VWR
We Enable Science

VWR CHEMICALS CATALOGUE

2017-2019

CHEMICALS | REAGENTS | STANDARDS | MICROBIOLOGY MEDIA
for laboratories and production

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Technical Services

The technical services section includes lots of technical tables and answers to FAQs. If you can't find the answer to your query there, then our technical services team can help with queries on product specifications, health and safety data, and environmental issues etc.

Tel: 02033 55 79 24

Email: technical.services.uk@vwr.com

Material Safety Data Sheets (MSDS): http://uk.vwr.com

Certificates of Analysis (CoA), Certificates of Specification (CoS):
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Other certificates or requests:
If your application with a VWR product requires other documents or change control procedures, please email: eu.notification.service@vwr.com

PLEASE NOTE: All items in this catalogue are intended for laboratory use and are not suitable for consumption by or as medicaments for humans or animals unless expressly stated. Orders for materials such as poisons, alcohols and restricted products are controlled. For health and safety reasons we are not prepared to sell chemicals to private individuals or deliver to residential addresses. Calls may be monitored for training purposes. Our Terms and Conditions can be found on our website; please be aware that there are areas to which you are bound under these Terms and Conditions.

Ongoing investment

- Updated and expanded facilities in France and Belgium
- Global acqusitions for manufacturing of raw materials, excipients and intermediates for production plus biochemicals, amino acid derivatives and acetonitrile

Commitment to quality and safety

- Expanded and re-equipped QC labs
- New packaging developments

Product innovations

- Standards and reagents for more and more sensitive trace analysis
- Additional solvents ranges
- Kjeldahl catalyst tablets
- Even more microbiology media
- Karl Fischer reagents
- Reference materials and standards for GC, melting point, COD, refractive index

and much more ...

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NOTE: VWR Life Science products may not be available in all countries. Please contact your local VWR sales office or distributor.

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WELCOME TO THE VWR CHEMICALS WORLD FOR LABORATORIES AND PRODUCTION

The brands we have in our portfolio have over one hundred years of heritage in seeking to make scientists lives as easy and cost effective as possible. Working with our customers, our goal is clear - to make VWR Chemicals your first choice, whatever your application, for both quality and value. Using customer feedback, we're proud to be able to offer:

- **Thousands of products for analysis, research and production, many new to our range**
- **Multiple grades ensuring the right quality for each application**
- **Laboratory and production pack sizes**
- **Custom manufacturing services**

VWR continues to invest through both development and the acquisition of market-leading laboratory and production chemical and life science companies such as AMRESCO®, United Biochemicals, Anachemia, PTI, Seastar, Klinipath and LABOnord amongst others increasing our manufacturing capabilities. This enables us to continue to expand our product choices, production capacity, logistic capabilities and levels of service.

We never lose sight of the fact that we need to deliver all this in full compliance with the European REACh directive plus, the Global Harmonised system of hazardous chemical labelling and other legislation, as it arises. VWR has also invested heavily in quality improvement systems and process excellence whilst continuing to demonstrate our commitment to sustainability.

Ongoing investment in production facilities
VWR production sites in France and Belgium have been recently expanded to include new automated and semi-automated filling lines to enhance our capability, flexibility and improve service levels. This investment includes extensive redevelopment of the Quality Control facilities at the VWR Haasrode site in Belgium. The laboratory is now over twice its original size with dedicated instrumental analysis, biochemical analysis and wet chemistry areas.

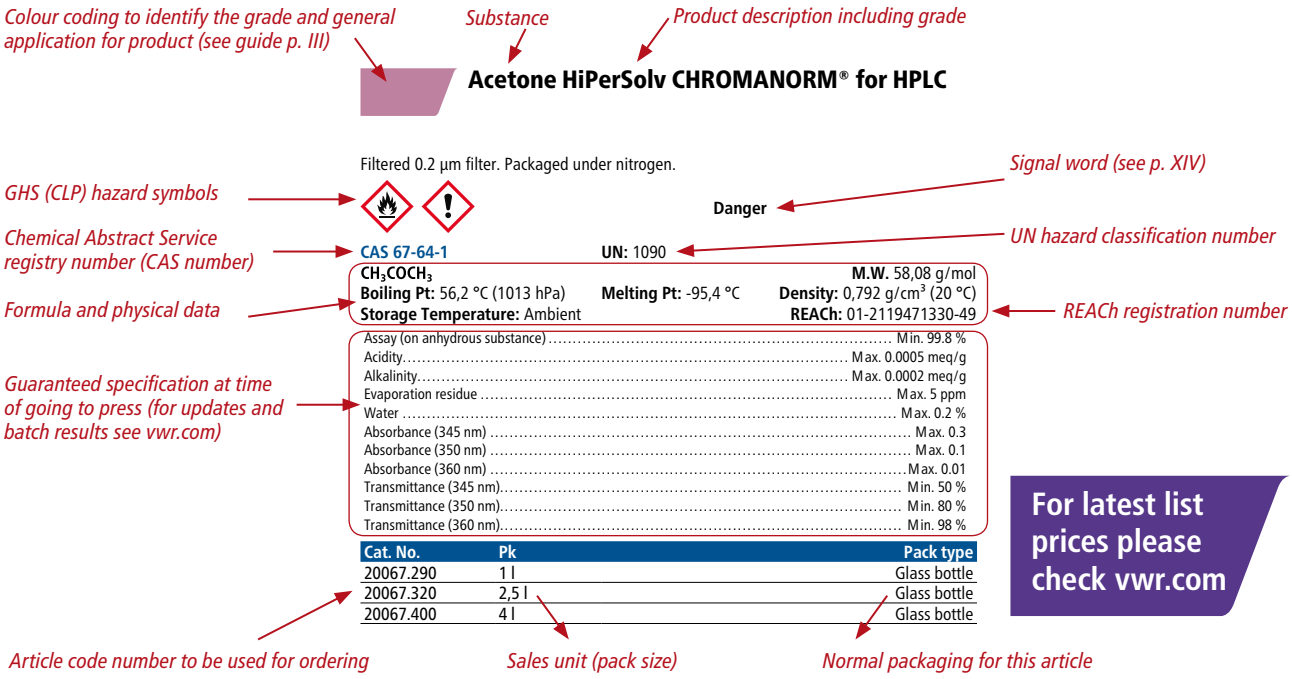
As chemistry develops with ppb and ppt level analysis commonplace, tighter and tighter reproducible specifications are required. At VWR we test every batch to guaranteed parameters because we don't believe that typical results are good enough. New instrumentation and continuous professional development of our scientific staff ensure that we stay ahead of your needs and our sites are regularly audited by our customers with very successful results. VWR use cleanrooms working to ISO standard 7 for the filling of Pharmacopoeia-quality products.

Trusted century old brand with a new modern look.

YOUR CATALOGUE HELPS YOU GET IT RIGHT

Get the right grade for the job – all our products are colour coded by application.

Colour	Grade/quality	Main applications/characteristics
	HiPerSolv® CHROMANORM®	HPLC: LC-UV, LC-MS and preparative applications
	PESTINORM®	GC/GLC: ECD, PND, GC-MS applications including pesticide residue analysis
	SpectrosoL® / SPECTRONORM	Spectroscopy
	ARISTAR® / NORMATOM®	High purity solvents, acids, reagents and standards for trace analysis (IC, ICP, ICP-MS)
	Deuterated and anhydrous solvents	NMR spectroscopy, organic synthesis
	Peptide synthesis solvents	Peptide synthesis
	AnalaR® NORMAPUR® ACS, Reag. Ph. Eur.	Analytical grade reagents for the pharma industry, ACS standards and Reag. Ph. Eur. specifications
	AnalaR® NORMAPUR®	Analytical grade reagents and standards
	AVS® TITRINORM® / ConvoL® NORMADOSE®	Ready to use/concentrated solutions of analytical reagents for volumetric titration and calibration
	Ph. Eur. and USP reagents	Range of standards and solutions specified in the Ph. Eur. for laboratory use
	Standards	AAS, ASTM and Ph. Eur. colour standards, hydrocarbon oil index, conductivity, UV/Vis
	Pharmacopoeia grade product	Products for pharmaceutical or biopharmaceutical production
	GPR RECTAPUR®	Reagents for general laboratory use
	LABWASH®	Cleaning products, for laboratory applications
	TECHNICAL, TechniSolv®	Reagents with limited specification for general laboratory use
	Indicator papers, strips, rolls, dyes including DOSATEST® and Rota®	Test and pH papers dyes, dry and in solution
	Electran®	Electrophoresis reagents
	Molecular biology	Reagents specified for use in molecular biology applications including auxiliaries like silica gel
	For biochemistry	Biochemicals and enzymes
	For microbiology	Ready to use and dehydrated culture media for microbiological applications
	Q Path®	For cytological and histological use
	Gurr®	Stains and dyes for microscopy
	Products for diagnostic work with tissue specimens	Reagents for classical haematology, cytology and histology
	For environmental analysis	Powder pillows and reagents for environmental applications



Help us to help you

- Please quote your customer (or delivered to) number when ordering
- If you need to follow up phone orders by fax or post, please clearly mark them 'Confirmation Order'
- Please quote our catalogue numbers in full when ordering
- Clearly state the quantity required

OUR LIFE SCIENCE RANGES

Start Pure

Purity drives your results and your business. You need complete confidence in a life science supplier because your work and reputation depend on it. At VWR Life Science, we earn trust by demanding the highest standards of purity in all aspects of our products and services. VWR Life Science has more than 35 years of experience in serving the global life science community, from basic research to large scale production in biopharmaceutical and diagnostics.

Research pack sizes are provided for our R&D and academic customers, lot-specific bulk biochemicals and reagents are made to order for our manufacturing customers. Convenient formats are available to make the best use of resources, and many products have been developed to minimise exposure and disposal of hazardous materials.

It all begins with purity, and we support that belief in everything we do. Let us help you make a difference in your work and our world.

Grade	Main applications/characteristics
ACS	Conforms with specifications and procedures outlined in the American Chemical Society
Biotechnology	Suitable for molecular biology applications
Conjugation	Suitable for enzyme conjugation
Electrophoresis	Suitable for electrophoresis applications
FCC	Conforms with specifications and procedures outlined in the Food Chemicals Codex
High Purity	Superior quality where there are no published standards
PFGE	Suitable for pulse-field gel electrophoresis
Proteomics	Suitable for proteomic research applications
Reagent	High purity materials meeting the specifications noted in the product description
RIA	Suitable for ELISA or other immuno-based applications
Sequencing	Suitable for use with automated capillary-sequencing equipment
Tissue Culture	Suitable for tissue culture applications
Ultra Pure	Purity level exceeds the various monograph grades
USP	Product is tested to USP specifications

Please note these products may not be available in all countries, check with your local VWR sales office or distributor.

CONSTANT INNOVATION

We're adding new products all the time – here are some recent highlights ...

For trace analysis

From the most exacting sample preparation with NORMATOM® high purity acids to ARISTAR® ICP/ICP-MS and AVS® TITRINORM® IC standards, VWR are able to offer a comprehensive trace analysis package.

In this catalogue, we've increased your choice with these new ranges

- High purity Ultrapure NORMATOM® acids produced by sub boiling distillation with 65 specifications at ppt level
- 30 new elements for ICP-MS at 1000 mg/l in 100 ml pack sizes
- ICP-MS Standards range at 10 mg/l in 100 ml pack sizes
- Extension of the ICP Standards at 10 000 mg/l in 500 ml
- 70 new Ion Chromatography standards at 1000 mg/l in water available in 100 ml
- ICP multi-element standards to meet application trends

All standards are backed by our extensive Certificate of Analysis for specific batch results, traceable to NIST controlled by an accredited ISO 17025 lab, ISO guide 34.

If you don't see what you want then we have also a customised standard production service available in many countries too.

A wealth of new solvents

The **HiPerSolv® CHROMANORM®** range now includes:

- Acetonitrile and Methanol Super Gradient grade Reag. Ph. Eur. suitable for UPLC/ UHPLC in 1; 2,5 and 4 l glass bottles plus 5; 10 and 28 l aluminium bottles
- Acetonitrile and Methanol Ultra LC-MS for the most sensitive LC-MS methods
- LC-MS mixes, solvents and additives

Added to the **PESTINORM®** range we have:

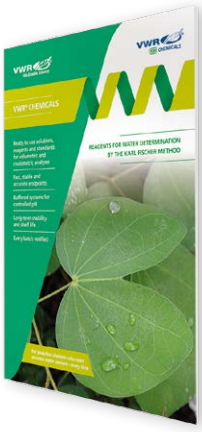
- Headspace solvents - DMF, DMSO, N,N Dimethylacetamide, N-Methyl 2 pyrrolidone, 1,3 Dimethyl 2 imidazolidone
- SUPRA TRACE solvents – for determination in the medium, high and even in the low boiling range
- All in one: Guaranteed performers for all applications and methods (GC-ECD, GC-FID, GC-MS)

The latest **anhydrous solvents** update is a complete range of 15 solvents with very low water content (below 30 ppm generally) available in 250 ml with septum cap and 1 l glass bottle. Includes 2 additional grades of Acetonitrile for DNA synthesis.

Reagents for water determination by the Karl Fischer method

Volumetric or coulometric titration with unique benefits

- Ready to use solutions and reagents for Karl Fischer titration
- Fast, stable and accurate end points
- Long-term stability and shelf life
- Each batch is application tested



Excelling in electrochemistry

- All our pH buffers are now controlled by a quality control lab accredited to ISO EN 17025
- NEW buffers at 25 °C
- NEW buffer solutions in sachets

Setting the standard

- A large range of new physical property standards including melting point, COD, refractive index, density and viscosity
- 68 new USP Standards have been added to the existing Reag. Ph. Eur. Standards range with over 250 'ready to use' solutions
- 22 new Secondary Reference Standards for GC with a complete Certificate of Analysis (including the analytical method to determine purity and assay, manufactured and expiry dates and traceability data to a specific current lot of primary standard)

Kjeldahl catalyst tablets

For more than 120 years, the determination of nitrogen according to the Kjeldahl method has been the internationally accepted standard. Used in dairy products, meat products, beer, cereals and in environmental analysis, 20 different catalysts in 3,5 and 5 g have been introduced.

VWR handy solution guide to microbiology

- **A complete range of dehydrated and ready to use microbiology culture media**
- **High quality raw materials selected for the highest quality products**
- **Compliant with international standards, such as Pharmacopoeia and ISO**
- **Available in standard formulation and animal-free**
- **Custom products available**
- **Products available from stock**

Packaging developments with safety in mind

More and more of our acids and solvents are now also available in HDPE bottles that are virtually unbreakable, light and easy to handle. Do not worry about the quality, however, as the specifications and shelf life are exactly the same as in the glass bottles.

QUALITY, RELIABILITY, AND SUSTAINABILITY IS AT THE HEART OF OUR CHEMICALS BUSINESS

Quality and process excellence

VWR was the first major European scientific supplier to achieve triple certification to the International Standards:

- Quality – ISO 9001:2008
- Environment – ISO 14001:2004
- Health and safety – OHSAS 18001:2007

Our certification for the whole of our business gives customers confidence that a third party certification body regularly audits us; checking how we organise our processes and the human/technical factors that could affect quality and the environment. This means our customers can be sure that the service we provide is of the highest quality. VWR works continually on enlarging the scope of our certification and, in addition, now holds certifications for:

- ISO/IEC 17025:2005 for services in several countries and for pipette calibration services used across Europe
- ISO 13485:2003 for manufacturing of consumables for pathology and cytopathology labs
- GDP for medicinal products in some countries
- ISO EN 17025 accredition in our laboratories for electrochemistry

The current scope of our certification

Procurement, marketing, storage, distribution and sales of chemicals, consumables, laboratory equipment, furniture and laboratory information systems. Blending, filling, analysis and packaging of chemicals. Regeneration of resins. Installation, maintenance, validation, calibration and repair of laboratory equipment. The supply of training services.

Feel the chemistry

For almost 170 years, our customers have challenged us with finding the answers that help improve lives. Our mission is to identify product and service solutions, eliminate process complexities and help labs and production facilities to work better and faster. To that end VWR has built, and indeed continues to invest in, a global network.

- Dedicated ISO 9001 certified production facilities moving towards ISO 17025 and ISO 17034 accreditation
- Water installations providing water at 'water for injection grade' (USP and Ph. Eur. 0169), highly purified water (Ph. Eur. 1927) and purified water (Ph. Eur. 0008)
- Highly qualified, competent in-house quality control facilities using modern, validated methods with up-to date equipment and instruments; typically following USP, Ph. Eur. or ACS
- Expert quality assurance and regulatory affairs teams ensure product quality, legal compliance and up-to-date compendial requirements

At VWR nothing is 'typical'

VWR don't do typical results, our job is to provide you with reliable, reproducible and batch-to-batch consistent products. That means we test every parameter of every specification to ensure actual results – so you don't have to. All our documentation is available on the web in up to 7 languages. So you can access Certificates of Analysis, product or packaging specifications and health and safety data, 24/7.

Here's a flavour of some of the routine analytical methods

- Classical wet chemistry methods following pharmaceutical requirements
- Volumetric, potentiometric and photo-optic titrations including Karl Fischer coulometric and volumetric
- pH measurement to the highest accuracy in water-jacketed, temperature-controlled measuring vessels
- Turbidity, conductivity and density measurement
- UV, Vis, FT-IR and fluorescence spectroscopy
- Colorimetry, refractometry, melting and boiling point determination
- Metal trace analysis - analysis using ICP-MS, ICP-OES or flame AAS technology
- GC-FID analysis
- GC-PND and GC-ECD analysis for quantification of potential pesticides
- Headspace-GC and GC-MS technology for residual solvents and organic trace-level impurities
- HPLC and UPLC for high purity solvents used in chromatography and spectroscopy
- Sensitive Single and Triple-Quad Mass Spectroscopy detectors: SQD-MS, GC-MS, HPLC-MS, ICP-MS
- Total Organic Carbon (TOC) testing of water in ppb ranges
- Biological testing including endotoxin, DNase, RNase and protease levels
- Stability studies at ambient and accelerated storage condition temperatures

Celebrate sustainability

VWR recognises that building sustainable business practices to enhance the value of the company is in the best interest of our company, our associates, our suppliers, our customers and our community. We also understand that our customers have sustainability initiatives and VWR is committed to helping them achieve their sustainability goals.

At VWR, we are approaching sustainability to meet the three primary goals as defined by the UN World Commission on Environment and Development:

- Social Impact (People)
- Environmental Protection (Planet)
- Economic Growth (Performance)

Every area of our business is measured against these principles. From the choice of materials to produce this catalogue and the environmental credentials of its printers, to the global compliance of VWR companies with the Sarbanes-Oxley act of 2002 ensuring financial integrity. Our integrated logistics network and award winning eCommerce capabilities help you to support your sustainable business practises from order consolidation to free waste packaging collection*.

If you want to learn more about VWR's approach to sustainability, go to vwr.com and where you will find all the information in the 'About VWR' section or contact sustainability@vwr.com.

For quality and certification enquiries email euqualitysupport@vwr.com

For sustainability enquiries email sustainability@vwr.com

For more information go to vwr.com 'About us'

**Free waste packaging collection is not available in all countries. Contact your local VWR sales office for advice.*

VWR, A PARTNER YOU CAN TRUST FOR PRODUCTION CHEMICALS.

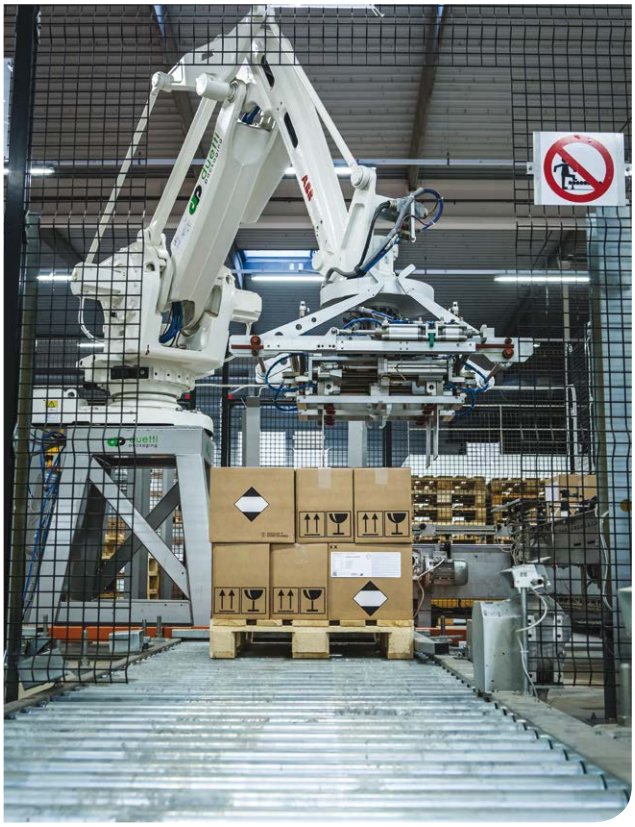
VWR continues to invest in production sites for chemicals to extend our product range and to ensure we will continue to meet all customer's increasing expectations and requirements. Most of these chemicals can be used in production and are available in production quantities. The VWR Chemicals brand is produced and exclusively distributed by VWR. We have acquired, and are likely to continue to acquire, new chemical producers to enhance our product range for pharma- and biopharmaceutical production, for diagnostics production or bioprocessing in general.

Some of VWR's recent investments for production chemicals

- Acquisition of UBI, today VWR Sanborn, manufacturer of amino acid derivates and biological buffers
- Acquisition of NBC, today VWR Aurora, manufacturer of speciality fine chemicals and processing of excipients
- Acquisition of PTI, makes VWR worldwide one of the biggest producers of high purity acetonitrile
- Acquisition of Reliable Biochemicals, producer of API, excipients and advanced intermediates following cGMP principles
- Renewed and extended cleanroom facilities in the Belgian production site for pharmaceutical raw materials
- Renewed and extended filling lines for solvents and acids in the French production site

Our European production sites are certified according to ISO 9001, ISO 14001 and OHSAS 18001 Standards and are regularly audited by our clients with excellent and successful results. In our US production site we also have ISO 13485 and Excipact certification. Our Belgian production site is also prepared to do the Excipact audit in the near future.

Our renewed and extended QC laboratories can perform in-house as good as all necessary analysis required for compendial grade chemicals, bioprocessing grade products and general chemicals for production, including headspace GC (residual solvents), ICP (trace metals), endotoxin measurement and microbiology.



MEETING THE CHALLENGE OF SCALE-UP AND MORE

The challenges of production include the scaling up of laboratory processes, processing and production management, personal and product safety and customisation of products.

VWR are able to provide support in this environment from raw materials to hygiene control.

Managing a chemical supply chain for customers involved in production has taught us that flexibility and high and reliable service levels are standard requirements in this environment. Every day VWR delivers to customers who rely on us to get the right product to them at the right time with the right documentation.

We also have a long history of servicing requests for custom products. The capability to do this is based on our production sites around the world. The approach applied to our VWR Chemicals brand also goes into our products for production customers, namely good quality materials supplied at a competitive price. VWR offer a wide range of Pharmacopoeia-compliant materials, all fully tested and documented to the required standards. All Pharmacopoeia materials are packed in cleanroom environments following the principles of GMP.

For production quantities, we can customise the pack size, packaging material, specifications, raw material source etc… We can make solutions or mixtures of the required products according to your specifications.

If the material or pack size you need is not listed, then please contact your local VWR sales office.

Change control security

If your application with VWR Pharmacopoeia or custom chemicals requires change notification please contact our VWR quality assurance department eu.notification.service@vwr.com

Customer audits

VWR welcomes audits of our facilities and processes by customers. However, the demand for such events is high, so we ask customers to make such requests several months in advance through the Quality Manager of your local VWR organisation.

PROVIDING INNOVATIVE, FLEXIBLE, CUSTOMISED SOLUTIONS

Working with VWR Custom Manufacturing Services is like having an advisory panel and project team just beyond the door of your own production facilities.

Our systems are modular in design so you can use all or a tailored selection of our production centres, equipment and infrastructure.

VWR process engineers and scientists will ensure the right processes and systems are used to meet your needs. Whether your product is in development or already commercialised, we can scale our systems appropriately.
VWR can grow with you throughout your new product's life cycle or provide a high throughput solution, coupled with a seamless transition that keeps your mature product flowing to market. We provide an entire team of skilled professionals who offer consultation and expertise in science and engineering, as well as quality assurance, operations and supply chain disciplines.

With VWR, you'll find the building blocks needed to customise a manufacturing and total delivery solution, one that's right for you and the markets you serve.

Liquid and powder manufacturing

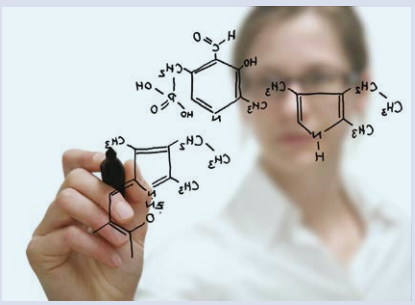
- Custom formulations
- Synthesis of buffer compounds and derivatives
- Lab to production scale
- Dedicated facilities for biologicals

Dosing and packaging

- ISO class environments
- Aseptic processing
- Flexible packaging and fill/finish options
- Hazardous and sensitive material handling
- Automated production lines

Assembly and finishing

- OEM packaging and labelling
- Multi-component kit assembly
- Package and label design
- Label control and management



Product design and transfer

- Seamless transition of product and process
- Validation
- Equipment and method transfer

Quality control

- Custom testing and method validation
- Customised certificates and documentation
- Biological and analytical test capabilities

Quality assurance and regulatory

- ISO 9001; ISO 13485; FDA registered facilities
- Change control and full traceability
- Custom documents

How can you get a quotation for a custom product?
Access our website vwr.com and click on services > VWR Custom Manufacturing Services > Custom manufacturing request
You can find out more and discuss your requirements with our trained chemical specialists by contacting your local VWR sales office.

ONLINE PACKAGING DATABASE FOR UP TO THE MINUTE INFORMATION

Types of packaging used in this catalogue

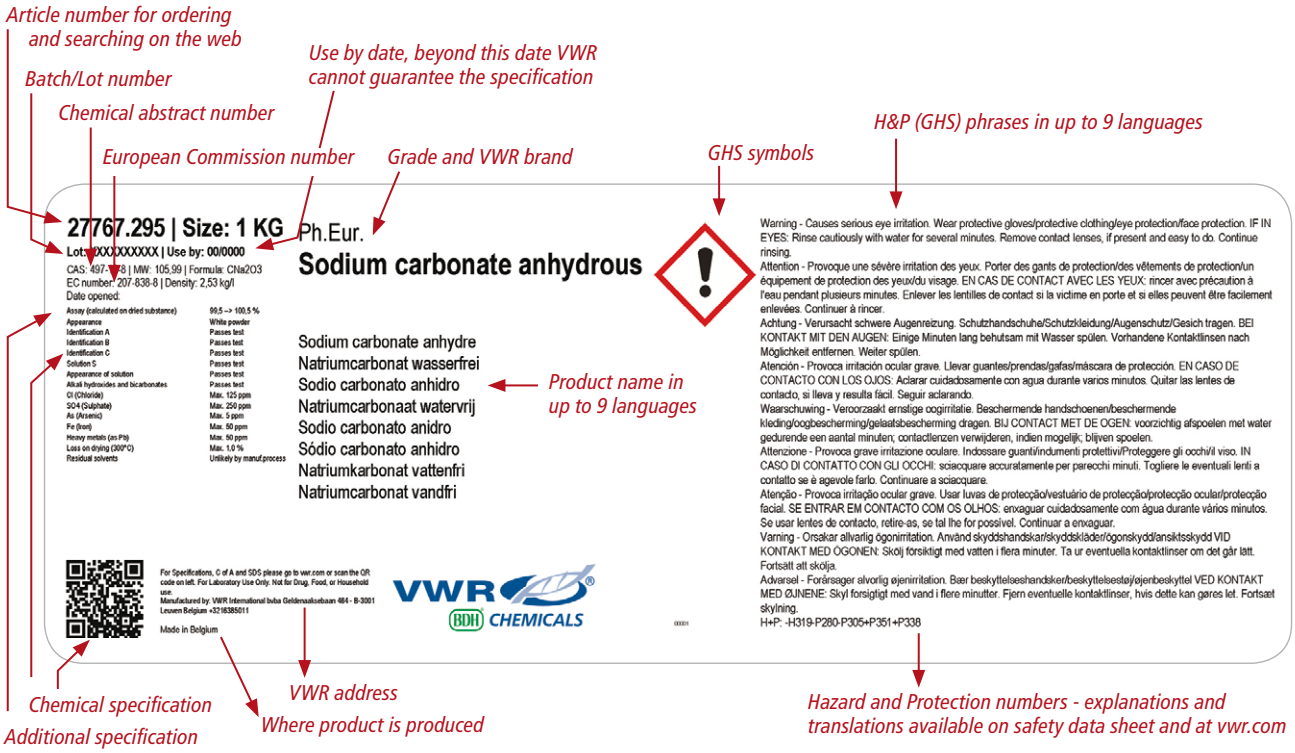
- Aerosol can
- Aluminium bottle
- Aluminium tube
- Bag-in-box (cubitainer)
- Bucket (plastic)
- Cardboard carton
- Fluorinated plastic bottle
- Glass ampoule
- Glass bottle
- Glass bottle for solids
- Glass bottle with plastic safety coating (Safebreak)
- Glass bottle with septum
- Iron box
- Kit packaging
- Metal can
- Metal drum
- Metal drum with liner
- Paper bag
- HDPE bottle
- Plastic ampoule
- Plastic bag
- Plastic bottle for solids
- Plastic container
- Plastic drum
- Plastic tube
- Pouch
- Roll packaging
- Set
- Steel drum
- Vial

Each product article in this catalogue has the type of packaging shown against the entry (see page II for more information). All packaging, if used for hazardous goods, is rigorously tested to ensure it meets all UN and ADR requirements.

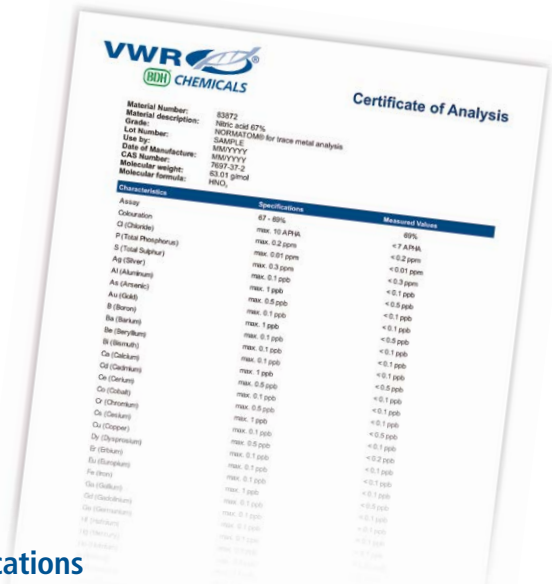
For each type of packaging we offer a comprehensive technical data sheet. This sheet includes everything from the dimensions, UN certification details and useful accessories for handling the packs such as drum keys etc.

For detailed information on packaging contact your local VWR sales office.

NEW LABELLING CONFORMING TO CLP REGULATION (EC) NO. 1272/2008



The new multilingual labels are designed to help you find the information you need easily and quickly. They always include an expiry date for unopened and correctly stored product and usually a space for customers to enter the date of receipt and/or when the bottle was first opened.
The new labels also comply with CLP requirements.
The guaranteed specification of the product appears on the label if space allows. Otherwise the current VWR specifications can be found on vwr.com.



Specifications

The specifications quote maximum permitted levels of impurities, not typical analyses. Certificates of Specification and Analysis are readily available on the new VWR website.

Please note specifications in this catalogue were correct when the catalogue went to press. The latest specifications are available on vwr.com.

REACH (EC NO. 1907/2006) AT VWR

REACh (**R**egistration, **E**valuation, **A**uthorisation of **C**hemicals) in brief

REACh, the European Union chemical regulations came into force on June 1st 2007. As a European Commission regulation, REACh replaces national chemical legislation, based on the directives 67/548/EEC and 1999/45/EC and follows specific transitional periods.

From June 2008 pre-registration of 'phase-in substances' began, these substances have been available in the market since 1981 and are listed in the EINECS-List, or in the No-Longer Polymer list (paragraph 8 No. 19).

Pre-registration is required for the application of the transitional arrangement for these substances and for their further availability in the market. Depending on production volume, registration must be done between 2009-2018.

Volume of 'phase-in substances'	Registration period allotted
≥1000 t/a or ≥100 t/a environmentally hazardous substances ≥1 t/a CMR** ≥100 t/a R50/53	30/11/2010
≥100 t/a	31/5/2013
≥1t/a	31/5/2018

**CMR: Substances that are carcinogenic, mutagenic or toxic for reproduction.

Only substances that have a sufficient data set can be placed on the market in future, while the type and scope of this data set to be provided in a substance dossier for registration is dependent upon the respective production or imported volume (1, 10 or >100 t/a).

Substances that may give rise to long-term, harmful effects, such as CMR, PBT (substances that are potentially persistent, bioaccumulative and toxic), or vPvB (substances that are potentially very persistent and very bioaccumulative), are grouped as Substance of Very High Concern (SVHC). In general, substances with these kind of properties could be listed as SVHC candidates published by ECHA (European Chemicals Agency). These candidates may become subject of authorisation once listed in authorisation list (annex VIX) after evaluation.

Role allocation under REACh

REACh redefines companies' responsibilities - i.e. the chemical manufacturers and importers – as well as those of downstream users.

Producers and importers of substances must both pre-register and register their substances. The objective of pre-registration was to gain an overview of substances within the EU and their cumulative volume, and to build registration consortia (one substance; one registration).

The downstream user undertakes to check the information of the extended safety data sheet once shared by the producers and to implement the recommended safety management. If the usage of the substance is not indicated in the extended safety data sheet, the downstream user must notify the supplier or ECHA of his specific usage. This, in particular, is important for dangerous substances.

Subsequent registration will be time-consuming, and for evaluated substances from the SVHC candidate list (CMR, BPT, vPvB) not possible. This is why VWR is supporting its suppliers and submitting customers' information regarding the usage of the substance where this is relevant.

All VWR chemicals have been pre-registered under REACh and are subject to the new directive.

VWR is currently working with all our suppliers to ensure they are also REACh compliant.

Safety Data Sheets (SDS)

Changes brought about by REACh have changed the content of SDS particularly with respect to the order of headings. SDS have expanded with the following information:

- **Registration number, if applicable**
- **Relevant information on the usage of material concerning safety data report**
- **Exposure evaluation and risk management recommendations for hazardous substances**

At present we cannot make any binding statement on which substances will be available in Europe after the full implementation of REACh. This depends upon the volume placed on the market and the quality of the data, but we do not expect major deletions from the range.

If you have further questions regarding REACh and VWR, please do not hesitate to contact us at reach.eu@vwr.com.

GLOBALLY HARMONISED SYSTEM OF CLASSIFICATION, LABELLING AND PACKAGING OF CHEMICALS (GHS)

All substances are packed and distributed according to CLP regulation (European Regulation (EC) No 1272/2008) and since May 31st 2015 mixtures are in scope of this regulation as well.

After May 2015 all products when produced, must be labelled in conformance with the new CLP regulations. There is an additional two year transition period during which suppliers can sell product which has been previously packed and labelled before these deadlines.

VWR International, as the global leader in distribution of laboratory chemicals, has a chemical team dedicated to implementing REACh and GHS in order to guarantee the continuity of supply of chemicals to you. More than 105 000 substances were pre-registered in line with REACh regulations and new tools developed and installed to handle the huge amount of information needed.

This team finalised the CLP data for all substances and mixtures sold in the VWR Chemicals range. Product labels and SDS conforming to the new regulations are now available. These SDS can be downloaded from VWR's website or requested in your mother language or preferred language at our dedicated mail box SDS@VWR.com.

VWR International situation and implementation plan

On December 16th 2008, the European Parliament published a new regulation on Classification, Labelling and Packaging of substances and mixtures (CLP).

This new regulation implements the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) of the United Nations, which was initiated at the UN Conference on the Environment and Sustainable Development Summit in Rio de Janeiro in 1992.

GHS replaces national regulations and provides a consistent global system for chemical classification and labelling. The goal is to improve safety, health and the environment.

In 2002 GHS was adopted at the World Summit on Sustainable Development in Johannesburg. The participating countries gave a commitment to implement by 2008.

However, the European Authorities realised that there were many links with the REACh regulations planned and that these, combined major changes in the regulatory environment, could not be done in such a short period of time. The CLP regulation, therefore, defines extensive transition periods for labelling of chemicals and Safety Data Sheets (SDS), production by chemical manufacturers and re-packers.

HAZARDOUS LABELS

The following pictograms and statements must be added to product labels for all hazardous substances produced by all manufacturers who are distributing these products in the European Union from December 1st 2010 to comply with directive (EG) No. 1272/2008 (CLP).

Hazardous mixtures can continue to be produced until 2015 with labelling that complies with the existing dangerous substances directive.

Signal words

These are words in bold on the label before the Hazard and Precautionary phrases. They describe the relative level of severity of hazards. **'Danger'** describes more severe hazard categories **'Warning'** describes less severe hazard categories.
The CLP system is using the 9 pictograms in accordance to GHS with their GHS number, signal words and meaning, shown in the table below

GHS01	**Danger** Unstable, Explosive	
GHS02	**Warning** Flammable	
GHS03	**Danger or Warning** Oxidising	
GHS04	**Warning** Compressed gas	
GHS05	**Danger or Warning** Corrosive	
GHS06	**Danger** Toxic	
GHS07	**Warning** Lower systemic health hazards	
GHS08	**Danger or Warning** Systemic health hazard	
GHS09	**Warning or no signal word** (Hazard to aquatic) Environment	

The pictogram GHS08 for "Systemic health hazards" indicates serveral serious hazards for internal organs, e.g.: Respiratory sensitisation, aspiration hazard, carcinogenicity, germ cell mutagenicity or reproductive toxicity (CMR), specific target organ toxicity. These hazards are distinguished by the H phrases used.

Hazard (H) and EU Hazard (EUH) statements

The Hazard (H) and EU Hazard (EUH) statements describe the nature of the hazards of the substance or mixture, including the degree of hazard.

H200	Unstable explosives.
H201	Explosive; mass explosion hazard.
H202	Explosive, severe projection hazard.
H203	Explosive; fire, blast or projection hazard.
H204	Fire or projection hazard.
H205	May mass explode in fire.
H220	Extremely flammable gas.
H221	Flammable gas.
H222 H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
H223 H229	Flammable aerosol. Pressurised container: May burst if heated.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H229	Pressurised container: May burst if heated.
H230	May react explosively even in the absence of air.
H231	May react explosively even in the absence of air at elevated pressure and/or temperature.
H240	Heating may cause an explosion.
H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H250	Catches fire spontaneously if exposed to air.
H251	Self-heating; may catch fire.
H252	Self-heating; in large quantities; may catch fire.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H261	In contact with water releases flammable gases.
H270	May cause or intensify fire; oxidiser.
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H280	Contains gas under pressure; may explode if heated.
H281	Contains refrigerated gas; may cause cryogenic burns or injury.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H300+H310	Fatal if swallowed or in contact with skin.
H300+H310+H330	Fatal if swallowed, in contact with skin or if inhaled.
H300+H330	Fatal if swallowed or if inhaled.
H301	Toxic if swallowed.
H301+H311	Toxic if swallowed or in contact with skin.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H301+H331	Toxic if swallowed or if inhaled.
H302	Harmful if swallowed.
H302+H312	Harmful if swallowed or in contact with skin.
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H302+H332	Harmful if swallowed or if inhaled.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H310+H330	Fatal in contact with skin or if inhaled.
H311	Toxic in contact with skin.
H311+H331	Toxic in contact with skin or if inhaled.
H312	Harmful in contact with skin.
H312+H332	Harmful in contact with skin or if inhaled.

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H350i	May cause cancer by inhalation.
H351	Suspected of causing cancer.
H360	May damage fertility or an unborn child.
H360D	May damage an unborn child.
H360Df	May damage an unborn child. Suspected of damaging fertility.
H360F	May damage fertility.
H360FD	May damage fertility. May damage an unborn child.
H360Fd	Suspected of damaging fertility. Suspected of damaging an unborn child.
H361	Suspected of damaging fertility or an unborn child.
H361d	Suspected of damaging an unborn child.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging an unborn child.
H362	May cause harm to breast-fed children.
H370	Causes damage to organs.
H371	May cause damage to organs.
H372	Causes damage to organs.
H373	May cause damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
H420	Harms public health and the environment by destroying ozone in the upper atmosphere.

EUH001	Explosive when dry.
EUH014	Reacts violently with water.
EUH018	In use may form flammable/explosive vapour-air mixture.
EUH019	May form explosive peroxides.
EUH029	Contact with water liberates toxic gas.
EUH031	Contact with acids liberates toxic gas.
EUH032	Contact with acids liberates very toxic gas.
EUH044	Risk of explosion if heated under confinement.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH070	Toxic by eye contact.
EUH071	Corrosive to the respiratory tract.
EUH201	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.
EUH201A	Warning! Contains lead.
EUH202	Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
EUH203	Contains chromium (VI). May produce an allergic reaction.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH205	Contains epoxy constituents. May produce an allergic reaction.
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
EUH207	Warning! Contains cadmium. Dangerous fumes are formed during use. See information supplied by the manufacturer. Comply with the safety instructions.
EUH208	Contains <name of sensitising substance>. May produce an allergic reaction.
EUH209	Can become highly flammable in use.
EUH209A	Can become flammable in use.
EUH210	Safety data sheet available on request.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
EUH210	Safety data sheet available on request.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary (P) statements

The Precautionary (P) statements describe recommended measures for preventing or minimising adverse effects that can be caused by exposure to the substance or mixture during use or disposal.

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P220	Keep/store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P222	Do not allow contact with air.
P223	Do not allow contact with water.
P230	Keep wetted with…
P231	Handle under inert gas.
P231+P232	Handle under inert gas. Protect from moisture.
P232	Protect from moisture.

P233	Keep container tightly closed.
P234	Keep only in original container.
P235	Keep cool.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non sparking tools.
P243	Take precautionary measures against static discharge.
P244	Keep valves and fittings free from oil and grease.
P250	Do not subject to grinding/shock/friction.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash … thoroughly after handling.
P270	Do no eat, drink or smoke when using this product.
P271	Use only outdoors or in a well ventilated area.

P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P282	Wear cold insulating gloves/face shield/eye protection.
P283	Wear fire/flame resistant/retardant clothing.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301	If swallowed:
P301+P310	If swallowed: Immediately call a poison centre/doctor/…
P301+P312	If swallowed: Call a poison centre/doctor/…/if you feel unwell.
P301+P330	If swallowed: Rinse mouth.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P301+P331	If swallowed: Do NOT induce vomiting.
P302	If on skin:
P302+P334	If on skin: Immerse in cool water/wrap in wet bandages.
P302+P352	If on skin: Wash with plenty of water/…
P303	If on skin (or hair):
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304	If inhaled:
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P304+P340+P310	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison centre or doctor/physician.
P305	If in eyes:
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P306	If on clothing:
P306+P360	If on clothing: Rinse contaminated clothing and skin immediately with plenty of water before removing clothes.
P308	If exposed or concerned:
P308+P310	If exposed or concerned: Immediately call a poison centre/doctor.
P308+P311	If exposed or concerned: Call a poison centre/doctor/…
P308+P313	If exposed or concerned: Get medical advice/attention.
P310	Immediately call a poison centre/doctor/…
P311	Call a poison centre/doctor/…
P312	Call a poison centre/doctor/…/if you feel unwell.
P313	Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P315	Get immediate medical advice/attention.
P320	Specific treatment is urgent (see … on this label).
P321	Specific treatment (see … on this label).
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P332	If skin irritation occurs:
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333	If skin irritation or rash occurs:
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P334	Immerse in cool water/wrap in wet bandages.
P335	Brush off loose particles from skin.
P335+P334	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P336	Thaw frosted parts with lukewarm water. Do no rub affected area.
P337	If eye irritation persists:
P337+P313	If eye irritation persists: Get medical advice/attention.
P338	Remove contact lenses, if present and easy to do. Continue rinsing.
P340	Remove person to fresh air and keep comfortable for breathing.
P342	If experiencing respiratory symptoms:
P342+P311	If experiencing respiratory symptoms: Call a poison centre/doctor/…
P351	Rinse cautiously with water for several minutes.
P352	Wash with plenty of water/…
P353	Rinse skin with water/shower.
P360	Rinse contaminated clothing and skin immediately with plenty of water before removing clothes.
P361	Take off all contaminated clothing immediately.
P361+P364	Take off all contaminated clothing immediately and wash it before re-use.
P362	Take off contaminated clothing.
P362+P364	Take off contaminated clothing and wash it before re-use.
P363	Wash contaminated clothing before re-use.
P364	And wash it before re-use.
P370	In case of fire:
P370+P376	In case of fire: Stop leak if safe to do so.
P370+P378	In case of fire: Use … to extinguish.
P370+P380	In case of fire: Evacuate area.
P370+P380+P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
P371	In case of major fire and large quantities:
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P372	Explosion risk in case of fire.
P373	Do NOT fight fire when fire reaches explosives.
P374	Fight fire with normal precautions from a reasonable distance.
P375	Fight fire remotely due to the risk of explosion.
P376	Stop leak if safe to do so.
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P378	Use… to extinguish.
P380	Evacuate area.
P381	Eliminate all ignition sources if safe to do so.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P401	Store …
P402	Store in a dry place.
P402+P404	Store in a dry place. Store in a closed container.
P403	Store in a well ventilated place.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P403+P235	Store in a well ventilated place. Keep cool.
P404	Store in a closed container.
P405	Store locked up.
P406	Store in a corrosive resistant/… container with a resistant inner liner.
P407	Maintain air gap between stacks/pallets.
P410	Protect from sunlight.
P410+P235	Keep cool. Protect from sunlight.
P410+P403	Protect from sunlight. Store in a well ventilated place.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.
P411	Store at temperatures not exceeding …°C.
P411+P235	Store at temperatures not exceeding …°C. Keep cool.
P412	Do not expose to temperatures exceeding 50 °C/122 °F.
P413	Store bulk masses greater than … kg/lbs at temperatures not exceeding …°C.
P420	Store away from other materials.
P422	Store contents under …
P501	Dispose of contents/container to …
P502	Refer to manufacturer/supplier for information on recovery/recycling.

HANDLING CHEMICALS

Hazardous chemicals

Always take note of the information contained in the safety data sheet and then carry out a risk assessment before handling any dangerous chemical.

Toxic and corrosive materials

Always treat all chemicals as potential poisons and be aware of properties/precautions before use. Avoid direct contact with any chemical and never breathe in solvent vapours. Examples of chemicals giving off vapours permeable to the skin include benzene, aniline, chlorinated compounds; nitrobenzene and phenols.

In cases of skin contact drench with water, then wash with soap and water and seek immediate medical advice. Unpleasant or poisonous compounds should be handled in a fume cupboard. N.B. NEVER mouth pipette any chemical.

Toxic gases

Ensure that all respirators are checked on a regular basis and are in good working order. Before commencing work with toxic gas have appropriate respirators nearby. For cyanides the antidote must be readily available and all laboratory occupants warned of its presence. N.B. liquids contaminated with toxic gas should be purged with nitrogen/air before removal from fume cupboard.

Labelling

All containers must be labelled correctly and securely. Never use unidentified reagents and thoroughly clean old containers.

Explosive materials

Always examine small quantities for the effects of impact and heating before scaling up the experiment. Potential explosives include any azo, diazo, azide, nitro or peroxide compounds and heavy metal salts of organic compounds.

Peroxides

Unsaturated hydrocarbons, aldehydes and ethers are liable to form peroxides in air or in the presence of nitric acid. Solutions should be tested with acidified potassium iodide and the peroxide removed (e.g. with ferrous sulphate solution) before any reaction or process is undertaken.

Mercury

Avoid spillage and vapour build up by working in a tray placed in a fume cupboard. If spilt, collect using any commercially available mercury absorbent or a pipette and remove remainder by applying a paste of equal parts of calcium hydroxide and flowers of sulphur thinned down with water. Allow to dry for 24 hours, remove and send to a waste management company for disposal. Do not dispose of waste in public drains.

Opening bottles

Several compounds often release toxic gases under pressure (hydrochloric acid, bromine, ammonia) when bottles are opened. A face mask, together with any protective clothing assessed to be necessary, should, therefore, be worn and the bottle opened in a fume cupboard.

Flammable solvents

The quantity stored should be kept to an absolute minimum. Store in a fireproof container away from heat. Always extinguish naked flames and display a warning notice when using solvents.

Static electricity

Organic solvents and gases often develop high electrical charges when being dispensed, therefore, all metal drums and gas cylinders, together with the receiver, should be earthed.

Highly reactive substances

Reactions involving, for example, alkali metals and their hydrides should be undertaken behind safety screens with any reagent added in a careful, dropwise manner.

Compressed gases

Always ensure the correct regulator and trap is fitted between glass apparatus and gas cylinder/air bottle. Cylinders should be operated carefully and securely held in stands.

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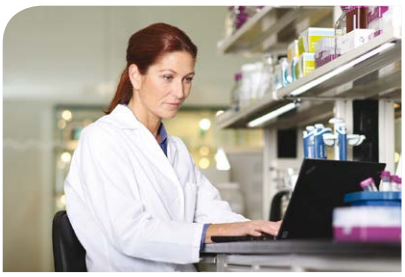

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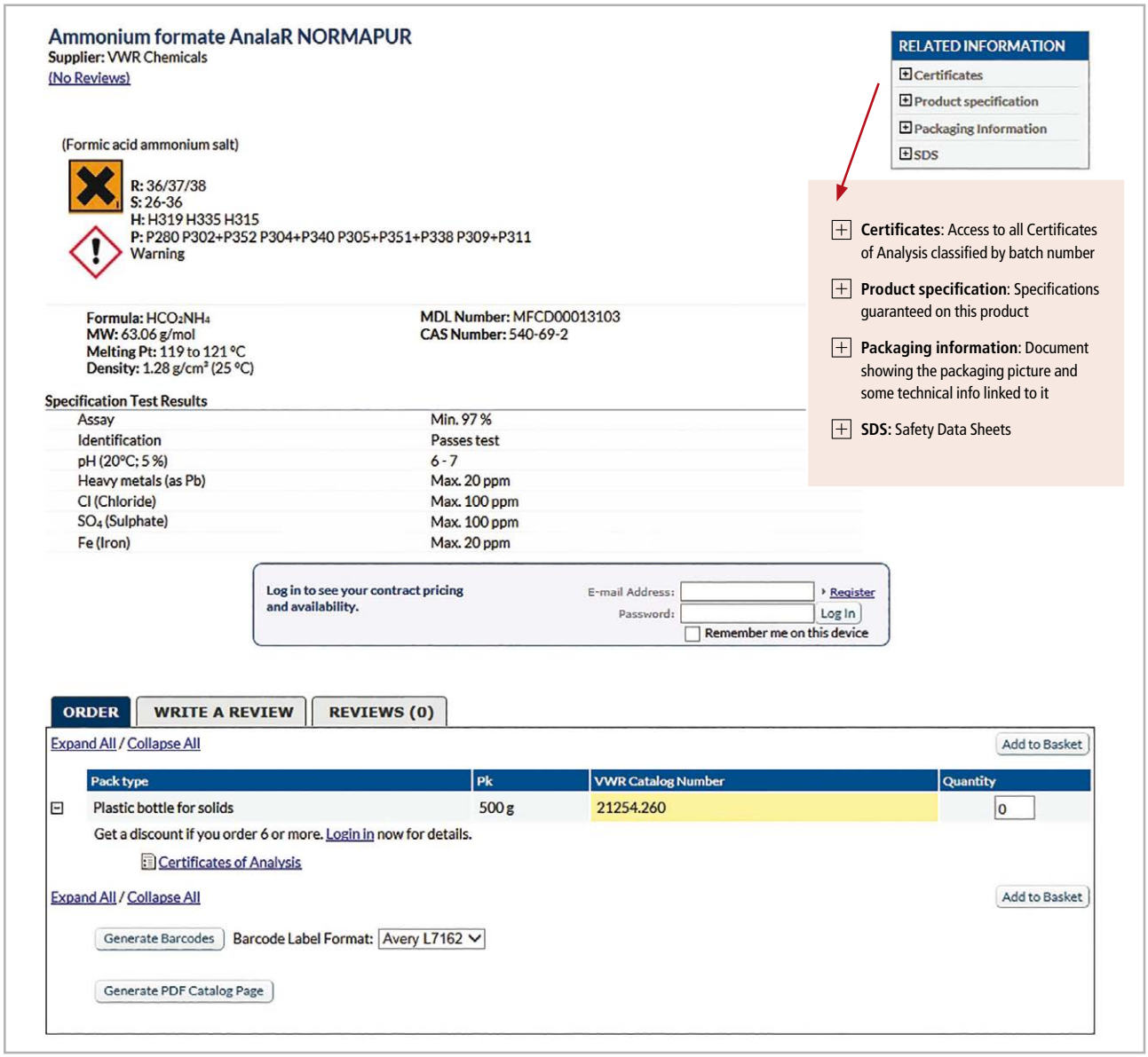

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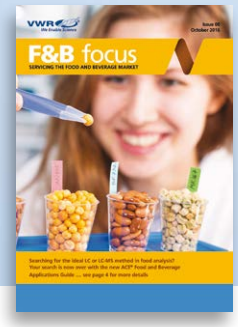

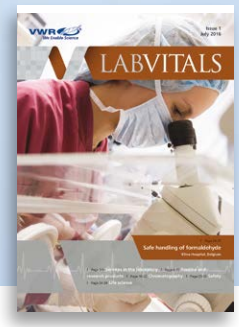

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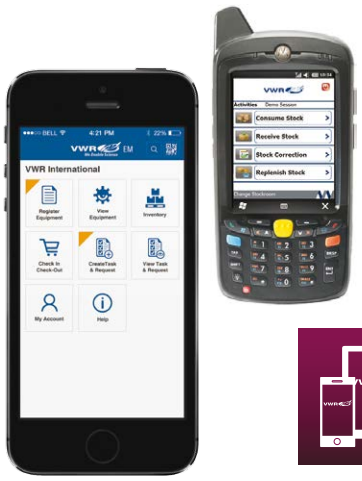

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Absorption granules

See Spillage absorption granules ..... p. 441

ABTS (Diammonium 2,2'-azinobis[3-ethyl-2,3-dihydrobenzothiazole-6-sulphonate]), ultrapure

Warning

CAS 30931-67-0
$C_{18}H_{24}N_6O_6S_4$
Storage Temperature: Refrigerator
Substrate for the detection of horseradish peroxidase commonly used in ELISA.

E max @225nm	> 48150
E max @342nm	>=37400
Free Ammonia	<= 6.5%
Loss on Drying	<= 2%
Solubility (5%, Water)	Pass
Thin Layer Chromatography	>= 98

Cat. No.	Pk	Pack type
0400-1G	1 g	Glass bottle
0400-10G	10 g	Plastic bottle

ABTS (Diammonium 2,2'-azinobis[3-ethyl-2,3-dihydrobenzothiazole-6-sulphonate]), tablets

Warning

CAS 30931-67-0
$C_{18}H_{24}N_6O_6S_4$
Storage Temperature: Refrigerator
Substrate for the detection of horseradish peroxidase commonly used in ELISA.
Each 140 mg tablet contains 10 mg of ABTS.

Cat. No.	Pk	Pack type
0895-50T	50	Glass bottle

ACAC

See Acetylacetone p.13

Acenaphthene, extra pure

CAS 83-32-9 **UN:** 3077
$C_{12}H_{10}$ **M.W.** 154.21 g/mol
Boiling Pt: 279 °C (1013 hPa) **Melting Pt:** 90-93 °C **Density:** 1,024 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
122852X	100 mg	Glass ampoule

Acetaldehyde TECHNICAL

Danger

CAS 75-07-0 **UN:** 1089
CH_3CHO **M.W.** 44.05 g/mol
Boiling Pt: 20,1 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,78 g/cm³ (20 °C)
Storage Temperature: Refrigerator

CAUTION : Due to the very low boiling point of this product (21°C), cool the bottle in ice before opening.

Assay	Min. 99 %
n 20/D	1.330 - 1.332

Cat. No.	Pk	Pack type
20877.265	500 ml	Glass bottle

N-(2-Acetamido)-2-aminoethanesulphonic acid (ACES), high purity

CAS 7365-82-4
$H_2NCOCH_2NHCH_2CH_2SO_3H$ **M.W.** 182.2 g/mol
Melting Pt: 270-295 °C
Storage Temperature: Ambient

Abs.@280nm (5%, Water)	< = 0.02
pH (1%, Water) @25°C	3.6 - 4.4
pKa @25°C	6.58 - 6.98
Purity	>= 99 %
Water (Karl Fisher)	<= 1 %

Cat. No.	Pk	Pack type
0285-100G	100 g	Plastic bottle
0285-1KG	1 kg	Plastic bottle

N-(2-Acetamido)-2-aminoethanesulphonic acid (ACES)

CAS 7365-82-4
$H_2NCOCH_2NHCH_2CH_2SO_3H$ **M.W.** 182.2 g/mol
Melting Pt: 270-295 °C
Storage Temperature: Ambient

Assay (potentiometric)	Min 99 %
pKa (20 °C)	6.9
Absorbance 250 nm (C = 2 %, H_2O - 10 mm)	0.1 max. (smooth curve between 230 to 350 nm)
Loss on drying (110 °C)	Max 0.2 %
Sulphated ash	Max 0.2 %
Sulphates (SO_4)	Max 0.005 %
Chloride (Cl)	Max 0.05 %
Cu (Copper)	Max 0.0005 %
Fe (Iron)	Max 0.0005 %
Na (Sodium)	Max 0.01 %
Pb (Lead)	Max 0.0005 %

Cat. No.	Pk	Pack type
441176C	1 kg	Plastic bottle

NEW Acetate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84951.180	100 ml	Plastic bottle

NEW Acetic acid 99% Ultrapure NORMATOM® for trace metal analysis

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 99%	Ag (Silver)	50 ppt
Al (Aluminium)	50 ppt	As (Arsenic)	50 ppt
Ba (Barium)	10 ppt	Be (Beryllium)	10 ppt
Bi (Bismuth)	10 ppt	Ca (Calcium)	50 ppt
Cd (Cadmium)	10 ppt	Ce (Cerium)	10 ppt
Co (Cobalt)	10 ppt	Cr (Chromium)	10 ppt
Cs (Cesium)	10 ppt	Cu (Copper)	10 ppt
Dy (Dysprosium)	1 ppt	Er (Erbium)	1 ppt
Eu (Europium)	1 ppt	Fe (Iron)	50 ppt
Ga (Gallium)	10 ppt	Gd (Gadolinium)	1 ppt
Ge (Germanium)	10 ppt	Hf (Hafnium)	10 ppt
Ho (Holmium)	1 ppt	In (Indium)	1 ppt
K (Potassium)	50 ppt	La (Lanthanum)	1 ppt
Li (Lithium)	10 ppt	Lu (Lutetium)	10 ppt
Mg (Magnesium)	50 ppt	Mn (Manganese)	10 ppt
Mo (Molybdenum)	10 ppt	Na (Sodium)	100 ppt
Nd (Neodymium)	1 ppt	Ni (Nickel)	50 ppt
Pb (Lead)	10 ppt	Pr (Praseodymium)	1 ppt
Pt (Platinum)	50 ppt	Rb (Rubidium)	10 ppt
Re (Rhenium)	10 ppt	Rh (Rhodium)	50 ppt
Ru (Ruthenium)	50 ppt	Sb (Antimony)	50 ppt
Sc (Scandium)	10 ppt	Se (Selenium)	Information only
Sm (Samarium)	1 ppt	Sn (Tin)	50 ppt
Sr (Strontium)	10 ppt	Tb (Terbium)	1 ppt
Te (Tellurium)	1 ppt		

Cat. No.	Pk	Pack type
85030.270	500 ml	Plastic bottle

Acetic acid ARISTAR® for trace analysis

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH **M.W.** 60.05 g/mol
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	99.8 - 100.0 %	Colour	Max. 10 APHA
Acetaldehyde	Max. 2 ppm	Acetone	Max. 1 ppm
Substances reducing dichromate (Cr^{6+})	Max. 100 ppm	Freezing point	Min. 16.3 °C
Cl (Chloride)	Max. 0.1 ppm	PO_4 (Phosphate)	Max. 0.1 ppm
SO_4 (Sulphate)	Max. 0.5 ppm	Ag (Silver)	Max. 0.010 ppm
Al (Aluminium)	Max. 0.005 ppm	As (Arsenic)	Max. 0.003 ppm
Au (Gold)	Max. 0.020 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.005 ppm	Be (Beryllium)	Max. 0.010 ppm
Bi (Bismuth)	Max. 0.050 ppm	Ca (Calcium)	Max. 0.200 ppm
Cd (Cadmium)	Max. 0.003 ppm	Cr (Chromium)	Max. 0.010 ppm
Co (Cobalt)	Max. 0.005 ppm	Cu (Copper)	Max. 0.003 ppm
Fe (Iron)	Max. 0.050 ppm	Ga (Gallium)	Max. 0.010 ppm
Ge (Germanium)	Max. 0.020 ppm	Hg (Mercury)	Max. 0.002 ppm
In (Indium)	Max. 0.010 ppm	K (Potassium)	Max. 0.050 ppm
Li (Lithium)	Max. 0.010 ppm	Mg (Magnesium)	Max. 0.010 ppm
Mn (Manganese)	Max. 0.005 ppm	Mo (Molybdenum)	Max. 0.005 ppm
Na (Sodium)	Max. 0.200 ppm	Ni (Nickel)	Max. 0.005 ppm
Pb (Lead)	Max. 0.005 ppm	Pt (Platinum)	Max. 0.050 ppm
Sn (Tin)	Max. 0.050 ppm	Sr (Strontium)	Max. 0.005 ppm
Ti (Titanium)	Max. 0.050 ppm	Tl (Thallium)	Max. 0.050 ppm
V (Vanadium)	Max. 0.010 ppm	Zn (Zinc)	Max. 0.050 ppm
Zr (Zirconium)	Max. 0.050 ppm	Substances reducing $K_2Cr_2O_7$	Passes test
Substances reducing $KMnO_4$	Passes test	Dilution test	Passes test
Non-volatile matter	Max. 5 ppm		

Cat. No.	Pk	Pack type
450013Y	500 ml	Glass bottle SAFEBREAK

Acetic acid 99% NORMATOM® for trace metal analysis

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 99 %	Colouration	Max. 10 APHA
Cl (Chloride)	Max. 1 ppm	PO_4 (Phosphate)	Max. 1 ppm
SO_4 (Sulphate)	Max. 0.5 ppm	Ag (Silver)	Max. 1 ppb
Al (Aluminium)	Max. 1 ppb	As (Arsenic)	Max. 0.5 ppb
Ba (Barium)	Max. 0.5 ppb	Be (Beryllium)	Max. 0.1 ppb
Bi (Bismuth)	Max. 0.1 ppb	Ca (Calcium)	Max. 1 ppb
Cd (Cadmium)	Max. 0.5 ppb	Ce (Cerium)	Max. 0.1 ppb
Co (Cobalt)	Max. 0.1 ppb	Cr (Chromium)	Max. 1 ppb
Cs (Cesium)	Max. 0.1 ppb	Cu (Copper)	Max. 0.5 ppb
Dy (Dysprosium)	Max. 0.1 ppb	Er (Erbium)	Max. 0.1 ppb
Eu (Europium)	Max. 0.1 ppb	Fe (Iron)	Max. 1 ppb
Ga (Gallium)	Max. 0.1 ppb	Gd (Gadolinium)	Max. 0.1 ppb
Ge (Germanium)	Max. 0.5 ppb	Hf (Hafnium)	Max. 0.1 ppb
Hg (Mercury)	Max. 1 ppb	Ho (Holmium)	Max. 0.1 ppb
In (Indium)	Max. 0.1 ppb	K (Potassium)	Max. 1 ppb
La (Lanthanum)	Max. 0.1 ppb	Li (Lithium)	Max. 0.1 ppb
Lu (Lutetium)	Max. 0.1 ppb	Mg (Magnesium)	Max. 0.5 ppb
Mn (Manganese)	Max. 0.5 ppb	Mo (Molybdenum)	Max. 0.5 ppb
Na (Sodium)	Max. 1 ppb	Nd (Neodymium)	Max. 0.1 ppb
Ni (Nickel)	Max. 0.5 ppb	Pb (Lead)	Max. 0.1 ppb
Pr (Praseodymium)	Max. 0.1 ppb	Pt (Platinum)	Max. 0.5 ppb
Rb (Rubidium)	Max. 0.1 ppb	Rh (Rhodium)	Max. 0.1 ppb
Ru (Ruthenium)	Max. 0.5 ppb	Sb (Antimony)	Max. 0.5 ppb
Sc (Scandium)	Max. 0.1 ppb	Sm (Samarium)	Max. 0.1 ppb
Se (Selenium)	Max. 1 ppb	Sn (Tin)	Max. 0.5 ppb
Sr (Strontium)	Max. 0.5 ppb	Tb (Terbium)	Max. 0.1 ppb
Te (Tellurium)	Max. 0.5 ppb	Th (Thorium)	Max. 0.1 ppb
Ti (Titanium)	Max. 0.5 ppb	Tl (Thallium)	Max. 0.1 ppb
Tm (Thulium)	Max. 0.1 ppb	U (Uranium)	Max. 0.1 ppb
V (Vanadium)	Max. 0.5 ppb	W (Tungsten)	Max. 0.5 ppb
Y (Yttrium)	Max. 0.1 ppb	Yb (Ytterbium)	Max. 0.1 ppb
Zn (Zinc)	Max. 1 ppb	Zr (Zirconium)	Max. 0.1 ppb

Cat. No.	Pk	Pack type
83876.270	500 ml	Plastic bottle
83876.330	2,5 l	Plastic bottle

NEW Acetic acid 99% HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay (on anhydrous substance)	Min. 99.8%
Evaporation residue	Max. 0.0001%
Water	Max. 0.1%
Calcium (0.1% Aqueous solution)	Max. 0.2 ppm
Potassium (0.1% Aqueous solution)	Max. 0.2 ppm
Magnesium (0.1% Aqueous solution)	Max. 0.2 ppm
Sodium (0.1% Aqueous solution)	Max. 0.5 ppm
Transmittance (255 nm - 0.1% Aqueous solution)	Min 10%
Transmittance (260 nm - 0.1% Aqueous solution)	Min 50%
Transmittance (270 nm - 0.1% Aqueous solution)	Min 80%
Transmittance (280 nm - 0.1% Aqueous solution)	Min 95%
Transmittance (300 nm - 0.1% Aqueous solution)	Min 99%

Cat. No.	Pk	Pack type
84874.180	100 ml	Glass bottle
84874.260	500 ml	Glass bottle
84874.290	1 l	Glass bottle

Acetic acid HiPerSolv CHROMANORM® for HPLC

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH **M.W.** 60.05 g/mol
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 99.9 %
Evaporation residue	Max. 10 ppm
Water	Max. 0.15 %
Transmittance (254 nm)	Min. 5 %
Transmittance (280 nm)	Min. 95 %

Cat. No.	Pk	Pack type
20108.230	250 ml	Glass bottle
20108.292	1 l	Glass bottle

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Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH **M.W.** 60.05 g/mol
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	99.8 - 100.5 %	Appearance	Passes test Ph.Eur.
Dilution test	Passes test ACS	IR Spectrum	Passes test
Substances reducing dichromate	Passes test ACS	Substances reducing $KMnO_4$	Passes test
Alkalinity	Max. 0.0004 meq/g	Boiling point	117 - 119 °C
Colouration	Max. 10 APHA	Solidification point	16.2 - 16.6 °C
Substances coloured by H_2SO_4	Max. 150 APHA	Acetaldehyde	Max. 2 ppm
Acetic anhydride	Max. 100 ppm	Evaporation residue	Max. 5 ppm
Formate	Max. 0.05 %	Heavy metals (as Pb)	Max. 0.5 ppm
Ignition residue (SO_4)	Max. 10 ppm	Water	Max. 0.25 %
Cl (Chloride)	Max. 0.5 ppm	NO_3 (Nitrate)	Max. 2 ppm
PO_4 (Phosphate)	Max. 0.5 ppm	SO_4 (Sulphate)	Max. 1 ppm
Ag (Silver)	Max. 0.5 ppm	Al (Aluminium)	Max. 0.03 ppm
As (Arsenic)	Max. 0.01 ppm	Ba (Barium)	Max. 0.01 ppm
Be (Beryllium)	Max. 0.01 ppm	Bi (Bismuth)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.2 ppm	Cd (Cadmium)	Max. 0.02 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.08 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.2 ppm
Ge (Germanium)	Max. 0.02 ppm	K (Potassium)	Max. 0.1 ppm
Li (Lithium)	Max. 0.5 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.01 ppm	Mo (Molybdenum)	Max. 0.02 ppm
Na (Sodium)	Max. 1 ppm	Ni (Nickel)	Max. 0.1 ppm
Pb (Lead)	Max. 0.02 ppm	Sr (Strontium)	Max. 0.01 ppm
Ti (Titanium)	Max. 0.02 ppm	Tl (Thallium)	Max. 0.02 ppm
V (Vanadium)	Max. 0.01 ppm	Zn (Zinc)	Max. 0.05 ppm
Zr (Zirconium)	Max. 0.02 ppm		

Cat. No.	Pk	Pack type
20104.243	1 l	Glass bottle SAFEBREAK
20104.298	1 l	Glass bottle
20104.312	1 l	Plastic bottle
20104.323	2,5 l	Glass bottle SAFEBREAK
20104.334	2,5 l	Plastic bottle
20104.367	5 l	Plastic bottle
20104.447	20 l	Plastic drum
20104.551	200 l	Plastic drum

Acetic acid analytical reagent, for cryoscopy

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH **M.W.** 60.05 g/mol
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 99.9 %	Substances reducing dichromate	Passes test ACS
Colouration	Max. 10 APHA	Solidification point	16.3 - 16.5 °C
Substances coloured by H_2SO_4	Max. 150 APHA	Evaporation residue	Max. 10 ppm
Ignition residue (SO_4)	Max. 10 ppm	Water	Max. 0.15 %
Cl (Chloride)	Max. 1 ppm	NO_3 (Nitrate)	Max. 1 ppm
SO_4 (Sulphate)	Max. 1 ppm	Ag (Silver)	Max. 0.5 ppm
Al (Aluminium)	Max. 0.05 ppm	As (Arsenic)	Max. 0.01 ppm
Ba (Barium)	Max. 0.01 ppm	Be (Beryllium)	Max. 0.01 ppm
Bi (Bismuth)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.2 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.08 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 0.3 ppm	Ge (Germanium)	Max. 0.05 ppm
K (Potassium)	Max. 0.1 ppm	Li (Lithium)	Max. 0.5 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.01 ppm
Mo (Molybdenum)	Max. 0.02 ppm	Na (Sodium)	Max. 0.5 ppm
Ni (Nickel)	Max. 0.1 ppm	Pb (Lead)	Max. 0.02 ppm
Sr (Strontium)	Max. 0.01 ppm	Ti (Titanium)	Max. 0.1 ppm
Tl (Thallium)	Max. 0.05 ppm	V (Vanadium)	Max. 0.01 ppm
Zn (Zinc)	Max. 0.05 ppm	Zr (Zirconium)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
20105.292	1 l	Glass bottle

Acetic acid 100% Ph. Eur.

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH **M.W.** 60.05 g/mol
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	99.5 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test Ph.Eur.
Identification (Acetate)	Passes test
Solution S	Passes test Ph.Eur.
Appearance test	Passes test Ph.Eur.
Freezing point	Min. 15.6 °C
Oxidisable substances	Passes test USP
Reducing substances	Passes test Ph.Eur.
Cl (Chloride)	Passes test USP
Cl (Chloride)	Max. 25 mg/l
SO_4 (Sulphate)	Passes test USP
SO_4 (Sulphate)	Max. 50 mg/l
Fe (Iron)	Max. 5 ppm
Heavy metals (as Pb)	Max. 5 ppm
Residue on evaporation	Max. 5 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
20102.292	1 l	Glass bottle
20102.320	2,5 l	Glass bottle
20102.463	25 l	Plastic drum
20102.550	210 l	Plastic drum

Acetic acid 99-100% GPR RECTAPUR®

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 99.5 %
Solidification point	16.0 - 16.6 °C
Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 50 ppm
Non-volatile residue	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
20103.295	1 l	Glass bottle
20103.330	2,5 l	Plastic bottle
20103.364	5 l	Plastic bottle
20103.444	20 l	Plastic drum

Acetic acid

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH **M.W.** 60.05 g/mol
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 98 %

Cat. No.	Pk	Pack type
84528.290	1 l	Plastic bottle
84528.360	5 l	Plastic bottle
84528.460	25 l	Plastic drum

Acetic acid 96% AnalaR NORMAPUR® analytical reagent

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH
Boiling Pt: 118 °C (1013 hPa) **Melting Pt:** 17 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475328-30

Assay	Min. 96.0 %	Substances reducing Cr^{6+} (as O)	Passes test
Colouration	Max. 10 APHA	Evaporation residue	Max. 10 ppm
Cl (Chloride)	Max. 1 ppm	SO_4 (Sulphate)	Max. 1 ppm
Ag (Silver)	Max. 0.5 ppm	Al (Aluminium)	Max. 0.05 ppm
As (Arsenic)	Max. 0.01 ppm	Ba (Barium)	Max. 0.01 ppm
Be (Beryllium)	Max. 0.02 ppm	Bi (Bismuth)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.2 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.08 ppm
Cu (Copper)	Max. 0.05 ppm	Fe (Iron)	Max. 0.4 ppm
Ge (Germanium)	Max. 0.05 ppm	K (Potassium)	Max. 0.1 ppm
Li (Lithium)	Max. 0.5 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.01 ppm	Mo (Molybdenum)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.1 ppm
Pb (Lead)	Max. 0.02 ppm	Sr (Strontium)	Max. 0.01 ppm
Ti (Titanium)	Max. 0.05 ppm	Tl (Thallium)	Max. 0.05 ppm
V (Vanadium)	Max. 0.01 ppm	Zn (Zinc)	Max. 0.05 ppm
Zr (Zirconium)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20099.290	1 l	Glass bottle
20099.324	2,5 l	Glass bottle SAFEBREAK

Acetic acid 90% GPR RECTAPUR®

Danger

CAS 64-19-7 **UN:** 2789
H_3CCOOH
Storage Temperature: Ambient

Assay	89 - 91 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 50 ppm

Cat. No.	Pk	Pack type
20109.295	1 l	Glass bottle
20109.364	5 l	Plastic bottle

Acetic acid 80% TECHNICAL

Danger

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Storage Temperature: Ambient

Assay	78 - 82 %
Density (20/4)	1.068 - 1.070

Cat. No.	Pk	Pack type
20119.368	5 l	Plastic bottle

Acetic acid 60% TECHNICAL

Danger

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Density: 1.06
Storage Temperature: Ambient

Assay	59 - 61 %

Cat. No.	Pk	Pack type
20127.366	5 l	Plastic bottle

Acetic acid 50%

Danger

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Density: 1.06
Storage Temperature: Ambient

Assay	49.5 - 50.5 %

Cat. No.	Pk	Pack type
20123.363	5 l	Plastic bottle

Acetic acid 32% TECHNICAL

Danger

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Density: 1.04
Storage Temperature: Ambient

Assay	Min. 32 %

Cat. No.	Pk	Pack type
20132.364	5 l	Plastic bottle

Acetic acid 30% Reag. Ph. Eur. 1000401

Danger

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87758.290	1 l	Plastic bottle

Acetic acid 12% Reag. Ph. Eur. 1000402

Warning

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87759.290	1 l	Plastic bottle

Acetic acid 12%

Warning

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Density: 1.01
Storage Temperature: Ambient

Assay	11.9 - 12.1 %

Cat. No.	Pk	Pack type
20121.366	5 l	Plastic bottle

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NEW Acetic acid 2 N USP test solutions (TS) 34

Warning

CAS 64-19-7 **UN:** 2790
H_3CCOOH
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85382.180	100 ml	Glass bottle
85382.260	500 ml	Glass bottle

Acetic acid 1 mol/l (1 N) AVS TITRINORM® volumetric solution

CAS 64-19-7
H_3CCOOH
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30010.292	1 l	Plastic bottle

Acetic acid ammonium salt

See Ammonium acetate p.30

Acetic acid butyl ester

See Butyl acetate p.71

Acetic acid cadmium salt dihydrate

See Cadmium acetate dihydrate p.73

Acetic acid calcium salt hydrate

See Calcium acetate hydrate p.74

Acetic acid cobalt (II) salt tetrahydrate

See Cobalt (II) acetate tetrahydrate p.93

Acetic acid dimethylamide

See N,N-Dimethylacetamide p.117

Acetic acid ethyl ester

See Ethyl acetate p.152

Acetic acid lead (II) salt basic

See Lead (II) acetate basic p.238

Acetic acid lead (II) salt trihydrate

See Lead (II) acetate trihydrate p.238

Acetic acid magnesium salt tetrahydrate

See Magnesium acetate tetrahydrate p.245

Acetic acid mercury (II) salt

See Mercury (II) acetate p.253

Acetic acid potassium salt

See Potassium acetate p.358

Acetic acid sodium salt trihydrate

See Sodium acetate trihydrate p.408

Acetic acid sodium salt

See Sodium acetate p.407

Acetic acid zinc salt dihydrate

See Zinc acetate dihydrate p.524

Acetic anhydride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 108-24-7 **UN:** 1715
$(CH_3CO)_2O$ **M.W.** 102.09 g/mol
Boiling Pt: 139,9 °C (1013 hPa) **Melting Pt:** -73 °C **Density:** 1,08 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486470-36

Assay	Min. 98.0 %	IR Spectrum	Passes test
Substances reducing $KMnO_4$	Passes test ACS	Boiling point	136 - 142 °C
Colouration	Max. 20 APHA	Substances coloured by H_2SO_4	Max. 100 APHA
Evaporation residue	Max. 30 ppm	Heavy metals (as Pb)	Max. 2 ppm
Substances reducing Cr^{6+} (as O)	Max. 0.03 %	Cl (Chloride)	Max. 2 ppm
PO_4 (Phosphate)	Max. 5 ppm	SO_4 (Sulphate)	Max. 5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Cu (Copper)	Max. 0.05 ppm
Fe (Iron)	Max. 2 ppm	Ni (Nickel)	Max. 0.05 ppm
Pb (Lead)	Max. 0.05 ppm	Zn (Zinc)	Max. 0.05 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
21390.293	1 l	Glass bottle
21390.330	2,5 l	Plastic bottle

Acetic anhydride GPR RECTAPUR®

Danger

CAS 108-24-7 **UN:** 1715
$(CH_3CO)_2O$ **M.W.** 102.09 g/mol
Boiling Pt: 139,9 °C (1013 hPa) **Melting Pt:** -73 °C **Density:** 1,08 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486470-36

Assay	Min. 96 %
Evaporation residue	Max. 100 ppm
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21389.298	1 l	Glass bottle
21389.367	5 l	Plastic bottle

Acetic anhydride 25% in pyridine Reag. Ph. Eur. 1000501

Danger

CAS 108-24-7 **UN:** 1282
$(CH_3CO)_2O$ **M.W.** 102.09 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87760.290	1 l	Plastic bottle

Acetone ARISTAR® for trace analysis

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay	Min. 99.8 %	Identity (IR)	Conforms
Resistivity (MOhm-cm)	Min. 5.0	Colour	Max. 10 APHA
Water	Max. 0.10 %	Free acid	Min. 20 ppm
Free alkali	Min. 2 ppm	Aldehydes (as HCHO)	Max. 10 ppm
Evaporation residue	Max. 5 ppm	Cl (Chloride)	Max. 0.5 ppm
SO_4 (Sulphate)	Max. 1 ppm	Heavy metals (as Pb)	Max. 0.1 ppm
Ethanol	Max. 100 ppm	Methanol	Max. 500 ppm
Ag (Silver)	Max. 0.01 ppm	Al (Aluminium)	Max. 0.05 ppm
As (Arsenic)	Max. 0.01 ppm	Au (Gold)	Max. 0.02 ppm
B (Boron)	Max. 0.01 ppm	Ba (Barium)	Max. 0.005 ppm
Be (Beryllium)	Max. 0.01 ppm	Bi (Bismuth)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.05 ppm	Cd (Cadmium)	Max. 0.005 ppm
Co (Cobalt)	Max. 0.005 ppm	Cr (Chromium)	Max. 0.005 ppm
Cu (Copper)	Max. 0.005 ppm	Fe (Iron)	Max. 0.02 ppm
Ga (Gallium)	Max. 0.01 ppm	In (Indium)	Max. 0.01 ppm
K (Potassium)	Max. 0.02 ppm	Li (Lithium)	Max. 0.01 ppm
Mg (Magnesium)	Max. 0.005 ppm	Mn (Manganese)	Max. 0.005 ppm
Mo (Molybdenum)	Max. 0.005 ppm	Na (Sodium)	Max. 0.05 ppm
Ni (Nickel)	Max. 0.005 ppm	Pb (Lead)	Max. 0.005 ppm
Pt (Platinum)	Max. 0.0500 ppm	Sb (Antimony)	Max. 0.01 ppm
Sn (Tin)	Max. 0.02 ppm	Sr (Strontium)	Max. 0.005 ppm
Ti (Titanium)	Max. 0.02 ppm	Tl (Thallium)	Max. 0.01 ppm
V (Vanadium)	Max. 0.01 ppm	Zn (Zinc)	Max. 0.01 ppm
Zr (Zirconium)	Max. 0.02 ppm	Substances reducing $KMnO_4$ (as O)	Max. 2.50 ppm

Cat. No.	Pk	Pack type
451004L	2,5 l	Glass bottle SAFEBREAK

Acetone HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.2 %
Absorbance (345 nm)	Max. 0.3
Absorbance (350 nm)	Max. 0.1
Absorbance (360 nm)	Max. 0.01
Transmittance (345 nm)	Min. 50 %
Transmittance (350 nm)	Min. 80 %
Transmittance (360 nm)	Min. 98 %

Cat. No.	Pk	Pack type
20067.290	1 l	Glass bottle
20067.320	2,5 l	Glass bottle
20067.400	4 l	Glass bottle

Acetone SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56.2 °C (1013 hPa) **Melting Pt:** -95.4 °C **Density:** 0.792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.2 %
Transmittance (330 nm)	Min. 20 %
Transmittance (340 nm)	Min. 85 %
Transmittance (350 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84700.290	1 l	Glass bottle
84700.320	2,5 l	Glass bottle

Acetone, anhydrous (max. 0.01% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (calculated on anhydrous)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.0100 %

Cat. No.	Pk	Pack type
83683.230	250 ml	Glass bottle with septum cap
83683.290	1 l	Glass bottle

NEW Acetone, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85653.180	100 ml	Glass bottle

NEW Acetone PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Appearance	Clear colourless liquid
Identity (IR)	Conforms
Assay (calculated on anhydrous)	Min. 99.9 %
Residue after evaporation	Max. 0.0003 %(m)
Water	Max. 0.3 %(m)
Colour	Max. 10 APHA
GC/ECD dioxins, furans and PCB's	Max. 5 ng/l
GC/ECD any pesticide (as Lindane)	Max. 5 ng/l
GC/NPD any pesticide (as Parathion)	Max. 10 ng/l
GC/ECD 1,2,4-TCB to deca-PCB(as Lindane)	Max. 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max. 2.0 ng/ml
GC/FID C_{10} to C_{40} (as n-Decane)	Max. 2.0 ng/ml
GC/MSD C_{10} to C_{40} (as Decane; 30-600amu)	Max. 2.0 ng/ml

Cat. No.	Pk	Pack type
85384.320	2,5 l	Glass bottle

Acetone PESTINORM® for capillary GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue (100°C)	Max. 0.0005 %
Organic residue (as Octanol) (GC/FID)	Max. 10 ng/ml
Halogenated residue (as Lindane)(GC/ECD)	Max. 5 ng/l
Water	Max. 0.3 %

Cat. No.	Pk	Pack type
83960.320	2,5 l	Glass bottle

Acetone PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay (on anhydrous substance)	Min. 99.70 %
Evaporation residue	Max. 5 ppm
Water	Max. 0.20 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83656.290	1 l	Glass bottle
83656.320	2,5 l	Glass bottle

Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay (on anhydrous substance)	Min. 99.8 %	Appearance of solution	Passes test Ph.Eur.
Aqueous solution	Passes test	Identification B	Passes test Ph.Eur.
Identification C	Passes test Ph.Eur.	Insolubility in water	Passes test
IR Spectrum	Passes test	Related substances	Passes test Ph.Eur.
Acidity	Max. 0.0003 meq/g	Alkalinity	Max. 0.0003 meq/g
Boiling point	56.0 - 56.7 °C	Colouration	Max. 10 APHA
Density (20/4)	0.790 - 0.792	Density (20/20)	0.790 - 0.793
Aldehydes (as HCHO)	Max. 10 ppm	Ethanol	Max. 100 ppm
Evaporation residue	Max. 5 ppm	Methanol	Max. 0.05 %
Propan-2-ol	Max. 100 ppm	Substances reducing $KMnO_4$ (as O)	Max. 2 ppm
Water	Max. 0.2 %	PO_4 (Phosphate)	Max. 100 ppb
Al (Aluminium)	Max. 0.1 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.05 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.01 ppm
Fe (Iron)	Max. 0.05 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.01 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.01 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.01 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
20066.296	1 l	Glass bottle
20066.310	1 l	Plastic bottle
20066.321	2,5 l	Glass bottle
20066.330	2,5 l	Plastic bottle
20066.423	2,5 l	Glass bottle SAFEBREAK
20066.365	5 l	Plastic bottle
20066.467	25 l	Metal drum
20066.558	200 l	Metal drum with liner

Acetone Ph. Eur.

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay	Min. 99.0 %
Appearance	Clear colourless liquid
Identification B	Passes test
Identification C	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Relative density	0.79 - 0.793
Reducing substances	Passes test
Methanol (V/V)	Max. 0.05 %
Propan-2-ol (V/V)	Max. 0.05 %
Benzene (V/V)	Max. 2 ppm
Any other impurity (V/V)	Max. 0.05 %
Matter insoluble in water	Passes test
Residue on evaporation	Max. 50 ppm
Water	Max. 3 g/l
Residual solvents	Passes test
Mesityl oxide (*)	Max. 10 ppm
Statement of original manufacturer	(*)

Cat. No.	Pk	Pack type
20165.298	1 l	Glass bottle
20165.323	2,5 l	Glass bottle
20165.367	5 l	Metal can
20165.460	25 l	Metal drum

Acetone GPR RECTAPUR®

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Related substances	Passes test
Boiling point	56 - 56.7 °C
Density (20/4)	0.79 - 0.793
Evaporation residue	Max. 20 ppm
Assay	Min. 99.5 %
Acidity	Passes test
Alkalinity	Passes test
Appearance of solution	Passes test
Insolubility in water	Passes test
IR Spectrum	Passes test
Substances reducing $KMnO_4$ (as O)	Max. 2 ppm
Water	Max. 0.3 %

Cat. No.	Pk	Pack type
20065.293	1 l	Plastic bottle
20065.327	2,5 l	Plastic bottle
20065.362	5 l	Plastic bottle
20065.464	25 l	Metal drum
20065.470	25 l	Plastic drum
20065.555	200 l	Metal drum

Acetone TECHNICAL

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Assay	Min. 99 %
IR Spectrum	Passes test

Cat. No.	Pk	Pack type
20063.296	1 l	Plastic bottle
20063.365	5 l	Plastic container
20063.412	10 l	Plastic drum
20063.467	25 l	Plastic drum
20063.558	200 l	Metal drum

Acetone VLSI Selectipur® for the electronics industry

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Product from BASF

Cat. No.	Pk	Pack type
50488858.	2,5 l	Plastic bottle

Acetone Selectipur® for the electronics industry

Danger

CAS 67-64-1 **UN:** 1090
CH_3COCH_3 **M.W.** 58.08 g/mol
Boiling Pt: 56,2 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,792 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471330-49

Product from BASF

Cat. No.	Pk	Pack type
55954791.	146 kg	Steel drum

Acetone-[D6] (99,8% D) for NMR spectroscopy

Danger

CAS 666-52-4 **UN:** 1090
$D_3CC(O)CD_3$ **M.W.** 64.03 g/mol
Boiling Pt: 55,5 °C (1013 hPa) **Melting Pt:** -95,4 °C **Density:** 0,79 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.80 %
Water (HDO+D_2O)	Max. 0.02 %

Cat. No.	Pk	Pk Info	Pack type
87152.0010	10 ml	-	Glass bottle
87152.0011	10 ml	-	Glass bottle with septum cap
87152.0025	25 ml	-	Glass bottle
87152.0100	100 ml	-	Glass bottle
87152.0006	1 Pack	10× 0,6 ml vials	Glass ampoule

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VWR chemicals & Bürkle pumps —

a perfect team for filling off safely

Solvent Pumps

Made of long-lasting high quality materials and especially constructed for filling off solvents like e.g. Acetone, Methanol. Ex-proof certified.

Mini solvent pump		
Pump capacity approx. l/min	Connector thread	Item no.
1.8	GL 45	223-0104
Accessories		
Thread adapter, PTFE, internal thread: S40, external thread: GL45		223-0101
Thread adapter, ETFE, internal thread: GL38, external thread: GL45		223-0102
Thread adapter, ETFE, internal thread: GL32, external thread: GL45		223-0103

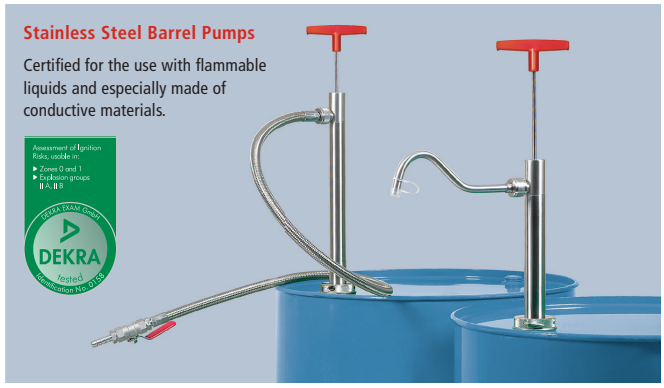
Solvent pump foot operated				
Model	Immersion depth cm	Connector thread	Pump capacity approx. l/min	Item no.
Discharge hose/stopcock	95	2″	20	223-0063
Discharge tube	95	2″	20	223-0062
Solvent pump hand operated				
Model	Immersion depth cm	Connector thread	Pump capacity approx. l/min	Item no.
Hand operated	60	2″	10	223-0067

PTFE Barrel Pumps Ultrapure

The all-rounder! Resistant against almost all chemicals, even very aggressive ones, and suitable for transferring ultra-pure liquids.

Stainless Steel Barrel Pumps

Certified for the use with flammable liquids and especially made of conductive materials.



PTFE barrel pump Ultrapure – discharge tube		
Immersion depth cm	Pump capacity ml/stroke	Item no.
60	270	223-0094
95	400	223-0038
PTFE barrel pump Ultrapure – discharge hose		
Immersion depth cm	Pump capacity ml/stroke	Item no.
60	270	223-0121
95	400	223-0096

Stainless steel barrel pump				
Model	Immersion depth cm	Total length cm	Pump capacity ml/stroke	Item no.
Discharge hose/stopcock	57	69	350	223-1234
Discharge hose/stopcock	91	103	560	223-1235
Discharge tube	57	69	350	223-1313
Discharge tube	91	103	560	223-1314

OTAL®-/PP-Pumps

The wide range of OTAL® and PP-Pumps include reliable solutions for acids, alkalis and detergents.

PP barrel pump – discharge tube			
Immersion depth cm	Total length cm	Pump capacity ml/stroke	Item no.
65	74	230	223-1221
100	109	300	223-0075
PP barrel pump – discharge hose/stopcock			
Immersion depth cm	Total length cm	Pump capacity ml/stroke	Item no.
65	74	230	223-1227
100	109	300	223-0077

OTAL® hand pump PP			
Immersion depth cm	Tube Ø mm	Pump capacity approx. l/min	Item no.
70	12	14	223-0006
70	18	26	223-1112
OTAL® foot pump PP			
Immersion depth cm	Tube Ø mm	Pump capacity approx. l/min	Item no.
70	15	20	223-0042
90	22	30	223-1122

Acetonitrile HiPerSolv CHROMANORM® ULTRA for LC-MS, suitable for UPLC/UHPLC-MS instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance)	Min. 99.95 %	Acidity	Max. 0.0001 meq/g
Alkalinity	Max. 0.0002 meq/g	Colouration	Max. 5 APHA
Density (20/4)	0.781 - 0.784	Density (20/20)	0.782 - 0.785
n 20/D	1.343 - 1.345	Evaporation residue	Max. 1 ppm
Water	Max. 10 ppm	Transmittance (190 nm)	Min. 50 %
Transmittance (193 nm)	Min. 60 %	Transmittance (195 nm)	Min. 90 %
Transmittance (200 nm)	Min. 98 %	Transmittance (210 nm)	Min. 98 %
Transmittance (215 nm)	Min. 99 %	Transmittance (220 nm)	Min. 99 %
Transmittance (230 nm)	Min. 99 %	Fluorescence (as quinine) (254/450 nm)	Max. 1 ppb
Fluorescence (as quinine) (365 nm)	Max. 0.5 ppb	Gradient grade (210 nm)	Max. 1 mAU
Gradient (254 nm)	Max. 1 mAU	MS-ESI+ (as Reserpine)	Max. 2 ppb
MS-APCI+ (as Reserpine)	Max. 2 ppb	MS-ESI- (as 4-Nitrophenol)	Max. 20 ppb
MS-APCI- (as 4-Nitrophenol)	Max. 20 ppb	Al (Aluminium)	Max. 20 ppb
Ba (Barium)	Max. 20 ppb	Ca (Calcium)	Max. 20 ppb
Cd (Cadmium)	Max. 20 ppb	Co (Cobalt)	Max. 20 ppb
Cu (Copper)	Max. 20 ppb	Fe (Iron)	Max. 20 ppb
K (Potassium)	Max. 20 ppb	Mg (Magnesium)	Max. 20 ppb
Mn (Manganese)	Max. 20 ppb	Na (Sodium) (at filling)	Max. 20 ppb
Ni (Nickel)	Max. 20 ppb	Pb (Lead)	Max. 20 ppb
Zn (Zinc)	Max. 20 ppb	Filtered at 0.2 µm	Confirmed

Cat. No.	Pk	Pack type
83642.320	2,5 l	Glass bottle

Acetonitrile HiPerSolv CHROMANORM® for LC-MS, suitable for UPLC/UHPLC instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,7820 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance)	Min. 99.9 %	Solution (100 g/l)	Passes test
Acidity	Max. 0.0001 meq/g	Alkalinity	Max. 0.0002 meq/g
Boiling point	80 - 82 °C	Colouration	Max. 10 APHA
Density (20/4)	0.781 - 0.784	Density (20/20)	0.782 - 0.785
n 20/D	1.343 - 1.345	Evaporation residue	Max. 2 ppm
Water	Max. 0.02 %	Al (Aluminium)	Max. 50 ppb
Ca (Calcium)	Max. 50 ppb	Fe (Iron)	Max. 50 ppb
K (Potassium)	Max. 50 ppb	Mg (Magnesium)	Max. 10 ppb
Na (Sodium)	Max. 100 ppb	Absorbance (191 nm)	Max. 0.5
Absorbance (200 nm)	Max. 0.1	Absorbance (210 nm)	Max. 0.02
Absorbance (215 nm)	Max. 0.01	Absorbance (220 nm)	Max. 0.01
Absorbance (230 nm)	Max. 0.005	Absorbance (from 240 nm)	Max. 0.005
Transmittance (191 nm)	Min. 30 %	Transmittance (195 nm)	Min. 80 %
Transmittance (200 nm)	Min. 95 %	Transmittance (210 nm)	Min. 96 %
Transmittance (215 nm)	Min. 98 %	Transmittance (220 nm)	Min. 98 %
Transmittance (230 nm)	Min. 99 %	Transmittance (from 240 nm)	Min. 99 %
Fluorescence (as quinine) (254/450 nm)	Max. 1 ppb	Gradient grade (210 nm)	Max. 3 mAU
Gradient (254 nm)	Max. 1 mAU	MS-ESI+ (as Reserpine)	Max. 2 ppb
MS-APCI+ (as Reserpine)	Max. 2 ppb	MS-ESI- (as 4-Nitrophenol)	Max. 20 ppb
MS-APCI- (as 4-Nitrophenol)	Max. 20 ppb	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
83640.290	1 l	Glass bottle
83640.320	2,5 l	Glass bottle
83640.400	4 l	Glass bottle

NEW Acetonitrile with 0.1% Acetic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol

Nominal concentration (V/V)	0.095 - 0.105 %
Evaporation residue	Max. 0.0001 %
Water	Max. 0.005 %
Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm
Transmittance (195 nm)	Min. 20 %
Transmittance (230 nm)	Min. 50 %
Transmittance (240 nm)	Min. 80 %
Transmittance (250 nm)	Min. 95 %
Transmittance (295 nm)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84872.290	1 l	Glass bottle
84872.320	2,5 l	Glass bottle

NEW Acetonitrile with 0.1% Formic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Storage Temperature: Ambient

Nominal concentration (V/V)	0.095 - 0.105 %	Evaporation residue	Max. 0.0001 %
Water	Max. 0.005 %	Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm	Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm	Transmittance (235 nm)	Min. 20 %
Transmittance (245 nm)	Min. 50 %	Transmittance (250 nm)	Min. 80 %
Transmittance (260 nm)	Min. 95 %	Transmittance (270 nm)	Min. 99 %
Suitable for LC-MS	Passes test		

Cat. No.	Pk	Pack type
84866.290	1 l	Glass bottle
84866.320	2,5 l	Glass bottle

NEW Acetonitrile with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Storage Temperature: Ambient

Nominal concentration (V/V)	0.095 - 0.105 %	Evaporation residue	Max. 0.0001 %
Water	Max. 0.005 %	Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm	Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm	Transmittance (195 nm)	Min. 20 %
Transmittance (200 nm)	Min. 50 %	Transmittance (245 nm)	Min. 80 %
Transmittance (260 nm)	Min. 95 %	Transmittance (270 nm)	Min. 99 %
Suitable for LC-MS	Passes test		

Cat. No.	Pk	Pack type
84869.290	1 l	Glass bottle
84869.320	2,5 l	Glass bottle

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Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/ UHPLC instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay	Min. 99.95 %	Solution (100 g/l)	Neutral
Acidity	Max. 0.0008 meq/g	Alkalinity	Max. 0.0006 meq/g
Boiling point	80 - 82 °C	Colouration	Max. 10 APHA
Density (20/4)	0.781 - 0.784	Density (20/20)	0.782 - 0.785
n 20/D	1.343 - 1.345	Evaporation residue	Max. 2 ppm
Water	Max. 30 ppm	Absorbance (190 nm)	Max. 1
Absorbance (195 nm)	Max. 0.1	Absorbance (200 nm)	Max. 0.02
Absorbance (210 nm)	Max. 0.02	Absorbance (220 nm)	Max. 0.01
Absorbance (230 nm)	Max. 0.01	Absorbance (240 nm)	Max. 0.005
Absorbance (250 nm)	Max. 0.005	Absorbance (240-420 nm)	Max. 0.005
Transmittance (190 nm)	Min. 10 %	Transmittance (195 nm)	Min. 80 %
Transmittance (200 nm)	Min. 95 %	Transmittance (210 nm)	Min. 96 %
Transmittance (220 nm)	Min. 97 %	Transmittance (230 nm)	Min. 98 %
Transmittance (240 nm)	Min. 99 %	Transmittance (250 nm)	Min. 99 %
Transmittance (240-420 nm)	Min. 99 %	Fluorescence (as quinine; 254 nm)	Max. 1 ppb
Gradient grade (210 nm)	Max. 3 mAU	Gradient (254 nm)	Max. 1 mAU
Conforms to ACS	Passes test	Conforms to ACS (HPLC/UV)	Passes test
Conforms to Reag. Ph.Eur.	Passes test	Conforms to USP	Passes test

Cat. No.	Pk	Pack type
83639.290	1 l	Glass bottle
83639.320	2,5 l	Glass bottle
83639.400	4 l	Glass bottle
83639.360	5 l	Aluminium bottle
83639.910	10 l	Aluminium bottle
83639.928	28 l	Aluminium bottle

Acetonitrile HiPerSolv CHROMANORM®, gradient grade for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance)	Min. 99.9 %	Acidity	Max. 0.0002 meq/g
Alkalinity	Max. 0.0002 meq/g	Evaporation residue	Max. 5 ppm
Water	Max. 0.02 %	Absorbance (195 nm)	Max. 0.1
Absorbance (200 nm)	Max. 0.05	Absorbance (210 nm)	Max. 0.02
Absorbance (220 nm)	Max. 0.02	Absorbance (240 nm)	Max. 0.005
Transmittance (195 nm)	Min. 80 %	Transmittance (200 nm)	Min. 90 %
Transmittance (210 nm)	Min. 94 %	Transmittance (220 nm)	Min. 96 %
Transmittance (240 nm)	Min. 99 %	Gradient grade (210 nm)	Max. 10 mAU

Cat. No.	Pk	Pack type
20060.290	1 l	Glass bottle
20060.320	2,5 l	Glass bottle
20060.420	2,5 l	Glass bottle SAFEBREAK
20060.360	5 l	Aluminium bottle

Acetonitrile HiPerSolv CHROMANORM®, isocratic grade for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance)	Min. 99.9 %	Acidity	Max. 0.0003 meq/g
Evaporation residue	Max. 5 ppm	Absorbance (200 nm)	Max. 0.1
Absorbance (210 nm)	Max. 0.1	Absorbance (220 nm)	Max. 0.05
Absorbance (230 nm)	Max. 0.01	Absorbance (250 nm)	Max. 0.005
Transmittance (200 nm)	Min. 80 %	Transmittance (210 nm)	Min. 85 %
Transmittance (220 nm)	Min. 90 %	Transmittance (230 nm)	Min. 98 %
Transmittance (250 nm)	Min. 98 %		

Cat. No.	Pk	Pack type
20048.290	1 l	Glass bottle
20048.320	2,5 l	Glass bottle
20048.360	5 l	Aluminium bottle

Acetonitrile HiPerSolv CHROMANORM® for preparative HPLC

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.02 %

Cat. No.	Pk	Pack type
84533.460	25 l	Metal drum
84533.550	200 l	Metal drum

Acetonitrile SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (GC)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.05 %
Transmittance (200 nm)	Min. 90 %
Transmittance (210 nm)	Min. 95 %
Transmittance (220 nm)	Min. 97 %
Transmittance (230 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84701.320	2,5 l	Glass bottle

Acetonitrile, anhydrous (max. 0.001 % H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

250 ml bottle with a septum cap featuring six separate re-sealable puncture points

Assay (calculated on dried substance) ..... Min. 99.8 %
Acidity ..... Max. 0.0005 meq/g
Residue on evaporation ..... Max. 0.0005 %
Water ..... Max. 10 ppm

Cat. No.	Pk	Pack type
83676.230	250 ml	Glass bottle with septum cap
83676.290	1 l	Glass bottle

Acetonitrile, anhydrous (max. 0.003% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance) ..... Min. 99.80 %
Acidity ..... Max. 0.0005 meq/g
Evaporation residue (100 °C) ..... Max. 0.0005 %
Water ..... Max. 30 ppm

Cat. No.	Pk	Pack type
83713.320	2,5 l	Glass bottle

NEW Acetonitrile, anhydrous (max. 0.001 % H_2O) for DNA synthesis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay ..... Min. 99.95 %
IR Spectrum ..... Passes test
Acidity ..... Max. 0.001 meq/g
Alkalinity ..... Max. 0.0002 meq/g
Colouration ..... Max. 10 APHA
Evaporation residue ..... Max. 1 ppm
Water ..... Max. 10 ppm

Cat. No.	Pk	Pack type
85501.290	1 l	Glass bottle
85501.320	2,5 l	Glass bottle
85501.400	4 l	Glass bottle

NEW Acetonitrile, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85654.180	100 ml	Glass bottle

Acetonitrile PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance) ..... Min. 99.70 %
Evaporation residue ..... Max. 5 ppm
Water ..... Max. 0.0500 %
Pesticide analysis (Ethylparathion/PND) ..... Max. 10 ng/l
Pesticide analysis (Lindane/ECD) ..... Max. 5 ng/l
Pesticide analysis (Lindane/ECD) ..... Max. 5 ng/l

Cat. No.	Pk	Pack type
83657.290	1 l	Glass bottle
83657.320	2,5 l	Glass bottle

Acetonitrile AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay (on anhydrous substance) ..... Min. 99.5 %
Solution (100 g/l) ..... Passes test
Alkalinity ..... Max. 0.0006 meq/g
Colouration ..... Max. 10 APHA
Density (20/20) ..... 0.782 - 0.785
Evaporation residue ..... Max. 10 ppm
CN (Cyanide) ..... Max. 50 ppm
Co (Cobalt) ..... Max. 0.01 ppm
Fe (Iron) ..... Max. 0.05 ppm
Ni (Nickel) ..... Max. 0.02 ppm
Zn (Zinc) ..... Max. 0.1 ppm
Conforms to ACS ..... Passes test
IR Spectrum ..... Passes test
Acidity ..... Max. 0.0002 meq/g
Boiling point ..... 80 - 82 °C
Density (20/4) ..... 0.781 - 0.784
n 20/D ..... 1.343 - 1.345
Water ..... Max. 0.15 %
Cd (Cadmium) ..... Max. 0.02 ppm
Cu (Copper) ..... Max. 0.04 ppm
Mn (Manganese) ..... Max. 0.01 ppm
Pb (Lead) ..... Max. 0.05 ppm
Transmittance (255-420 nm) ..... Min. 98 %
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
20071.294	1 l	Glass bottle
20071.328	2,5 l	Glass bottle
20071.460	25 l	Metal drum

Acetonitrile TECHNICAL

Danger

CAS 75-05-8 **UN:** 1648
H_3CCN **M.W.** 41.05 g/mol
Boiling Pt: 81,6 °C (1013 hPa) **Melting Pt:** -45,7 °C **Density:** 0,782 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471307-38

Assay ..... Min. 99 %
n 20/D ..... 1.343 - 1.345

Cat. No.	Pk	Pack type
20070.291	1 l	Glass bottle
20070.325	2,5 l	Glass bottle
20070.462	25 l	Metal drum
20070.553	192 l	Metal drum

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Acetonitrile-[D3] (99,8% D) for NMR spectroscopy

Danger

CAS 2206-26-0 **UN:** 1648
D_3CCN **M.W.** 44.03 g/mol
Boiling Pt: 80,7 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 0,844 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.80 %
Water (HDO+D_2O)	Max. 0.05 %

Cat. No.	Pk	Pack type
87155.0010	10 ml	Glass bottle
87155.0011	10 ml	Glass bottle with septum cap

2-Acetoxybenzoic acid

See o-Acetylsalicylic acid p.13

Acetylacetone AnalaR NORMAPUR® analytical reagent

Warning

CAS 123-54-6 **UN:** 2310
$CH_3COCH_2COCH_3$ **M.W.** 100.12 g/mol
Boiling Pt: 140,4 °C (1013 hPa) **Melting Pt:** -23 °C **Density:** 0,96945 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.0 %	Evaporation residue	Max. 50 ppm
Water	Max. 0.2 %	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 1 ppm	Pb (Lead)	Max. 1 ppm

Cat. No.	Pk	Pack type
20092.230	250 ml	Glass bottle

Acetylacetone TECHNICAL

Warning

CAS 123-54-6 **UN:** 2310
$CH_3COCH_2COCH_3$ **M.W.** 100.12 g/mol
Boiling Pt: 140,4 °C (1013 hPa) **Melting Pt:** -23 °C **Density:** 0,96945 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
n 20/D	1.450 - 1.452

Cat. No.	Pk	Pack type
20081.298	1 l	Glass bottle

Acetylacetone solution Reag. Ph. Eur. 1000901

CAS 123-54-6 **UN:** 2310
$CH_3COCH_2COCH_3$
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
87761.180	100 ml	Plastic bottle

Acetylsalicylic acid

See o-Acetylsalicylic acid p.13

o-Acetylsalicylic acid GPR RECTAPUR®

Warning

CAS 50-78-2
$2\text{-}(CH_3CO_2)C_6H_4CO_2H$ **M.W.** 180.16 g/mol
Boiling Pt: 140 °C (1013 hPa) **Melting Pt:** 138-140 °C **Density:** 1,39 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.05 %
Salicylic acid	Max. 0.05 %

Cat. No.	Pk	Pack type
20110.290	1 kg	Plastic bottle

Acetylthiocholine iodide

Danger

CAS 1866-15-5 **UN:** 2811
$H_3CC(S)O(CH_2)_2N(CH_3)_3I$ **M.W.** 289.18 g/mol
Melting Pt: 204 °C
Storage Temperature: Refrigerator
Substrate for acetylcholinesterase.

Assay (argentometric)	Min. 99.5 %
Identity (IR-spectrum)	passes test

Cat. No.	Pk	Pack type
400034L	10 g	Glass bottle

(2-Acetylthioethyl)trimethylammonium iodide

See Acetylthiocholine iodide p.13

Acids - High purity acids for trace metal analysis NORMATOM®

In trace analysis it's crucial to use a homogeneous solution, so samples are usually prepared by a digestion method with a mineral acid. The high purity of these acids is essential to avoid inaccuracy in the final results caused by impurities in these ancillary reagents. Two grades, NORMATOM® and NORMATOM® Ultra acids have been created to satisfy these exacting purity requirements. These Ultrapure, highly purified products have extensive specifications with most potential contaminants guaranteed at a level which does not exceed 0.5 ppb. Suitable for use with high resolution ICP-MS, ICP-MS and graphite furnace atomic absorption spectroscopy techniques.

- Very high quality (maximum permitted limits of impurity at ppb or ppt levels)
- Produced by sub-boiling distillation
- Supplied in specially cleaned HDPE, fluoropolymer FEP or PFA bottles
- Delivered with Certificate of Analysis

Description	Page	Pk	Cat. No.
Acetic acid 99% NORMATOM® for trace metal analysis	2	2,5 l	83876.330
Acetic acid 99% Ultrapure NORMATOM® for trace metal analysis	2	500 ml	85030.270
Ammonia 20% NORMATOM® for trace metal analysis	28	500 ml	83870.270
Ammonia 20% Ultrapure NORMATOM® for trace metal analysis	27	500 ml	85031.270
Hydrobromic acid 47% Ultrapure NORMATOM® for trace metal analysis	14, 196	500 ml	85032.270
Hydrochloric acid 34% NORMATOM® for trace metal analysis	14, 198	500 ml	83871.270
Hydrochloric acid 34% NORMATOM® for trace metal analysis	14, 198	1 l	83871.290
Hydrochloric acid 34% NORMATOM® for trace metal analysis	14, 198	2,5 l	83871.330
Hydrochloric acid 32% ULTRAPURE NORMATOM®, ultrapure for trace metal analysis	14, 199	500 ml	83878.270
Hydrochloric acid 32% ULTRAPURE NORMATOM®, ultrapure for trace metal analysis	14, 199	1 l	83878.290
Hydrofluoric acid 47% NORMATOM® for trace metal analysis	14, 205	500 ml	83873.260
Hydrofluoric acid 47% Ultrapure NORMATOM® for trace metal analysis	14, 204	500 ml	85029.270
Hydrofluoric acid 47% Ultrapure NORMATOM® for trace metal analysis	14, 204	1 l	85029.290
Nitric acid 67% ULTRAPURE NORMATOM® for trace metal analysis	14, 318	500 ml	83879.270
Nitric acid 67% ULTRAPURE NORMATOM® for trace metal analysis	14, 318	1 l	83879.290
Nitric acid 67% NORMATOM® for trace metal analysis	14, 319	500 ml	83872.270
Nitric acid 67% NORMATOM® for trace metal analysis	14, 319	1 l	83872.290
Nitric acid 67% NORMATOM® for trace metal analysis	14, 319	2,5 l	83872.330
Perchloric acid 65% NORMATOM® for trace metal analysis	14, 339	500 ml	83874.260
Perchloric acid 65% NORMATOM® for trace metal analysis	14, 339	2,5 l	83874.320
Perchloric acid 65% NORMATOM® for trace metal analysis	14, 339	2,5 l	83874.420
Sulphuric acid 93% NORMATOM® for trace metal analysis	14, 472	500 ml	83875.270
Sulphuric acid 93% NORMATOM® for trace metal analysis	14, 472	1 l	83875.290
Sulphuric acid 93% NORMATOM® for trace metal analysis	14, 472	2,5 l	83875.330
Sulphuric acid 93% ULTRAPURE NORMATOM for trace metal analysis	14, 472	500 ml	85028.270
Sulphuric acid 93% ULTRAPURE NORMATOM for trace metal analysis	14, 472	1 l	85028.290
Water NORMATOM® for trace metal analysis	14, 512	500 ml	83877.260
Water NORMATOM® for trace metal analysis	14, 512	1 l	83877.290

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Acid Blue 83

See Coomassie® Brilliant Blue R-250 ..... p.96

Acid Blue 90

See Coomassie® Brilliant Blue G-250 ..... p.96

Acid Blue 93

See Dyes and Stains p.290

Acidum ascorbicum

See L(+)-Ascorbic acid p.50

Acidum ascorbicum sodium salt

See Sodium L(+)-ascorbate p.409

Acrylamide (monomer) Electran® for electrophoresis

Danger

CAS 79-06-1 **UN:** 2074
CH_2=CHCONH$_2$ **M.W.** 71.08 g/mol
Boiling Pt: 232 °C (1013 hPa) **Melting Pt:** 84,5 °C **Density:** 1,122 g/cm^3 (20 °C)
Storage Temperature: Refrigerator

Identity	Passes test (IR)
Assay (by GC)	Min 99.9 %
pH (c = 5%, H_2O)	5.0 to 6.5
Absorbance 290 nm (C = 1% - 10 mm)	Max 0.15
Appearance of the solution (c = 50%, H_2O)	Clear and colourless
Maximum conductivity (50% w/v solution, 20 °C)	Max 2.0 mS/cm
Turbidity, 50% w/v in methanol (37 °C)	Max 3.0 NTU
Turbidity, 50% w/v in water	Max 2.0 NTU
Water-insoluble matter	Max 0.005 %
Water (Karl Fischer)	Max 0.1 %
Free acid (as Acrylic acid)	Max 0.001 %

Cat. No.	Pk	Pack type
442994J	1 kg	Plastic bottle

Acrylamide (monomer), ultrapure

Danger

CAS 79-06-1 **UN:** 2074
CH_2=CHCONH$_2$ **M.W.** 71.08 g/mol
Boiling Pt: 232 °C (1013 hPa) **Melting Pt:** 84,5 °C **Density:** 1,122 g/cm^3 (20 °C)
Storage Temperature: Refrigerator

Conductivity (40%, Water)	5 umhos	DNase	NONE
Free Acrylic Acid	<0.001 %	Identification	PASS
Insolubles	< 0.005 %	Iron	< 0.0001 %
Lead	< 0.0001 %	Magnesium	< 0.0001 %
Melting Point	84 - 86 °C	Moisture (KF)	< 0.2 %
pH (10%, 0.1 M NaCl) @25 °C	5.5 - 6.5	Protease	NONE
Purity	99.9 %	Reassay Date	REPORT
RNase	NONE		

Cat. No.	Pk	Pack type
0341-100G	100 g	Plastic bottle for solids
0341-500G	500 g	Plastic bottle for solids
0341-1KG	1 kg	Plastic bottle for solids

Acrylamide (monomer), proteomics grade

Danger

CAS 79-06-1 **UN:** 2074
CH_2=CHCONH$_2$ **M.W.** 71.08 g/mol
Boiling Pt: 232 °C (1013 hPa) **Melting Pt:** 84,5 °C **Density:** 1,122 g/cm^3 (20 °C)
Storage Temperature: Refrigerator

Conductivity (40%, Water)	< 5 umhos	DNase	none detected
Electrophoresis	Pass	Free Acrylic Acid	< 0.001 %
Appearance	White free-flowing, uniform crystals	Insolubles	< 0.005 %
Iron	< 0.0001 %	Lead	< 0.0001 %
Magnesium	< 0.0001 %	Melting Point	84°C - 86°C
Moisture (KF)	< 0.2 %	pH (10%, 0.1M NaCl) @25°C	< 6.5 %
Protease	none detected	Purity	>= 99.9%
RNase	none detected		

Cat. No.	Pk	Pack type
M120-100G	100 g	Plastic bottle for solids
M120-1KG	1 kg	Plastic bottle for solids

Acrylamide (monomer) 40% in aqueous solution Electran® for electrophoresis

Danger

CAS 79-06-1 **UN:** 3426
CH_2=CHCONH$_2$
Storage Temperature: Refrigerator

Appearance	Clear, colorless liquid
DNases/RNases/proteases	Not detected
Acrylic acid	Max. 0.001 %
Acrylamide	400 g/l

Cat. No.	Pk	Pack type
443545P	1 l	Glass bottle SAFEBREAK

Acrylamide (monomer) 40% in aqueous solution, ultrapure

Danger

CAS 79-06-1 **UN:** 3426
CH_2=CHCONH$_2$
Storage Temperature: Refrigerator

Acrylic Acid	< 0.005 %
Conductivity	<= 5 umhos
pH @25°C	6.0-7.0

Cat. No.	Pk	Pack type
0132-500ML	500 ml	Plastic bottle

Acrylamide (monomer) 40% in aqueous solution, proteomics grade

Danger

CAS 79-06-1 **UN:** 3426
CH_2=CHCONH$_2$
Storage Temperature: Refrigerator

Acrylic Acid	< 0.005%
Conductivity	< 5 umhos
DNase	none detected
Electrophoresis	Pass
pH @25°C	6 - 7
Protease	none detected
RNase	none detected

Cat. No.	Pk	Pack type
M121-100ML	100 ml	Plastic bottle
M121-500ML	500 ml	Plastic bottle

Acrylamide, linear (5 mg/ml) for biotechnology

A co-precipitant that improves the yield of nucleic acids in the precipitation steps of purification protocols. DNase- and RNase-free.

Cat. No.	Pk	Pack type
K548-5X1ML	5 ml	Vial

Acrylamide-Bis (37.5:1), ultrapure

Danger

UN: 3426

Storage Temperature: Refrigerator

Abs.@290 nm (1%, Water) (Bis) ..... ≤ 0.2
Acrylic Acid (Bis) ..... ≤ 0.001 %
Conductivity (Acryl) ..... ≤ 5 umhos
Conductivity (Bis) ..... 10 umhos
Free Acrylic Acid (Acryl) ..... ≤ 0.001 %
Iron (Acryl) ..... ≤ 0.0001 %
Lead (Acryl) ..... ≤ 0.0001 %
Melting Point (Acryl) ..... 84 - 86 °C
pH (10%, 0.1M NaCl) (Acryl) ..... 5.5 - 6.5
Purity (Acryl) ..... ≤ 99.9 %
Purity (Bis) ..... ≤ 99.0 %

Cat. No.	Pk	Pack type
0907-200G	200 g	Plastic bottle for solids

Acrylamide-Bis (37.5:1), 40% aqueous solution, ultrapure

Danger

UN: 3426

Storage Temperature: Ambient

Conductivity ..... 10 umhos
Electrophoresis ..... PASS
pH @25 °C ..... REPORT

Cat. No.	Pk	Pack type
0254-500ML	500 ml	Plastic bottle

Acrylamide-Bis (37.5:1), 40% aqueous solution

Danger

UN: 3426

Storage Temperature: Ambient

A 40% (w/v) solution of ultra pure acrylamide (38.96%) and bis-acrylamide (1.04%) at a final ratio of 37.5:1.

Conductivity (µmhos) ..... ≤ 10
DNase (P/F) ..... NONE
Electrophoresis (P/F) ..... PASS
pH @25 °C ..... REPORT
Polymerisation Time (minutes) ..... ≤ 20
Protease (P/F) ..... NONE
RNase (P/F) ..... NONE

Cat. No.	Pk	Pack type
M157-500ML	500 ml	Plastic bottle

Acrylamide-Bis (29:1), 40% aqueous solution, ultrapure

Danger

UN: 3426

Storage Temperature: Ambient

Conductivity ..... 10 umhos
Electrophoresis ..... PASS
pH @25 °C ..... REPORT

Cat. No.	Pk	Pack type
0311-500ML	500 ml	Plastic bottle
0311-1L	1 l	Plastic bottle

Acrylamide-Bis (19:1), 40% aqueous solution, ultrapure

Danger

UN: 3426

Density: 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

Conductivity ..... 10 umhos
DNase ..... NONE
Electrophoresis ..... PASS
pH @25 °C ..... REPORT
Protease ..... NONE
RNase ..... NONE

Cat. No.	Pk	Pack type
0496-500ML	500 ml	Plastic bottle
0496-1L	1 l	Plastic bottle

Acrylamide-Bis solution (37.5: 1) 30% aqueous solution, ultrapure

Danger

UN: 3426

Storage Temperature: Freezer

Cat. No.	Pk	Pack type
E347-500ML	500 ml	Plastic bottle

Acryl/Bis solution (30%) 29:1, ultrapure

Danger

UN: 3426

Storage Temperature: Freezer

Cat. No.	Pk	Pack type
E344-500ML	500 ml	Plastic bottle

Acrylogel 2.6 (40%) solution Electran® for electrophoresis

Danger

UN: 3426

Storage Temperature: Ambient

A convenient, ready-to-use 40% w/v (40%T) solution of acrylamide Electran® and NN'-methylenebisacrylamide Electran® 2.6% (C±0.2%) in deionised water. Final ratio 37:1.

Appearance ..... Clear colourless liquid
N,N'-Methylenebisacrylamide ..... 2.4 - 2.8 %
Acrylic acid ..... Max. 0.002 %
Absorptivity (1 %; 1 cm; 290 nm) ..... Max. 0.15

Cat. No.	Pk	Pack type
443745V	1 l	Glass bottle SAFEBREAK

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Acrylogel 40% solution (32:1 Acrylamide/Bis) Electran® for electrophoresis

Danger

UN: 3426

Storage Temperature: Ambient

A convenient, ready-to-use 40% w/v (40%T) solution of acrylamide Electran® and NN'-methylenebisacrylamide Electran® 3% (C±0.2%) in deionised water. Final ratio 29.1:0.9.

Appearance	Clear colourless liquid
N,N'-Methylenebisacrylamide	2.8 - 3.2 %
Acrylic acid	Max. 0.002 %
Absorptivity (1 %; 1 cm; 290 nm)	Max. 0.15

Cat. No.	Pk	Pack type
443733R	250 ml	Glass bottle SAFEBREAK

Acrylogel 2.6 (30%) solution Electran® for electrophoresis

Danger

UN: 3426

Density: 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

A convenient, ready-to-use 30% w/v (30%T) solution of acrylamide `Electran` and NN'-methylenebisacrylamide `Electran` (2.6%C) in deionised water (Final ratio is 37.5:1)

Appearance	Clear colourless liquid
N,N'-Methylenebisacrylamide	2.4 - 2.8 %
Acrylic acid	Max. 0.002 %
Absorptivity (1 %; 1 cm; 290 nm)	Max. 0.15

Cat. No.	Pk	Pack type
427205E	1 l	Glass bottle

VWR LIFE SCIENCE Adenine, high purity

Danger

CAS 73-24-5 **UN:** 2811

$C_5H_5N_5$ **M.W.** 135.13 g/mol

Density: 0,99741 g/cm³ (25 °C)

Storage Temperature: Ambient

Heavy Metals	< 0.001 %
Identification (IR)	PASS
Loss on Drying	1.0 %
Nitrogen Content	50.2 - 53.4 %
Purity	98.0 %
Residue on Ignition	0.1 %
Solubility (0.05%, Water)	NONE

Cat. No.	Pk	Pack type
0183-50G	50 g	Plastic bottle for solids
0183-100G	100 g	Plastic bottle for solids

VWR LIFE SCIENCE Adenine sulphate dihydrate, high purity

CAS 6509-19-9

$(C_5H_5N_5)_2.H_2SO_4.2H_2O$ **M.W.** 404.37 g/mol

Storage Temperature: Ambient

Component of YAC selection media.

Em (262nm, 0.01N HCl)	> 13000
Purity	>=99%
Solubility (0.05%, Water)	Pass
Water (KF)	6 % - 10%

Cat. No.	Pk	Pack type
0607-50G	50 g	Plastic bottle for solids
0607-100G	100 g	Plastic bottle for solids

VWR LIFE SCIENCE Adenosine, high purity

CAS 58-61-7

$C_{10}H_{13}N_5O_4$

Storage Temperature: Refrigerator

Em (257nm, 0.1N HCl, pH 2.0)	>= 14600
Loss on Drying	<= 0.5 %
Purity	> 99 %

Cat. No.	Pk	Pack type
0325-100G	100 g	Plastic bottle for solids

VWR LIFE SCIENCE Adenosine 5'-diphosphate disodium salt (ADP disodium salt) dihydrate, ultrapure

Warning

CAS 16178-48-6

$C_{10}H_{13}N_5Na_2O_{10}P_2 \cdot 2H_2O$

Storage Temperature: Freezer

A250/A260	0.74 - 0.82
A280/A260	0.13 - 0.19
Arsenic	< 0.0001 %
ATP	<= 1 %
Em (259nm,Phosphate Buffer,pH 7.0)	>= 14500
Heavy Metals	< 0.002 %
Loss on Drying	< 8 %
Solubility (5%, Water)	pass

Cat. No.	Pk	Pack type
0160-5G	5 g	Glass bottle

VWR LIFE SCIENCE Adenosine 5'-monophosphate disodium salt (AMP disodium salt) hydrate, ultrapure

CAS 4578-31-8

$C_{10}H_{12}N_5Na_2O_7P \cdot H_2O$

Storage Temperature: Refrigerator

A250/A260	0.79 - 0.9
A280/A260	0.18 - 0.22
Em (258nm, Phosphate Buffer, pH 7.0)	> 11000
Heavy Metals	< 0.002 %

Cat. No.	Pk	Pack type
0634-25G	25 g	Plastic bottle for solids

VWR LIFE SCIENCE Adenosine 5'-triphosphate disodium salt (ATP disodium salt) trihydrate, ultrapure

CAS 51963-61-2

$C_{10}H_{14}N_5Na_2O_{13}P_3 \cdot 3H_2O$

Storage Temperature: Freezer

A250/A260	0.75 - 0.81
A280/A260	0.14 - 0.18
AMP & ADP	<= 0.5 %
Em (259nm,Phosphate Buffer,pH 7.0)	>= 14700
Heavy Metals	<= 0.003 %
Moisture (KF)	< 10 %
Purity	> 98 %
Sodium (Flame Photom)	7 % - 8 %
Solubility (5%, Water)	pass

Cat. No.	Pk	Pack type
0220-25G	25 g	Plastic bottle for solids
0220-100G	100 g	Plastic bottle for solids

Adipic acid TECHNICAL

Warning

CAS 124-04-9
$HOOC(CH_2)_4COOH$ **M.W.** 146.14 g/mol
Boiling Pt: 337 °C (1013 hPa) **Melting Pt:** 151 °C **Density:** 1,36 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)..... Min. 99 %

Cat. No.	Pk	Pack type
20115.365	5 kg	Bucket (Plastic)

AEBSF hydrochloride (4-(2-Aminoethyl) benzenesulphonylfluoride hydrochloride), ultrapure

Warning

CAS 30827-99-7 **UN:** 3261
$C_8H_{11}ClFNO_2S$
Storage Temperature: Refrigerator
An irreversible serine protease inhibitor of chymotrypsin, trypsin, kallikrein, plasmin and thrombin. Useful as a non toxic alternative to PMSF.

Purity (Titration)..... 98 %
Solubility (0.02%, Water) ..... PASS

Cat. No.	Pk	Pack type
J582-50MG	50 mg	Glass bottle

Aerosol® OT

Warning

CAS 577-11-7
$C_{20}H_{37}NaO_7S$ **M.W.** 444.57 g/mol
Boiling Pt: < 180 °C (1013 hPa) **Melting Pt:** ~ 155 °C **Density:** ~1,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Anionic surfactant

Description ..... White-creamy waxy solid
Assay..... Min. 95 %
Loss on drying (110°C) ..... Max. 2.00 %
Sulphated ash (calculated on dried) ..... 15.0 - 17.0 %

Cat. No.	Pk	Pack type
560454R	500 g	Plastic bottle

Aesculin sesquihydrate TECHNICAL

CAS 66778-17-4
$C_{15}H_{16}O_9 \cdot 1{,}5H_2O$ **M.W.** 367.31 g/mol
Melting Pt: 203-205 °C

Spec. opt. rot. (2 %;dioxan/water 50/50) ..... -87.5 to -84 °
Water ..... 7.0 - 8.5 %

Cat. No.	Pk	Pack type
23676.124	10 g	Plastic bottle for solids

Aethoform

See Benzocaine (Ethyl 4-aminobenzoate)..... p.56

AFA

See Histological Fixative AFA..... p.191

Agar for bacteriology

CAS 9002-18-0
Melting Pt: 90 °C
Storage Temperature: Ambient

Ash ..... ≤6.5 %
Gel Point (1.5%)..... 32 - 38 °C
Gel Strength (1.5%)..... 550 - 950 g/cm²
Heavy Metals..... ≤0.002
Loss on Drying..... ≤12 %
Melting Point..... 80 - 90 °C
Pass Thru 60 Mesh..... ≥90 %
Turbidity (Nephelos)..... ≤40

Cat. No.	Pk	Pack type
J637-500G	500 g	Plastic bottle
J637-1KG	1 kg	Plastic bottle
J637-2.5KG	2,5 kg	Bucket (Plastic)

Agar, powder for bacteriology

CAS 9002-18-0
Melting Pt: 90 °C
Storage Temperature: Ambient

Clarity after autoclaving (*)..... Max. 15 NTU
Clarity before autoclaving..... Max. 15 NTU
Gelling point (1.5 %; water) (*) ..... 30 - 40 °C
Gel strength (1.5 %; water) (*)..... 700 - 1000 g/cm²
pH after autoclaving (1.5 %) (*)..... 6.0 - 7.5
pH before autoclaving (1.5 %)..... 6.0 - 7.5
Ignition residue (SO_4)..... Max. 5 %
As (Arsenic)..... Max. 5 ppm
Pb (Lead)..... Max. 2 ppm
(*) tested on a 1.5% solution after autoclaving (121 °C) and cooled to 60 °C.....

Cat. No.	Pk	Pack type
20767.232	250 g	Plastic bottle for solids
20767.298	1 kg	Plastic bottle for solids

Agar, powder TECHNICAL

CAS 9002-18-0
Melting Pt: 90 °C
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
20768.235	250 g	Plastic bottle for solids
20768.292	1 kg	Plastic bottle for solids
20768.361	5 kg	Bucket (Plastic)

Agarose DNA Grade Electran® for electrophoresis

CAS 9012-36-6
Melting Pt: 60-90 °C
Storage Temperature: Ambient
DNA grade agarose is suitable for the majority of routine DNA separations. For applications where a more stringent specification is required use Agarose molecular biology grade.

- Free from DNase and RNase

DNA binding..... Passes test
Electroendosmosis (-Mr) ..... Max. 0.15
Gelling temperature (1.5 %; water)..... 34 to 37°C
Gel strength (1.5 %; water)..... Min. 2100 g/cm²
Ignition residue ..... Max. 1.0 %
Loss on drying..... Max. 10.0 %

Cat. No.	Pk	Pack type
438792U	100 g	Plastic bottle
438795A	1 kg	Plastic bottle

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Agarose DNA Pure Grade Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose DNA pure grade ensures reliable digestion and ligations from recovered DNA or RNA fragments from 100 bp to 23 kb. It is particularly suitable for both preparative and analytical separation procedures with nucleic acids ≥1000 base pairs, where a low melting point is not required. The agarose gives rise to firm gels even at low concentrations and gives low background after ethidium bromide staining.

- Best choice for DNA/RNA recovery and cloning applications
- DNase and RNase free

DNA binding	None
DNases, RNases	Not detected
Electroendosmosis (-Mr)	-0.14 to -0.08
Gel strength (1.5 %; water)	Min. 2300 g/cm²
Gelling temperature (1.5 %; water)	34 - 37 °C
SO_4 (Sulphate)	Max. 0.09 %

Cat. No.	Pk	Pack type
443666A	500 g	Plastic bottle

Agarose Wide Range Low Melting Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose, low gelling temperature has low melting and gelling temperatures, low sulphate content and high optical clarity. It is suitable for use in protein and nucleic acid electrophoresis and for immobilisation of heat labile substances (e.g. bacteria, yeast and Eukaryotic cells) due to the low gelling point. In addition, the low melting point of this agarose offers the possibility of recovering proteins and nucleic acids without denaturation when remelted.

DNA binding	None
DNases, Rnases	Not detected
Electroendosmosis (-Mr)	-0.14 to -0.05
Melting point (1.5 %; water)	Max. 66 °C
Gel strength (1.5 %; water)	Min. 200 g/cm²
Gelling temperature (1.5 %; water)	Max. 31 °C
SO_4 (Sulphate)	Max. 0.1 %

Cat. No.	Pk	Pack type
444153H	125 g	Plastic bottle
444152G	25 g	Plastic bottle

Agarose High Resolution Low Melting Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose high resolution (HR) has low melting (max. 90 °C) and gelling temperatures (32.5 -38 °C) but differs from traditional low melting point molecular biology grade agaroses in the gel separation range. Using this agarose in electrophoresis allows fine and consistent resolution of nucleic acids below 1000 base pairs, which differ by only a few base pairs. The properties of Agarose HR allow consistent gel separations (analytical and preparative) and performance of *in-vitro* translation and transcription mapping as well as *in-vivo* ligation and transformation. For analytical gel separation of DNA/RNA below 1000 base pairs where a higher gel strength for ease of manipulation is required, we recommend the use of Agarose, high resolution, Electran® (43655).

- DNase and RNase free

DNA binding	Passes
DNases, Rnases	Passes
Electroendosmosis (-Mr)	Max. 0.13
Gel strength	Min. 1400 g/cm²
Gelling temperature	32.5 - 38.0 °C
Melting point	Max. 90 °C
Ignition residue	Max. 1.0 %
Loss on drying	Max. 10.0 %
SO_4 (Sulphate)	Max. 0.15 %

Cat. No.	Pk	Pack type
437123Y	125 g	Plastic bottle
437122H	25 g	Plastic bottle

Agarose, High Resolution Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

For analytical gel separations of DNA/RNA below 1000 base pairs where a higher gel strength for ease of manipulation is required

- DNase and RNase free

Moisture content	Max. 10 %
Sulfate content	Max. 0.15 %
Gel strength	Min. 500 g/cm²
EEO, -Mr	Max. 0.15
Gelling temperature	Max. 35 °C
Melting temperature	Max. 65 °C
Appearance	Passes
Ash content	Max. 1 %
DNA binding	Passes
RNase / DNase	Not detected

Cat. No.	Pk	Pack type
436552V	25 g	Plastic bottle
436553W	100 g	Plastic bottle

Agarose 15 Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose 15 is suitable for use in a wide variety of general applications in protein electrophoresis and immunoelectrophoresis. It has a medium range of electroendosmosis and high gel strength.

- DNase and RNase free

Gel strength (1.5 %; water)	Min. 1800 g/cm²
Gelling temperature (1,5 %; water)	Passes test
Electroendosmosis (-Mr)	0.15 - 0.19
Sulphates	Max. 0.20 %
Residue on ignition	Max. 1.0 %
Loss on drying	Max. 10.0 %

Cat. No.	Pk	Pack type
443024S	125 g	Plastic bottle
443023R	25 g	Plastic bottle
443025T	500 g	Plastic bottle

Agarose 25 Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose 25 is suitable for use in a wide range of protein electrophoresis techniques and is particularly recommended for counter immunoelectrophoresis. In this application the higher electroendosmosis permits optimum positioning during antibody/antigen contact.

- DNase and RNase free

Electroendosmosis (-Mr)	0.23 to 0.26
Gel strength (1,5 %; water)	Min. 650 g/cm²
Gelling temperature (1,5 %; water)	34.5 to 37.5 °C
SO_4 (Sulphate)	Max. 0.2 %
Moisture	Max. 10 %

Cat. No.	Pk	Pack type
442494R	125 g	Plastic bottle
442492P	25 g	Plastic bottle

Agarose IEF Electran® for electrophoresis

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose IEF is designed to be free of electroendosmosis which makes it ideal for isoelectric focusing applications with all pH ranges. It is also recommended for use in isotachophoresis.

The agarose forms highly porous gels, which permit rapid focusing of high molecular weight proteins. The agarose solutions can easily be cast into thin gels for improved resolution, the gels rapidly setting at room temperature.

- DNase and RNase free

Electroendosmosis	Below detection
Gel strength (1.5 %; water)	Min. 500 GCM
SO_4 (Sulphate)	Max. 0.20 %

Cat. No.	Pk	Pack type
443173H	25 g	Plastic bottle
443174Y	100 g	Plastic bottle

Agarose I™, for biotechnology

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose I™ is a standard melting/gelling agarose, suitable for routine nucleic acid analytical/preparative applications (250 bp - 22 kb). Agarose I™ has a low EEO (electroendosmosis) for shorter electrophoretic runs without compromising resolution. Agarose I™ is excellent for blotting techniques and general manipulations.

- All-purpose, high purity agarose
- Exceptional band resolution and clarity
- Nuclease and protease-free

DNase	NONE
EEO(-Mr)	<0.13
Endonuclease/ligase inhibitory factors	NONE
Gel Strength (1.5%)	1200 g/cm²
Gelling Range (1.5%)	36 - 39 °C
Melting Range (1.5%)	87 - 89 °C
Moisture	< 10 %
Protease	NONE
RNase	NONE
Sulfate	0.15 %

Cat. No.	Pk	Pack type
0710-25G	25 g	Plastic bottle
0710-100G	100 g	Plastic bottle
0710-250G	250 g	Plastic bottle
0710-500G	500 g	Plastic bottle

Agarose I™, tablets for biotechnology

CAS 9012-36-6

Melting Pt: 60 - 90 °C

Storage Temperature: Ambient

Agarose I™ is a standard melting/gelling agarose, suitable for routine nucleic acid analytical/preparative applications (250 bp - 22 kb). Agarose I™ has a low EEO for shorter electrophoretic runs without compromising resolution. Agarose I™ is excellent for blotting techniques and general manipulations.

- All-purpose, high purity agarose
- Exceptional band resolution and clarity
- Nuclease and protease-free
- Convenient tablet format available - no weighing required

Conductivity (3%, Water) @25°C	REPORT
Gelling Range (1.5%, Water)	36 - 39 °C
pH (3%, Water) @25°C	5.7 - 7.7
Tablet Weight	485 - 515 mg

Cat. No.	Pk	Pack type
K857-100TABS	100 Tab.	Plastic bottle

Agarose II™, for biotechnology

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

A low melting agarose that melts between 62 to 68 °C and remains liquid for several hours at 37 °C. Ideal for purification of macromolecules from agarose slices and for in-gel enzymatic manipulations.

DNase	NONE
EEO (-Mr)	0.12
Gel Strength (1.0%)	250 g/cm²
Gelling Range (1.0%)	24 - 29 °C
Melting Range	62 - 68 °C
Moisture	< 10 %
Protease	NONE
RNase	NONE
Sulfate	0.1 %

Cat. No.	Pk	Pack type
0815-25G	25 g	Plastic bottle

Agarose LF™ for pulsed field gel electrophoresis (PFGE)

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose LF™ (Large Fragment, 1 kb - 40 kb) is optimised for pulsed-field gel electrophoresis (PFGE) applications. The exceptionally low EEO (electroendosmosis) and high gel strength of Agarose LF™ facilitates faster electrophoresis running times in low concentration gels. This agarose is best suited for resolving large (>20 kb) DNA fragments.

- Optimised for pulsed field gel electrophoresis (PFGE)
- Ideal for resolving large (>20 kb) DNA fragments
- Nuclease and protease-free

DNase	none detected
EEO (Electroendosmosis)	< = 0.06
Endonuclease/ligase inhibitory factors	none
Gel Strength	> = 2000 g/cm²
Gelling Range	37°C - 41°C
Melting Range	93°C - 96°C
Moisture	< = 8.5 %
Protease	none detected
RNase	none detected
Sulphate	< = 0.06 %

Cat. No.	Pk	Pack type
X174-25G	25 g	Plastic bottle
X174-100G	100 g	Plastic bottle
X174-250G	250 g	Plastic bottle

Agarose SFR™, for biotechnology

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose SFR™ (Super Fine Resolution) is a high resolution sieving agarose with excellent clarity. DNA bands differing in size by 2% can be resolved in the range of 200 bp to 1000 bp. This agarose is suitable for the analysis of AFLPs (Amplified Fragment Length Polymorphisms), STRs (Short Tandem Repeats) and tetranucleotide repeats. The low melting temperature of Agarose SFR™ makes it an excellent medium for analytical and preparative electrophoresis.

- Super fine resolution - resolve 238 bp and 242 bp bands
- Low melting point
- Nuclease and protease-free

Appearance	PASS
Ash	0.35 %
Conductivity (1%, Water) @25 °C	10 umhos
DNase	NONE
EEO (-Mr)	0.12
Gel Strength (1.5%, Water)	500 g/cm²
Gelling Temperature (1.5%, Water)	30.0 °C
Melting Point (1.5%, Water)	70.0 °C
Moisture	7.0 %
pH (1%, Water) @25 °C	REPORT
Protease	NONE
RNase	NONE
Sulfate	0.11 %

Cat. No.	Pk	Pack type
J234-25G	25 g	Plastic bottle
J234-100G	100 g	Plastic bottle
J234-250G	250 g	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Agarose RA™

CAS 9012-36-6

Melting Pt: 60-90 °C

Storage Temperature: Ambient

Agarose RA™ is a general application agarose that provides good resolution and is cost effective for high volume users. It was developed specifically for quick checks of PCR products, plasmids preps, screening and cloning. Agarose RA™ features high resolution, easy preparation and set up, a low EEO and excellent sensitivity with low background when stained. For recovery and blotting applications Agarose I™ is recommended.

- Ideal agarose for high throughput
- High resolution
- Easy preparation
- Excellent sensitivity

DNase	NONE
EEO (-mr)	<0.13
Gel Strength (1.5%, Water)	1200 g/cm²
Gelling Point (1.5%, Water)	34 - 38 °C
Melting Point (1.5%, Water)	87 - 89 °C
Moisture	10 %
Protease	NONE
RNase	NONE
Sulphate	0.15 %

Cat. No.	Pk	Pack type
N605-25G	25 g	Plastic bottle
N605-100G	100 g	Plastic bottle
N605-250G	250 g	Plastic bottle
N605-500G	500 g	Plastic bottle
N605-1KG	1 kg	Plastic bottle

L-Alanine, high purity

CAS 56-41-7

$C_3H_7NO_2$ **M.W.** 89.09 g/mol

Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 79 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Non-animal origin. White crystalline powder

Nonpolar. Aliphatic amino acid. Non-essential amino acid. Common component of culture media. Involved in regulation of a variety of metabolic functions.

Arsenic	< = 0.00015 %
Ash	<= 0.15 %
Chloride	<= 0.05 %
Heavy Metals	<= 0.001 %
Sulphate	< 0.03 %
Iron	< 0.003 %
Loss on Drying	< 0.2 %
pH (5%, Water) @25°C	5.5 - 7.0
Purity	> 99 %
Specific Rotation	13.7 °-15.1 °

Cat. No.	Pk	Pack type
0106-100G	100 g	Plastic bottle for solids

Bovine Serum Albumin, for biotechnology

Heat shock isolated BSA (Bovine Serum Albumin) with low endotoxin.

Cat. No.	Pk	Pack type
N208-10G	10 g	Plastic bottle for solids

Bovine Serum Albumin, for biotechnology

A heat shock isolation product provided as a fine, white powder in a salt free form (pH 5.2) for low salt applications.

Cat. No.	Pk	Pack type
0175-25G	25 g	Plastic bottle for solids
0175-100G	100 g	Plastic bottle for solids

Bovine Serum Albumin, for biotechnology

Heat shock isolated bovine serum albumin (BSA) suitable for use in a wide range of molecular biology applications, including Western blotting.

- Nuclease-free
- Protease-free

A standard grade albumin for basic applications, produced by a heat shock process in caprylic acid.

Cat. No.	Pk	Pack type
0332-25G	25 g	Plastic bottle for solids
0332-100G	100 g	Plastic bottle for solids
0332-500G	500 g	Plastic bottle for solids
0332-1KG	1 kg	Plastic bottle for solids

Bovine Serum Albumin, biotechnology grade

A 0.5 mg/ml BSA solution.

Cat. No.	Pk	Pack type
E531-1.5ML	1	Plastic tube

Bovine Serum Albumin, crystals, for biotechnology

Cold alcohol isolation suitable for sensitive biochemical and diagnostic assays. DNase and RNase free, virtually free of globulins and other interfering contaminants.

Cat. No.	Pk	Pack type
0903-5G	5 g	Plastic bottle for solids
0903-10G	10 g	Plastic bottle for solids

Bovine Serum Albumin, for radioimmunoassay

Cold alcohol isolation.

Cat. No.	Pk	Pack type
E588-25G	25 g	Plastic bottle for solids
E588-100G	100 g	Plastic bottle for solids

Bovine Serum Albumin

Produced by a heat shock process using sodium caprylate as a stabiliser with additional treatments including dialysis and deionisation.

- Low endotoxin

Cat. No.	Pk	Pack type
422381B	100 g	Glass bottle

Bovine Serum Albumin, standard grade

A standard grade albumin for basic applications, produced by a heat shock process in caprylic acid.

- 5% Moisture

Cat. No.	Pk	Pack type
421501J	100 g	Glass bottle

Bovine Serum Albumin, molecular biology grade

A higher purity product than standard grade or Cohn fraction V material. It is negative for globulins that interfere in many assays.

- Moisture: 4.5%
- Ashes: 1.5%

Cat. No.	Pk	Pack type
422351S	100 g	Glass bottle

Bovine Serum Albumin

A protease free grade albumin for RIA and ELISA applications, produced by a heat shock process in caprylic acid.

- Protease-free
- IgG-free
- Moisture: 5%

Cat. No.	Pk	Pack type
422361V	100 g	Glass bottle

Bovine Serum Albumin, in aqueous solution

Concentrated 30% BSA solution, fraction V, cold alcohol isolation, in 0.85% NaCl, contains 0.1% Na-Azide (as a stabilizer)

Cat. No.	Pk	Pack type
K719-50ML	50 ml	Plastic bottle
K719-500ML	500 ml	Plastic bottle

Bovine Serum Albumin, in aqueous solution, for biotechnology

Concentrated 20% BSA solution (Albumin, Bovine, Fraction V – Cold Alcohol Isolation) in 0,85% sodium chloride and contains 0,1% sodium azide (as a preservative for stability).

Cat. No.	Pk	Pack type
K720-50ML	50 ml	Plastic bottle

Bovine Serum Albumin, Cohn Fraction V

A Cohn fraction V albumin produced by cold ethanol fractionation with minimum use of chemicals. Fatty acids and native sialic acid residues are preserved in this BSA.

Cat. No.	Pk	Pack type
422371X	100 g	Glass bottle

Albumin from chicken egg, technical grade

Cat. No.	Pk	Pack type
20771.236	250 g	Plastic bottle for solids

Alcian Blue 8GX, high purity

Used to stain glucosaminoglycans and other acidic polysaccharides in tissue samples. Also used as a bacterial stain.

Cat. No.	Pk	Pack type
0298-50G	50 g	Glass bottle
0298-100G	100 g	Glass bottle

Alconox® detergent, powder

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
560437Q	1,818 kg	Plastic bag

Alginic acid sodium salt

See Sodium alginate p.408

Alizarin complexone TECHNICAL

CAS 3952-78-1
$C_{19}H_{15}NO_8$ **M.W.** 385.33 g/mol
Melting Pt: 180 °C
Storage Temperature: Ambient

Dissolution test ..... Passes test
Sensitivity of fluorine test ..... Passes test
Ignition residue ..... Max. 0.2 %

Cat. No.	Pk	Pack type
20118.081	1 g	Glass bottle

Alizarin S solution Reag. Ph. Eur. 1002601

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87763.180	100 ml	Plastic bottle

Alizarine-3-methylamine-N,N-diacetic acid

See Alizarin complexone p.22

Alkaline phosphatase pH 9.5 for biotechnology

Storage Temperature: Ambient
Enzyme that removes phosphate groups from nucleotides, proteins and alkaloids.

Conductivity (25°C) ..... 16 - 23 mS
pH (25°C) ..... 9.4 - 9.6

Cat. No.	Pk	Pack type
J840-4L	4 l	Bag-in-box (Cubitainer)

N-Allylthiourea

See Allylthiourea p.22

Allylthiourea TECHNICAL

Danger

CAS 109-57-9 **UN:** 2811
$H_2CCHCH_2NHC(S)NH_2$ **M.W.** 116.19 g/mol
Boiling Pt: 191 °C (1013 hPa) **Melting Pt:** 74 °C **Density:** 1,219 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
28630.153	50 g	Plastic bottle for solids

Alum potassium

See Aluminium potassium sulphate dodecahydrate p.24

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Aluminium standard solution, 10,000 mg/l Al in dil. nitric acid (from $Al(NO_3)_3$) ARISTAR® standard for ICP

$Al(NO_3)_3 \cdot 9H_2O$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455012E	100 ml	Plastic bottle
455014G	500 ml	Plastic bottle

NEW Aluminium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Traceable to SRM from NIST. Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities.

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Aluminum	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457202A
Aluminum	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85548.180

Aluminium standard solution, 1,000 mg/l Al in dil. nitric acid (from $Al(NO_3)_3.9H_2O$) ARISTAR® standard for ICP

$Al(NO_3)_3 \cdot 9H_2O$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455002C	100 ml	Plastic bottle
455004E	500 ml	Plastic bottle

Aluminium standard solution, 1,000 mg/l Al in 5% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86660.180	100 ml	Plastic bottle
86660.260	500 ml	Plastic bottle

Aluminium ammonium bis(sulphate) dodecahydrate

See Aluminium ammonium sulphate dodecahydrate..... p.23

Aluminium ammonium sulphate dodecahydrate GPR RECTAPUR®

Warning

CAS 7784-26-1

$AlNH_4(SO_4)_2 \cdot 12H_2O$ **M.W.** 453.33 g/mol

Boiling Pt: 200 °C (1013 hPa) **Melting Pt:** 93 °C **Density:** 1,64 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay..... Min. 98 %
Heavy metals (as Pb)..... Max. 50 ppm
Cl (Chloride)..... Max. 50 ppm
Fe (Iron)..... Max. 10 ppm

Cat. No.	Pk	Pack type
21083.292	1 kg	Plastic bottle for solids

Aluminium chloride, anhydrous GPR RECTAPUR®

Danger

CAS 7446-70-0 **UN:** 1726

$AlCl_3$ **M.W.** 133.34 g/mol

Boiling Pt: 180 °C (1013 hPa) **Melting Pt:** 180-181 °C **Density:** 1,31 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay..... Min. 99 %
Heavy metals (as Pb)..... Max. 20 ppm
Insolubility in water..... Max. 100 ppm
Not precipitated by NH_4OH (as SO_4)..... Max. 0.1 %
SO_4 (Sulphate)..... Max. 100 ppm
Fe (Iron)..... Max. 100 ppm

Cat. No.	Pk	Pack type
21031.293	1 kg	Glass bottle for solids

Aluminium chloride solution Reag. Ph. Eur. 1002701

Warning

CAS 7446-70-0 **UN:** 1726

$AlCl_3$ **M.W.** 133.34 g/mol

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87764.180	100 ml	Plastic bottle

Aluminium chloride reagent Reag. Ph. Eur. 1002702

Danger

UN: 3286

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87765.290	1 l	Plastic bottle

Aluminium hydroxide TECHNICAL

Warning

CAS 21645-51-2

$Al(OH)_3$ **M.W.** 78 g/mol

Melting Pt: 300 °C **Density:** 2,42 g/cm³ (20 °C)

Storage Temperature: Ambient

Aluminium oxide..... 60 - 70 %
Mean particle size (> 40 µm)..... Max. 3 %

Cat. No.	Pk	Pack type
20980.364	5 kg	Bucket (Plastic)

Aluminium nitrate nonahydrate analytical reagent

Warning

CAS 7784-27-2 **UN:** 1438

$Al(NO_3)_3 \cdot 9H_2O$ **M.W.** 375.13 g/mol

Melting Pt: 73 °C **Density:** 1,72 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay..... Min. 98.0 %
Heavy metals (as Pb)..... Max. 10 ppm
Insolubility in water..... Max. 50 ppm
Not precipitated by NH_4OH (as SO_4)..... Max. 0.1 %
Cl (Chloride)..... Max. 10 ppm
SO_4 (Sulphate)..... Max. 100 ppm
Fe (Iron)..... Max. 50 ppm

Cat. No.	Pk	Pack type
21050.260	500 g	Plastic bottle for solids
21050.298	1 kg	Plastic bottle for solids

Aluminium oxide activated basic for chromatography

CAS 1344-28-1

Al_2O_3 **M.W.** 101.96 g/mol

Identification ..... Passes test
Particle size (< 48 µm) ..... Max. 10 %
Particle size (> 200 µm) ..... Max. 1.5 %

Cat. No.	Pk	Pack type
21012.297	1 kg	Plastic bottle for solids

Aluminium oxide TECHNICAL, calcined

CAS 1344-28-1

Al_2O_3 **M.W.** 101.96 g/mol
Boiling Pt: 2980 °C (1013 hPa) **Melting Pt:** 2045 °C **Density:** 3,94 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119529248-35

Identification ..... Passes test

Cat. No.	Pk	Pack type
20985.361	5 kg	Bucket (Plastic)
20985.460	25 kg	Bucket (Plastic)

Aluminium potassium bis(sulphate) dodecahydrate

See Aluminium potassium sulphate dodecahydrate p.24

Aluminium potassium sulphate dodecahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7784-24-9

$AlK(SO_4)_2 \cdot 12H_2O$ **M.W.** 474.39 g/mol
Melting Pt: 92,5 °C **Density:** 1,72 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119960162-44

Assay ..... 99.5 - 100.5 %
Identification A ..... Passes test Ph.Eur.
Identification C ..... Passes test Ph.Eur.
pH (20°C; 10 %) ..... 3.0 - 3.5
Insolubility in water ..... Max. 50 ppm
NH_4 (Ammonium) ..... Max. 50 ppm
Na (Sodium) ..... Max. 0.02 %
Conforms to ACS ..... Passes test
Appearance of solution ..... Passes test Ph.Eur.
Identification B ..... Passes test Ph.Eur.
Solution S ..... Passes test Ph.Eur.
Heavy metals (as Pb) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 5 ppm
Fe (Iron) ..... Max. 5 ppm
Pb (Lead) ..... Max. 5 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
21110.296	1 kg	Plastic bottle for solids

Aluminium potassium sulphate dodecahydrate TECHNICAL

CAS 7784-24-9

$AlK(SO_4)_2 \cdot 12H_2O$ **M.W.** 474.39 g/mol
Melting Pt: 92,5 °C **Density:** 1,72 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119960162-44

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
21098.293	1 kg	Plastic bottle for solids
21098.362	5 kg	Bucket (Plastic)

Aluminium sodium dioxide

See Sodium aluminate p.408

Aluminum sodium oxide

See Sodium aluminate p.408

Aluminium sulphate octadecahydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7784-31-8

$Al_2(SO_4)_3 \cdot 18H_2O$ **M.W.** 666.43 g/mol
Melting Pt: 86 °C **Density:** 1.69 g/cm³ (20 °C)

The composition of the material may vary between 16-18 hydrate.

Assay (calculated as $Al_2(SO_4)3$) ..... 51.0 - 59.0 %
pH (20°C; 2 %) ..... 2.5 - 4.0
Heavy metals (as Pb) ..... Max. 20 ppm
NH_4 (Ammonium) ..... Max. 100 ppm
Fe (Iron) ..... Max. 50 ppm
Solution (20 %; water) ..... Clear colourless liquid
Alkali and alkaline-earth metals ..... Max. 0.4 %
Cl (Chloride) ..... Max. 50 ppm
As (Arsenic) ..... Max. 3 ppm

Cat. No.	Pk	Pack type
100103M	500 g	Plastic bottle for solids
10010DF	25 kg	Plastic bottle

Aluminium sulphate tetradecahydrate GPR RECTAPUR®

Danger

CAS 16828-12-9

$Al_2(SO_4)_3 \cdot 14H_2O$ **M.W.** 594.37 g/mol

Assay (calculated as Al_2O_3) ..... 16.5 - 17.5 %
Heavy metals (as Pb) ..... Max. 20 ppm
Not precipitated by NH_4OH (as SO_4) ..... Max. 0.3 %
Cl (Chloride) ..... Max. 100 ppm
Fe (Iron) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
21070.297	1 kg	Plastic bottle for solids

Aluminium sulphate tetradecahydrate, crystallised TECHNICAL

Danger

CAS 16828-12-9

$Al_2(SO_4)_3 \cdot 14H_2O$ **M.W.** 594.37 g/mol

Assay (calculated as Al_2O_3) ..... Min. 16 %

Cat. No.	Pk	Pack type
21067.365	5 kg	Bucket (Plastic)

Aluminium trilactate TECHNICAL

Warning

CAS 18917-91-4

$(H_3CCH(OH)COO)_3Al$ **M.W.** 294.19 g/mol
Melting Pt: > 300 °C
Storage Temperature: Ambient

Assay (calculated as Al) ..... Min. 8.6 %
Assay (on anhydrous substance) ..... Min. 94 %
Heavy metals (as Pb) ..... Max. 20 ppm
Water ..... Max. 5 %
Cl (Chloride) ..... Max. 0.04 %
SO_4 (Sulphate) ..... Max. 0.6 %
Fe (Iron) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
83861.230	250 g	Plastic bottle for solids

AMBERLITE® IRN-77, Ion exchange resin cationic type (H^+)

CAS 11128-94-2

Identification ..... Passes test

Cat. No.	Pk	Pack type
27362.296	1 kg	Plastic bottle for solids

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Amidosulphonic acid AnalaR NORMAPUR® analytical reagent

Warning

CAS 5329-14-6 **UN:** 2967
H_3NO_3S **M.W.** 97.09 g/mol
Boiling Pt: 247 °C (1013 hPa) **Melting Pt:** 205 °C **Density:** 2,15 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue	Max. 0.02 %	Cl (Chloride)	Max. 10 ppm
NO_3 (Nitrate)	Max. 20 ppm	SO_4 (Sulphate)	Max. 0.1 %
Fe (Iron)	Max. 5 ppm		

Cat. No.	Pk	Pack type
20672.234	250 g	Plastic bottle for solids

Amidosulphonic acid TECHNICAL

Warning

CAS 5329-14-6 **UN:** 2967
H_3NO_3S **M.W.** 97.09 g/mol
Boiling Pt: 247 °C (1013 hPa) **Melting Pt:** 205 °C **Density:** 2,15 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
20671.297	1 kg	Plastic bottle for solids
20671.366	5 kg	Bucket (Plastic)
20671.468	25 kg	Bucket (Plastic)

Amino acids (reagents for the analysis of)

Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent p.315
Ninhydrin 0.5% in 1-butanol spray reagent for TLC p.316

Aminoacetic acid

See Glycine p.177

4-Aminoantipyrine analytical reagent

Warning

CAS 83-07-8
$C_{11}H_{13}N_3O$ **M.W.** 203.24 g/mol
Melting Pt: 107-109 °C
Storage Temperature: Ambient

Assay	Min. 98.0 %
Suitable as phenol reagent	Passes test
Melting point	106 - 109 °C
Loss on drying (105°C)	Max. 0.5 %
Ignition residue (SO_4)	Max. 0.1 %

Cat. No.	Pk	Pack type
21161.122	10 g	Plastic bottle for solids
21161.188	100 g	Plastic bottle for solids

4-Aminoantipyrine TECHNICAL

Warning

CAS 83-07-8
$C_{11}H_{13}N_3O$ **M.W.** 203.24 g/mol
Melting Pt: 107-109 °C
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
21160.185	100 g	Plastic bottle for solids

Aminobenzene

See Aniline p.47

4-Aminobenzenesulphonic acid

See Sulphanilic acid p.468

4-Amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one

See 4-Aminoantipyrine p.25

2-Aminoethanol

See Ethanolamine p.151

N-2-Aminoethyl-1-naphthylamine dihydrochloride analytical reagent

Warning

CAS 1465-25-4
$C_{12}H_{16}Cl_2N_2$ **M.W.** 259.18 g/mol
Melting Pt: 188-190 °C
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 98.0 %
IR Spectrum	Passes test
Sensitivity to sulphanilamide	Passes test
Solubility	Passes test
Loss on drying (80°C; 4 h)	Max. 5 %

Cat. No.	Pk	Pack type
25792.120	10 g	Plastic bottle for solids
25792.130	25 g	Plastic bottle for solids

N-2-Aminoethyl-1-naphthylamine dihydrochloride GPR RECTAPUR®

Warning

CAS 1465-25-4
$C_{12}H_{16}Cl_2N_2$ **M.W.** 259.18 g/mol
Melting Pt: 188-190 °C
Storage Temperature: Ambient

Assay (calculated on dried substance) ..... Min. 95 %

Cat. No.	Pk	Pack type
293044M	10 g	Plastic bottle for solids

2-Amino-2-(hydroxymethyl)propane-1,3-diol

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.498

2-Amino-2-(hydroxymethyl)-1,3-propanediol

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.498

2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride

See TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) p.501

L(+)-2-Aminopentanedioic acid

See L(+)-Glutamic acid p.174

(S)-(+)-2-Aminopentanedioic acid

See L(+)-Glutamic acid p.174

L(+)-2-Aminopentanedioic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

(S)-(+)-2-Aminopentanedioic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

4-Aminophenazone

See 4-Aminoantipyrine p.25

4-Aminophenol, purified

Warning

CAS 123-30-8 **UN:** 2512

$H_2NC_6H_4OH$ **M.W.** 109.13 g/mol

Boiling Pt: 284 °C (1013 hPa) **Melting Pt:** ~ 186 °C **Density:** 1,3 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
21168.262	500 g	Plastic bottle for solids

(4-(4-Aminophenyl)(4-iminocyclohexa-2,5-dienylidene) methyl)-2-methylaniline hydrochloride

See Dyes and Stains p.290

L(+)-1-Aminopropane-1,3-dicarboxylic acid

See L(+)-Glutamic acid p.174

(S)-(+)-1-Aminopropane-1,3-dicarboxylic acid

See L(+)-Glutamic acid p.174

L(+)-1-Aminopropane-1,3-dicarboxylic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

(S)-(+)-1-Aminopropane-1,3-dicarboxylic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

Aminosulphonic acid

See Amidosulphonic acid p.25

Ammonia 32% HiPerSolv CHROMANORM® for HPLC

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,88 g/cm³ (20 °C)

Storage Temperature: Ambient

Non-volatile residue ..... Max. 20 ppm
Fe (Iron) ..... Max. 0.2 ppm
Pb (Lead) ..... Max. 0.05 ppm
Transmittance (215 nm) (1 mol/l) ..... Min. 10 %
Transmittance (254 nm) (1 mol/l) ..... Min. 97 %

Cat. No.	Pk	Pack type
153312K	100 ml	Glass bottle

Ammonia solution about 32 % GPR RECTAPUR®

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,88 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 30 - 33 %
Density (20/4) ..... 0.880 - 0.910
Evaporation residue ..... Max. 100 ppm
Heavy metals (as Pb) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 10 ppm
CO_3 (Carbonate) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 20 ppm
Fe (Iron) ..... Max. 1 ppm
Pb (Lead) ..... Max. 1 ppm

Cat. No.	Pk	Pack type
21192.298	1 l	Glass bottle
21192.323	2,5 l	Glass bottle SAFEBREAK
21192.367	5 l	Fluorinated plastic bottle

Ammonia 28% AnalaR NORMAPUR® analytical reagent

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,898 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 28.0 - 32.0 %
Density (20/4) ..... 0.880 - 0.910
Silica ..... Max. 10 ppm
Cl (Chloride) ..... Max. 0.5 ppm
NO_2 (Nitrite) ..... Max. 2 ppm
S (Sulphide) ..... Max. 0.1 ppm
Al (Aluminium) ..... Max. 0.03 ppm
B (Boron) ..... Max. 0.02 ppm
Be (Beryllium) ..... Max. 0.01 ppm
Cd (Cadmium) ..... Max. 0.01 ppm
Cr (Chromium) ..... Max. 0.02 ppm
Fe (Iron) ..... Max. 0.1 ppm
K (Potassium) ..... Max. 0.1 ppm
Mg (Magnesium) ..... Max. 0.05 ppm
Mo (Molybdenum) ..... Max. 0.02 ppm
Ni (Nickel) ..... Max. 0.02 ppm
Sr (Strontium) ..... Max. 0.01 ppm
V (Vanadium) ..... Max. 0.01 ppm
Zr (Zirconium) ..... Max. 0.05 ppm

Colouration ..... Max. 10 APHA
Evaporation residue ..... Max. 10 ppm
Substances reducing $KMnO_4$ (as O) ..... Max. 4 ppm
CO_3 (Carbonate) ..... Max. 10 ppm
PO_4 (Phosphate) ..... Max. 0.5 ppm
SO_4 (Sulphate) ..... Max. 2 ppm
As (Arsenic) ..... Max. 0.01 ppm
Ba (Barium) ..... Max. 0.02 ppm
Ca (Calcium) ..... Max. 0.3 ppm
Co (Cobalt) ..... Max. 0.01 ppm
Cu (Copper) ..... Max. 0.02 ppm
Hg (Mercury) ..... Max. 0.01 ppm
Li (Lithium) ..... Max. 0.01 ppm
Mn (Manganese) ..... Max. 0.01 ppm
Na (Sodium) ..... Max. 2 ppm
Pb (Lead) ..... Max. 0.02 ppm
Ti (Titanium) ..... Max. 0.05 ppm
Zn (Zinc) ..... Max. 0.02 ppm

Cat. No.	Pk	Pack type
21190.246	1 l	Glass bottle SAFEBREAK
21190.292	1 l	Glass bottle
21190.326	2,5 l	Glass bottle SAFEBREAK
21190.361	5 l	Fluorinated plastic bottle

Ammonia 28% GPR RECTAPUR®

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,898 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 28 - 32 %
Density (20/4) ..... 0.880 - 0.910
Evaporation residue ..... Max. 0.02 %
Heavy metals (as Pb) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 20 ppm
Fe (Iron) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
21182.294	1 l	Glass bottle
21182.363	5 l	Fluorinated plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Ammonia 28% VLSI Selectipur® for the electronics industry

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Density: 0,898 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50488905.	2,5 l	Plastic bottle
52136564.	165 kg	Metal drum lined
56996240.	170 kg	Metal drum lined

Ammonia 28% SLSI Selectipur® for the electronics industry

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,898 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
51152938.	2,25 kg	Glass bottle

Ammonia 28% Selectipur® for the electronics industry

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,898 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50451647.	24,4 kg	Plastic drum

Ammonia 25% AnalaR NORMAPUR® analytical reagent

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,907 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 25 %	Evaporation residue	Max. 20 ppm
Substances reducing $KMnO_4$ (as O)	Max. 8 ppm	Total S (as SO_4)	Max. 1 ppm
Cl (Chloride)	Max. 0.5 ppm	CO_3 (as CO_2)	Max. 15 ppm
PO_4 (Phosphate)	Max. 1 ppm	Ca (Calcium)	Max. 1 ppm
Cd (Cadmium)	Max. 0.1 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 1 ppm
Mn (Manganese)	Max. 0.01 ppm	Na (Sodium)	Max. 2 ppm
Pb (Lead)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
1133.1000	1 l	Glass bottle
1133.2500	2,5 l	Glass bottle

Ammonia 25% GPR RECTAPUR®

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,907 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 25 %
Non-volatile residue	Max. 100 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
271402T	2,5 l	Plastic bottle

Ammonia 25% TECHNICAL

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Boiling Pt: 32-37,7 °C (1013hPa) **Melting Pt:** (-60)-(-57,5) °C **Density:** 0,907 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 24 - 26 %

Cat. No.	Pk	Pack type
21191.364	5 l	Fluorinated plastic bottle
21191.450	17 kg	Plastic drum

NEW Ammonia 20% Ultrapure NORMATOM® for trace metal analysis

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Density: 0,923 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	20-22%	Ag (Silver)	Max. 10 ppt
Al (Aluminium)	Max. 20 ppt	As (Arsenic)	Max. 10 ppt
Au (Gold)	Max. 10 ppt	Ba (Barium)	Max. 10 ppt
Be (Beryllium)	Max. 10 ppt	Bi (Bismuth)	Max. 10 ppt
Ca (Calcium)	Max. 10 ppt	Cd (Cadmium)	Max. 10 ppt
Ce (Cerium)	Max. 10 ppt	Co (Cobalt)	Max. 10 ppt
Cr (Chromium)	Max. 10 ppt	Cs (Cesium)	Max. 10 ppt
Cu (Copper)	Max. 10 ppt	Dy (Dysprosium)	Max. 10 ppt
Er (Erbium)	Max. 10 ppt	Eu (Europium)	Max. 10 ppt
Fe (Iron)	Max. 10 ppt	Ga (Gallium)	Max. 10 ppt
Gd (Gadolinium)	Max. 10 ppt	Ge (Germanium)	Max. 10 ppt
Hf (Hafnium)	Information only	Hg (Mercury)	Max. 200 ppt
Ho (Holmium)	Max. 10 ppt	In (Indium)	Max. 10 ppt
K (Potassium)	Max. 10 ppt	La (Lanthanum)	Max. 10 ppt
Li (Lithium)	Max. 10 ppt	Lu (Lutetium)	Max. 10 ppt
Mg (Magnesium)	Max. 10 ppt	Mn (Manganese)	Max. 10 ppt
Mo (Molybdenum)	Max. 10 ppt	Na (Sodium)	Max. 20 ppt
Nb (Niobium)	Max. 10 ppt	Nd (Neodymium)	Max. 10 ppt
Ni (Nickel)	Max. 10 ppt	Pb (Lead)	Max. 10 ppt
Pd (Palladium)	Information only	Pr (Praseodymium)	Max. 10 ppt
Pt (Platinum)	Information only	Rb (Rubidium)	Max. 10 ppt
Re (Rhenium)	Information only	Rh (Rhodium)	Max. 10 ppt
Ru (Ruthenium)	Information only	Sb (Antimony)	Max. 10 ppt
Sc (Scandium)	Max. 10 ppt	Se (Selenium)	Information only
Sm (Samarium)	Max. 10 ppt		

Cat. No.	Pk	Pack type
85031.270	500 ml	Plastic bottle

Ammonia 20% NORMATOM® for trace metal analysis

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Density: 0,923 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	20 - 22 %	Colouration	Max. 10 APHA
Cl (Chloride)	Max. 0.5 ppm	PO_4 (Phosphate)	Max. 0.01 ppm
SO_4 (Sulphate)	Max. 1 ppm	Ag (Silver)	Max. 0.5 ppb
Al (Aluminium)	Max. 1 ppb	As (Arsenic)	Max. 1 ppb
Au (Gold)	Max. 0.5 ppb	Ba (Barium)	Max. 0.1 ppb
Be (Beryllium)	Max. 0.1 ppb	Bi (Bismuth)	Max. 0.1 ppb
Ca (Calcium)	Max. 1 ppb	Cd (Cadmium)	Max. 0.5 ppb
Ce (Cerium)	Max. 0.1 ppb	Co (Cobalt)	Max. 0.5 ppb
Cr (Chromium)	Max. 0.5 ppb	Cs (Cesium)	Max. 0.1 ppb
Cu (Copper)	Max. 0.5 ppb	Dy (Dysprosium)	Max. 0.100 ppb
Er (Erbium)	Max. 0.100 ppb	Eu (Europium)	Max. 0.1 ppb
Fe (Iron)	Max. 1 ppb	Ga (Gallium)	Max. 0.1 ppb
Gd (Gadolinium)	Max. 0.1 ppb	Ge (Germanium)	Max. 0.1 ppb
Hg (Mercury)	Max. 0.2 ppb	Ho (Holmium)	Max. 0.1 ppb
In (Indium)	Max. 0.1 ppb	K (Potassium)	Max. 1 ppb
La (Lanthanum)	Max. 0.1 ppb	Li (Lithium)	Max. 0.1 ppb
Lu (Lutetium)	Max. 0.1 ppb	Mg (Magnesium)	Max. 1 ppb
Mn (Manganese)	Max. 0.5 ppb	Mo (Molybdenum)	Max. 0.5 ppb
Na (Sodium)	Max. 1 ppb	Nb (Niobium)	Max. 0.1 ppb
Nd (Neodymium)	Max. 0.1 ppb	Ni (Nickel)	Max. 0.5 ppb
Pb (Lead)	Max. 0.1 ppb	Pr (Praseodymium)	Max. 0.1 ppb
Rb (Rubidium)	Max. 0.1 ppb	Rh (Rhodium)	Max. 0.5 ppb
Sb (Antimony)	Max. 0.5 ppb	Sc (Scandium)	Max. 0.1 ppb
Se (Selenium)	Max. 1 ppb	Sm (Samarium)	Max. 0.1 ppb
Sn (Tin)	Max. 0.5 ppb	Sr (Strontium)	Max. 0.1 ppb
Tb (Terbium)	Max. 0.1 ppb	Te (Tellurium)	Max. 0.1 ppb
Th (Thorium)	Max. 0.1 ppb	Ti (Titanium)	Max. 0.5 ppb
Tl (Thallium)	Max. 0.1 ppb	Tm (Thulium)	Max. 0.1 ppb
U (Uranium)	Max. 0.1 ppb	V (Vanadium)	Max. 0.5 ppb
W (Tungsten)	Max. 0.1 ppb	Y (Yttrium)	Max. 0.1 ppb
Yb (Ytterbium)	Max. 0.1 ppb	Zn (Zinc)	Max. 0.5 ppb
Zr (Zirconium)	Max. 0.1 ppb		

Cat. No.	Pk	Pack type
83870.270	500 ml	Plastic bottle

Ammonia 20% AnalaR NORMAPUR® analytical reagent

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Density: 0,923 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	18.0 - 22.0 %	Colouration	Max. 10 APHA
Density (20/4)	0.910 - 0.930	Evaporation residue	Max. 10 ppm
Silica	Max. 10 ppm	Substances reducing $KMnO_4$ (as O)	Max. 4 ppm
Cl (Chloride)	Max. 0.5 ppm	CO_3 (Carbonate)	Max. 10 ppm
PO_4 (Phosphate)	Max. 0.5 ppm	S (Sulphur)	Max. 0.2 ppm
SO_4 (Sulphate)	Max. 20 ppm	Al (Aluminium)	Max. 0.03 ppm
As (Arsenic)	Max. 0.01 ppm	B (Boron)	Max. 0.05 ppm
Ba (Barium)	Max. 0.02 ppm	Be (Beryllium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.5 ppm	Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.3 ppm	Li (Lithium)	Max. 0.01 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.01 ppm
Mo (Molybdenum)	Max. 0.02 ppm	Na (Sodium)	Max. 0.8 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.02 ppm
Sr (Strontium)	Max. 0.01 ppm	Ti (Titanium)	Max. 0.1 ppm
V (Vanadium)	Max. 0.01 ppm	Zn (Zinc)	Max. 1 ppm
Zr (Zirconium)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
21188.294	1 l	Glass bottle
21188.363	5 l	Fluorinated plastic bottle

Ammonia 20 % GPR RECTAPUR®

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Density: 0,92 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	18 - 22 %
Density (20/4)	0.910 - 0.930
Evaporation residue	Max. 0.02 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 20 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
21180.242	1 l	Glass bottle SAFEBREAK
21180.297	1 l	Glass bottle
21180.366	5 l	Fluorinated plastic bottle
21180.446	20 l	Plastic drum

Ammonia 17% Reag. Ph. Eur. 1004701

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Density: 0,92 g/cm³ (20 °C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87707.180	100 ml	Plastic bottle

Ammonia 10%

Danger

CAS 1336-21-6 **UN:** 2672

NH_3 **M.W.** 35.05 g/mol

Density: 0,957 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	9.0 - 11.0 %

Cat. No.	Pk	Pack type
190064V	1 l	Glass bottle

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Ammonia 6 mol/l (6 N) Reag. Ph. Eur. 1004702

Danger

CAS 1336-21-6 **UN:** 3266
NH_3 **M.W.** 35.05 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87682.290	1 l	Plastic bottle

Ammonia 2 mol/l (2 N) Reag. Ph. Eur. 1004703

Danger

CAS 1336-21-6 **UN:** 2672
NH_3 **M.W.** 35.05 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87766.290	1 l	Plastic bottle

Ammonia 0.1 mol/l (0.1 N) Reag. Ph. Eur. 1004704

Warning

CAS 1336-21-6
NH_3 **M.W.** 35.05 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87767.290	1 l	Plastic bottle

Ammonium standard solution, 1,000 mg/l NH_4 in dil. nitric acid ARISTAR® standard for ion chromatography

NH_4 in dilute HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458192M	100 ml	Plastic bottle

Standard solution (250 ppm NH_4) for the preparation of Ammonium standard solution (2.5 ppm NH_4) Reag.Ph.Eur.; 5000301

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88084.180	100 ml	Plastic bottle

NEW Ammonia USP test solutions (TS) 34

CAS 1336-21-6
NH_3 **M.W.** 35.05 g/mol
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85380.180	100 ml	Glass bottle
85380.260	500 ml	Glass bottle

NEW Ammonium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84952.180	100 ml	Plastic bottle
84952.260	500 ml	Plastic bottle

NEW Ammonium (in N) 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84953.180	100 ml	Plastic bottle
84953.260	500 ml	Plastic bottle

NEW Ammonium acetate HiPerSolv CHROMANORM® for LC-MS

Warning

CAS 631-61-8
$H_3CCOONH_4$ **M.W.** 77.08 g/mol
Melting Pt: 114 °C **Density:** 1,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99 %
Ignition residue	Max. 0.01 %
Water	Max. 1 %
Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 10 ppm
NO_3 (Nitrate)	Max. 10 ppm
Ca (Calcium) (0.1 %)	Max. 0.2 ppm
K (Potassium) (0.1 %)	Max. 0.2 ppm
Mg (Magnesium) (0.1 %)	Max. 0.2 ppm
Na (Sodium) (0.1 %)	Max. 0.5 ppm
Transmittance (210 nm) (0.1 %)	Min. 10 %
Transmittance (220 nm) (0.1 %)	Min. 50 %
Transmittance (230 nm) (0.1 %)	Min. 80 %
Transmittance (235 nm) (0.1 %)	Min. 95 %
Transmittance (245 nm) (0.1 %)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84885.180	100 g	Plastic bottle
84885.260	500 g	Plastic bottle

Ammonium acetate HiPerSolv CHROMANORM® for HPLC

Warning

CAS 631-61-8
$H_3CCOONH_4$

M.W. 77.08 g/mol
Melting Pt: 114 °C **Density:** 1,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %
pH (20°C; 5 %)	6.5 - 7.5
Fe (Iron)	Max. 1 ppm
Pb (Lead)	Max. 1 ppm
Transmittance (254 nm) (1 mol/l)	Min. 98.0 %

Cat. No.	Pk	Pack type
153164R	250 g	Plastic bottle for solids

Ammonium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 631-61-8
$H_3CCOONH_4$

M.W. 77.08 g/mol
Melting Pt: 114 °C **Density:** 1,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Appearance	Colourless crystals
pH (25°C; 5 %)	6.7 - 7.3	Heavy metals (as Pb)	Max. 2 ppm
Ignition residue (SO_4)	Max. 100 ppm	Insolubility in water	Max. 50 ppm
Substances reducing $KMnO_4$ (as HCOOH)	Max. 50 ppm	Water	Max. 2.0 %
Cl (Chloride)	Max. 5 ppm	NO_3 (Nitrate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 10 ppm	Ca (Calcium)	Max. 10 ppm
Cd (Cadmium)	Max. 0.5 ppm	Cu (Copper)	Max. 0.5 ppm
Fe (Iron)	Max. 2 ppm	Ni (Nickel)	Max. 0.5 ppm
Pb (Lead)	Max. 0.5 ppm	Zn (Zinc)	Max. 0.5 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
21200.264	500 g	Plastic bottle for solids
21200.297	1 kg	Plastic bottle for solids
21200.366	5 kg	Bucket (Plastic)
21200.460	25 kg	Bucket (Plastic)

Ammonium acetate for soil analysis

Warning

CAS 631-61-8
$H_3CCOONH_4$

M.W. 77.08 g/mol
Melting Pt: 114 °C **Density:** 1,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	pH (20°C; 5 %)	5.0 - 7.4
Heavy metals (as Pb)	Max. 2 ppm	Ignition residue (SO_4)	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	NO_3 (Nitrate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 10 ppm	Ca (Calcium)	Max. 5 ppm
Cu (Copper)	Max. 0.5 ppm	Fe (Iron)	Max. 2 ppm
K (Potassium)	Max. 1 ppm	Mg (Magnesium)	Max. 1 ppm
Na (Sodium)	Max. 1 ppm	Pb (Lead)	Max. 0.5 ppm
Zn (Zinc)	Max. 0.5 ppm		

Cat. No.	Pk	Pack type
21199.361	5 kg	Bucket (Plastic)

Ammonium acetate GPR RECTAPUR®

Warning

CAS 631-61-8
$H_3CCOONH_4$

M.W. 77.08 g/mol
Melting Pt: 114 °C **Density:** 1,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.05 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21198.260	500 g	Plastic bottle for solids
21198.298	1 kg	Plastic bottle for solids
21198.367	5 kg	Bucket (Plastic)

Ammonium acetate Electran® Molecular biology grade

Warning

CAS 631-61-8
$H_3CCOONH_4$

M.W. 77.08 g/mol
Melting Pt: 114 °C **Density:** 1,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Appearance (description)	fine-crystalline powder
Appearance (colour)	almost colourless
Assay (acidimetric)	Min 98 %
pH-value (5 %; water)	6.5 - 7.3
Heavy metals (as Pb)	Max 0.0002 %
DNases (Exo- and endonucleases)	non detectable
Rnases	non detectable
Proteases	non detectable

Cat. No.	Pk	Pack type
437453A	250 g	Plastic bottle for solids

Ammonium bicarbonate

See Ammonium hydrogen carbonate p.35

Ammonium bifluoride

See Ammonium hydrogen difluoride p.35

Ammonium carbonate AnalaR NORMAPUR® analytical reagent

Danger

CAS 10361-29-2
$CO(OH)_2.2NH_3$

Melting Pt: 58 °C **Density:** 1,500 g/cm³ (20 °C)
Storage Temperature: Ambient

Mixture in approximatively equimolar ratio of ammonium carbamate $NH_4CO_2NH_2$ and ammonium hydrogen carbonate NH_4HCO_3.

Assay (NH_3)	30.0 - 34.0 %	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 50 ppm	Insolubility in water	Max. 100 ppm
Cl (Chloride)	Max. 5 ppm	NO_3 (Nitrate)	Max. 10 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 20 ppm
As (Arsenic)	Max. 3 ppm	Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
21217.260	500 g	Plastic bottle for solids
21217.295	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Ammonium carbonate Ph. Franç

Warning

CAS 10361-29-2
$CO(OH)_2.2NH_3$

Melting Pt: 58 °C **Density:** 1,5 g/cm³ (20 °C)
Storage Temperature: Ambient

Mixture in approximatively equimolar ratio of ammonium carbamate $NH_4CO_2NH_2$ and ammonium hydrogen carbonate NH_4HCO_3.

Assay (NH_3)	30.0 - 34.0 %
Appearance	White crystalline powder
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm
Heavy metals (as Pb)	Max. 10 ppm
Sulphated ash	Max. 0.05 %

Cat. No.	Pk	Pack type
83516.290	1 kg	Plastic bottle for solids

NEW Ammonium carbonate in aqueous solution USP test solutions (TS)

CAS 506-87-6
$(NH_4)_2CO_3$
Storage Temperature: Ambient
Ready to use test solution (TS).

Produced according to Pharmacopoeia requirements
Reduces time and expenses
Manufactured with controlled processes
Independent, traceable and certified
Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85328.180	100 ml	Plastic bottle
85328.260	500 ml	Plastic bottle

Ammonium carbonate 1 mol/l in aqueous solution Reag. Ph. Eur. 1005201

CAS 506-87-6
$(NH_4)_2CO_3$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87768.290	1 l	Plastic bottle

Ammonium ceric nitrate

See Ammonium cerium (IV) nitrate p.31

Ammonium ceric sulphate dihydrate

See Ammonium cerium (IV) sulphate dihydrate p.31

Ammonium cerium (IV) nitrate GPR RECTAPUR®

Danger

CAS 16774-21-3 **UN:** 1477
$(NH_4)_2Ce(NO_3)_6$

M.W. 548.22 g/mol
Melting Pt: 107-108 °C **Density:** 2,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 95 %
Not precipitated by NH_4OH (as SO_4)	Max. 0.2 %
Cl (Chloride)	Max. 0.02 %

Cat. No.	Pk	Pack type
22594.237	250 g	Plastic bottle for solids
22594.294	1 kg	Plastic bottle for solids

Ammonium cerium (IV) nitrate TECHNICAL

Danger

CAS 16774-21-3 **UN:** 1477
$(NH_4)_2Ce(NO_3)_6$

M.W. 548.22 g/mol
Melting Pt: 107-108 °C **Density:** 2,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 94 %

Cat. No.	Pk	Pack type
22595.297	1 kg	Plastic bottle for solids

Ammonium cerium (IV) nitrate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 16774-21-3
$(NH_4)_2Ce(NO_3)_6$

Titer (20°C; real value 0.2 % accuracy)	0.0998 - 0.1002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
30483.295	1 l	Plastic bottle

Ammonium cerium (IV) sulphate dihydrate AnalaR NORMAPUR® analytical reagent

CAS 10378-47-9
$(NH_4)_2Ce(SO_4)_4 \cdot 2H_2O$ **M.W.** 632.55 g/mol
Melting Pt: 130 °C

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 50 ppm
Insolubility in diluted H_2SO_4	Max. 50 ppm	Cl (Chloride)	Max. 10 ppm
PO_4 (Phosphate)	Max. 50 ppm	Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
21232.151	50 g	Plastic bottle for solids

Ammonium cerium (IV) sulphate dihydrate GPR RECTAPUR®

CAS 10378-47-9
$(NH_4)_2Ce(SO_4)_4 \cdot 2H_2O$ **M.W.** 632.55 g/mol
Melting Pt: 130 °C

Assay	Min. 95 %
Not precipitated by NH_4OH (as SO_4)	Max. 0.2 %
Cl (Chloride)	Max. 0.02 %

Cat. No.	Pk	Pack type
22606.230	250 g	Plastic bottle for solids

Ammonium cerium (IV) sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7637-03-8 **UN:** 3264
$(NH_4)_2Ce(SO_4)_4$

Titer (20°C; real value 0.2 % accuracy)	0.0998 - 0.1002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
2678.1000	1 l	Glass bottle

Ammonium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 12125-02-9
NH_4Cl
M.W. 53.49 g/mol
Melting Pt: 335 °C
Density: 1,5256 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119487950-27

Assay (calc. on dried substance)	99.8 - 100.5 %	Acidity or alkalinity	Passes test Ph.Eur.
Appearance of solution	Passes test Ph.Eur.	Bromides and iodides	Passes test Ph.Eur.
Identification A	Passes test Ph.Eur.	Identification B	Passes test Ph.Eur.
Solution S	Passes test Ph.Eur.	pH (25°C; 5 %)	4.5 - 5.5
Heavy metals (as Pb)	Max. 5 ppm	Ignition residue (SO_4)	Max. 100 ppm
Insolubility in water	Max. 50 ppm	Loss on drying (105°C; 2 h)	Max. 1 %
NO_3 (Nitrate)	Max. 5 ppm	PO_4 (Phosphate)	Max. 2 ppm
SO_4 (Sulphate)	Max. 20 ppm	Ca (Calcium)	Max. 5 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 2 ppm
K (Potassium)	Max. 50 ppm	Mg (Magnesium)	Max. 5 ppm
Na (Sodium)	Max. 50 ppm	Ni (Nickel)	Max. 1 ppm
Pb (Lead)	Max. 1 ppm	Zn (Zinc)	Max. 2 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
21236.267	500 g	Plastic bottle for solids
21236.291	1 kg	Plastic bottle for solids
21236.360	5 kg	Bucket (Plastic)

Ammonium chloride GPR RECTAPUR®

Warning

CAS 12125-02-9
NH_4Cl
M.W. 53.49 g/mol
Melting Pt: 335 °C
Density: 1,5256 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119487950-27

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.1 %
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21235.297	1 kg	Plastic bottle for solids
21235.366	5 kg	Plastic bottle for solids
21235.468	25 kg	Bucket (Plastic)

Ammonium chloride Molecular biology grade

Warning

CAS 12125-02-9
NH_4Cl
M.W. 53.49 g/mol
Melting Pt: 335 °C
Density: 1,5256 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119487950-27

Assay	Min. 99.80 %
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Absorbance (260 nm) (0.1 mol/l)	Max. 0.030
Absorbance (280 nm) (0.1 mol/l)	Max. 0.020
Heavy metals (as Pb)	Max. 0.001 %
Insoluble substances	Passes test
pH (20°C; 5 %)	4.50 - 5.50
Cu (Copper)	Max. 0.0002 %
Fe (Iron)	Max. 0.0002 %
Mg (Magnesium)	Max. 0.0005 %
Pb (Lead)	Max. 0.0001 %

Cat. No.	Pk	Pack type
437075R	1 kg	Plastic bottle

Ammonium chloride, crystallised TECHNICAL

Warning

CAS 12125-02-9
NH_4Cl
M.W. 53.49 g/mol
Melting Pt: 335 °C
Density: 1,5256 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119487950-27

Assay	Min. 98 %

Cat. No.	Pk	Pack type
21224.368	5 kg	Bucket (Plastic)

NEW Ammonium chloride 10.5% USP test solutions (TS)

CAS 12125-02-9
H_4ClN
M.W. 53.49 g/mol
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85329.180	100 ml	Plastic bottle
85329.260	500 ml	Plastic bottle

Ammonium chloride 2 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1005301

CAS 12125-02-9
NH_4Cl
M.W. 53.49 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87769.290	1 l	Plastic bottle

Ammonium chloride buffer solution pH 10.0 Reag. Ph. Eur. 4007300

Danger

UN: 3266

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85739.290	1 l	Plastic bottle

Ammonium citrate dibasic

See di-Ammonium hydrogen citrate p.35

Ammonium citrate tribasic

See tri-Ammonium citrate p.33

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tri-Ammonium citrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 3458-72-8
$C_6H_{17}N_3O_7$

M.W. 243.22 g/mol
Melting Pt: 185 °C
Density: 1 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	98.5 - 101.0 %	Identification	Passes test
Reducing substances	Passes test	pH (20°C; 5 %)	6.0 - 7.5
Ignition residue (SO_4)	Max. 50 ppm	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 30 ppm
Na (Sodium)	Max. 40 ppm	Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
103013A	250 g	Plastic bottle for solids

tri-Ammonium citrate GPR RECTAPUR®

Warning

CAS 3458-72-8
$C_6H_{17}N_3O_7$

M.W. 243.22 g/mol
Melting Pt: 185 °C
Density: 1 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	97 - 103 %
Identification	Passes test
pH (20°C; 5 %)	6.0 - 7.5
Ignition residue (SO_4)	Max. 0.05 %
Cl (Chloride)	Max. 100 ppm
Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
271534H	500 g	Plastic bottle for solids

Ammonium dihydrogen phosphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7722-76-1
$(NH_4)H_2PO_4$

M.W. 115.03 g/mol
Melting Pt: 190 °C
Density: 1,8 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119488166-29

Assay	Min. 99.0 %	pH (2,3 %)	About 4.2
pH (25°C; 5 %)	3.8 - 4.4	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 5 ppm
NO_3 (Nitrate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ca (Calcium)	Max. 10 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 50 ppm	Mg (Magnesium)	Max. 5 ppm
Na (Sodium)	Max. 50 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21305.260	500 g	Plastic bottle for solids
21305.290	1 kg	Plastic bottle for solids

Ammonium dihydrogen phosphate, purified

CAS 7722-76-1
$NH_4H_2PO_4$

M.W. 115.03 g/mol
Melting Pt: 190 °C
Density: 1,8 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119488166-29

Assay	Min. 97.5 %
Heavy metals (As Pb)	Max. 20 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
21303.293	1 kg	Plastic bottle for solids

Ammonium dihydrogen phosphate TECHNICAL

CAS 7722-76-1
$NH_4H_2PO_4$

M.W. 115.03 g/mol
Melting Pt: 190 °C
Density: 1,8 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119488166-29

Assay	Min. 97 %

Cat. No.	Pk	Pack type
21302.368	5 kg	Bucket (Plastic)

Ammonium ethanedioate monohydrate

See di-Ammonium oxalate monohydrate p.37

Ammonium ferric sulphate dodecahydrate

See Ammonium iron (III) sulphate dodecahydrate p.36

Ammonium ferrous sulphate hexahydrate

See Ammonium iron (II) sulphate hexahydrate p.36

Ammonium fluoride AnalaR NORMAPUR® analytical reagent

Danger

CAS 12125-01-8
NH_4F

UN: 2505
M.W. 37.04 g/mol
Melting Pt: 160 °C
Density: 1,0088-1,0096g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 98.0 %	Ammonium hydrogen difluoride	Max. 1 %
Heavy metals (as Pb)	Max. 5 ppm	Water	Max. 5 %
Cl (Chloride)	Max. 10 ppm	SiF_6 (Hexafluorosilicate)	Max. 0.1 %
SO_4 (Sulphate)	Max. 50 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 30 ppm	Na (Sodium)	Max. 80 ppm

Cat. No.	Pk	Pack type
21252.263	500 g	Plastic bottle for solids

Ammonium fluoride GPR RECTAPUR®

Danger

CAS 12125-01-8
NH_4F

UN: 2505
M.W. 37.04 g/mol
Melting Pt: 160 °C
Density: 1,0088-1,0096g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.05 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
21251.260	500 g	Plastic bottle for solids

NEW Ammonium formate HiPerSolv CHROMANORM® for LC-MS

Warning

CAS 540-69-2
HCO_2NH_4

M.W. 63.06 g/mol
Melting Pt: 119-121 °C
Density: 1,28 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99 %
Ignition residue	Max. 0.005 %
Water	Min. 2 %
Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 50 ppm
Ca (Calcium) (0.1 %)	Max. 0.2 ppm
K (Potassium) (0.1 %)	Max. 0.2 ppm
Mg (Magnesium) (0.1 %)	Max. 0.2 ppm
Na (Sodium) (0.1 %)	Max. 0.5 ppm
Transmittance (215 nm) (0.1 %)	Min. 10 %
Transmittance (225 nm) (0.1 %)	Min. 50 %
Transmittance (230 nm) (0.1 %)	Min. 80 %
Transmittance (240 nm) (0.1 %)	Min. 95 %
Transmittance (245 nm) (0.1 %)	Min. 99 %
Suitable for LC-MS (0.1 %)	Passes test

Cat. No.	Pk	Pack type
84884.180	100 g	Plastic bottle
84884.260	500 g	Plastic bottle

Ammonium formate AnalaR NORMAPUR® analytical reagent

Warning

CAS 540-69-2
NH_4HCO_2

M.W. 63.06 g/mol
Melting Pt: 119-121 °C **Density:** 1,28 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 97 %	Identification	Passes test
pH (20°C; 5 %)	6 - 7	Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm	SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 20 ppm		

Cat. No.	Pk	Pack type
21254.260	500 g	Plastic bottle for solids

Ammonium heptamolybdate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 12054-85-2
$(NH_4)_6Mo_7O_{24}·4H_2O$

M.W. 1235.86 g/mol
Density: 2,498 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated as MoO_3)	81.0 - 83.0 %	Heavy metals (as Pb)	Max. 10 ppm
Insolubility in water	Max. 50 ppm	Mg and alkaline earth metals	Max. 0.02 %
Cl (Chloride)	Max. 5 ppm	NO_3 (Nitrate)	Max. 0.05 %
PO_4 + AsO_4 + SiO_4 (as PO_4)	Max. 5 ppm	PO_4 + AsO_4 + SiO_4 (as SiO_2)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Cu (Copper)	Max. 10 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 100 ppm
Mg (Magnesium)	Max. 50 ppm	Na (Sodium)	Max. 100 ppm
Pb (Lead)	Max. 10 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21276.185	100 g	Plastic bottle for solids
21276.260	500 g	Plastic bottle for solids
21276.298	1 kg	Plastic bottle for solids

Ammonium heptamolybdate tetrahydrate GPR RECTAPUR®

Warning

CAS 12054-85-2
$(NH_4)_6Mo_7O_{24}·4H_2O$

M.W. 1235.86 g/mol
Density: 2,498 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98.5 %
Heavy metals (as Pb)	Max. 50 ppm
PO_4 + AsO_4 + SiO_4 (as PO_4)	Max. 0.02 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
21275.262	500 g	Plastic bottle for solids

Ammonium heptamolybdate 10% in aqueous solution Reag. Ph. Eur. 1005702

CAS 12054-85-2
$(NH_4)_6Mo_7O_{24}$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87770.290	1 l	Plastic bottle

Ammonium heptamolybdate 10% in aqueous solution Reag. Ph. Eur. 1005703

CAS 12054-85-2
$(NH_4)_6Mo_7O_{24}$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87771.290	1 l	Plastic bottle

Ammonium heptamolybdate 0.04 mol/l in sulphuric acid 50% Reag. Ph. Eur. 1086500

CAS 12054-85-2
$(NH_4)_6Mo_7O_{24}$

UN: 2796

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87947.180	100 ml	Plastic bottle

Ammonium heptamolybdate 0.004 mol/l in sulphuric acid 96% Reag. Ph. Eur. 1086400

Danger

CAS 12054-85-2
$(NH_4)_6Mo_7O_{24}$

UN: 1830

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87946.180	100 ml	Plastic bottle

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Ammonium heptamolybdate 4% and ammonium metavanadate 0.1% in nitric acid 20% Reag. Ph. Eur. 1056700

UN: 2031

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87872.180	100 ml	Plastic bottle

Ammonium hexanitratocerate (IV)

See Ammonium cerium (IV) nitrate p.31

Ammonium hydrogen carbonate AnalaR NORMAPUR® analytical reagent

Warning

CAS 1066-33-7
NH_4HCO_3

M.W. 79.06 g/mol
Melting Pt: 35 °C **Density:** 1,57 g/cm³ (20 °C)

Assay	Min. 97.5 %	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 50 ppm	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	PO_4 (Phosphate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm	Fe (Iron)	Max. 2 ppm

Cat. No.	Pk	Pack type
21219.292	1 kg	Plastic bottle for solids

Ammonium hydrogen carbonate GPR RECTAPUR®

Warning

CAS 1066-33-7
NH_4HCO_3

M.W. 79.06 g/mol
Melting Pt: 35 °C **Density:** 1,57 g/cm³ (20 °C)

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.05 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21218.298	1 kg	Plastic bottle for solids

di-Ammonium hydrogen citrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 3012-65-5
$HOC(CO_2H)(CH_2CO_2NH_4)_2$

M.W. 226.19 g/mol
Density: 1,483 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	99.0 - 103.0 %	C_2O_4 (Oxalate)	Passes test
Heavy metals (as Pb)	Max. 5 ppm	Ignition residue (SO_4)	Max. 100 ppm
Insolubility in water	Max. 50 ppm	Total S (as SO_4)	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	PO_4 (Phosphate)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm		

Cat. No.	Pk	Pack type
21246.238	250 g	Plastic bottle for solids

di-Ammonium hydrogen citrate GPR RECTAPUR®

Warning

CAS 3012-65-5
$HOC(CO_2H)(CH_2CO_2NH_4)_2$

M.W. 226.19 g/mol
Density: 1,483 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.1 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
21245.361	5 kg	Bucket (Plastic)

Ammonium hydrogen difluoride AnalaR NORMAPUR® analytical reagent

Danger

CAS 1341-49-7 **UN:** 1727
NH_4HF_2

M.W. 57.04 g/mol
Melting Pt: 127 °C **Density:** 0,8 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98.5 %	Heavy metals (as Pb)	Max. 0.03 %
Ignition residue (SO_4)	Max. 0.02 %	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ca (Calcium)	Max. 10 ppm	Fe (Iron)	Max. 80 ppm

Cat. No.	Pk	Pack type
81000.260	500 g	Plastic bottle for solids

Ammonium hydrogen difluoride GPR RECTAPUR®

Danger

CAS 1341-49-7 **UN:** 1727
NH_4HF_2

M.W. 57.04 g/mol
Melting Pt: 127 °C **Density:** 0,8 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 0.03 %
Cl (Chloride)	Max. 0.05 %
SiF_6 (Hexafluorosilicate)	Max. 0.3 %
Fe (Iron)	Max. 100 ppm

Cat. No.	Pk	Pack type
21262.360	5 kg	Bucket (Plastic)

Ammonium hydrogen difluoride TECHNICAL

Danger

CAS 1341-49-7 **UN:** 1727
NH_4HF_2

M.W. 57.04 g/mol
Melting Pt: 127 °C **Density:** 0,8 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
21253.290	1 kg	Plastic bottle for solids
21253.368	5 kg	Bucket (Plastic)

di-Ammonium hydrogen orthophosphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7783-28-0
$(NH_4)_2HPO_4$

M.W. 132.06 g/mol
Melting Pt: 185 °C **Density:** 1,619 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490974-22

Assay	Min. 99.0 %	pH (20°C)	About 8
pH (25°C; 5 %)	7.8 - 8.1	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 40 ppm	NO_3 (Nitrate)	Max. 10 ppm
Ca (Calcium)	Max. 10 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 10 ppm	Mg (Magnesium)	Max. 5 ppm
Na (Sodium)	Max. 10 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21311.234	250 g	Plastic bottle for solids
21311.291	1 kg	Plastic bottle for solids

di-Ammonium hydrogen orthophosphate TECHNICAL

CAS 7783-28-0
$(NH_4)_2HPO_4$

M.W. 132.06 g/mol
Melting Pt: 185 °C **Density:** 1,619 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490974-22

Assay ..... Min. 97.5 %

Cat. No.	Pk	Pack type
21306.362	5 kg	Bucket (Plastic)

Ammonium hydrogen phosphate

See di-Ammonium hydrogen orthophosphate..... p.35

di-Ammonium hydrogen phosphate

See di-Ammonium hydrogen orthophosphate..... p.35

Ammonium iron (III) citrate TECHNICAL

Warning

CAS 1185-57-5
$C_6H_8O_7 \cdot xFe^{3+} \cdot yNH3$
Storage Temperature: Ambient

Assay (calculated as Fe)..... 14 - 16 %

Cat. No.	Pk	Pack type
83887.290	1 kg	Plastic bottle for solids
83887.360	5 kg	Bucket (Plastic)

Ammonium iron (II) sulphate hexahydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 7783-85-9
$(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$
M.W. 392.14 g/mol
Melting Pt: 110 °C **Density:** 1,864 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (25°C; 5 %)	3.0 - 5.0
Total P (Phosphorus)	Max. 30 ppm	Cl (Chloride)	Max. 10 ppm
Ca (Calcium)	Max. 10 ppm	Cu (Copper)	Max. 10 ppm
Fe (III) (Iron)	Max. 0.03 %	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 50 ppm	Mn (Manganese)	Max. 0.05 %
Na (Sodium)	Max. 50 ppm	Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 50 ppm		

Cat. No.	Pk	Pack type
24257.236	250 g	Plastic bottle for solids
24257.260	500 g	Plastic bottle for solids
24257.293	1 kg	Plastic bottle for solids
24257.460	25 kg	Bucket (Plastic)

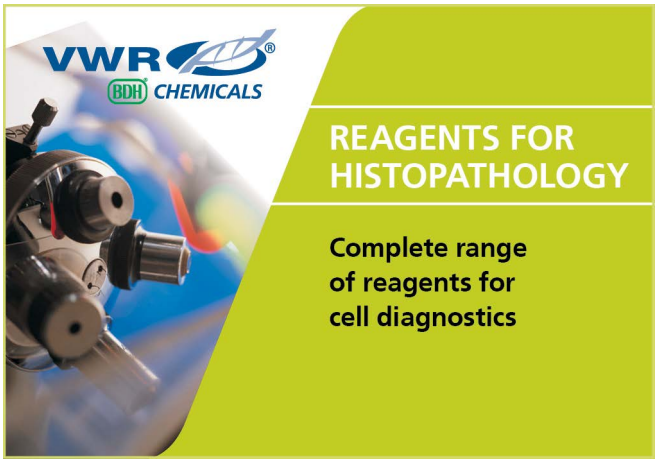
Ammonium iron (II) sulphate hexahydrate TECHNICAL

Warning

CAS 7783-85-9
$(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$
M.W. 392.14 g/mol
Melting Pt: 110 °C **Density:** 1,864 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 98.5 %

Cat. No.	Pk	Pack type
24254.293	1 kg	Plastic bottle for solids



Ammonium iron (II) sulphate 0.12 mol/l (0.12 N) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard

CAS 10045-89-3
$(NH_4)_2Fe(SO_4)_2$
Storage Temperature: Ambient
Not suitable for extended storage. Check strength before use.

Titer (20°C; real value 0.2 % accuracy)..... 0.1198 - 0.1202 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30884.291	1 l	Glass bottle

Ammonium iron (II) sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 10045-89-3
$(NH_4)_2Fe(SO_4)_2$
Density: 1,030 g/cm³ (20 °C)
Storage Temperature: Ambient
Not suitable for extended storage. Check strength before use.

Titer (20°C; real value 0.2 % accuracy)..... 0.0998 - 0.1002 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30883.297	1 l	Glass bottle

Ammonium iron (II) sulphate 0.05 mol/l (0.05 N) in aqueous solution

CAS 10045-89-3
$(NH_4)_2Fe(SO_4)_2$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)..... 0.0499 - 0.0501 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30882.294	1 l	Glass bottle

Ammonium iron (III) sulphate dodecahydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 7783-83-7
$NH_4Fe(SO_4)_2 \cdot 12H_2O$
M.W. 482.2 g/mol
Boiling Pt: 230 °C (1013 hPa) **Melting Pt:** 39 - 41 °C **Density:** 1,71 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 101.0 %	Insolubility in water	Max. 50 ppm
Substances not precipitated by NH_4OH	Max. 0.1 %	Cl (Chloride)	Max. 10 ppm
NO_3 (Nitrate)	Max. 100 ppm	Cu (Copper)	Max. 20 ppm
Fe (II) (Iron)	Max. 10 ppm	Mn (Manganese)	Max. 50 ppm
Pb (Lead)	Max. 20 ppm	Zn (Zinc)	Max. 30 ppm

Cat. No.	Pk	Pack type
21094.233	250 g	Plastic bottle for solids
21094.260	500 g	Plastic bottle for solids
21094.290	1 kg	Plastic bottle for solids

Ammonium iron (III) sulphate dodecahydrate TECHNICAL

Warning

CAS 7783-83-7
$NH_4Fe(SO_4)_2 \cdot 12H_2O$
M.W. 482.2 g/mol
Boiling Pt: 230 °C (1013 hPa) **Melting Pt:** 39-41 °C **Density:** 1,71 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
21092.293	1 kg	Plastic bottle for solids

di-Ammonium iron (II) sulphate hexahydrate

See Ammonium iron (II) sulphate hexahydrate..... p.36

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Ammonium metavanadate analytical reagent

Danger

CAS 7803-55-6 **UN:** 2859
NH_4VO_3 **M.W.** 116.98 g/mol
Melting Pt: 200 °C **Density:** 2,33 g/cm³ (20 °C)

Assay	Min. 99.0 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.05 %
Pb (Lead)	Max. 20 ppm

Cat. No.	Pk	Pack type
21369.186	100 g	Plastic bottle for solids

Ammonium molybdate (para) tetrahydrate

See Ammonium heptamolybdate tetrahydrate p.34

Ammonium molybdate solution R3 Reag. Ph. Eur. 1005704

Danger

UN: 1760

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87772.290	1 l	Plastic bottle

Ammonium molybdate solution R4 Reag. Ph. Eur. 1005705

Danger

UN: 1993

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87773.260	500 ml	Plastic bottle

Ammonium monohydrogen phosphate

See di-Ammonium hydrogen orthophosphate p.35

Ammonium monovanadate

See Ammonium metavanadate p.37

Ammonium nitrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 6484-52-2 **UN:** 1942
NH_4NO_3 **M.W.** 80.04 g/mol
Boiling Pt: 230 °C (1013 hPa) **Melting Pt:** 169 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	pH (25°C; 5 %)	4.5 - 6.0
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Residue on ignition	Max. 100 ppm	Cl (Chloride)	Max. 3 ppm
NO_2 (Nitrite)	Max. 5 ppm	PO_4 (Phosphate)	Max. 5 ppm
SO_4 (Sulphate)	Max. 20 ppm	Ca (Calcium)	Max. 30 ppm
Fe (Iron)	Max. 2 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21280.260	500 g	Plastic bottle for solids
21280.293	1 kg	Plastic bottle for solids
21280.460	25 kg	Bucket (Plastic)

Ammonium nitrate GPR RECTAPUR®

Warning

CAS 6484-52-2 **UN:** 1942
NH_4NO_3 **M.W.** 80.04 g/mol
Boiling Pt: 230 °C (1013 hPa) **Melting Pt:** 169 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 98.5 %
Heavy metals (as Pb)	Max. 10 ppm
PO_4 (Phosphate)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21278.295	1 kg	Plastic bottle for solids
21278.364	5 kg	Bucket (Plastic)

Ammonium nitrate TECHNICAL

Warning

CAS 6484-52-2 **UN:** 1942
NH_4NO_3 **M.W.** 80.04 g/mol
Boiling Pt: 230 °C (1013 hPa) **Melting Pt:** 169 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 98.5 %

Cat. No.	Pk	Pack type
21277.361	5 kg	Bucket (Plastic)
21277.460	25 kg	Bucket (Plastic)

Ammonium oxalate solution Reag. Ph. Eur. 1005901

CAS 6009-70-7
$(NH_4)_2C_2O_4 \cdot H_2O$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87774.290	1 l	Plastic bottle

di-Ammonium oxalate monohydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 6009-70-7 **UN:** 3288
$(NH_4)_2C_2O_4 \cdot H_2O$ **M.W.** 142.11 g/mol
Boiling Pt: 70 °C (1013 hPa) **Melting Pt:** 70 °C **Density:** ~1,5 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.5 - 101.0 %	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 0.02 %	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 20 ppm	NO_3 (Nitrate)	Max. 20 ppm
SO_4 (Sulphate)	Max. 20 ppm	Ca (Calcium)	Max. 20 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 20 ppm
Mg (Magnesium)	Max. 10 ppm	Na (Sodium)	Max. 10 ppm

Cat. No.	Pk	Pack type
21289.236	250 g	Plastic bottle for solids
21289.293	1 kg	Plastic bottle for solids

di-Ammonium oxalate monohydrate GPR RECTAPUR®

Warning

CAS 6009-70-7 **UN:** 3288
$(NH_4)_2C_2O_4 \cdot H_2O$ **M.W.** 142.11 g/mol
Boiling Pt: 70 °C (1013 hPa) **Melting Pt:** 70 °C **Density:** ~1,5 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.1 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
21288.266	500 g	Plastic bottle for solids

Ammonium paramolybdate tetrahydrate

See Ammonium heptamolybdate tetrahydrate..... p.34

Ammonium peroxodisulphate (APS) AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7727-54-0 **UN:** 1444
$(NH_4)_2S_2O_8$
M.W. 228.2 g/mol
Melting Pt: 120 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue	Max. 0.05 %	Insolubility in water	Max. 0.02 %
Cl (Chloride)	Max. 5 ppm	Fe (Iron)	Max. 10 ppm
Mn (Manganese)	Max. 2 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
21300.260	500 g	Plastic bottle for solids
21300.293	1 kg	Plastic bottle for solids

Ammonium peroxodisulphate (APS) GPR RECTAPUR®

Danger

CAS 7727-54-0 **UN:** 1444
$(NH_4)_2S_2O_8$
M.W. 228.2 g/mol
Melting Pt: 120 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97.5 %
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 20 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
21299.366	5 kg	Plastic bottle for solids

Ammonium peroxodisulphate (APS), proteomics grade

Danger

CAS 7727-54-0 **UN:** 1444
$(NH_4)_2S_2O_8$
M.W. 228.2 g/mol
Melting Pt: 120 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Chloride & Chlorate	<= 0.001%
DNase	none detected
Electrophoresis (P/F)	Pass
Heavy Metals (as Pb)	<= 0.005%
Insolubles	<= 0.005%
Iron	<= 0.001%
Manganese	<= 0.00005%
Protease	none detected
Purity	>= 98%
Residue on Ignition	<= 0.05%
RNase	none detected
Titrable Free Acid	<= 0.04 meq/g

Cat. No.	Pk	Pack type
M133-25G	25 g	Plastic bottle
M133-100G	100 g	Plastic bottle for solids

Ammonium peroxodisulphate (APS), tablets for biotechnology

Danger

CAS 7727-54-0 **UN:** 1444
$(NH_4)_2S_2O_8$
M.W. 228.2 g/mol
Melting Pt: 120 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Convenient tablet eliminates the need for weighing powder. Easily prepared without weighing. Add one tablet to 1.5 ml of water to make a 10% solution.

- Fast and easy polymerisation of acrylamide mixtures
- Odour-free and non-flammable
- Non-hazardous shipping

Dissolution Time (1 tablet/1 ml Water)	4 minutes
Polymerisation	30 minutes
Solubility (10%, Water)	PASS

Cat. No.	Pk	Pack type
K833-100TABS	100 Tab.	Plastic bottle

Ammonium persulphate

See Ammonium peroxodisulphate (APS)..... p.38

Ammonium phosphate dibasic

See di-Ammonium hydrogen orthophosphate..... p.35

Ammonium phosphate monobasic

See Ammonium dihydrogen phosphate..... p.33

Ammonium purpurate

See Murexide..... p.312

Ammonium rhodanide

See Ammonium thiocyanate p.39

Ammonium sulphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7783-20-2
$(NH_4)_2SO_4$
M.W. 132.14 g/mol
Melting Pt: 336-339 °C **Density:** 1,78 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455044-46

Assay	Min. 99.5 %	pH (25°C; 5 %)	5.0 - 6.0
Heavy metals (as Pb)	Max. 5 ppm	Ignition residue (SO_4)	Max. 50 ppm
Insolubility in water	Max. 10 ppm	Loss on drying (105°C)	Max. 0.1 %
Cl (Chloride)	Max. 3 ppm	NO_3 (Nitrate)	Max. 10 ppm
PO_4 (Phosphate)	Max. 5 ppm	As (Arsenic)	Max. 0.2 ppm
Ca (Calcium)	Max. 10 ppm	Cd (Cadmium)	Max. 1 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 2 ppm
K (Potassium)	Max. 20 ppm	Mg (Magnesium)	Max. 5 ppm
Na (Sodium)	Max. 20 ppm	Pb (Lead)	Max. 2 ppm
Zn (Zinc)	Max. 1 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21333.296	1 kg	Plastic bottle for solids
21333.365	5 kg	Plastic bottle for solids

Ammonium sulphate Reag. Ph. Eur.

CAS 7783-20-2
$(NH_4)_2SO_4$
M.W. 132.14 g/mol
Melting Pt: 336-339 °C **Density:** 1,78 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455044-46

Assay	Min. 99.0 %
Appearance	White crystals
pH (5 %)	4.5 - 6.0
Sulphated ash	Max. 0.1 %

Cat. No.	Pk	Pack type
85509.290	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Ammonium sulphate GPR RECTAPUR®

CAS 7783-20-2
$(NH_4)_2SO_4$
M.W. 132.14 g/mol
Melting Pt: 336-339 °C **Density:** 1,78 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455044-46

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.02 %
Cl (Chloride)	Max. 20 ppm
NO_3 (Nitrate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21332.293	1 kg	Plastic bottle for solids
21332.362	5 kg	Plastic bottle for solids

Ammonium sulphate Electran® Molecular biology grade

CAS 7783-20-2
$(NH_4)_2SO_4$
M.W. 132.14 g/mol
Melting Pt: 336-339 °C **Density:** 1,78 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455044-46

May be used for the precipitation or fractionation of proteins or for purification of antibodies. Useful for crystallographic analysis of nucleic acids and proteins.

Assay	Min. 99.50 %	Appearance	White crystalline powder
DNases (exo- and endonucleases)	Not detected	RNases	Not detected
Proteases	Not detected	pH (5 %)	5.00 - 6.00
Absorbance (260 nm) (0.1 mol/l)	Max. 0.01	Absorbance (280 nm) (0.1 mol/l)	0.01
NO_3 (Nitrate)	Max. 0.001 %	PO_4 (Phosphate)	Max. 0.0005 %
As (Arsenic)	Max. 0.0001 %	Ca (Calcium)	Max. 0.001 %
Cl (Chloride)	Max. 0.001 %	Cu (Copper)	Max. 0.0005 %
Fe (Iron)	Max. 0.0005 %	K (Potassium)	Max. 0.002 %
Mg (Magnesium)	Max. 0.0005 %	Na (Sodium)	Max. 0.002 %
Pb (Lead)	Max. 0.0001 %	Zn (Zinc)	Max. 0.0002 %

Cat. No.	Pk	Pack type
444445Q	1 kg	Bucket (Plastic)
444446R	5 kg	Bucket (Plastic)

Ammonium sulphate, ultrapure

CAS 7783-20-2
$(NH_4)_2SO_4$
M.W. 132.14 g/mol
Melting Pt: 336-339 °C **Density:** 1,78 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455044-46

May be used for the precipitation or fractionation of proteins or for purification of antibodies. Useful for crystallographic analysis of nucleic acids and proteins.

Arsenic	< 0.0001%
Chloride	<= 0.0005%
DNase	none detected
Heavy Metals (as Pb)	<= 0.0002%
Insolubles	<= 0.005%
Iron	<= 0.0005%
Magnesium Test	Pass
pH (5%, Water) @25°C	5 - 6
Phosphate	<= 0.0005%
Protease	none detected
Purity (Dry Basis)	>= 99.5%
Residue on Ignition	<= 0.005%
RNase	none detected
Selenium	<= 0.002%

Cat. No.	Pk	Pack type
0191-1KG	1 kg	Plastic bottle for solids
0191-5KG	5 kg	Bucket (Plastic)
0191-50KG	50 kg	Plastic drum

Ammonium sulphate, proteomics grade

CAS 7783-20-2
$(NH_4)_2SO_4$
M.W. 132.14 g/mol
Melting Pt: 336-339 °C **Density:** 1,78 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455044-46

Arsenic	< 0.0001%
Chloride	< 0.0005 %
DNase	none detected
Heavy Metals (as Pb)	< 0.0002 %
Insolubles	< 0.005 %
Iron	< 0.0005 %
Magnesium Test	Pass
pH (5%, Water) @25°C	5.0 - 6.0
Phosphate	< 0.0002 %
Protease	none
Purity (Dry Basis)	> 99.5 %
Residue on Ignition	< 0.005 %
RNase	none detected
Selenium	<= 0.0005 %

Cat. No.	Pk	Pack type
M105-1KG	1 kg	Plastic bottle for solids
M105-5KG	5 kg	Bucket (Plastic)

Ammonium sulphide 20% in aqueous solution AnalaR NORMAPUR® analytical reagent

Danger

CAS 12135-76-1 **UN:** 2683
$(NH_4)_2S$

Assay (as $(NH_4)_2S$ from sulphide)	17.0 - 23.0 %	Ignition residue (SO_4)	Max. 100 ppm
Cl (Chloride)	Max. 0.02 %	CO_3 (Carbonate)	Max. 100 ppm

Cat. No.	Pk	Pack type
21354.298	1 l	Glass bottle

Ammonium sulphide 20% in aqueous solution GPR RECTAPUR®

Danger

CAS 12135-76-1 **UN:** 2683
$(NH_4)_2S$

Assay (as $(NH_4)_2S$ from sulphide)	17 - 23 %
Ignition residue (SO_4)	Max. 0.05 %

Cat. No.	Pk	Pack type
21352.292	1 l	Glass bottle
21352.441	20 l	Plastic drum

Ammonium thiocyanate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 1762-95-4
NH_4SCN
M.W. 76.12 g/mol
Melting Pt: 150 °C **Density:** 1,305 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.5 %	pH (20°C; 5 %)	4.2 - 5.8
Heavy metals (as Pb)	Max. 5 ppm	Ignition residue (SO_4)	Max. 0.025 %
Insolubility in water	Max. 50 ppm	Substances reducing iodine	Max. 0.4 %
Cl (Chloride)	Max. 50 ppm	S (Sulphide)	Max. 10 ppm
Cu (Copper)	Max. 4 ppm	Fe (Iron)	Max. 1 ppm
Pb (Lead)	Max. 4 ppm	Conforms to Reag. Ph.Eur.	Passes test
SO_4 (Sulphate)	Max. 100 ppm		

Cat. No.	Pk	Pack type
21344.237	250 g	Plastic bottle for solids
21344.294	1 kg	Plastic bottle for solids

Ammonium thiocyanate, purified

Warning

CAS 1762-95-4
NH_4SCN **M.W.** 76.12 g/mol
Melting Pt: 150 °C **Density:** 1,305 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Heavy metals (as Pb) ..... Max. 10 ppm
Fe (Iron) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
21342.297	1 kg	Plastic bottle for solids

NEW Ammonium thiocyanate in aqueous solution USP test solutions (TS)

CAS 1762-95-4
NH_4SCN
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85331.180	100 ml	Plastic bottle
85331.260	500 ml	Plastic bottle

Ammonium thiocyanate 1 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1006701

CAS 1762-95-4
NH_4SCN
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87775.290	1 l	Plastic bottle

Ammonium thiocyanate 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 1762-95-4
NH_4SCN
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31960.291	1 l	Glass bottle

Ammonium thiocyanate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 1762-95-4
NH_4SCN
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31961.294	1 l	Plastic bottle
31961.328	2,5 l	Plastic bottle

Ammonium vanadate solution Reag. Ph. Eur. 1006801

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87776.290	1 l	Plastic bottle

Ammonium vanadium trioxide

See Ammonium metavanadate p.37

Ammonium 5-(2,4,6-trioxoperhydropyrimidin-5-ylideneamino)barbiturate

See Murexide p.312

VWR LIFE SCIENCE Amphotericin B for tissue culture

Warning

CAS 1397-89-3
$C_{47}H_{73}NO_{17}$
Storage Temperature: Freezer
An antifungal polyene believed to act by altering membrane permeability. Susceptible organisms - yeasts and moulds. Recommended working concentration: 2.5 µg/ml.

Activity mcg/mg is lot dependent ..... REPORT

Cat. No.	Pk	Pack type
E437-100MG	100 mg	Vial
E437-1G	1 g	Vial

VWR LIFE SCIENCE Amphotericin B for tissue culture

Warning

CAS 1397-89-3
$C_{47}H_{73}NO_{17}$
Storage Temperature: Freezer
Alters membrane permeability. Working concentration: 2.5 µg/ml

Potency (Solubilised Amphotericin) ..... REPORT

Cat. No.	Pk	Pack type
K721-20ML	20 ml	Vial

VWR LIFE SCIENCE Ampicillin sodium salt for tissue culture, γ-irradiated

Danger

CAS 69-52-3
$C_{16}H_{18}N_3NaO_4S$ **M.W.** 371.39
Storage Temperature: Refrigerator
Aseptically prepared, gamma-irradiated. Tissue culture tested. 10 mg/ml solution. Working concentration: 50 µg/ml

Expiration Date ..... REPORT
pH (1%, Water) @25 °C ..... 8.0 - 10.0
Potency (Anhydrous) ..... 845 - 988 mcg/mg
Solubility (Vial Contents, 20 ml Water) ..... PASS
Sterile (gamma-irradiated) ..... PASS
USP Grade Ampicillin Sodium ..... PASS

Cat. No.	Pk	Pack type
E477-20ML	20 ml	Vial

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Ampicillin sodium salt, ultrapure

Danger

CAS 69-52-3

$C_{16}H_{18}N_3NaO_4S$ **M.W.** 371.39

Storage Temperature: Refrigerator

Interferes with formation of bacterial cell wall. Working concentration: 50 µg/ml.

Crystallinity	PASS
Dimethylaniline (P/F)	PASS
Identification	PASS
Methylene Chloride	<= 0.2 %
pH (1%, Water) @25C	8.0 - 10.0
Potency (anhydrous)	845 - 988 mcg/mg
Potency (as is)	916.54 mcg/mg
Water (KF)	<= 2.0 %

Cat. No.	Pk	Pack type
0339-EU-25G	25 g	Plastic bottle for solids
0339-EU-100G	100 g	Plastic bottle for solids

n-Amyl alcohol

See 1-Pentanol p.338

Amylodextrin

See Starch, soluble p.464

AnalaR NORMAPUR® ACS Reag. Ph. Eur.

Comprehensive range of analytical chemicals.

- Reagents suitable for a multitude of analytical and R&D applications
- Specifications conform to ACS and Reag Ph Eur
- Reproducible quality

Description	Page	Pk	Cat. No.
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	1 l	20104.243
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	1 l	20104.298
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	2,5 l	20104.323
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	2,5 l	20104.334
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	5 l	20104.367
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	20 l	20104.447
Acetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	3, 42	200 l	20104.551
Acetic anhydride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	5, 42	1 l	21390.293
Acetic anhydride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	5, 42	2,5 l	21390.330
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	1 l	20066.296
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	2,5 l	20066.321
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	2,5 l	20066.330
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	2,5 l	20066.423
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	5 l	20066.365
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	25 l	20066.467
Acetone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	7, 42	200 l	20066.558
Acetonitrile AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	12, 42	1 l	20071.294
Acetonitrile AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	12, 42	2,5 l	20071.328
Acetonitrile AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	12, 42	25 l	20071.460
Aluminium potassium sulphate dodecahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	24, 42	1 kg	21110.296
Ammonium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	30, 42	500 g	21200.264
Ammonium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	30, 42	1 kg	21200.297
Ammonium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	30, 42	5 kg	21200.366
Ammonium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	32, 42	500 g	21236.267
Ammonium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	32, 42	1 kg	21236.291
Ammonium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	32, 42	5 kg	21236.360
Ammonium dihydrogen phosphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	33, 42	500 g	21305.260
Ammonium dihydrogen phosphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	33, 42	1 kg	21305.290
Ammonium heptamolybdate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	34, 42	100 g	21276.185
Ammonium heptamolybdate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	34, 42	500 g	21276.260
Ammonium heptamolybdate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	34, 42	1 kg	21276.298
di-Ammonium hydrogen orthophosphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	35, 42	250 g	21311.234
di-Ammonium hydrogen orthophosphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	35, 42	1 kg	21311.291
Ammonium nitrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	37, 42	1 kg	21280.293
Ammonium peroxodisulphate (APS) AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	38, 42	500 g	21300.260
Ammonium peroxodisulphate (APS) AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	38, 42	1 kg	21300.293
Ammonium sulphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	38, 42	1 kg	21333.296
Ammonium sulphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	38, 42	5 kg	21333.365
Ammonium thiocyanate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	39, 42	250 g	21344.237
Ammonium thiocyanate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	39, 42	1 kg	21344.294
Barium chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 52	500 g	21716.266
Barium chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 52	1 kg	21716.290
Barium chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 52	5 kg	21716.368
Barium hydroxide octahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 53	250 g	21687.232
Barium hydroxide octahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 53	1 kg	21687.298
1-Butanol ≥99.5% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 70	1 l	20810.298
1-Butanol ≥99.5% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 70	2,5 l	20810.323
tert-Butanol ≥99.5% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 71	1 l	20814.292
Calcium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent low in alkali, precipitated	42, 74	250 g	22300.233
Calcium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent low in alkali, precipitated	42, 74	1 kg	22300.290
Calcium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent low in alkali, precipitated	42, 74	25 kg	22300.460
Calcium chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 75	250 g	22317.230
Calcium chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 75	500 g	22317.260
Calcium chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 75	1 kg	22317.297
Calcium chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 75	2,5 kg	22317.320
Calcium chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 75	25 kg	22317.460
Copper (II) chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 98	250 g	23093.233
Copper (II) chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 98	1 kg	23093.290
Copper (II) sulphate pentahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 99	250 g	23174.233
Copper (II) sulphate pentahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 99	1 kg	23174.290
Copper (II) sulphate pentahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 99	5 kg	23174.360
Cyclohexane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 102	1 l	23224.293
Cyclohexane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 102	2,5 l	23224.327
Cyclohexane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 102	5 l	23224.362
Cyclohexane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 102	200 l	23224.550
Dichloromethane stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 111	1 l	23366.293
Dichloromethane stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 111	2,5 l	23366.327
Diethyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 115	1 l	23811.292
Diethyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 115	2,5 l	23811.326
Diethyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 115	5 l	23811.361
Diethyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 115	25 l	23811.463
Diisopropyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 117	1 l	24900.296
4-(Dimethylamino)benzaldehyde AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 118	50 g	23439.158
4-(Dimethylamino)benzaldehyde AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	42, 118	250 g	23439.238
N,N-Dimethylformamide AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 120	1 l	23466.298
N,N-Dimethylformamide AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 120	2,5 l	23466.323
Dodecamolybdophosphoric acid hydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 127	100 g	20616.184
EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 130	100 g	20302.180
EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 130	250 g	20302.236
EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	42, 130	500 g	20302.260

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Description	Page	Pk	Cat. No.
EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 130	1 kg	20302.293
EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 130	25 kg	20302.464
Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 146	1 l	20821.296
Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 146	1 l	20821.310
Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 146	2,5 l	20821.321
Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 146	2,5 l	20821.330
Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 146	5 l	20821.365
Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 146	25 l	20821.467
Ethyl acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 153	1 l	23882.296
Ethyl acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 153	2,5 l	23882.321
Ethyl acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 153	2,5 l	23882.330
Ethyl acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 153	25 l	23882.467
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162, 291	1 l	20909.290
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162, 291	2,5 l	20909.330
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162, 291	5 l	20909.368
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162	20 l	20909.448
Formic acid 99-100% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 166	1 l	20318.297
Formic acid 99-100% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 166	2,5 l	20318.320
Formic acid 99-100% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 166	2,5 l	20318.322
Formic acid 99-100% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 166	20 l	20318.446
n-Hexane ≥95% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 189	1 l	24577.298
n-Hexane ≥95% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 189	2,5 l	24577.323
n-Hexane ≥95% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 189	5 l	24577.367
n-Hexane ≥95% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 189	25 l	24577.460
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	1 l	20252.244
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	1 l	20252.290
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197, 476	1 l	20252.295
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	2,5 l	20252.324
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	2,5 l	20252.335
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	2,5 l	20252.420
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	5 l	20252.368
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 197	20 l	20252.448
Hydroxylammonium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 208	250 g	24708.235
Hydroxylammonium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 208	1 kg	24708.292
Iodine AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent, resublimed	43, 220	100 g	24757.187
Iodine AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent, resublimed	43, 220	250 g	24757.234
Iodine AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent, resublimed	43, 220	1 kg	24757.291
Iron (III) chloride hexahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 224	250 g	24208.237
Iron (III) chloride hexahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 224	500 g	24208.260
Iron (III) nitrate nonahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 224	250 g	24175.233
Iron (III) nitrate nonahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 224	500 g	24175.260
Iron (III) nitrate nonahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 224	1 kg	24175.290
Iron (II) sulphate heptahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 225	250 g	24244.232
Iron (II) sulphate heptahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 225	1 kg	24244.298
Isobutanol ≥99.0% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 227	1 l	20833.297
Lithium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 241	250 g	25007.230
Lithium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 241	250 g	25012.237
Lithium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 241	500 g	25012.260
Lithium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	43, 241	5 kg	25012.363
Magnesium chloride hexahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 246	500 g	25108.260
Magnesium chloride hexahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 246	1 kg	25108.295
Manganese (II) chloride tetrahydrate AnalaR NORMAPUR® ACS analytical reagent	43, 250	250 g	25222.233
Manganese (II) chloride tetrahydrate AnalaR NORMAPUR® ACS analytical reagent	43, 250	1 kg	25222.290
Manganese (II) sulphate monohydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 250	250 g	25303.233
Manganese (II) sulphate monohydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 250	1 kg	25303.290
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	1 l	20847.240
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	1 l	20847.295
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	2,5 l	20847.307
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	2,5 l	20847.320
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	2,5 l	20847.422
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	5 l	20847.360
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	25 l	20847.466
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent	43, 258	200 l	20847.557
Methyl ethyl ketone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 261	1 l	25642.291
Methyl ethyl ketone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 261	2,5 l	25642.325
4-Methyl-2-pentanone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 263	1 l	25652.295
4-Methyl-2-pentanone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 263	2,5 l	25652.320
Nickel (II) nitrate hexahydrate AnalaR NORMAPUR® ACS analytical reagent (max. 0.005% Co)	43, 315	250 g	25873.232
Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 218, 315	5 g	25905.107
Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 218, 315	50 g	25905.153
Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 218, 315	100 g	25905.180
Nitric acid 69% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 317	1 l	20425.242
Nitric acid 69% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 317	1 l	20425.297
Nitric acid 69% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 317	2,5 l	20425.322
Nitric acid 69% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 317	2,5 l	20425.420
Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 324	500 ml	20624.262
Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 324, 476	1 l	20624.295
Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 324, 476	2,5 l	20624.330
Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 324	2,5 l	20624.420
Oxalic acid dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 325	250 g	20562.234
Oxalic acid dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 325	500 g	20562.260
Oxalic acid dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 325	1 kg	20562.291
Perchloric acid 70% AnalaR NORMAPUR® ACS analytical reagent	43, 339	500 ml	20589.260
Perchloric acid 70% AnalaR NORMAPUR® ACS analytical reagent	43, 339	1 l	20589.247
Perchloric acid 70% AnalaR NORMAPUR® ACS analytical reagent	43, 339	1 l	20589.293
Perchloric acid 70% AnalaR NORMAPUR® ACS analytical reagent	43, 339	2,5 l	20589.327

Description	Page	Pk	Cat. No.
Phenol, detached crystals AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 347	250 g	20599.231
Phenol, detached crystals AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 347	500 g	20599.260
Phenol, detached crystals AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 347	1 kg	20599.297
Potassium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 359	500 g	26726.260
Potassium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 359	1 kg	26726.297
Potassium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 359	2,5 kg	26726.322
Potassium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 359	25 kg	26726.460
Potassium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 360	250 g	26764.232
Potassium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 360	500 g	26764.260
Potassium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 360	1 kg	26764.298
Potassium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 360	5 kg	26764.367
Potassium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 360	25 kg	26764.460
Potassium dichromate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 362	250 g	26784.231
Potassium dichromate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 362	1 kg	26784.297
Potassium dihydrogen phosphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 363	250 g	26936.236
Potassium dihydrogen phosphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 363	500 g	26936.260
Potassium dihydrogen phosphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 363	1 kg	26936.293
Potassium dihydrogen phosphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 363	2,5 kg	26936.320
Potassium dihydrogen phosphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 363	25 kg	26936.460
Potassium hydroxide, pellets AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 367	500 g	26668.263
Potassium hydroxide, pellets AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 367	1 kg	26668.296
Potassium hydroxide, pellets AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 367	5 kg	26668.365
Potassium hydroxide, pellets AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 367	25 kg	26668.460
Potassium permanganate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 372	250 g	26910.237
Potassium permanganate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 372	1 kg	26910.294
Potassium peroxodisulphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 373	100 g	26915.187
Potassium peroxodisulphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 373	1 kg	26915.291
L(+)-Potassium sodium tartrate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 373	250 g	27068.233
L(+)-Potassium sodium tartrate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 373	1 kg	27068.290
Potassium sulphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 374	1 kg	26997.293
1-Propanol AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 376	1 l	20861.294
1-Propanol AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 376	2,5 l	20861.320
1-Propanol AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 376	5 l	20861.363
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	1 l	20842.298
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	1 l	20842.312
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	2,5 l	20842.323
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	2,5 l	20842.330
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	5 l	20842.367
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	25 l	20842.460
2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 378	200 l	20842.550
Pyridine AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 382	500 ml	27199.268
Pyridine AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 382	1 l	27199.292
Pyridine AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 382	2,5 l	27199.326
Sodium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 407	250 g	27653.235
Sodium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 407	500 g	27653.260
Sodium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 407	1 kg	27653.292
Sodium acetate trihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 408	250 g	27652.232
Sodium acetate trihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 408	500 g	27652.260
Sodium acetate trihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 408	1 kg	27652.298
Sodium acetate trihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 408	5 kg	27652.367
Sodium acetate trihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 408	25 kg	27652.460
Sodium carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 410	250 g	27771.233
Sodium carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 410	500 g	27771.260
Sodium carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 410	1 kg	27771.290
Sodium carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 410	5 kg	27771.360
Sodium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 411	500 g	27810.262
Sodium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 411	1 kg	27810.295
Sodium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 411	5 kg	27810.364
Sodium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 411	25 kg	27810.460
tri-Sodium citrate dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 413	250 g	27833.237
tri-Sodium citrate dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 413	500 g	27833.260
tri-Sodium citrate dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 413	1 kg	27833.294
tri-Sodium citrate dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 413	5 kg	27833.363
tri-Sodium citrate dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 413	25 kg	27833.460
tetra-Sodium diphosphate decahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 415	1 kg	28055.292
Sodium fluoride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 417	250 g	27860.231
Sodium fluoride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 417	1 kg	27860.297
Sodium hydrogen carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 418	250 g	27778.236
Sodium hydrogen carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 418	500 g	27778.260
Sodium hydrogen carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 418	1 kg	27778.293
Sodium hydrogen carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 418	5 kg	27778.360
Sodium hydrogen carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 418	25 kg	27778.460
di-Sodium hydrogen phosphate, anhydrous AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 419	500 g	102494C
di-Sodium hydrogen phosphate, anhydrous AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 419	2,5 kg	102495D
di-Sodium hydrogen phosphate, anhydrous AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 419	25 kg	10249LT
Sodium hydroxide, pellets AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 421	500 g	28244.262
Sodium hydroxide, pellets AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 421	1 kg	28244.295
Sodium hydroxide, pellets AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 421	5 kg	28244.364
Sodium hydroxide, pellets AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 421	25 kg	28244.466
Sodium nitrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 430	250 g	27955.238
Sodium nitrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	44, 430	1 kg	27955.295
Sodium periodate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 431	100 g	27985.185
Sodium sulphate, anhydrous AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 434	250 g	28114.230
Sodium sulphate, anhydrous AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 434	500 g	28114.260
Sodium sulphate, anhydrous AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 434	1 kg	28114.296
Sodium sulphate, anhydrous AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	44, 434	5 kg	28114.365

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Description	Page	Pk	Cat. No.
Sodium sulphate, anhydrous AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	45, 434	25 kg	28114.460
Sodium sulphite AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	45, 435	500 g	28130.260
Sodium sulphite AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	45, 435	1 kg	28130.292
di-Sodium tetraborate decahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	45, 436	250 g	27727.231
di-Sodium tetraborate decahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	45, 436	1 kg	27727.297
di-Sodium tetraborate decahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	45, 436	25 kg	27727.460
Sodium thiosulphate pentahydrate AnalaR NORMAPUR® ACS analytical reagent	45, 437	500 g	27910.260
Sodium thiosulphate pentahydrate AnalaR NORMAPUR® ACS analytical reagent	45, 437	1 kg	27910.291
Tetrahydrofuran stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 483	1 l	28551.296
Tetrahydrofuran stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 483	2,5 l	28551.321
Tetrahydrofuran stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 483	25 l	28551.460
Tin (II) chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 488	500 g	23742.260
Tin (II) chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 488	1 kg	23742.293
Toluene AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 492	1 l	28676.297
Toluene AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 492	2,5 l	28676.322
Toluene AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 492	5 l	28676.366
Toluene AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 492	25 l	28676.468
Toluene AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 492	200 l	28676.550
Trichloroacetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 493	100 g	20742.180
Trichloroacetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 493	250 g	20742.236
Trichloroacetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 493	1 kg	20742.293
2,2,4-Trimethylpentane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 497	1 l	28781.291
2,2,4-Trimethylpentane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 497	2,5 l	28781.325
2,2,4-Trimethylpentane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 497	25 l	28781.460
Urea AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent	45, 506	250 g	28877.235
Urea AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent	45, 506	500 g	28877.260
Urea AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent	45, 506	5 kg	28877.361
Urea AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent	45, 506	25 kg	28877.460
Xylene (mixture of isomers) AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 521	1 l	28975.291
Xylene (mixture of isomers) AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 521	2,5 l	28975.325
Xylene (mixture of isomers) AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 521	5 l	28975.360
Xylene (mixture of isomers) AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 521	25 l	28975.462
Xylene (mixture of isomers) AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 521	200 l	28975.553
Zinc chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 525	250 g	29156.231
Zinc chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 525	500 g	29156.260
Zinc chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 525	1 kg	29156.297
Zinc sulphate heptahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 526	250 g	29253.236
Zinc sulphate heptahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 526	500 g	29253.260
Zinc sulphate heptahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 526	1 kg	29253.293
Zinc sulphate heptahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	45, 526	25 kg	29253.460

Anhydrous solvents

A complete range of high purity anhydrous solvents packed in septum sealed 250 ml glass bottles or standard 1 litre and 2,5 litre glass bottles.
Produced from consistent quality raw materials under ISO 9001 conditions, these solvents are:

- Specifically purified by chemical treatment and glass distillation to minimise impurities
- Filtered at 0.2 µm
- Septum cap for 250 ml bottle features six separate puncture points
- Bottled under nitrogen
- Very low evaporation residue

Description	Page	Pk	Cat. No.
Acetone, anhydrous (max. 0.01% H_2O)	6, 46	250 ml	83683.230
Acetone, anhydrous (max. 0.01% H_2O)	6, 46	1 l	83683.290
Acetonitrile, anhydrous (max. 0.001 % H_2O)	12, 46	250 ml	83676.230
Acetonitrile, anhydrous (max. 0.001 % H_2O)	12, 46	1 l	83676.290
Chloroform, anhydrous (max. 0.005% H_2O) stabilised AnalaR NORMAPUR® analytical reagent	46, 87	1 l	22709.292
Dichloromethane, anhydrous (max. 0.001 % H_2O) stabilised	46, 110	250 ml	83682.230
Dichloromethane, anhydrous (max. 0.001 % H_2O) stabilised	46, 110	1 l	83682.290
Dichloromethane, anhydrous (max. 0.005% H_2O) stabilised AnalaR NORMAPUR® analytical reagent	46, 111	1 l	25630.290
Diethyl ether, anhydrous (max. 0.005% H_2O) stabilised	46, 114	250 ml	83671.230
N,N-Dimethylformamide, anhydrous (max. 0.005% H_2O)	46, 119	250 ml	83675.230
N,N-Dimethylformamide, anhydrous (max. 0.005% H_2O)	46, 119	1 l	83675.290
N,N-Dimethylformamide, dehydrated (max. 0.015% H_2O) for synthesis	46, 119	2,5 l	83691.320
Dimethyl sulphoxide, anhydrous (max. 0.005% H_2O)	46, 121	250 ml	83673.230
Dimethyl sulphoxide, anhydrous (max. 0.005% H_2O)	46, 121	1 l	83673.290
Dimethyl sulphoxide, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent	46, 121	1 l	23488.294
1,4-Dioxane, anhydrous (max. 0.003% H_2O) stabilised	46, 123	250 ml	83674.230
1,4-Dioxane, dehydrated (max. 0.01% H_2O) stabilised AnalaR NORMAPUR® analytical reagent	46, 123	1 l	23539.291
Ethanol absolute, anhydrous (max. 0.003% H_2O)	46, 145	1 l	83672.290
Ethyl acetate, anhydrous (max. 0.005% H_2O)	46, 152	250 ml	83681.230
Ethyl acetate, anhydrous (max. 0.005% H_2O)	46, 152	1 l	83681.290
Ethyl acetate, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent	46, 153	1 l	23881.293
n-Hexane, anhydrous (max. 0.005% H_2O) ≥97% AnalaR NORMAPUR® analytical reagent	46, 189	1 l	24603.290
Methanol, anhydrous (max. 0.002% H_2O)	46, 257	250 ml	83679.230
Methanol, anhydrous (max. 0.002% H_2O)	46, 257	500 ml	83679.260
Methanol, anhydrous (max. 0.002% H_2O)	46, 257	1 l	83679.290
Methanol, anhydrous (max. 0.005% H_2O) for synthesis	46, 258	1 l	20856.296
Petroleum spirit 40-60°C, anhydrous (max. 0.005% H_2O) AnalaR NORMAPUR® analytical reagent	46, 342	1 l	23849.292
2-Propanol, anhydrous (max. 0.003% H_2O)	46, 378	250 ml	83677.230
2-Propanol, anhydrous (max. 0.003% H_2O)	46, 378	1 l	83677.290
2-Propanol, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent	46, 378	1 l	20838.294
Pyridine, anhydrous (max. 0.003% H_2O)	46, 382	250 ml	83684.230
Pyridine, anhydrous (max. 0.003% H_2O)	46, 382	1 l	83684.290
Pyridine, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent	46, 382	1 l	27197.295
Tetrahydrofuran, anhydrous (max. 0.003% H_2O) stabilised	46, 483	250 ml	83678.230
Tetrahydrofuran, anhydrous (max. 0.003% H_2O) stabilised	46, 483	1 l	83678.290
Tetrahydrofuran, dehydrated (max. 0.01% H_2O) stabilised AnalaR NORMAPUR® analytical reagent	46, 484	1 l	28553.293
Toluene, anhydrous (max. 0.002% H_2O)	46, 491	250 ml	83680.230
Toluene, anhydrous (max. 0.002% H_2O)	46, 491	1 l	83680.290
Toluene, anhydrous (max. 0.005% H_2O) AnalaR NORMAPUR® analytical reagent	46, 492	1 l	28681.295
Xylene (mixture of isomers), anhydrous (max. 0.005% H_2O) AnalaR NORMAPUR® analytical reagent	46, 521	1 l	28976.294

Aneurine hydrochloride

See Thiamine hydrochloride p.485

Aniline AnalaR NORMAPUR® analytical reagent

Danger

CAS 62-53-3 **UN:** 1547
$C_6H_5NH_2$ **M.W.** 93.13 g/mol
Boiling Pt: 184 °C (1013 hPa) **Melting Pt:** -6,2 °C **Density:** 1,019 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119451454-41

Assay (on anhydrous substance)	Min. 99.5 %	Hydrocarbons	Passes test
Acidity or alkalinity	Max. 0.03 meq/g	Density (20/4)	1.021 - 1.023
Solidification point	-6.5 to -6.1 °C	Ignition residue (SO_4)	Max. 50 ppm
Nitrobenzene	Max. 100 ppm	Solubility in HCl 2 N	Min. 13 %
Water	Max. 0.1 %		

Cat. No.	Pk	Pack type
21423.231	250 ml	Glass bottle

Aniline GPR RECTAPUR®

Danger

CAS 62-53-3 **UN:** 1547
$C_6H_5NH_2$ **M.W.** 93.13 g/mol
Boiling Pt: 184 °C (1013 hPa) **Melting Pt:** -6,2 °C **Density:** 1,019 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119451454-41

Assay	Min. 98.5 %
Density (20/4)	1.021 - 1.023
Ignition residue (SO_4)	Max. 0.02 %

Cat. No.	Pk	Pack type
21422.294	1 l	Glass bottle

Aniline blue water soluble TECHNICAL

CAS 28631-66-5
$C_{32}H_{25}N_3Na_2O_9S_3$ **M.W.** 737.74 g/mol
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
21999.183	100 g	Plastic bottle for solids

Aniline blue WS

See Aniline blue water soluble p.47

Aniline-4-sulphonic acid

See Sulphanilic acid p.468

Anion exchange membranes 125 x 125 mm

Cat. No.	Pk	Pack type
551642S	6	Cardboard carton

Anion multi component standard 1 aqueous solution ARISTAR® for ion chromatography

Cl	30 ppm	PO_4	150 ppm
F	20 ppm	SO_4	150 ppm
NO_3	100 ppm		

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458142C	100 ml	Plastic bottle

Anion multi component standard 2 aqueous solution ARISTAR® for ion chromatography

Br	400 ppm	NO_3	400 ppm
Cl	200 ppm	PO_4	600 ppm
F	100 ppm	SO_4	400 ppm

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458152E	100 ml	Plastic bottle

Anion multi component standard 3 aqueous solution ARISTAR® for ion chromatography

Br	40 ppm	NO_3	40 ppm
Cl	40 ppm	PO_4	40 ppm
F	20 ppm	SO_4	40 ppm
NO_2	40 ppm		

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458164C	1 SET	Plastic bottle

Anion multi-component 4, for IC standard for ion chromatography

Br	50 ppm	NO_3	50 ppm
Cl	50 ppm	PO_4	50 ppm
F	25 ppm	SO_4	50 ppm

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458174A	100 ml	Plastic bottle

Anisaldehyde solution Reag. Ph. Eur. 1007301

Danger

UN: 2924

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87777.180	100 ml	Plastic bottle

Anthracene, extra pure

Warning

CAS 120-12-7 **UN:** 3077

$C_{14}H_{10}$ **M.W.** 178.23 g/mol

Boiling Pt: 340 °C (1013 hPa) **Melting Pt:** 111-112 °C **Density:** 1,24 g/cm³ (20 °C)

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
122892W	100 mg	Glass ampoule

NEW Antimony standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Matrix for 1000 and 10000 ppm contain a trace amount of tartaric acid

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Antimony	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456632H
Antimony	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457002K
Antimony	10 ppm	2% HNO_3/0,5% HF	Plastic bottle	100 ml	85595.180

Antimony standard solution, 1,000 mg/l Sb in dil. nitric acid with tartaric acid (max. 1%) (from Sb) ARISTAR® standard for ICP

Sb in HNO_3 2% tr. tartaric acid

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455022G	100 ml	Plastic bottle
455024Y	500 ml	Plastic bottle

Antimony standard solution, 1,000 mg/l Sb in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86707.180	100 ml	Plastic bottle
86707.260	500 ml	Plastic bottle

Antimony (III) chloride AnalaR NORMAPUR® analytical reagent

Danger

CAS 10025-91-9 **UN:** 1733

$SbCl_3$ **M.W.** 228.12 g/mol

Boiling Pt: 223,5 °C (1013 hPa) **Melting Pt:** 73 °C **Density:** 3,14 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Insolubility in ethanol	Max. 0.02 %
Insolubility in HCl 10 N	Max. 50 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ca (Calcium)	Max. 50 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 20 ppm	K (Potassium)	Max. 50 ppm
Na (Sodium)	Max. 50 ppm	Pb (Lead)	Max. 30 ppm

Cat. No.	Pk	Pack type
21470.186	100 g	Glass bottle

Antimony (III) potassium oxitartrate trihydrate GPR RECTAPUR®

Warning

CAS 28300-74-5 **UN:** 1551

$C_8H_4K_2O_{12}Sb_2 \cdot 3H_2O$ **M.W.** 667.88 g/mol

Melting Pt: 100 °C **Density:** 2,6 g/cm³ (20 °C)

Assay	Min. 99 %
Cl (Chloride)	Max. 100 ppm
As (Arsenic)	Max. 0.025 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21486.237	250 g	Plastic bottle for solids

Antimony trichloride solution Reag. Ph. Eur. 1007701

Danger

UN: 1760

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87779.180	100 ml	Plastic bottle

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Antimony (III) chloride solution R1 Reag. Ph. Eur. 1007702

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87780.180	100 ml	Plastic bottle

Antimony trichloride

See Antimony (III) chloride..... p.48

Antipain dihydrochloride, ultrapure

A reversible cysteine and serine protease inhibitor of trypsin, papain and cathepsin A and B. Slightly inhibits plasmin.

Loss on Drying 5%
Solubility (0.01M, Water)
Pass

Cat. No.	Pk	Pack type
J581-5MG	5 mg	Glass bottle

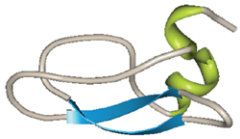
Aprotinin (Trypsin inhibitor, pancreatic basic), high purity

A competitive and reversible serine protease inhibitor of chymotrypsin, trypsin, kallikrein and plasmin. Not an inhibitor of Factor Xa and thrombin.

Activity (KIU/mg) 4500

Cat. No.	Pk	Pack type
E429-10MG	10 mg	Glass bottle

Aprotinin (Trypsin inhibitor, pancreatic basic) (from bovine lung), proteomics grade



Crystal structure of aprotinin and its complex with sucrose octasulfate reveal multiple modes of interactions with implications for heparin binding. PDB 3LDJ. Yang, I.S., Kim, T.G., Park, B.S., Cho, K.J., Lee, J.H., Park, Y., Kim, K.H. (2010) *Biochem. Biophys. Res. Commun.* **397**(3), 429–435.

A competitive and reversible serine protease inhibitor of chymotrypsin, trypsin, kallikrein and plasmin. Not an inhibitor of Factor Xa and thrombin.

Activity (KIU/mg) ≤4500
Purity (HPLC) Pass

Cat. No.	Pk	Pack type
M167-10MG	10 mg	Glass bottle

APS/TEMED, tablets for biotechnology

Danger

A pre-measured tablet for preparation of a working APS/TEMED solution. Each tablet prepares 1 ml of working solution when dissolved in 1 ml distilled, deionised water. This solution is stable for one week at room temperature.

Cat. No.	Pk	Pack type
N310-100TAB	100 Tab.	Plastic bottle

APS

See Ammonium peroxodisulphate (APS)..... p.38

L(+)-Arabinose GPR RECTAPUR®

CAS 5328-37-0
$C_5H_{10}O_5$ **M.W.** 150.13 g/mol
Boiling Pt: 331 °C (1013 hPa) **Melting Pt:** 158-160 °C **Density:** 1,585 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Melting point	154 - 157 °C
Specific optical rotation (10 %; water)	103 - 105 °
Ignition residue (SO_4)	Max. 0.1 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
21513.130	25 g	Plastic bottle for solids

L(+)-Arabinose

CAS 5328-37-0
$C_5H_{10}O_5$ **M.W.** 150.13 g/mol
Boiling Pt: 331 °C (1013 hPa) **Melting Pt:** 158-160 °C **Density:** 1,585 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 0.0003%
Assay (dry basis)	>=99%
Chloride	<= 0.005%
Heavy Metals (as Pb)	<= 0.0001%
Loss on Drying	<= 0.5%
Melting Point	154°C - 158°C
Residue on Ignition	<= 0.1%
Specific Rotation	101° - 105°
Sulphate	<= 0.005%

Cat. No.	Pk	Pack type
1B1473-100G	100 g	Plastic bottle

Organic reference standard, Aroclor 1242 (PCB-mixture, 42% chlorinated) 1,000 µg/ml in hexane

Cat. No.	Pk	Pack type
122792T	1 ml	Glass ampoule

Organic reference standard, Aroclor 1260 (PCB-mixture, 60% chlorinated) 35 µg/ml in isooctane

Cat. No.	Pk	Pack type
122732H	1 ml	Glass ampoule

NEW Arsenic standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Arsenic	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456642J
Arsenic	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457012M
Arsenic	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85549.180

Arsenic standard solution, 10,000 mg/l As in dil. nitric acid (from As) ARISTAR® standard for ICP

As in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455052M	100 ml	Plastic bottle

Arsenic standard solution, 1,000 mg/l As in dil. nitric acid (from As) ARISTAR® standard for ICP

As in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455042K	100 ml	Plastic bottle
455044M	500 ml	Plastic bottle

Arsenic standard solution, 1,000 mg/l As in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86661.180	100 ml	Plastic bottle
86661.260	500 ml	Plastic bottle

Arsenite solution Reag. Ph. Eur. 1008301

Composition: 0.5% arsenite, 2.0% sodium hydrogen carbonate

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87781.180	100 ml	Plastic bottle

L(+)-Ascorbic acid AnalaR NORMAPUR® analytical reagent

CAS 50-81-7

$C_6H_8O_6$ **M.W.** 176.13 g/mol
Boiling Pt: 553 °C (1013 hPa) **Melting Pt:** 190-192 °C **Density:** 1,694 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 100.5 %
Colour of solution (50 g/l; water)	< BY7
Melting point	182 - 192 °C
Specific optical rotation (10 %; water)	20.5 - 21.5 °
Spec. optical rotation (25°C;10 %;water)	20.5 - 21.5 °
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.05 %
Loss on drying (105°C)	Max. 0.1 %
Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 20 ppm
Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 10 ppm
Fe (Iron)	Max. 2 ppm
Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
20150.184	100 g	Plastic bottle for solids
20150.231	250 g	Plastic bottle for solids
20150.290	1 kg	Plastic bottle for solids

L(+)-Ascorbic acid USP, Ph. Eur.

CAS 50-81-7

$C_6H_8O_6$ **M.W.** 176.13 g/mol
Boiling Pt: 553 °C (1013 hPa) **Melting Pt:** 190-192 °C **Density:** 1,694 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 100.5 %
Appearance	crystalline powder
Identification (IR)	Passes test
Solution S	Passes test Ph.Eur.
Specific optical rotation	20.5 - 21.5 °
Impurity C	Max. 0.15 %
Unspecified impurities	Max. 0.1 %
Disregard limit	Max. 0.05 %
Fe (Iron)	Max. 2 ppm
Sulphated ash	Max. 0.1 %
Residues of metal catalysts or reagents	Unlikely by manuf.process
Conforms to USP	Passes test
Appearance	Conforms (see CoA/CoS)
Appearance	or colourless crystals
Identification B	Passes test USP
Appearance of solution	Passes test Ph.Eur.
Impurity E (Oxalic acid)	Max. 0.2 %
Impurity D	Max. 0.15 %
Total of impurities other than C and D	Max. 0.2 %
Cu (Copper)	Max. 5 ppm
Heavy metals (as Pb)	Max. 10 ppm
Residual solvents (CPMP/ICH/283/95)	Conforms
Conforms to Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
83568.180	100 g	Plastic bottle for solids
83568.290	1 kg	Plastic bottle for solids
83568.360	5 kg	Plastic bottle for solids
83568.460	25 kg	Bucket (Plastic)

L(+)-Ascorbic acid TECHNICAL

CAS 50-81-7

$C_6H_8O_6$ **M.W.** 176.13 g/mol
Boiling Pt: 553 °C (1013 hPa) **Melting Pt:** 190-192 °C **Density:** 1,694 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
20155.237	250 g	Plastic bottle for solids
20155.294	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

L(+)-Ascorbic acid Reag. Ph. Eur. 1008401

Danger

CAS 50-81-7 **UN:** 2265
$C_6H_8O_6$ **M.W.** 176.13 g/mol
0.1% ascorbic acid in N,N-dimethylformamide

Ordering information: Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87782.180	100 ml	Plastic bottle

L(+)-Ascorbic acid sodium salt

See Sodium L(+)-ascorbate p.409

VWR LIFE SCIENCE L(+)-Asparagine, anhydrous, high purity

CAS 70-47-3
$H_2NCOCH_2CH(NH_2)CO_2H$ **M.W.** 132.12 g/mol
Boiling Pt: 343 °C (1013 hPa) **Melting Pt:** 234-235 °C
Storage Temperature: Ambient
Animal-free amino acid. Polar. Amide.

Chloride (%) ..... < 0.05
Moisture (%) 0.5
Purity (dried basis) (%) 99.0
Sulfate (%) ..... < 0.05

Cat. No.	Pk	Pack type
94341-100G	100 g	Plastic bottle for solids
94341-500G	500 g	Plastic bottle for solids

NEW L-Asparagine, anhydrous for biopharmaceutical production

CAS 70-47-3
$H_2NCOCH_2CH(NH_2)CO_2H$ **M.W.** 132.12 g/mol
Boiling Pt: 343 °C (1013 hPa) **Melting Pt:** 234-235 °C
Storage Temperature: Ambient

Assay ..... 98.0 - 102.0 %
Appearance ..... White crystalline powder
Cell culture toxicity ..... Passes test
DNases ..... Not detected
Identification by IR ..... Conforms to structure
Proteases ..... Not detected
RNases ..... Not detected
Solubility (10 %; diluted HCl) ..... Clear and complete
Spec. opt. rot. (C=10; HCl 6 N;on dried) ..... 33.0 - 36.5 °
Aspartic acid ..... Max. 2 %
Heavy metals (as Pb) ..... Max. 15 ppm
Ignition residue ..... Max. 0.1 %
Loss on drying (105°C; 3 h) ..... Max. 0.5 %
Cl (Chloride) ..... Max. 0.02 %
SO_4 (Sulphate) ..... Max. 0.03 %
Bioburden ..... Max. 100 CFU/g
Endotoxin (2 g/l) ..... Max. 0.04 EU/mg

Cat. No.	Pk	Pack type
15005.180	100 g	Plastic bottle for solids
15005.297	1 kg	Plastic bottle for solids
15005.366	5 kg	Bucket (Plastic)
15005.468	25 kg	Bucket (Plastic)

VWR LIFE SCIENCE L(+)-Aspartic acid, high purity

CAS 56-84-8
$C_4H_7NO_4$ **M.W.** 133.1 g/mol
Boiling Pt: 311 °C (1013 hPa) **Melting Pt:** 251 °C **Density:** 1,6613 g/cm³ (13 °C)
Storage Temperature: Ambient
Animal-free amino acid. Polar. Acidic.

Loss on Drying ..... < = 0.2 %
Purity ..... > = 98 %

Cat. No.	Pk	Pack type
0192-500G	500 g	Plastic bottle for solids
0192-1KG	1 kg	Plastic bottle for solids

ASTM mixes

Light distillate suitable for use in the testing of petroleum products by IP and ASTM methods p.240
Silica gel Davison 923 suitable for use in the testing of petroleum products by IP and ASTM methods p.395
Solvent ASTM 4739 , Toluene, 2-Propanol, Diclorometano, Cloroformo, agua, (10/10/10/0,3 v/v) VOLUSOL® p.438
Solvent ASTM D2896, Chlorobenzene/Acetic acid-mixture (2/1 v/v), TBN solvent VOLUSOL® p.438
Solvent ASTM D 664, Toluene/2-Propanol-mixture (50/50 v/v), TAN solvent VOLUSOL® p.438
Solvent ASTM D235 Type 1 (white spirit BSS 245) suitable for use in the testing of petroleum products by ASTM methods p.438
Solvent acetic acid mixture for ASTM method D2710 B / D1159 VOLUSOL® p.438

Atrazine, extra pure

Warning

CAS 1912-24-9 **UN:** 3077
$C_8H_{14}ClN_5$ **M.W.** 215.69 g/mol
Boiling Pt: 369 °C (1013 hPa) **Melting Pt:** 171-174 °C **Density:** 1,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
123542H	10 mg	Glass ampoule

VWR LIFE SCIENCE Avidin (from hen egg white), technical grade

A 66 kDa glycoprotein containing four identical subunits with high binding affinity for biotin.

Activity: 10 U/mg
Protein: 95.0 %
Solubility (5%, Water): PASS

Cat. No.	Pk	Pack type
0866-5MG	5 mg	Glass bottle

Azinphos-methyl, extra pure

Danger

CAS 86-50-0 **UN:** 2811
$C_{10}H_{12}N_3O_3PS_2$ **M.W.** 317.33 g/mol
Boiling Pt: 401 °C (1013 hPa) **Melting Pt:** 73 °C **Density:** 1,44 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
123562L	10 mg	Glass ampoule

Azomethine H sodium salt hydrate analytical reagent

CAS 206752-32-1
$C_{17}H_{12}NNaO_8S_2 \cdot xH_2O$ **M.W.** 463.42 g/mol
Storage Temperature: Ambient

Suited for boron spectrophotometry ..... Passes test
Water ..... Max. 8 %
A (Lambda max.) (1 %; buffer pH 5.0) ..... Min. 1100
Absorption maximum ..... 231 - 241 nm

Cat. No.	Pk	Pack type
21645.124	10 g	Plastic bottle for solids

Baird Parker agar

See Microbiology

Baird Parker

See Microbiology

NEW

Barium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Traceable to SRM from NIST. Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Barium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456652L
Barium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85552.180

Barium standard solution, 10,000 mg/l Ba in dil. nitric acid (from $Ba(NO_3)_2$) ARISTAR® standard for ICP

$Ba(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455072Q	100 ml	Plastic bottle

Barium standard solution, 1,000 mg/l Ba in dil. nitric acid (from $Ba(NO_3)_2$) ARISTAR® standard for ICP

$Ba(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455062X	100 ml	Plastic bottle
455064Q	500 ml	Plastic bottle

Barium standard solution, 1,000 mg/l Ba in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86664.180	100 ml	Plastic bottle
86664.260	500 ml	Plastic bottle

NEW

Barium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84954.180	100 ml	Plastic bottle

Barium bis(4-anilinobenzenesulphonate)

See Barium diphenylamine-4-sulphonate..... p.53

Barium carbonate AnalaR NORMAPUR® analytical reagent

Warning

CAS 513-77-9 **UN:** 1564

$BaCO_3$ **M.W.** 197.34 g/mol

Melting Pt: 1350 °C **Density:** 3,89 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Alkali hydroxides+carbonates(as $Ba(OH)_2$)	Max. 0.015 %
Heavy metals (as Pb)	Max. 10 ppm	Insolubility in hydrochloric acid	Max. 0.015 %
Oxidising substances (as NO_3)	Max. 50 ppm	S (Sulphur)	Max. 10 ppm
Ca (Calcium)	Max. 0.02 %	Cl (Chloride)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 50 ppm
Na (Sodium)	Max. 0.02 %	Sr (Strontium)	Max. 0.3 %

Cat. No.	Pk	Pack type
21702.235	250 g	Plastic bottle for solids
21702.292	1 kg	Plastic bottle for solids

Barium chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 10326-27-9 **UN:** 1564

$BaCl_2 \cdot 2H_2O$ **M.W.** 244.27 g/mol

Boiling Pt: 1560 °C (1013 hPa) **Melting Pt:** 960 °C **Density:** 3,86 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (25°C; 5 %)	5.2 - 8.2
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Loss on drying (150°C)	14.0 - 16.0 %	Total N (Nitrogen)	Max. 20 ppm
Ca (Calcium)	Max. 50 ppm	Fe (Iron)	Max. 1 ppm
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 50 ppm
Pb (Lead)	Max. 10 ppm	Sr (Strontium)	Max. 0.05 %
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21716.266	500 g	Plastic bottle for solids
21716.290	1 kg	Plastic bottle for solids
21716.368	5 kg	Plastic bottle for solids

Barium chloride dihydrate GPR RECTAPUR®

Danger

CAS 10326-27-9 **UN:** 1564

$BaCl_2 \cdot 2H_2O$ **M.W.** 244.27 g/mol

Boiling Pt: 1560 °C (1013 hPa) **Melting Pt:** 960 °C **Density:** 3,86 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Insolubility in water	Max. 0.05 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
21715.263	500 g	Plastic bottle for solids
21715.296	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Barium chloride dihydrate TECHNICAL

Danger

CAS 10326-27-9 **UN:** 1564
$BaCl_2 \cdot 2H_2O$ **M.W.** 244.27 g/mol
Boiling Pt: 1560 °C (1013 hPa) **Melting Pt:** 960 °C **Density:** 3,86 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
21709.364	5 kg	Bucket (Plastic)

NEW Barium chloride in aqueous solution USP test solutions (TS)

CAS 10361-37-2 **UN:** 3287
$BaCl_2$ **M.W.** 208.24 g/mol
Storage Temperature: Ambient
Ready to use test/reagent solutions (TS and RS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85332.180	100 ml	Plastic bottle
85332.260	500 ml	Plastic bottle

Barium chloride 10% in aqueous solution

Warning

CAS 10361-37-2 **UN:** 3287
$BaCl_2$ **M.W.** 208.24 g/mol
Boiling Pt: >100 °C (1013hPa)
Storage Temperature: Ambient

Assay (W/V) ..... 9.95 - 10.00 %
pH (25°C) ..... 6.5 - 7.5

Cat. No.	Pk	Pack type
164735P	1 l	Glass bottle

Barium chloride (1 g/l), for Hydrometry VOLUSOL

CAS 10361-37-2 **UN:** 3287
$BaCl_2$ **M.W.** 208.24 g/mol
Storage Temperature: Ambient

Assay (complexometric, calc. on the ignition residue) ..... Min 99 %
Loss on ignition (1000 °C) ..... Max 1.0 %

Cat. No.	Pk	Pack type
30594.298	1 l	Glass bottle

Barium chloride 0.25 mol/l (0.5 N) in aqueous solution Reag. Ph. Eur. 1009301

Warning

CAS 10361-37-2 **UN:** 3287
$BaCl_2$ **M.W.** 208.24 g/mol
Density: 1,034 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87783.290	1 l	Plastic bottle

Barium chloride 0.15 mol/l (0.3 N) in aqueous solution Reag. Ph. Eur. 1009302

Warning

CAS 10361-37-2 **UN:** 3287
$BaCl_2$ **M.W.** 208.24 g/mol
Density: 1,034 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87784.290	1 l	Plastic bottle

Barium diphenylamine-4-sulphonate TECHNICAL

Warning

CAS 6211-24-1 **UN:** 1564
$C_{24}H_{20}BaN_2O_6S_2$ **M.W.** 633.89 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient

IR Spectrum ..... Passes test

Cat. No.	Pk	Pack type
84003.100	5 g	Glass bottle

Barium hydroxide octahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 12230-71-6 **UN:** 3262
$Ba(OH)_2 \cdot 8H_2O$ **M.W.** 315.47 g/mol
Boiling Pt: 780 °C (1013 hPa) **Melting Pt:** 78 °C **Density:** 2,18 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in diluted HCl	Max. 50 ppm	Not precipitated by dil. H_2SO_4 (as SO_4)	Max. 0.2 %
CO_3 (as $BaCO_3$)	Max. 2 %	Cl (Chloride)	Max. 10 ppm
S (Sulphur)	Max. 5 ppm	Ca (Calcium)	Max. 30 ppm
Fe (Iron)	Max. 5 ppm	Sr (Strontium)	Max. 1.5 %
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
21687.232	250 g	Plastic bottle for solids
21687.298	1 kg	Plastic bottle for solids

VWR Handy Solution Guides

Barium hydroxide 0.15 mol/l (0.3 N) in aqueous solution Reag. Ph. Eur. 1009401

CAS 17194-00-2
$Ba(OH)_2$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87785.290	1 l	Plastic bottle

Barium nitrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 10022-31-8 **UN:** 1446
$Ba(NO_3)_2$ **M.W.** 261.34 g/mol
Melting Pt: ~ 592 °C **Density:** ~3,23 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (20°C; 5 %)	5.0 - 8.0
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 100 ppm
Not precipitated by H_2SO_4 (as SO_4)	Max. 0.05 %	Cl (Chloride)	Max. 5 ppm
Ca (Calcium)	Max. 20 ppm	Fe (Iron)	Max. 2 ppm
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 50 ppm
Sr (Strontium)	Max. 0.2 %		

Cat. No.	Pk	Pack type
21740.293	1 kg	Plastic bottle for solids

NEW Barium nitrate in aqueous solution USP test solutions (TS)

$BaNO_3$
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85333.180	100 ml	Plastic bottle
85333.260	500 ml	Plastic bottle

Barium perchlorate AnalaR NORMAPUR® analytical reagent

Danger

CAS 13465-95-7 **UN:** 1447
$Ba(ClO_4)_2$ **M.W.** 336.23 g/mol
Melting Pt: 505 °C **Density:** 3,2 g/cm³ (20 °C)

Assay	Min. 97.0 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in methanol	Max. 0.1 %	Not precipitated by H_2SO_4 (as SO_4)	Max. 0.2 %
Water	Max. 4 %	Cl (Chloride)	Max. 100 ppm
Ca (Calcium)	Max. 0.05 %	Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
21749.236	250 g	Plastic bottle for solids

Barium N-phenylsulphanilate

See Barium diphenylamine-4-sulphonate p.53

Barium sulphate, fine powder Ph. Eur.

CAS 7727-43-7
$BaSO_4$ **M.W.** 233.39 g/mol
Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 1345 °C **Density:** 4,5 g/cm³ (25 °C)
Storage Temperature: Ambient

Appearance	White powder
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Acidity or alkalinity	Passes test
Substances soluble in acid	Max. 0.3 %
Oxidisable sulphur compounds	Passes test
Soluble barium salts	Max. 10 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on ignition (600 ± 50°C)	Max. 2 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
21763.292	1 kg	Plastic bottle for solids
21763.463	25 kg	Bucket (Plastic)

Barium sulphate GPR RECTAPUR®

CAS 7727-43-7
$BaSO_4$ **M.W.** 233.39 g/mol
Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 1345 °C **Density:** 4,5 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Acidity	Max. 0.002 meq/g
Heavy metals (as Pb)	Max. 10 ppm
PO_4 (Phosphate)	Max. 10 ppm

Cat. No.	Pk	Pack type
21766.292	1 kg	Plastic bottle for solids

Basic vanadium (IV) sulphate pentahydrate

See Vanadyl sulphate pentahydrate p.508

BCIG

See X-Gal (5-Bromo-4-chloro-3-indolyl-ß-D-galactopyranoside) p.520

BCIP

See 5-Bromo-4-chloro-3-indolyl phosphate p-toluidine salt (BCIP (p-toluidine salt), X-Phosphate) p.64

VWR LIFE SCIENCE BCIP-NBT solution

Ready-to-use solution produces a dark blue insoluble end product ideal for immunohistochemistry and Northern and Southern hybridisations.

Cat. No.	Pk	Pack type
E116-100ML	100 ml	Glass bottle

VWR LIFE SCIENCE Beef Extract, powder, high purity

A dried replacement for infusions of meat.

pH (10%, Water) @25°C	4.6 - 6
Residue on Ignition	27 % - 31 %
Salmonella	none
Solubility (10%, Water)	pass

Cat. No.	Pk	Pack type
0114-50G	50 g	Plastic bottle
0114-100G	100 g	Plastic bottle
0114-500G	500 g	Plastic bottle

Beeswax white TECHNICAL

CAS 8012-89-3
Melting Pt: ~ 64 °C **Density:** 0,95 g/cm³ (20 °C)

Melting point	61 - 65 °C

Cat. No.	Pk	Pack type
22841.265	500 g	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Beeswax yellow TECHNICAL

CAS 8012-89-3

Melting Pt: ~ 64 °C **Density:** 0,95 g/cm³ (20 °C)

Melting point ..... 61 - 65 °C

Cat. No.	Pk	Pack type
22842.268	500 g	Plastic bottle for solids

Bentonite TECHNICAL

CAS 1302-78-9

Density: 2,5 g/cm³ (20 °C)

Density ..... About 620 g/l
Swelling volume (ml/g) ..... 10 - 15
Loss on drying ..... Max. 16.5 %

Cat. No.	Pk	Pack type
87120.360	5 kg	Bucket (Plastic)

Benzaldehyde GPR RECTAPUR®

Warning

CAS 100-52-7 **UN:** 1990
C_6H_5CHO **M.W.** 106.12 g/mol
Boiling Pt: 179 °C (1013 hPa) **Melting Pt:** -26 °C **Density:** 1,049 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Acidity ..... Max. 0.08 meq/g
Boiling point ..... 177 - 181 °C
Density (20/4) ..... 1.040 - 1.050

Cat. No.	Pk	Pack type
20863.291	1 l	Glass bottle

VWR LIFE SCIENCE Benzamidine hydrochloride hydrate, ultrapure

Warning

CAS 206752-36-5
$C_6H_5C(=NH)NH_2 \cdot HCl \cdot H_2O$ **M.W.** 174.63 g/mol
Storage Temperature: Ambient

A protease inhibitor of arginine-selective enzymes like trypsin, kallikrein and thrombin.

Em (Lambda Max, MEOH, anhy) ..... >= 9500
Heavy Metals (as Pb) ..... <= 0.005 %
Melting Point ..... 77 °C - 87 °C
Purity (Anhydrous) ..... >= 98 %
Solubility (1%, Water) ..... pass

Cat. No.	Pk	Pack type
0616-25G	25 g	Plastic bottle for solids

Benzene AnalaR NORMAPUR® analytical reagent

Danger

CAS 71-43-2 **UN:** 1114
C_6H_6 **M.W.** 78.11 g/mol
Boiling Pt: 80,1 °C (1013 hPa) **Melting Pt:** 5,5 °C **Density:** 0,878 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119447106-44

Assay (on anhydrous substance) ..... Min. 99.7 %
Colouration ..... Max. 10 APHA
Solidification point ..... 5.2 - 5.4 °C
Substances coloured by H_2SO_4 ..... Max. 60 APHA
Thiophene ..... Max. 1 ppm
Water ..... Max. 0.05 %
B (Boron) ..... Max. 0.02 ppm
Ca (Calcium) ..... Max. 0.5 ppm
Co (Cobalt) ..... Max. 0.02 ppm
Cu (Copper) ..... Max. 0.01 ppm
Mg (Magnesium) ..... Max. 0.1 ppm
Ni (Nickel) ..... Max. 0.01 ppm
Sn (Tin) ..... Max. 0.1 ppm
Acidity or alkalinity ..... Max. 0.0001 meq/g
Density (20/4) ..... 0.878 - 0.879
n 20/D ..... 1.500 - 1.502
Evaporation residue ..... Max. 5 ppm
Total S (as SO_4) ..... Max. 10 ppm
Al (Aluminium) ..... Max. 0.5 ppm
Ba (Barium) ..... Max. 0.1 ppm
Cd (Cadmium) ..... Max. 0.01 ppm
Cr (Chromium) ..... Max. 0.02 ppm
Fe (Iron) ..... Max. 0.1 ppm
Mn (Manganese) ..... Max. 0.02 ppm
Pb (Lead) ..... Max. 0.01 ppm
Zn (Zinc) ..... Max. 0.05 ppm

Cat. No.	Pk	Pack type
21803.291	1 l	Glass bottle

NEW Benzene 200 µg/ml in methanol, organic reference standard,

Cat. No.	Pk	Pack type
123152U	1 ml	Glass ampoule

Benzene-[D6] (99,8% D) for NMR spectroscopy

Danger

CAS 1076-43-3 **UN:** 1114
C_6D_6 **M.W.** 84.07 g/mol
Boiling Pt: 79 °C (1013 hPa) **Melting Pt:** 6,7 °C **Density:** 0,95 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance) ..... Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.50 %
Water ..... Max. 0.02 %

Cat. No.	Pk	Pack type
87160.0010	10 ml	Glass bottle
87160.0011	10 ml	Glass bottle with septum cap
87160.0025	25 ml	Glass bottle
87160.0100	100 ml	Glass bottle

1,3-Benzenediol

See Resorcinol p.388

Benzethonium chloride, anhydrous TECHNICAL

Danger

CAS 121-54-0 **UN:** 3077
$C_{27}H_{42}ClNO_2$ **M.W.** 448.09 g/mol
Melting Pt: 164-166 °C
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
21798.235	250 g	Plastic bottle for solids

Benzethonium chloride 0.004 mol/l AVS TITRINORM® volumetric solution

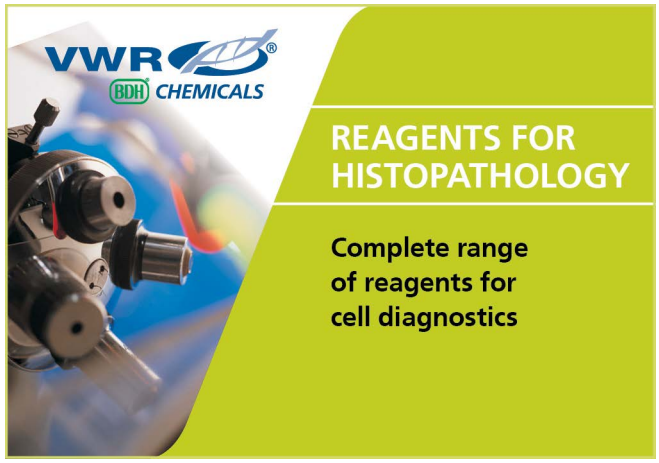
CAS 121-54-0
$C_{27}H_{42}ClNO_2$

Titer (20°C; real value 0.2 % accuracy) ..... 0.00399 - 0.00401 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30497.293	1 l	Plastic bottle
30497.327	2,5 l	Plastic bottle

NEW Organic reference standard, Benzo[a]pyrene 50 µg/ml in toluene

Cat. No.	Pk	Pack type
122932N	1 ml	Glass ampoule



NEW Benzoate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84955.180	100 ml	Plastic bottle

Benzocaine (Ethyl 4-aminobenzoate) Ph. Eur.

Warning

CAS 94-09-7
$C_9H_{11}NO_2$ **M.W.** 165.19 g/mol
Boiling Pt: 311 °C (1013 hPa) **Melting Pt:** 89-90 °C
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification (IR)	Passes test
Loss on drying	Max. 0.5 %
Sulphated ash	Max. 0.1 %
Related substances	Passes test
Residual solvents	Passes test

Cat. No.	Pk	Pack type
83530.150	50 g	Plastic bottle for solids

Benzoic acid AnalaR NORMAPUR® analytical reagent

Danger

CAS 65-85-0
$C_7H_6O_2$ **M.W.** 122.12 g/mol
Boiling Pt: 249 °C (1013 hPa) **Melting Pt:** 121-123 °C **Density:** 1,316 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119455536-33

Assay	Min. 99.7 %	Substances reducing $KMnO_4$ (as O)	Passes test
Substances coloured by H_2SO_4	Passes test	Melting point	121 - 123 °C
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in absolute ethanol	Max. 50 ppm
Insolubility in diluted ammonia	Max. 50 ppm	Insolubility in NaOH 1 N	Max. 50 ppm
Ignition residue (SO_4)	Max. 100 ppm	Total Cl (Chlorine)	Max. 50 ppm
Water	Max. 0.3 %	SO_4 (Sulphate)	Max. 30 ppm
Fe (Iron)	Max. 5 ppm		

Cat. No.	Pk	Pack type
20172.180	100 g	Plastic bottle for solids
20172.260	500 g	Plastic bottle for solids

Benzoic acid methyl ester GPR RECTAPUR®

Warning

CAS 93-58-3
$C_6H_5COOCH_3$ **M.W.** 136.15 g/mol
Boiling Pt: 199,6 °C (1013 hPa) **Melting Pt:** -12 °C **Density:** 1,0888 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Identification	Passes test
Density (20/4)	1.080 - 1.090
Ignition residue (SO_4)	Max. 0.05 %
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
25567.291	1 l	Glass bottle

Benzoic acid sodium salt

See Sodium benzoate p.409

1,2-Benzophenanthrene

See Chrysene p.90

Benzotriazole TECHNICAL

Danger

CAS 95-14-7 **UN:** 2811
$C_6H_5N_3$ **M.W.** 119.13 g/mol
Boiling Pt: 350 °C (1013 hPa) **Melting Pt:** 99 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
21841.292	1 kg	Plastic bottle for solids

1,2,3-Benzotriazole

See Benzotriazole p.56

1H-Benzotriazole

See Benzotriazole p.56

1H-1,2,3-Benzotriazole

See Benzotriazole p.56

Benzyl alcohol analytical reagent

Warning

CAS 100-51-6
$C_6H_5CH_2OH$ **M.W.** 108.14 g/mol
Boiling Pt: 205 °C (1013 hPa) **Melting Pt:** -15,3 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.0 %
Acidity	Max. 0.0008 meq/g
Boiling point	204 - 208 °C
Density (20/4)	1.043 - 1.046
Peroxide value	Max. 10
Benzaldehyde	Max. 0.1 %
Water	Max. 0.1 %
Cl (Chloride)	Max. 20 ppm

Cat. No.	Pk	Pack type
20807.297	1 l	Glass bottle
20807.322	2,5 l	Glass bottle

Benzyl alcohol GPR RECTAPUR®

Warning

CAS 100-51-6
$C_6H_5CH_2OH$ **M.W.** 108.14 g/mol
Boiling Pt: 205 °C (1013 hPa) **Melting Pt:** -15,3 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	97 - 100.5 %
Acidity	Passes test
Appearance of solution	Passes test
IR Spectrum	Passes test
Density (20/20)	1.043 - 1.049
Peroxide value	Max. 5
n 20/D	1.538 - 1.541
Benzaldehyde	Max. 0.15 %
Evaporation residue	Max. 0.05 %
Related substances	Max. 0.2 %
Cl (Chloride)	Max. 20 ppm

Cat. No.	Pk	Pack type
27354EE	25 l	Plastic drum

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Benzyl alcohol GPR RECTAPUR®

Warning

CAS 100-51-6
$C_6H_5CH_2OH$
M.W. 108.14 g/mol
Boiling Pt: 205 °C (1013 hPa) **Melting Pt:** -15,3 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Boiling point	204 - 208 °C
Density (20/4)	1.043 - 1.046

Cat. No.	Pk	Pack type
20805.291	1 l	Glass bottle

Benzyl alcohol TECHNICAL

Warning

CAS 100-51-6
$C_6H_5CH_2OH$
M.W. 108.14 g/mol
Boiling Pt: 205 °C (1013 hPa) **Melting Pt:** -15,3 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %

Cat. No.	Pk	Pack type
20804.366	5 l	Plastic bottle

Benzylpenicillin potassium salt

See Penicillin G potassium salt p.336

Beryllium standard solution, 10,000 mg/l Be in dil. nitric acid (from BeO.(Be(OAc)₂)₃) ARISTAR® standard for ICP

$BeO(C_2H_3O_2)_6$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455092U	100 ml	Plastic bottle

NEW Beryllium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Traceable to SRM from NIST. Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities.

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Beryllium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456662N
Beryllium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85553.180

Beryllium standard solution, 1,000 mg/l Be in dil. nitric acid (from BeO.(Be(OAc)₂)₃) ARISTAR® standard for ICP

$BeO(Be(OC_2H_3O_2)_2)_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455082S	100 ml	Plastic bottle
455084U	500 ml	Plastic bottle

Beryllium standard solution, 1,000 mg/l Be in 2% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86665.180	100 ml	Plastic bottle
86665.260	500 ml	Plastic bottle

Betaine Enhancer

See PCR

VWR LIFE SCIENCE Betaine hydrochloride, ultrapure

CAS 590-46-5
$C_5H_{12}ClNO_2$
Storage Temperature: Ambient

Heavy Metals	< 0.001%
Loss on Drying	< 0.5 %
pH (25%, Water) @25°C	0.8 - 1.2
Purity	> 98 %
Residue on Ignition	< 0.1 %

Cat. No.	Pk	Pack type
K186-1KG	1 kg	Plastic bottle for solids

BHI

See Microbiology

VWR LIFE SCIENCE Bicine, high purity

CAS 150-25-4
$C_6H_{13}NO_4$
M.W. 163.17 g/mol
Melting Pt: 185-192 °C
Storage Temperature: Ambient

Moisture (Karl Fischer)	< = 1 %
O.D.@260nm (0.1M, Water)	<= 0.05
O.D.@280nm (0.1M, Water)	<= 0.05
pH (1%, Water) @25°C	4.2 - 5.5
Purity	>= 99 %
Solubility (20%, Water)	pass

Cat. No.	Pk	Pack type
0149-100G	100 g	Plastic bottle
0149-1KG	1 kg	Plastic bottle

Bicyclo[4.4.0]decane

See Decahydronaphthalene (mixture of cis and trans isomers) p.105

Bile Esculine Azide Agar

See Microbiology

D(+)-Biotin, reagent grade

CAS 58-85-5
$C_{10}H_{16}N_2O_3S$ **M.W.** 244.31 g/mol
Melting Pt: 232-233 °C **Density:** 1,41 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Heavy Metals (as Pb) ..... < 0.001 %
Purity (RG) ..... >= 99 %
Specific Rotation ..... 89°- 93°

Cat. No.	Pk	Pack type
0340-1G	1 g	Glass bottle
0340-5G	5 g	Glass bottle

4,4'-Bi-o-toluidine

See o-Tolidine p.490

BIS

See Bisacrylamide p.58

Bisacrylamide, ultrapure

Warning

CAS 110-26-9
$(H_2C=CHCONH)_2CH_2$ **M.W.** 154.17 g/mol
Boiling Pt: 125 °C (3,33 hPa) **Melting Pt:** 185 °C **Density:** 1,235 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Abs.@290 nm (1%, Water) ..... ≤ 0.2
Acrylic Acid ..... ≤ 0.001 %
Conductivity (2%, Water) ..... <5 umhos
DNase ..... NONE
Identification ..... PASS
pH (1%, 0.1M NaCl) @25 °C 5.0
Protease ..... NONE
Purity ..... ≤ 99.0 %
RNase ..... NONE

Cat. No.	Pk	Pack type
0172-50G	50 g	Plastic bottle
0172-100G	100 g	Plastic bottle
0172-250G	250 g	Plastic bottle

Bisacrylamide, proteomics grade

Warning

CAS 110-26-9
$(H_2C=CHCONH)_2CH_2$ **M.W.** 154.17 g/mol
Boiling Pt: 125 °C (3,33 hPa) **Melting Pt:** 185 °C **Density:** 1,235 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Abs.@290 nm (1%, Water) 0.2
Acrylic Acid ..... 0.001 %
Conductivity (2%, Water) ..... 10 umhos
DNase ..... NONE
Electrophoresis ..... PASS
Polymerisation (Min) ..... 20 Minutes
Protease ..... NONE
Purity ..... 99.0 %
RNase ..... NONE

Cat. No.	Pk	Pack type
M104-100G	100 g	Plastic bottle

Bisacrylamide 20 g/l in aqueous solution Electran® for electrophoresis

CAS 110-26-9
$(H_2C=CHCONH)_2CH_2$

A 2% w/v solution of NN'-methylenebisacrylamide Electran® in deionised water.

Assay (by acidimetry following saponification) ..... 1.8 to 2.2 %
Absorbance A (290 nm; 2.0 %; 1 cm) ..... Max 0.4

Cat. No.	Pk	Pack type
443555R	1 l	Glass bottle SAFEBREAK

Bisacrylamide 20 g/l in aqueous solution, ultrapure

CAS 110-26-9
$(H_2C=CHCONH)_2CH_2$

Appearance ..... PASS
Conductivity ..... REPORT
Electrophoresis ..... PASS
pH @25 °C ..... REPORT

Cat. No.	Pk	Pack type
0832-500ML	500 ml	Plastic bottle

Bisacrylamide 2% (w/v), proteomics grade

CAS 110-26-9
$C_7H_{10}O_2N_2$ 154.17
Storage Temperature: Refrigerator
A 2% (w/v) N,N'-methylene-bisacrylamide solution.

Appearance ..... PASS
Conductivity (µmhos) ..... REPORT
DNase ..... NONE
Electrophoresis ..... PASS
pH @ 25 °C ..... REPORT
Protease ..... NONE
RNase ..... NONE

Cat. No.	Pk	Pack type
M193-500ML	500 ml	

1,2-Bis(dimethylamino)ethane

See TEMED (N,N,N',N'-Tetramethylethylenediamine) p.484

3,7-Bis(dimethylamino)phenothiazin-5-ium chloride zinc chloride double salt

See Methylene blue NZ p.261

3,7-Bis(dimethylamino)phenothiazin-5-ium chloride

See Methylene blue p.261

VWR BDH CHEMICALS
AnalaR® NORMAPUR® ANALYTICAL REAGENTS
- Guaranteed specifications with real values
- Reproducible results
- High quality at an affordable price

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Bis(ethylenediamine)copper dihydroxide 21% in aqueous solution Reag. Ph. Eur. 3008700

Danger

CAS 14552-35-3 **UN:** 1761
$Cu(H_2NCH_2CH_2NH_2)_2(OH)_2$ **M.W.** 217.76 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87712.290	1 l	Plastic bottle

Bis(2-ethylhexyl) sebacate TECHNICAL

CAS 122-62-3
$C_{26}H_{50}O_4$ **M.W.** 426.68 g/mol
Boiling Pt: 435 °C (1013 hPa) **Melting Pt:** -55 °C **Density:** 0,914 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
23399.296	1 l	Glass bottle

Bis(2-hydroxyethyl)amino-tris(hydroxymethyl) methane (BIS-TRIS), ultrapure

Warning

CAS 6976-37-0
$C_8H_{19}NO_5$ **M.W.** 209.24 g/mol
Melting Pt: 102-103 °C
Storage Temperature: Ambient

DNase ..... none detected
RNase ..... none detected
Melting Point ..... 102 °C - 106 °C
Moisture (KF) ..... <= 1 %
pH (1.0%, Water) @25°C ..... 8.8 - 9.6
pKa @25°C ..... 6.45 - 6.65
Protease ..... none
Purity (Titration) ..... > 99 %

Cat. No.	Pk	Pack type
0715-100G	100 g	Plastic bottle for solids
0715-250G	250 g	Plastic bottle for solids
0715-500G	500 g	Plastic bottle for solids

Bis(4-hydroxy-1-naphthyl)phenylmethanol

See 1-Naphtholbenzeine p.313

Bismuth (reagents for the analysis of)

Dimethyl glyoxime AnalaR NORMAPUR® analytical reagent p.120
Dithizone analytical reagent p.126
Pyrogallol AnalaR NORMAPUR® analytical reagent p.382
Xylenol orange tetrasodium salt TECHNICAL p.522

Bismuth standard solution, 10,000 mg/l Bi in dil. nitric acid (from Bi) ARISTAR® standard for ICP

Bi in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455114J	500 ml	Plastic bottle

NEW Bismuth standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Traceable to SRM from NIST. Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities.

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Bismuth	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456672P
Bismuth	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85554.180

Bismuth standard solution, 1,000 mg/l Bi in dil. nitric acid (from Bi) ARISTAR® standard for ICP

Bi in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455102F	100 ml	Plastic bottle
455104H	500 ml	Plastic bottle

Bismuth standard solution, 1,000 mg/l Bi in 10% nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86666.180	100 ml	Plastic bottle
86666.260	500 ml	Plastic bottle

Bismuth (III) carbonate basic Ph. Eur.

CAS 5892-10-4
$(BiO)_2CO_3$ **M.W.** 509.97 g/mol
Density: 6,86 g/cm³ (25 °C)

Assay (Bi) (calculated on dried) ..... 80.0 - 82.5 %
Identification A ..... Passes test
Solution S ..... Passes test
Cl (Chloride) ..... Max. 500 ppm
Alkali and alkaline-earth metals ..... Max. 1.0 %
Cu (Copper) ..... Max. 50 ppm
Ag (Silver) ..... Max. 25 ppm
Residual solvents ..... Unlikely by manuf.process
Appearance ..... White/almost white powder
Identification B ..... Passes test
Appearance of solution ..... Passes test
NO_3 (Nitrate) ..... Max. 0.4 %
As (Arsenic) ..... Max. 5 ppm
Pb (Lead) ..... Max. 20 ppm
Loss on drying (105°C) ..... Max. 1.0 %

Cat. No.	Pk	Pack type
83518.230	250 g	Plastic bottle for solids

Bismuth carbonate oxide

See Bismuth (III) carbonate basic p.59

Bismuth (III) nitrate pentahydrate GPR RECTAPUR®

Warning

CAS 10035-06-0 **UN:** 1477

$Bi(NO_3)_3 \cdot 5H_2O$ **M.W.** 485.07 g/mol

Boiling Pt: 75-80 °C (1013 hPa) **Melting Pt:** 30 °C **Density:** 2,736 g/cm³ (20 °C)

Assay ..... Min. 97 %
Alkali and alkaline-earths (as SO_4) ..... Max. 0.2 %
Cl (Chloride) ..... Max. 0.02 %
SO_4 (Sulphate) ..... Max. 0.1 %

Cat. No.	Pk	Pack type
21932.263	500 g	Plastic bottle for solids

Bismuth (III) nitrate basic AnalaR NORMAPUR®

Danger

CAS 1304-85-4 **UN:** 1477

$Bi_5O(OH)_9(NO_3)_4$ **M.W.** 1461.99 g/mol

Density: 4,928 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated as Bi) ..... 71.0 - 74.0 %
Loss on drying (105°C) ..... Max. 3 %
Cl (Chloride) ..... Max. 0.02 %
Cu (Copper) ..... Max. 50 ppm
Identification ..... Passes test
Substances not precipitated by ammonia . Max. 1 %
Ag (Silver) ..... Max. 25 ppm
Pb (Lead) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
84838.180	100 g	Plastic bottle for solids

Bismuth (III) oxide GPR RECTAPUR®

Warning

CAS 1304-76-3

BiO_3 **M.W.** 465.96 g/mol

Boiling Pt: 1890 °C (1013 hPa) **Melting Pt:** 825 °C **Density:** 8,9 g/cm³ (20 °C)

Assay ..... Min. 99 %
NO_3 (Nitrate) ..... Max. 0.2 %
As (Arsenic) ..... Max. 5 ppm
Pb (Lead) ..... Max. 30 ppm

Cat. No.	Pk	Pack type
21945.267	500 g	Plastic bottle for solids

Bismuth subcarbonate

See Bismuth (III) carbonate basic p.59

Bismuth subnitrate solution Reag. Ph. Eur. 1011502

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87786.260	500 ml	Plastic bottle

Bismuth trinitrate pentahydrate

See Bismuth (III) nitrate pentahydrate..... p.60

Biuret AnalaR NORMAPUR® analytical reagent

CAS 108-19-0

$H_2NC(O)NHC(O)NH_2$ **M.W.** 103.08 g/mol

Melting Pt: 188 °C **Density:** 1,467 g/cm³ (10 °C)

Storage Temperature: Refrigerator

Assay ..... Min. 97.0 %
Loss on drying ..... Max. 1 %

Cat. No.	Pk	Pack type
21975.157	50 g	Plastic bottle for solids

Biuret reagent solution Reag. Ph. Eur.

Warning

UN: 3266

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87787.290	1 l	Plastic bottle

Biuret reagent solution for protein (total) in serum or plasma

Warning

UN: 3266

Storage Temperature: Ambient

Contents per litre :
3 g Cupric sulphate $CuSO_4.5H_2O$
5.0 g Potassium iodide KI
9.0 g Potassium sodium tartrate $KNaC_4H_4O_6.4H_2O$
8 g Sodium hydroxide NaOH
1.4 ml Wetting agent ARW-7

Suitability ..... Passes test

Cat. No.	Pk	Pack type
220947S	5 l	Plastic container

Boiling stones ('Anti-Bumping'), granules

Granules of fused alumina, to reduce ‚bumping' in boiling liquids

Particle size (1-4 mm) ..... Min. 96 %

Cat. No.	Pk	Pack type
330093Y	250 g	Plastic bottle for solids

Bole white (Kaolin) TECHNICAL, washed

CAS 1332-58-7

$Al_2SiO_7 \cdot 2H_2O$ **M.W.** 258.16 g/mol

Melting Pt: 1760 °C **Density:** 0,5 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24926.364	5 kg	Bucket (Plastic)

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Borate solution Reag. Ph. Eur. 1033601

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87826.290	1 l	Plastic bottle

ortho-Boric acid, crystallised AnalaR NORMAPUR® analytical reagent

Danger

CAS 10043-35-3

$B(OH)_3$ **M.W.** 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay	99.8 - 100.5 %	Organic impurities	Passes test
Solution in water	Passes test	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in methanol	Max. 50 ppm	Insolubility in water	Max. 50 ppm
Non-esterifiable impurities	Max. 0.1 %	Non-volatile with methanol/HCl	Max. 0.05 %
NH_4 (Ammonium)	Max. 20 ppm	Cl (Chloride)	Max. 3 ppm
PO_4 (Phosphate)	Max. 5 ppm	SO_4 (Sulphate)	Max. 5 ppm
As (Arsenic)	Max. 0.5 ppm	Ca (Calcium)	Max. 20 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 1 ppm
Mg (Magnesium)	Max. 5 ppm	Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
20185.260	500 g	Plastic bottle for solids
20185.297	1 kg	Plastic bottle for solids
20185.360	5 kg	Plastic bottle for solids
20185.460	25 kg	Cardboard carton

Boric acid, crystallised Ph. Eur.

Danger

CAS 10043-35-3

$B(OH)_3$ **M.W.** 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (3.3 %)	3.8 - 4.8
Solubility in alcohol	Passes test
Organic matter	Passes test
SO_4 (Sulphate)	Max. 450 ppm
Heavy metals (as Pb)	Max. 15 ppm
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
20181.294	1 kg	Plastic bottle for solids
20181.363	5 kg	Plastic bottle for solids
20181.465	25 kg	Bucket (Plastic)

ortho-Boric acid, crystallised GPR RECTAPUR®

Danger

CAS 10043-35-3

$B(OH)_3$ **M.W.** 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Non-volatile with methanol/HCl	Max. 0.2 %
Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20182.297	1 kg	Plastic bottle for solids
20182.366	5 kg	Plastic bottle for solids

ortho-Boric acid, powder GPR RECTAPUR®

Danger

CAS 10043-35-3

$B(OH)_3$ **M.W.** 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Non-volatile with methanol/HCl	Max. 0.2 %
Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.025 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20183.291	1 kg	Plastic bottle for solids
20183.360	5 kg	Bucket (Plastic)

ortho-Boric acid, crystallised Gen-Apex® Molecular biology grade

Danger

CAS 10043-35-3

$B(OH)_3$ **M.W.** 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay	Min. 99.5 %
Colouration (0,1 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 5 ppm
Transmittance (230 nm) (0,1 mol/l)	Min. 99 %
Transmittance (260 nm) (0,1 mol/l)	Min. 95 %
Transmittance (280 nm) (0,1 mol/l)	Min. 97 %
Transmittance (320 nm) (0.1 mol/l)	Min. 99 %

Cat. No.	Pk	Pack type
33601.261	500 g	Plastic bottle for solids

VWR LIFE SCIENCE ortho-Boric acid, proteomics grade

Danger

CAS 10043-35-3

$B(OH)_3$ **M.W.** 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Calcium	< 0.005%
Chloride	< 0.001 %
DNase	none detected
Heavy Metals (as Pb)	< 0.001 %
Insolubles (Methanol)	< 0.005 %
Iron	< 0.001 %
Nonvolatiles (Methanol)	< 0.05 %
Phosphate	< 0.001 %
Protease	none detected
Purity	> 99.5 %
RNase	none detected
Sulphate	< 0.01 %

Cat. No.	Pk	Pack type
M139-500G	500 g	Plastic bottle for solids
M139-1KG	1 kg	Plastic bottle for solids

ortho-Boric acid Molecular biology grade

Danger

CAS 10043-35-3
$B(OH)_3$
M.W. 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay	Min. 99.5 %	Identification	Passes test
DNases	Not detected	RNases	Not detected
Proteases	Not detected	Absorbance (260 nm) (0,05 mol/l)	Max. 0.01
Absorbance (280 nm) (0,05 mol/l)	Max. 0.01	Heavy metals (as Pb)	Max. 0.001 %
pH (20 °C; 5 %)	3.8 to 4.8	Water	Max. 0.3 %
Cl (Chloride)	Max. 0.001 %	PO_4 (Phosphate)	Max. 0.0002 %
SO_4 (Sulphate)	Max. 0.005 %	As (Arsenic)	Max. 0.0001 %
Ca (Calcium)	Max. 0.002 %	Cu (Copper)	Max. 0.0005 %
Fe (Iron)	Max. 0.0002 %	Mg (Magnesium)	Max. 0.0005 %
Na (Sodium)	Max. 0.002 %	Pb (Lead)	Max. 0.0005 %

Cat. No.	Pk	Pack type
443904S	500 g	Plastic bottle
443905T	1 kg	Plastic bottle
443907V	5 kg	Plastic bottle

ortho-Boric acid, crystallised TECHNICAL

Danger

CAS 10043-35-3
$B(OH)_3$
M.W. 61.83 g/mol
Boiling Pt: 185 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,44 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119486683-25

Assay: Min. 98 %

Cat. No.	Pk	Pack type
20177.290	1 kg	Plastic bottle for solids
20177.368	5 kg	Bucket (Plastic)

ortho-Boric acid 40 g/l in aqueous solution

CAS 10043-35-3
$B(OH)_3$
Storage Temperature: Ambient

Assay: 3.9 - 4.1 %

Cat. No.	Pk	Pack type
5792.5000	5 l	Plastic container

ortho-Boric acid 40 g/l in aqueous solution with indicator for Kjeldahl determinations

CAS 10043-35-3
$B(OH)_3$
Storage Temperature: Ambient

Contents per litre:
Boric acid AnalaR NORMAPUR® 40 g
BDH `4.5` indicator 6 ml

Assay: 39.0 - 41.0 g/l
pH (20°C): 3.80 - 4.0

Cat. No.	Pk	Pack type
192316H	2,5 l	Glass bottle

ortho-Boric acid 40 g/l in aqueous solution with indicator VOLUSOL

CAS 10043-35-3
$B(OH)_3$
Storage Temperature: Ambient

Assay (W/V): 3.9 - 4.2 %
Appearance: Clear red liquid
Sensitivity: Passes test
Density (20/4): 1.000 - 1.020

Cat. No.	Pk	Pack type
95097.5000	5 l	Plastic container

ortho-Boric acid 20 g/l in aqueous solution

CAS 10043-35-3
$B(OH)_3$
Storage Temperature: Ambient

Assay: 1.9 - 2.1 %

Cat. No.	Pk	Pack type
2733.5000	5 l	Plastic container

ortho-Boric acid 10 g/l in aqueous solution, light green VOLUSOL®

CAS 10043-35-3
$B(OH)_3$
Storage Temperature: Ambient

Assay (W/V): 0.9 - 1.1 %
Appearance: Clear green liquid
Sensitivity: Passes test

Cat. No.	Pk	Pack type
5732.5000	5 l	Plastic container

Boron standard solution, 10,000 mg/l B in ammonium hydroxide solution (max. 1%) (from $B(OH_3)$) ARISTAR® standard for ICP

H_3BO_3 in H_2O tr. NH_4OH

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455132L	100 ml	Plastic bottle
455134N	500 ml	Plastic bottle

Boron standard solution, 5,000 mg/l B in water

This certified reference material is produced using a high-purity starting material, acid from sub-boiling and 18 MOhm deionised water.

Cat. No.	Pk	Pack type
88380.260	500 ml	Plastic bottle
88380.290	1.000 ml	Plastic bottle

NEW Boron standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Traceable to SRM from NIST. Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities.

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Boron	1000 ppm	H_2O/ tr.NH_4OH	Plastic bottle	100 ml	457213B
Boron	10 ppm	H_2O/ tr.NH_4OH	Plastic bottle	100 ml	85551.180

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Boron standard solution, 1,000 mg/l B in ammonium hydroxide solution (max. 1%) (from B(OH3)) ARISTAR® standard for ICP

$B(OH)_3$ in H_2O tr.NH_4OH

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455122J	100 ml	Plastic bottle
455124L	500 ml	Plastic bottle

Boron standard solution, 1,000 mg/l B in water AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86663.180	100 ml	Plastic bottle
86663.260	500 ml	Plastic bottle

Boron trifluoride methanol complex 20% in methanol for synthesis

Danger

CAS 373-57-9 **UN:** 2924

$BF_3 \cdot CH_3OH$ **M.W.** 99.85 g/mol

Density: 0,89 g/cm³ (20 °C)

Assay ..... 13 - 20 %
Density (20/4) ..... 0.880 - 0.895

Cat. No.	Pk	Pack type
22007.263	500 ml	Glass bottle

Bouin's solution GURR®

Danger

UN: 3265

Composition ..... Passes test

Cat. No.	Pk	Pack type
7000.1000	1 l	Plastic bottle

Boutron-Boudet hydrotimetric solution

0.104 ml corresponds to 1 hydrotimetric degree for a 40 ml-water sample

Description	Pk	Cat. No.
Boutron-Boudet hydrotimetric solution	1 l	31700.293

Bovine Albumin

See Bovine Serum Albumin, for biotechnology p.21

VWR LIFE SCIENCE Bradford Protein Assay, proteomics grade

The Bradford Protein Assay is the preferred colorimetric assay for quantifying total protein concentration. Based upon complex formation between basic and aromatic amino acid residues with Coomassie® Brilliant Blue G-250 dye, the Bradford method is easier, faster and more sensitive than the Lowry method.

- Sensitive, fast and consistent
- Standard protocol for measuring concentrations from 10 to 100 µg
- Microassay protocol for measuring concentrations from 1 to 10 µg

Cat. No.	Pk	Pack type
M173-KIT	1 KIT	Kit

Brewers Yeast

See Yeast (Brewers) p.523

VWR LIFE SCIENCE Brij® 35, high purity

CAS 9002-92-0

$C_{58}H_{118}O_{24}$ **M.W.** 1199.56 g/mol

Storage Temperature: Ambient

Non-ionic detergent efficiently hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Hydroxyl Number ..... 40 - 60
Moisture (KF) ..... <= 3 %

Cat. No.	Pk	Pack type
0217-1KG	1 kg	Plastic bottle for solids
0217-5KG	5 kg	Bucket (Plastic)

Brilliant blue G

See Coomassie® Brilliant Blue G-250, ultrapure p.96

Brillant blue R

See Coomassie® Brilliant Blue R-250 ..... p.96

Brilliant Cyanine 6B

See Coomassie® Brilliant Blue R-250 ..... p.96

Brilliant green bile agar

See Microbiology

Brilliant indocyanine 6B

See Coomassie® Brilliant Blue R-250 ..... p.96

Brilliant indocyanine G

See Coomassie® Brilliant Blue G-250 ..... p.96

NEW Bromate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84956.180	100 ml	Plastic bottle

Bromide standard solution, 1,000 mg/l Br- in water (from NaBr) ARISTAR® standard for ion chromatography

Br in H_2O

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458042W	100 ml	Plastic bottle
458044B	500 ml	Plastic bottle

NEW Bromide 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84957.180	100 ml	Plastic bottle
84957.260	500 ml	Plastic bottle

5-Bromo-4-chloro-3-indolyl phosphate p-toluidine salt (BCIP (p-toluidine salt), X-Phosphate), ultrapure

Warning

CAS 6578-06-9
$C_{15}H_{15}BrClN_2O_4P$
Storage Temperature: Freezer

Chromogenic substrate for the detection of alkaline phosphatase. Often used with INT or NBT to amplify the sensitivity of staining.

Em (290nm)	> 5700
Moisture	<= 2%
O.D.@620nm (0.1%, DMF)	<= 0.005
Purity (HPLC)	>= 99%
Solubility (0.10%, DMF)	Pass

Cat. No.	Pk	Pack type
0885-100MG	100 mg	Glass bottle
0885-500MG	500 mg	Glass bottle
0885-1G	1 g	Glass bottle

5-Bromo-4-chloroindol-3-yl-β-D-galactopyranoside

See X-Gal (5-Bromo-4-chloro-3-indolyl-ß-D-galactopyranoside)..... p.520

Bromocresol green, powder pH-indicator

CAS 76-60-8
$C_{21}H_{14}Br_4O_5S$ **M.W.** 698.02 g/mol
Melting Pt: 217-218 °C
Storage Temperature: Ambient

Transition range pH 3.8 - 5.4	Yellowish green to blue
Appearance of solution	Passes test
Transition range (according to ACS)	Passes test
Loss on drying (110°C)	Max. 3.00 %
Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
200125B	25 g	Glass bottle

Bromocresol green 0.04% in ethanol TECHNICAL

Danger

CAS 76-60-8 **UN:** 1170
$C_{21}H_{14}Br_4O_5S$
Storage Temperature: Ambient

Transition range: pH 3.8-5.4

Identification	Passes test

Cat. No.	Pk	Pack type
34301.237	250 ml	Glass bottle

Bromoform stabilised AnalaR NORMAPUR® analytical reagent, for mineralogy

Stabilised with ethanol 1 %

Danger

CAS 75-25-2 **UN:** 2515
Br_3CH **M.W.** 252.73 g/mol
Boiling Pt: 149,5 °C (1013 hPa) **Melting Pt:** 9,2 °C **Density:** 2,8912 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 98.0 %	Acidity	Max. 0.002 meq/g
Density (20/4)	2.820 - 2.880	n 20/D	1.590 - 1.598

Cat. No.	Pk	Pack type
22045.297	1 l	Glass bottle

Bromoform stabilised GPR RECTAPUR®

Stabilised with ethanol 1 %

Danger

CAS 75-25-2 **UN:** 2515
Br_3CH **M.W.** 252.73 g/mol
Boiling Pt: 149,5 °C (1013 hPa) **Melting Pt:** 9,2 °C **Density:** 2,8912 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 97 %
Density (20/4)	2.800 - 2.880
n 20/D	1.590 - 1.598

Cat. No.	Pk	Pack type
22044.294	1 l	Glass bottle

Organic reference standard, Bromomethane 200 µg/ml in methanol

Cat. No.	Pk	Pack type
123472K	1 ml	Glass ampoule

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Bromophenol blue ACS

A tracking dye for nucleic acid and protein gels. Also a pH indicator (yellow to blue, range 3.0 - 4.6).

Cat. No.	Pk	Pack type
0449-25G	25 g	Glass bottle
0449-50G	50 g	Glass bottle
0449-100G	100 g	Glass bottle

Bromophenol Blue, sodium salt, proteomics grade

A tracking dye for nucleic acid and protein gels. Also a pH indicator (yellow to blue, range 3.0 - 4.6).

Cat. No.	Pk	Pack type
M116-50G	50 g	Glass bottle

Bromophenol blue 0.04% in ethanol TECHNICAL

Danger

CAS 115-39-9 **UN:** 1170
$C_{19}H_{10}Br_4O_5S$
Storage Temperature: Ambient

Transition range: pH 3.0 - 4.6

Identification ..... Passes test

Cat. No.	Pk	Pack type
34307.237	250 ml	Glass bottle

Bromophenol blue solution R1 Reag. Ph. Eur. 1012802

Comprises <0.1% bromophenol blue and <0.1% sodium hydroxide in water.

Supplied with certificate of analysis

Cat. No.	Pk	Pack type
87795.180	100 ml	Plastic bottle

Bromophenol blue sodium salt ACS

CAS 62625-28-9
$C_{19}H_9Br_4NaO_5S$ **M.W.** 691.95 g/mol
Storage Temperature: Ambient

Clarity of Solution ..... Pass
Visual Transition Interval (pH 3.0-4.6) ..... Pass

Cat. No.	Pk	Pack type
0312-50G	50 g	Glass bottle
0312-100G	100 g	Glass bottle

Bromothymol blue ACS

Cat. No.	Pk	Pack type
0431-25G	25 g	Plastic bottle for solids
0431-50G	50 g	Glass bottle

Bromothymol blue 1% in DMF Reag. Ph. Eur. 1012902

Danger

CAS 76-59-5 **UN:** 2265
$C_{27}H_{28}Br_2O_5S$
Boiling Pt: 152 °C **Melting Pt:** -61 °C

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87797.180	100 ml	Plastic bottle

Bromothymol blue 0.04% in ethanol TECHNICAL

Danger

CAS 76-59-5 **UN:** 1170
$C_{27}H_{28}Br_2O_5S$
Storage Temperature: Ambient

Transition range: pH 6.0-7.6

Identification ..... Passes test

Cat. No.	Pk	Pack type
34303.234	250 ml	Glass bottle

Culture media in bottles

S.O.C. Medium is used in the final step of bacterial cell transformation to obtain maximal transformation efficiency of *E. coli*. S.O.C. LB broth is used for the propagation and maintenance of *E. coli*. Widely used for the preparation of plasmid DNA and recombinant proteins.

- Ready to use

Description	Filling	Pk	Cat. No.
LB broth Lennox, TC grade	1000 ml	10	K488-10PK
SOC media	100 ml	100 ml	N549-100ML

LB Broth liquid for biotechnology

Used for the propagation and maintenance of *E. coli*. Widely used for the preparation of plasmid DNA and recombinant proteins.

Abs. @ 260 nm (1:100, water) ..... 0.2263 – 0.2663
Bioburden (Milliflex) ..... NONE
pH @ 25 °C ..... 6.65 – 7.15
Refractive index ..... 1.334 – 1.342
Specific gravity @ 20 °C ..... 1.0116 – 1.0128

Cat. No.	Pk	Pack type
J833-1L	1 l	Plastic bottle

2XYT Medium Broth for biotechnology

Pre-mixed powder. Used for the preparation of *E. coli* strains infected with M13 bacteriophage.

Conductivity (1:10) @25 °C ..... REPORT
pH @25 °C ..... 6.6 - 7.0
Solubility (31 g/1000 ml water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J902-500G	500 g	Plastic bottle for solids

NZCYM Broth powder, for biotechnology

Used for the preparation of media for the growth of lambda phages. A rich source of high quality amino acids and peptides.

Conductivity (10%, water) @25°C ..... REPORT
pH (23 g/1000 ml water to 7.5 w/1M NaOH)@25°C ..... REPORT
Solubility (23 g/1000 ml water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J865-500G	500 g	Plastic bottle for solids

NZYM Broth powder for biotechnology

Used for the replication and maintenance of lambda bacteriophage (NZCYM without casamino acids).

Conductivity (10%, water) @ 25 °C ..... REPORT
pH (17 g/qs 1000 ml water/ 5 ml 20% casamino acid) ..... REPORT
Solubility (17 g/qs 1000 ml water/ 5 ml 20% casamino) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J866-500G	500 g	Plastic bottle for solids

SOB Broth, for biotechnology

Used for the preparation of nutritionally rich growth medium and transformation of competent *E. coli*.

Conductivity (1:10) @ 25 °C (µmhos) ..... REPORT
pH @ 25 °C ..... 6.4 – 7.3
Solubility (25.6 g/ 20 ml 1 M $MgSO_4$, 1000 ml water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J906-100G	100 g	Plastic bottle for solids
J906-500G	500 g	Plastic bottle for solids

YPD Broth for biotechnology

Used for the propagation and maintenance of yeasts.

Conductivity @ 25 °C (µmhos) ..... REPORT
pH @ 25 °C ..... 6.0 – 7.0
Solubility (50 g/1000 ml water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J903-500G	500 g	Plastic bottle for solids

M63 Medium Broth for biotechnology

A minimal medium used for the cultivation and propagation of *E. coli*.

Conductivity (1:10) @ 25 °C (µmhos) ..... REPORT
Solubility (15.6 g/1000 ml water) (P/F) ..... PASS

Cat. No.	Pk	Pack type
J910-100G	100 g	Plastic bottle for solids
J910-500G	500 g	Plastic bottle for solids

M9 Medium Broth powder

A minimal medium used for the preparation of recombinant *E. coli* strains. Can maintain bacteria for use with M13.

Conductivity (1:10) @ 25 °C (µmhos) ..... REPORT
Solubility (15.6 g/1000 ml water) (P/F) ..... PASS

Cat. No.	Pk	Pack type
J863-100G	100 g	Plastic bottle for solids
J863-500G	500 g	Plastic bottle for solids

M9CA Medium Broth powder

A minimal medium supplemented with casamino acids used for the preparation of recombinant *E. coli* strains.

Conductivity (10%, water) @ 25 °C (µmhos) ..... REPORT
pH (12.5 g/qs 1000 ml water) @ 25 °C ..... REPORT
Solubility (12.5 g/qs 1000 ml water) ..... PASS

Cat. No.	Pk	Pack type
J864-100G	100 g	Plastic bottle for solids

YM Medium Broth for biotechnology

Used for the preparation of aciduric microorganisms like yeasts and moulds. Increases transformation efficiency during electroporation of Agrobacterium.

Conductivity (1:10) @ 25 °C (µmhos) ..... REPORT
pH @ 25 °C ..... 7.8 – 8.2
Solubility (11.2 g/1000 ml water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J904-100G	100 g	Plastic bottle for solids
J904-500G	500 g	Plastic bottle for solids

Superbroth powder for biotechnology

Rich medium used for obtaining high yields of lambda phage in liquid lysates.

Conductivity (10% dilution pH soln., water) (µmhos) ..... REPORT
pH (57 g/5 ml 1 N NaOH/qs 1000 ml water) @ 25 °C ..... 7.0 – 7.4
Reassay date ..... REPORT
Solubility (57 g/5 ml 1 N NaOH/qs 1000 ml water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J868-500G	500 g	Plastic bottle for solids

Terrific broth, powder

Used for the preparation of molecular genetic strains of *E. coli.* Supports higher density of cells to increase plasmid yield.

Description	Standard	Pk	Cat. No.
Terrific broth, powder	-	100 g	J869-100G
Terrific broth, powder	-	500 g	J869-500G

Tryptone broth powder for biotechnology

Used for the cultivation of *E. coli*.

Conductivity (10%, water) @ 25 °C (µmhos) ..... REPORT
pH @ 25 °C (15 g/1000 ml, water) ..... 6.8 – 7.2
Solubility (15 g/1000 ml, water) ..... PASS
Supports Growth of Bacteria ..... PASS

Cat. No.	Pk	Pack type
J870-500G	500 g	Plastic bottle for solids

BROXO salt tablets

See Sodium chloride p.411

BSA

See Bovine Serum Albumin, for biotechnology p.21

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Buffer solutions, 20 °C AVS TITRINORM®

- Solutions prepared from AnalaR® NORMAPUR® grade analytical reagents
- True analytical value on the label to an accuracy of ± 0,02 pH units (pH 1- 11) (± 0,05 for pH 12.00 buffer)
- Traceable to SRM from NIST
- Batch number and packing date for traceability
- Certificate of analysis available from www.vwr.com

Analysed by an independent accredited control laboratory ISO EN 17025

Ordering information: If significantly large volumes are required please contact your local VWR sales office for a customised offer.

Packaging information: * 5 litre plastic bottle; ** Bag in a box 5 or 10 litre; *** 1 litre dosing bottles

For full information concerning health and safety data please see the vwr.com website.

pH value	pH accuracy	pH buffer type	Pk	Cat. No.	Pack type
Buffer solutions in bottles					
1,00	±0,02	Glycine	1 l	32031.297	Plastic bottle
2,00	±0,02	Citrate	500 ml	32032.260	Plastic bottle
2,00	±0,02	Citrate	1 l	32032.291	Plastic bottle
3,00	±0,02	Citrate	1 l	32033.294	Plastic bottle
3,00	±0,02	Citrate	5 l	32033.374	Bag-in-box (Cubitainer)
4,00	±0,02	Phthalate	500 ml	32095.264	Plastic bottle
4,00	±0,02	Phthalate	1 l	32095.297	Plastic bottle
4,00*	±0,02	Phthalate	5 l	32095.366	Plastic bottle
4,00**	±0,02	Phthalate	5 l	32095.377	Bag-in-box (Cubitainer)
4,00 (red coloured)	±0,02	Phthalate	500 ml	32044.268	Plastic bottle
4,00 (red coloured)***	±0,02	Phthalate	1 l	32044.290	Dosing bottle (Plastic)
4,00 (red coloured)	±0,02	Phthalate	1 l	32044.292	Plastic bottle
4,00 (red coloured)**	±0,02	Phthalate	5 l	32044.372	Bag-in-box (Cubitainer)
4,00 (red coloured)**	±0,02	Phthalate	10 l	32044.418	Bag-in-box (Cubitainer)
4,66	±0,02	Acetate	500 ml	98192.260	Plastic bottle
4,66	±0,02	Acetate	1 l	98192.290	Plastic bottle
5,00	±0,02	Citrate	1 l	32035.291	Plastic bottle
6,00	±0,02	Citrate	1 l	32036.294	Plastic bottle
6,88	±0,02	Phosphate	500 ml	83601.260	Plastic bottle
6,88	±0,02	Phosphate	1 l	83601.290	Plastic bottle
7,00	±0,02	Phosphate	500 ml	32096.267	Plastic bottle
7,00	±0,02	Phosphate	1 l	32096.291	Plastic bottle
7,00*	±0,02	Phosphate	5 l	32096.360	Plastic bottle
7,00**	±0,02	Phosphate	5 l	32096.371	Bag-in-box (Cubitainer)
7,00	±0,02	Phosphate	10 l	32096.400	Bag-in-box (Cubitainer)
7,00 (green coloured)	±0,02	Phthalate-phosphate	500 ml	32045.262	Plastic bottle
7,00 (green coloured)***	±0,02	Phthalate-phosphate	1 l	32045.290	Dosing Bottle (Plastic)
7,00 (green coloured)	±0,02	Phthalate-phosphate	1 l	32045.295	Plastic bottle
7,00 (green coloured)	±0,02	Phthalate-phosphate	5 l	32045.375	Bag-in-box (Cubitainer)
7,00 (green coloured)	±0,02	Phthalate-phosphate	10 l	32045.412	Bag-in-box (Cubitainer)
8,00	±0,02	Borate	1 l	32038.291	Plastic bottle
9,00	±0,02	Borate	500 ml	32039.261	Plastic bottle
9,00	±0,02	Borate	1 l	32039.294	Plastic bottle
9,00	±0,02	Borate	5 l	32039.374	Bag-in-box (Cubitainer)
9,00 (blue coloured)	±0,02	Borate	500 ml	32046.265	Plastic bottle
9,00 (blue coloured)***	±0,02	Borate	1 l	32046.290	Dosing Bottle (Plastic)
9,00 (blue coloured)	±0,02	Borate	1 l	32046.298	Plastic bottle
9,00 (blue coloured)**	±0,02	Borate	5 l	32046.378	Bag-in-box (Cubitainer)
9,22	±0,02	Borate	500 ml	32097.261	Plastic bottle
9,22	±0,02	Borate	1 l	32097.290	Plastic bottle
10,00	±0,02	Borate	500 ml	32040.260	Plastic bottle
10,00	±0,02	Borate	1 l	32040.298	Plastic bottle
10,00	±0,02	Borate	5 l	32040.378	Bag-in-box (Cubitainer)
10,00 (total hardness in water)	±0,05	Ammonia	500 ml	98213.260	Plastic bottle
10,00 (yellow)	±0,02	Borate	500 ml	85680.260	Plastic bottle
10,00 (yellow)	±0,02	Borate	1 l	85680.290	Plastic bottle
10,00 (yellow)	±0,02	Borate	1 l	85680.295	Plastic bottle
11,00	±0,05	Phosphate	1 l	32041.292	Plastic bottle
12,00	±0,05	Phosphate	1 l	32042.295	Plastic bottle
Buffer solution sets					
10,00/7,00/4,00			1	83610.600	Plastic bottle (3×100 ml)
10,00/7,00/4,00			1	83610.610	Plastic bottle (3×250 ml)

Buffer solutions, 25 °C AVS TITRINORM®

- Solutions prepared from AnalaR® NORMAPUR® grade analytical reagents
- True analytical value on the label to an accuracy of ± 0,02 pH units
- Traceable to SRM from NIST
- Batch number and packing date for traceability

Certificate of analysis available from www.vwr.com

Analysed by an independent accredited control laboratory ISO EN 17025

pH value	pH buffer type	Colour	Reference temperature	Pk	Cat. No.
1,68	Oxalate	Colourless	25 °C	500 ml	85506.260
4,01	Phthalate	Colourless	25 °C	500 ml	85511.260
6,87	Phosphate	Colourless	25 °C	500 ml	85515.260
7,41	Phosphate	Colourless	25 °C	500 ml	85516.260
9,18	Borate	Colourless	25 °C	500 ml	85517.260
10,01	Carbonate	Colourless	25 °C	500 ml	85518.260

Buffer solutions, secondary standards

- Solution standardised at 25 °C, compliant with DIN 17025
- Accurate to ±0,010 pH units (except buffer 12.454 with accuracy ±0,050)
- Fully traceable for optimum pH calibration (traceable to NIST)
- Supplied with detailed certificate of analysis
- Temperature dependence data is printed on the labels as are batch number and expiry date

pH value	pH accuracy	Reference temperature	Pk	Cat. No.
1,679	±0,010	25 °C	500 ml	84580.260
4,005	±0,010	25 °C	500 ml	84582.260
6,865	±0,010	25 °C	500 ml	84583.260
7,413	±0,010	25 °C	500 ml	84584.260
9,18	±0,010	25 °C	500 ml	84585.260
10,012	±0,010	25 °C	500 ml	84586.260
12,454	±0,050	25 °C	500 ml	84587.260

Special buffer tablets for haematology

Buffer tablets Gurr® for the preparation of microscopical stain solutions.These tablets provide a rapid and convenient method of preparing buffer solution. One tablet dissolved in distilled water and made up to 100 ml produces a solution of the stated pH at 20 °C. The molarity of the buffer solutions is 0.005M. Contains potassium, sodium and phosphate.

Description	Pk	Cat. No.	Pack type
Buffer pH 4,00 ±0,02 tablets	50 Tab.	331542Q	Plastic tube
Buffer pH 7,00 ±0,02 tablets	50 Tab.	331552S	Plastic tube
Buffer tablets, pH 9,22 ±0,02	50 Tab.	331562U	Plastic tube
Buffer tablets Gurr® pH ~6,8	50 Tab.	331932D	Plastic tube
Buffer tablets Gurr® pH ~7,2	50 Tab.	331942F	Plastic tube

pH Buffer capsules

- Colour coded for easy identification
- Preservative free
- Extended shelf life
- Add one capsule to 100 ml of distilled water

pH value	pH accuracy	Colour	Final volume	Packed	Pk	Cat. No.
4,01	±0,02	Orange	100 ml	5 tubes, 10 capsules/tube	50	332732B
7,00	±0,02	Green	100 ml	5 tubes, 10 capsules/tube	50	332742D
10,00	±0,02	Blue	100 ml	5 tubes, 10 capsules/tube	50	332762H

pH Buffer solutions in sachets, 20 °C, AVS TITRINORM®

For calibration of pH meters.

- Practical colour coded 30 ml sachets - one use per sachet - no risk of contamination
- Ideal for on-site analyses
- Accuracy: pH is ±0,02 at 20 °C
- Traceable to SRM from NIST

pH value	pH buffer type	Colour	Packed	Pk	Cat. No.
pH Buffer solutions in sachets, 20 °C, AVS TITRINORM®					
4,01	Phthalate	Colourless	30×30 ml sachets per kit	1 KIT	85041.001
7,00	Phosphate	Colourless	30×30 ml sachets per kit	1 KIT	85042.001
9,00	Borate	Colourless	30×30 ml sachets per kit	1 KIT	85043.001
10,00	Borate	Colourless	30×30 ml sachets per kit	1 KIT	85044.001
Assorted buffer kits					
4,01/7,00/9,00		Colourless	10×30 ml sachets of pH 4,01; 10×30 ml sachets of pH 7,00; 10×30 ml sachets of pH 9,00	1 KIT	85045.001
4,01/7,00/10,00		Colourless	10×30 ml sachets of pH 4,01; 10×30 ml sachets of pH 7,00; 10×30 ml sachets of pH 10,00	1 KIT	85046.001

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Acetate buffer USP Test Solution (TS)

Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Description	Pk	Cat. No.
Acetate buffer TS	100 ml	85323.180
Acetate buffer TS	500 ml	85323.260

Acetic acid-ammonium acetate buffer USP Test solution (TS)

Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Description	pH value	pH buffer type	Pk	Cat. No.
Acetic acid-ammonium acetate buffer TS	6,8	Acetate	100 ml	85325.180
Acetic acid-ammonium acetate buffer TS	6,8	Acetate	500 ml	85325.260

Buffers, ammonia- ammonium chloride and ammonium chloride-ammonium hydroxide USP Test solutions (TS)

Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Description	pH value	Pk	Cat. No.
Ammonia-ammonium chloride TS	10,0	100 ml	85326.180
Ammonia-ammonium chloride TS	10,0	500 ml	85326.260
Ammonium chloride-ammonium hydroxide TS	10,0	100 ml	85330.180
Ammonium chloride-ammonium hydroxide TS	10,0	500 ml	85330.260

Buffer, ammonia solution, pH 10 ready to use

Ideal for hardness of water determination.

Description	Contents	Packed	Pk	Cat. No.
Buffer, ammonia solution for determination of hardness of water	Ammonia w/v: 14,5 - 15,5%	Glass bottle	1 l	160204A
Buffer, ammonia solution for determination of hardness of water	Ammonia w/v: 14,5 - 15,5%	Glass bottle	2,5 l	160205B

Buffer, sodium acetate concentrated solution for chlorine determination in water monitors

pH value	pH buffer type	Reference temperature	Packed	Pk	Cat. No.
4,50	Acetate	20 °C	Metal drum	25 l	160868L

Buffer solutions in 100 ml plastic bottles

Description	Pk	Cat. No.
Buffer solution pH 10±0,02 (20 °C) (boric acid/sodium hydroxide/potassium chloride), AVS TITRINORM®	100 ml	32040.185
Buffer solution pH 4,00±0,02 (20 °C) (potassium hydrogen phthalate), AVS TITRINORM®	100 ml	32095.184
Buffer solution pH 7,00±0,02 (20 °C) (potassium dihydrogen phosphate/disodium hydrogen phosphate), AVS TITRINORM®	100 ml	32096.187

Buffer standard solutions, Biotechnology Grade

pH value	pH accuracy	Reference temperature	Packed	Pk	Cat. No.
4,00	±0,03	25 °C	Plastic bottle	500 ml	E452-500ML
7,00	±0,03	25 °C	Plastic bottle	500 ml	E459-500ML
10,0	±0,03	25 °C	Plastic bottle	500 ml	E464-500ML

pH buffer solution according to Reag. Ph. Eur. 4000600

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

pH value	Colour	Pk	Cat. No.
3,5	Colourless	1 l	85669.290

Buffer, potassium phosphate buffer solution pH 7.5 (20°C) (0.2 mol/l) ± 0.2 pH-units

Cat. No.	Pk	Pack type
799187L	10 l	Plastic drum

Blocking buffer, fish gelatin, 10% solution

A non mammalian blocking solution that will not cross-react with mammalian antibodies.

Cat. No.	Pk	Pack type
M319-100ML	100 ml	Plastic bottle
M319-500ML	500 ml	Plastic bottle

Buffered Peptone Water, preweighed

See Microbiology

1,4-Butanedioic acid

See Succinic acid p.466

2,3-Butanedione dioxime

See Dimethyl glyoxime p.120

n-Butanol

See 1-Butanol p.70

(±)-sec-Butanol

See (±)-2-Butanol p.71

iso-Butanol

See Isobutanol p.227

1-Butanol ≥99.8% HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 71-36-3 **UN:** 1120

$H_3C(CH_2)_2CH_2OH$ **M.W.** 74.12 g/mol

Boiling Pt: 117,6 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,812 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119484630-38

Assay (calculated on anhydrous)	Min. 99.8 %
Acidity (as CH_3COOH)	Max. 0.002 %
Colour	Max. 10 APHA
Residue after evaporation	Max. 0.0005 %(m)
Water (KF)	Max. 0.05 %(m)
Transmittance (210 nm)	Min. 20 %
Transmittance (230 nm)	Min. 70 %
Transmittance (270 nm)	Min. 90 %
Transmittance (310 nm)	Min. 98 %

Cat. No.	Pk	Pack type
83633.290	1 l	Glass bottle

1-Butanol ≥99.8% SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 71-36-3 **UN:** 1120

$H_3C(CH_2)_2CH_2OH$ **M.W.** 74.12 g/mol

Boiling Pt: 117,6 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,812 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119484630-38

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.05 %
Transmittance (220 nm)	Min. 30 %
Transmittance (230 nm)	Min. 60 %
Transmittance (250 nm)	Min. 95 %
Transmittance (270 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84709.290	1 l	Glass bottle

1-Butanol ≥99.5% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 71-36-3 **UN:** 1120

$H_3C(CH_2)_2CH_2OH$ **M.W.** 74.12 g/mol

Boiling Pt: 117,6 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,812 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119484630-38

Assay (on anhydrous substance)	Min. 99.5 %	IR Spectrum	Passes test
Acidity or alkalinity	Max. 0.0005 meq/g	Boiling point	117 - 119 °C
Colouration	Max. 10 APHA	Density (20/4)	0.807 - 0.812
Density (20/20)	0.808 - 0.813	Aldehydes + ketones (as C_3H_7CHO)	Max. 0.01 %
Butan-2-ol	Max. 0.05 %	Dibutyl ether	Max. 0.2 %
Evaporation residue	Max. 10 ppm	Water	Max. 0.1 %
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20810.298	1 l	Glass bottle
20810.323	2,5 l	Glass bottle

1-Butanol ≥98.5% GPR RECTAPUR®

Danger

CAS 71-36-3 **UN:** 1120

$H_3C(CH_2)_2CH_2OH$ **M.W.** 74.12 g/mol

Boiling Pt: 117,6 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,812 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119484630-38

Assay	Min. 98.5 %
Boiling point	117 - 119 °C
Density (20/4)	0.807 - 0.812
Evaporation residue	Max. 100 ppm

Cat. No.	Pk	Pack type
20808.291	1 l	Glass bottle
20808.325	2,5 l	Glass bottle
20808.360	5 l	Plastic bottle
20808.462	25 l	Metal drum

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

(±)-2-Butanol ≥99% analytical reagent

Warning

CAS 78-92-2 **UN:** 1120
$H_3CCH_2CH(OH)CH_3$ **M.W.** 74.12 g/mol
Boiling Pt: 94 °C (1013 hPa) **Melting Pt:** -115 °C **Density:** 0,8534 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance) ..... Min. 99.0 %
Acidity ..... Max. 0.0005 meq/g
Boiling point ..... 98.5 - 100.5 °C
Density (20/4) ..... 0.805 - 0.809
Evaporation residue ..... Max. 50 ppm
Water ..... Max. 0.2 %

Cat. No.	Pk	Pack type
20812.295	1 l	Glass bottle
20812.320	2,5 l	Glass bottle

(±)-2-Butanol ≥98% GPR RECTAPUR®

Warning

CAS 78-92-2 **UN:** 1120
$H_3CCH_2CH(OH)CH_3$ **M.W.** 74.12 g/mol
Boiling Pt: 94 °C (1013 hPa) **Melting Pt:** -115 °C **Density:** 0,8534 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %
Boiling point ..... 98.5 - 100.5 °C
Density (20/4) ..... 0.805 - 0.809
Evaporation residue ..... Max. 100 ppm

Cat. No.	Pk	Pack type
20811.292	1 l	Glass bottle
20811.326	2,5 l	Glass bottle

tert-Butanol ≥99.5% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 75-65-0 **UN:** 1120
$(CH_3)_3COH$ **M.W.** 74.12 g/mol
Boiling Pt: 82,2 °C (1013 hPa) **Melting Pt:** 25,3 °C **Density:** 0,7887 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119444321-51

Assay ..... Min. 99.5 %
Boiling point ..... 81.5 - 83.0 °C
Density (26/4) ..... 0.770 - 0.780
Non-volatile residue ..... Max. 20 ppm
Conforms to Reag. Ph.Eur. ..... Passes test
Acidity ..... Max. 0.0002 meq/g
Colouration ..... Max. 10 APHA
Solidification point ..... 24 - 26 °C
Water ..... Max. 0.1 %

Cat. No.	Pk	Pack type
20814.292	1 l	Glass bottle

tert-Butanol ≥99% GPR RECTAPUR®

Danger

CAS 75-65-0 **UN:** 1120
$(CH_3)_3COH$ **M.W.** 74.12 g/mol
Boiling Pt: 82,2 °C (1013 hPa) **Melting Pt:** 25,3 °C **Density:** 0,7887 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119444321-51

Assay ..... Min. 99 %
Density (26/4) ..... 0.770 - 0.780
Solidification point ..... 23.5 - 26.5 °C
Evaporation residue ..... Max. 100 ppm
Water ..... Max. 0.5 %

Cat. No.	Pk	Pack type
20813.298	1 l	Glass bottle

2-Butanone

See Methyl ethyl ketone p.261

2-Butoxyethanol TECHNICAL

Warning

CAS 111-76-2 **UN:** 2810
$CH_3(CH_2)_3OCH_2CH_2OH$ **M.W.** 118.18 g/mol
Boiling Pt: 171 °C (1013 hPa) **Melting Pt:** -70 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475108-36

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
22122.363	5 l	Plastic bottle

2-(2-Butoxyethoxy)ethanol

See Diethylene glycol monobutyl ether p.114

NEW Butyl acetate, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85655.180	100 ml	Glass bottle

Butyl acetate AnalaR NORMAPUR® analytical reagent

Warning

CAS 123-86-4 **UN:** 1123
$CH_3COO(CH_2)_3CH_3$ **M.W.** 116.16 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** -76 °C **Density:** 0,875 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance) ..... Min. 99.0 %
Colouration ..... Max. 10 APHA
Evaporation residue ..... Max. 20 ppm
Water ..... Max. 0.1 %
B (Boron) ..... Max. 0.02 ppm
Ca (Calcium) ..... Max. 0.5 ppm
Co (Cobalt) ..... Max. 0.02 ppm
Fe (Iron) ..... Max. 0.1 ppm
Mn (Manganese) ..... Max. 0.02 ppm
Pb (Lead) ..... Max. 0.05 ppm
Acidity ..... Max. 0.002 meq/g
Density (20/4) ..... 0.874 - 0.884
Heavy metals (as Pb) ..... Max. 0.2 ppm
Al (Aluminium) ..... Max. 0.5 ppm
Ba (Barium) ..... Max. 0.1 ppm
Cd (Cadmium) ..... Max. 0.05 ppm
Cr (Chromium) ..... Max. 0.02 ppm
Mg (Magnesium) ..... Max. 0.1 ppm
Ni (Nickel) ..... Max. 0.02 ppm
Sn (Tin) ..... Max. 0.1 ppm

Cat. No.	Pk	Pack type
22087.292	1 l	Glass bottle

Butyl acetate GPR RECTAPUR®

Warning

CAS 123-86-4 **UN:** 1123
$CH_3COO(CH_2)_3CH_3$ **M.W.** 116.16 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** -76 °C **Density:** 0,875 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
IR Spectrum ..... Passes test
Boiling point ..... 124 - 128 °C
Density (20/4) ..... 0.874 - 0.884

Cat. No.	Pk	Pack type
22081.326	2,5 l	Glass bottle
22081.361	5 l	Metal can
22081.463	25 l	Metal drum

Butyl acetate TECHNICAL

Warning

CAS 123-86-4 **UN:** 1123
$CH_3COO(CH_2)_3CH_3$ **M.W.** 116.16 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** -76 °C **Density:** 0,875 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 96 %

Cat. No.	Pk	Pack type
22080.298	1 l	Glass bottle

1-Butyl alcohol

See 1-Butanol p.70

(±)-sec-Butyl alcohol

See (±)-2-Butanol p.71

iso-Butyl alcohol

See Isobutanol p.227

tert-Butyl alcohol

See tert-Butanol p.71

Butyl carbinol

See 1-Pentanol p.338

Butyl cellosolve

See 2-Butoxyethanol p.71

tert-Butyl methyl ether HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 1634-04-4 **UN:** 2398
$(CH_3)_3COCH_3$ **M.W.** 88.15 g/mol
Boiling Pt: 55,2 °C (1013 hPa) **Melting Pt:** -108,6 °C **Density:** 0,7405 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance) ..... Min. 99.5 %
Acidity ..... Max. 0.001 meq/g
Evaporation residue ..... Max. 20 ppm
Peroxides ..... Max. 5 ppm
Water ..... Max. 0.05 %
Transmittance (254 nm) ..... Min. 60 %
Transmittance (280 nm) ..... Min. 80 %

Cat. No.	Pk	Pack type
22105.295	1 l	Glass bottle
22105.320	2,5 l	Glass bottle

NEW tert-Butyl methyl ether, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85671.180	100 ml	Glass bottle

NEW tert-Butyl methyl ether AnalaR NORMAPUR® ACS

Danger

CAS 1634-04-4 **UN:** 2398
$(CH_3)_3COCH_3$ **M.W.** 88.15 g/mol
Boiling Pt: 55,2 °C (1013 hPa) **Melting Pt:** -108,6 °C **Density:** 0,7405 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.0 %
IR Spectrum ..... Passes test
Colouration ..... Max. 10 APHA
Evaporation residue ..... Max. 10 ppm
Peroxides (as H_2O_2) ..... Max. 1 ppm
Water ..... Max. 0.05 %

Cat. No.	Pk	Pack type
85027.290	1 l	Glass bottle
85027.320	2,5 l	Glass bottle

tert-Butyl methyl ether TECHNICAL

Danger

CAS 1634-04-4 **UN:** 2398
$(CH_3)_3COCH_3$ **M.W.** 88.15 g/mol
Boiling Pt: 55,2 °C (1013 hPa) **Melting Pt:** -108,6 °C **Density:** 0,7405 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Appearance ..... Clear colourless liquid
IR Spectrum ..... Passes test
Water ..... Max. 1 %

Cat. No.	Pk	Pack type
22104.292	1 l	Glass bottle
22104.320	2,5 l	Glass bottle

NEW iso-Butyl methyl ketone, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85673.180	100 ml	Glass bottle

Butyldigol

See Diethylene glycol monobutyl ether p.114

N-butyl-1-propanamine

See Dibutylamine p.109

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Cadmium standard solution, 10,000 mg/l Cd in dil. nitric acid (from Cd) ARISTAR® standard for ICP

Cd in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455152P	100 ml	Plastic bottle

NEW Cadmium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Cadmium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456682R
Cadmium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85556.180

Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid (from Cd) ARISTAR® standard for ICP

Cd in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455142N	100 ml	Plastic bottle
455144P	500 ml	Plastic bottle

Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86668.180	100 ml	Plastic bottle
86668.260	500 ml	Plastic bottle

Cadmium acetate dihydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 5743-04-4 **UN:** 2570

$(H_3CCOO)_2Cd{\cdot}2H_2O$ **M.W.** 266.53 g/mol

Boiling Pt: 105-107 °C (4 torr) **Melting Pt:** 256 °C **Density:** 2,341 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm
Na (Sodium)	Max. 20 ppm	Pb (Lead)	Max. 50 ppm
Zn (Zinc)	Max. 20 ppm		

Cat. No.	Pk	Pack type
22189.294	1 kg	Plastic bottle for solids

Cadmium di(acetate) dihydrate

See Cadmium acetate dihydrate p.73

Cadmium (II) sulphate 8/3-hydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7790-84-3 **UN:** 2570

$3CdSO_4{\cdot}8H_2O$ **M.W.** 256.51 g/mol

Melting Pt: 41 °C **Density:** 3,79 g/cm³ (20 °C)

Assay	98.0 - 102.0 %	Insoluble matter	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	$NO_3 + NO_2$ (as NO_3)	Max. 30 ppm
Ca (Calcium)	Max. 50 ppm	Cu (Copper)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 100 ppm
Na (Sodium)	Max. 0.02 %	Pb (Lead)	Max. 30 ppm
Zn (Zinc)	Max. 0.05 %	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
22226.236	250 g	Plastic bottle for solids

Caffeine AnalaR NORMAPUR® analytical reagent

Warning

CAS 58-08-2 **UN:** 1544

$C_8H_{10}N_4O_2$ **M.W.** 194.19 g/mol

Melting Pt: 235-239 °C **Density:** 1,23 g/cm³ (19 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Appearance	White crystalline powder
Acidity	Max. 0.005 meq/g	Melting point	235 - 238 °C
Substances coloured by H_2SO_4	Max. 60 APHA	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.1 %	Insolubility in water (± 100°C)	Max. 25 ppm
Loss on drying (100°C)	Max. 0.5 %	Theobromine	Max. 0.2 %
Cl (Chloride)	Max. 100 ppm	SO_4 (Sulphate)	Max. 0.02 %

Cat. No.	Pk	Pack type
22234.187	100 g	Plastic bottle for solids

VWR LIFE SCIENCE Caffeine USP

Warning

CAS 58-08-2 **UN:** 1544

$C_8H_{10}N_4O_2$ **M.W.** 194.19 g/mol

Melting Pt: 235-239 °C **Density:** 1,23 g/cm³ (19 °C)

Storage Temperature: Ambient

Product is Tested to USP Specifications

Heavy Metals	< = 0.001 %
Loss on Drying	<= 0.5 %
Organic Impurities: Individual Impurities	<= 0.1 %
Organic Impurities: Total Impurities	<= 0.1 %
Purity	98.5 % - 101 %
Residue on Ignition	< 0.1 %

Cat. No.	Pk	Pack type
0150-500G	500 g	Glass bottle

NEW Calcium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Calcium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456692T
Calcium	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457042S
Calcium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85555.180

Calcium standard solution, 10,000 mg/l Ca in dil. nitric acid (from $CaCO_3$) ARISTAR® standard for ICP

$CaCO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455172T	100 ml	Plastic bottle
455174V	500 ml	Plastic bottle

Calcium standard solution, 1.000 mg/l Ca in dil. nitric acid (from $CaCO_3$) ARISTAR® standard for ICP

$CaCO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455162R	100 ml	Plastic bottle
455164T	500 ml	Plastic bottle

Calcium standard solution, 1.000 mg/l Ca in dil. nitric acid (from Ca) ARISTAR® standard for ion chromatography

Ca in dilute HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458202U	100 ml	Plastic bottle

NEW Calcium 1.000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84958.180	100 ml	Plastic bottle

Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid (from $Ca(NO_3)_2$) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86667.180	100 ml	Plastic bottle
86667.260	500 ml	Plastic bottle

Standard solution (1000 ppm Ca) for the preparation of calcium standard solution (100 ppm Ca), alcoholic Reag.Ph.Eur.; 5000802

Danger

UN: 1993

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88085.180	100 ml	Plastic bottle

VWR LIFE SCIENCE Calcium acetate, high purity

CAS 62-54-4

$(H_3CCOO)_2Ca$

M.W. 158.17 g/mol
Density: 1,509 g/cm³ (20 °C)

Storage Temperature: Ambient

Chloride	< 0.01 %
Heavy Metals	< 0.0025 %
Loss on Drying	<= 7 %
Purity	>= 99 %

Cat. No.	Pk	Pack type
0225-500G	500 g	Plastic bottle for solids

Calcium acetate hydrate analytical reagent

CAS 114460-21-8

$(H_3CCOO)_2Ca{\cdot}nH_2O$

M.W. 176.18 g/mol
Density: 1,5 g/cm³ (20 °C)

Assay	Min. 93.5 %
pH (20°C; 5 %)	7.5 - 9.0
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 0.1 %
Na (Sodium)	Max. 0.1 %

Cat. No.	Pk	Pack type
22268.264	500 g	Plastic bottle for solids

Calcium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent low in alkali, precipitated

CAS 471-34-1

$CaCO_3$

M.W. 100.09 g/mol
Melting Pt: 825 °C
Density: 2,71 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119486795-18

Assay (calc. on dried substance)	98.5 - 100.5 %	Ba (Barium)	Passes test
Identification A	Passes test Ph.Eur.	Identification B	Passes test Ph.Eur.
Particle size d50 (about 14 µm)	Passes test	Solution S	Passes test Ph.Eur.
Heavy metals (as Pb)	Max. 20 ppm	Insolubility in acetic acid	Max. 0.2 %
Insolubility in hydrochloric acid	Max. 50 ppm	Loss on drying (200°C)	Max. 1.0 %
Magnesium and alkali metals	Max. 1.5 %	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 50 ppm	SO_4 (Sulphate)	Max. 0.03 %
Al (Aluminium)	Max. 50 ppm	As (Arsenic)	Max. 4 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 50 ppm	Mg (Magnesium)	Max. 0.02 %
Na (Sodium)	Max. 0.2 %	Pb (Lead)	Max. 5 ppm
Sr (Strontium)	Max. 0.1 %	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
22300.233	250 g	Plastic bottle for solids
22300.290	1 kg	Plastic bottle for solids
22300.460	25 kg	Bucket (Plastic)

Calcium carbonate GPR RECTAPUR®, precipitated

CAS 471-34-1

$CaCO_3$

M.W. 100.09 g/mol
Melting Pt: 825 °C
Density: 2,71 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119486795-18

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 0.03 %
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 0.03 %

Cat. No.	Pk	Pack type
22296.294	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Calcium carbonate, powder TECHNICAL

CAS 471-34-1

$CaCO_3$

M.W. 100.09 g/mol
Melting Pt: 825 °C
Density: 2,71 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119486795-18

Assay ..... Min. 95 %

Cat. No.	Pk	Pack type
22290.363	5 kg	Bucket (Plastic)

Calcium carbonate light TECHNICAL, precipitated

CAS 471-34-1

$CaCO_3$

M.W. 100.09 g/mol
Melting Pt: 825 °C
Density: 2,93 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 95 %

Cat. No.	Pk	Pack type
22291.366	5 kg	Bucket (Plastic)

Calcium chloride, granules GPR RECTAPUR® 2-5 mm, purified

Warning

CAS 10043-52-4

$CaCl_2$

M.W. 110.98 g/mol
Boiling Pt: 1600 °C (1013 hPa)
Melting Pt: 772 °C
Density: 2,174 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119494219-28

Assay ..... Min. 94 %

Cat. No.	Pk	Pack type
22328.262	500 g	Plastic bottle for solids
22328.364	5 kg	Bucket (Plastic)

Calcium chloride, dry, granules 2-6 mm, purified

Warning

CAS 10043-52-4

$CaCl_2$

M.W. 110.98 g/mol
Boiling Pt: 1600 °C (1013 hPa)
Melting Pt: 772 °C
Density: 2,174 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119494219-28

Assay ..... Min. 90 %

Cat. No.	Pk	Pack type
22316.261	500 g	Plastic bottle for solids
22316.363	5 kg	Bucket (Plastic)

Calcium chloride TECHNICAL

Warning

CAS 10043-52-4

$CaCl_2$

M.W. 110.98 g/mol
Boiling Pt: 1600 °C (1013 hPa)
Melting Pt: 772 °C
Density: 2,174 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119494219-28

Assay ..... 90 - 98 %

Cat. No.	Pk	Pack type
22313.294	1 kg	Plastic bottle for solids
22313.363	5 kg	Bucket (Plastic)
22313.460	25 kg	Bucket (Plastic)

Calcium chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 10035-04-8

$CaCl_2 \cdot 2H_2O$

M.W. 147.01 g/mol
Boiling Pt: 1600 °C (1013 hPa)
Melting Pt: 176 °C
Density: 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 99.0 - 103.0 %
Identification A ..... Passes test Ph.Eur.
Solution in water ..... Passes test
Al (Aluminium) ..... Passes test Ph.Eur.
pH (25°C; 5 %) ..... 4.5 - 8.5
Insolubility in water ..... Max. 100 ppm
Not precipitated by $(COONH_4)_2$ (as SO_4) ..... Max. 0.2 %
Total N (Nitrogen) ..... Max. 20 ppm
PO_4 (Phosphate) ..... Max. 10 ppm
As (Arsenic) ..... Max. 1 ppm
Cu (Copper) ..... Max. 5 ppm
K (Potassium) ..... Max. 100 ppm
Na (Sodium) ..... Max. 100 ppm
Conforms to ACS ..... Passes test
Appearance of solution ..... Passes test Ph.Eur.
Identification B ..... Passes test Ph.Eur.
Solution S ..... Passes test Ph.Eur.
Acidity or alkalinity ..... Max. 0.002 meq/g
Heavy metals (as Pb) ..... Max. 5 ppm
Magnesium and alkali metals ..... Max. 0.5 %
Oxidising substances ..... Max. 30 ppm
NH_4 (Ammonium) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Ba (Barium) ..... Max. 30 ppm
Fe (Iron) ..... Max. 3 ppm
Mg (Magnesium) ..... Max. 50 ppm
Sr (Strontium) ..... Max. 0.05 %
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
22317.230	250 g	Plastic bottle for solids
22317.260	500 g	Plastic bottle for solids
22317.297	1 kg	Plastic bottle for solids
22317.320	2,5 kg	Plastic bottle for solids
22317.460	25 kg	Bucket (Plastic)

Calcium chloride dihydrate Ph. Eur.

Warning

CAS 10035-04-8

$CaCl_2 \cdot 2H_2O$

M.W. 147.01 g/mol
Boiling Pt: 1600 °C (1013 hPa)
Melting Pt: 176 °C
Density: 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 97.0 - 103.0 %
Appearance ..... Conforms (see CoA/CoS)
Identification A ..... Passes test
Identification B ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Acidity or alkalinity ..... Passes test
SO_4 (Sulphate) ..... Max. 300 ppm
Al (Aluminium) ..... Passes test
Ba (Barium) ..... Passes test
Fe (Iron) ..... Max. 10 ppm
Magnesium and alkali metals ..... Max. 0.5 %
Heavy metals (as Pb) ..... Max. 20 ppm
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
22322.295	1 kg	Plastic bottle for solids
22322.364	5 kg	Bucket (Plastic)
22322.466	25 kg	Bucket (Plastic)

Calcium chloride dihydrate Electran® Molecular biology grade

Warning

CAS 10035-04-8
$CaCl_2 \cdot 2H_2O$
M.W. 147.01 g/mol
Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 176 °C **Density:** 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Appearance	White/almost white powder
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Assay	Min. 99.5 %
pH (5 %)	4.5 - 6.5
Heavy metals (as Pb)	Max. 0.0005 %
F (Fluoride)	0.005 %
SO_4 (Sulphate)	Max. 0.005 %
Al (Aluminium)	Max. 0.0001 %
As (Arsenic)	Max. 0.0001 %
Cu (Copper)	Max. 0.0005 %
Fe (Iron)	Max. 0.001 %
Pb (Lead)	Max. 0.0005 %
Zn (Zinc)	Max. 0.0005 %

Cat. No.	Pk	Pack type
437053L	250 g	Plastic bottle for solids
437055N	1 kg	Plastic bottle

Calcium chloride hexahydrate GPR RECTAPUR®

Warning

CAS 7774-34-7
$CaCl_2 \cdot 6H_2O$
M.W. 219.08 g/mol
Melting Pt: 29,54 °C **Density:** 1,71 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
22311.297	1 kg	Plastic bottle for solids
22311.366	5 kg	Plastic bottle for solids

Calcium chloride 1 mol/l in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 10043-52-4
$CaCl_2$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.998 - 1.002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
190464K	1 l	Plastic bottle

Calcium chloride 1 mol/l in aqueous solution for biotechnology, sterile

Warning

CAS 10043-52-4
$CaCl_2$
Storage Temperature: Ambient

Identification	PASS
Sterility	PASS
Titration	0.95 - 1.05 M

Cat. No.	Pk	Pack type
E506-100ML	100 ml	Plastic bottle
E506-500ML	500 ml	Plastic bottle

Calcium chloride 0.5 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1014601

CAS 10043-52-4
$CaCl_2$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87800.290	1 l	Plastic bottle

Calcium chloride 0.02 mol/l (0.04 N) in aqueous solution Reag. Ph. Eur. 1014603

CAS 10043-52-4
$CaCl_2$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87802.290	1 l	Plastic bottle

Calcium chloride 0.01 mol/l (0.02 N) in aqueous solution Reag. Ph. Eur. 1014602

CAS 10043-52-4
$CaCl_2$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87801.290	1 l	Plastic bottle

Calcium di(acetate) hydrate

See Calcium acetate hydrate p.74

Calcium dihydroxide

See Calcium hydroxide p.77

Calcium fluoride GPR RECTAPUR®, precipitated

Warning

CAS 7789-75-5
CaF_2
M.W. 78.07 g/mol
Boiling Pt: 2500 °C (1013 hPa) **Melting Pt:** 1418 °C **Density:** 3,18 g/cm³ (20 °C)

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 0.1 %
SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 100 ppm
Mg (Magnesium)	Max. 100 ppm
Mn (Manganese)	Max. 5 ppm

Cat. No.	Pk	Pack type
22344.291	1 kg	Plastic bottle for solids

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Calcium hydroxide AnalaR NORMAPUR® analytical reagent

Danger

CAS 1305-62-0 **UN:** 3262
$Ca(OH)_2$ **M.W.** 74.09 g/mol
Melting Pt: 550 °C **Density:** 2,24 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Insoluble in hydrochloric acid	Max. 0.02 %
Cl (Chloride)	Max. 0.1 %	SO_4 (Sulphate)	Max. 0.01 %
Total N (Nitrogen)	Max. 0.005 %	As (Arsenic)	Max. 0.0001 %
Ba (Barium)	Max. 0.005 %	Cu (Copper)	0.001 %
Fe (Iron)	Max. 0.005 %	K (Potassium)	Max. 0.05 %
Mg (Magnesium)	Max. 0.05 %	Na (Sodium)	Max. 0.05 %
Pb (Lead)	Max. 0.001 %	Sr (Strontium)	Max. 0.05 %

Cat. No.	Pk	Pack type
10304KA	25 kg	Cardboard carton

Calcium hydroxide GPR RECTAPUR®

Danger

CAS 1305-62-0 **UN:** 3262
$Ca(OH)_2$ **M.W.** 74.09 g/mol
Melting Pt: 550 °C **Density:** 2,24 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (at filling)	Min. 96 %
Heavy metals (as Pb)	Max. 50 ppm
Insolubility in hydrochloric acid	Max. 0.1 %
Not precipitated by $(COONH_4)_2$ (as SO_4)	Max. 2.5 %
Cl (Chloride)	Max. 50 ppm
CO_3 (as $CaCO_3$)	Max. 3 %
SO_4 (Sulphate)	Max. 0.2 %
Fe (Iron)	Max. 0.05 %

Cat. No.	Pk	Pack type
22355.298	1 kg	Plastic bottle for solids
22355.367	5 kg	Bucket (Plastic)

Calcium hydroxide TECHNICAL

Danger

CAS 1305-62-0 **UN:** 3262
$Ca(OH)_2$ **M.W.** 74.09 g/mol
Melting Pt: 550 °C **Density:** 2,24 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (at filling)	Min. 95 %

Cat. No.	Pk	Pack type
22641.460	25 kg	Bucket (Plastic)

Calcium hypochlorite about 60 % active chlorine TECHNICAL

Danger

UN: 1748
REACh: 01-2119487005-40

Assay (Active chlorine)(at filling)	Min. 61 %

Cat. No.	Pk	Pack type
22669.293	1 kg	Plastic bottle for solids
22669.362	5 kg	Plastic bottle for solids

Calcium nitrate tetrahydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 13477-34-4 **UN:** 1454
$Ca(NO_3)_2{\cdot}4H_2O$ **M.W.** 236.15 g/mol
Melting Pt: ~ 42 °C **Density:** 1,86 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Acidity or alkalinity	Max. 0.005 meq/g
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Not precipitated by $(COONH_4)_2$ (as SO_4)	Max. 0.25 %	Cl (Chloride)	Max. 10 ppm
NH_4 (Ammonium)	Max. 20 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ba (Barium)	Max. 50 ppm	Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
22388.292	1 kg	Plastic bottle for solids

Calcium nitrate tetrahydrate GPR RECTAPUR®

Warning

CAS 13477-34-4 **UN:** 1454
$Ca(NO_3)_2{\cdot}4H_2O$ **M.W.** 236.15 g/mol
Melting Pt: ~ 42 °C **Density:** 1,86 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 5 ppm
Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
22399.290	1 kg	Plastic bottle for solids

Calcium nitrate tetrahydrate TECHNICAL

Warning

CAS 13477-34-4 **UN:** 1454
$Ca(NO_3)_2{\cdot}4H_2O$ **M.W.** 236.15 g/mol
Melting Pt: ~ 42 °C **Density:** 1,86 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
22384.367	5 kg	Bucket (Plastic)

Calcium orthophosphate

See tri-Calcium phosphate p.78

Calcium oxide, lumps TECHNICAL

Danger

CAS 1305-78-8 **UN:** 1910
CaO **M.W.** 56.08 g/mol
Boiling Pt: 2850 °C (1013 hPa) **Melting Pt:** 2580 °C **Density:** 3,38 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 90 %

Cat. No.	Pk	Pack type
22642.360	5 kg	Bucket (Plastic)

Calcium oxide, powder TECHNICAL

Danger

CAS 1305-78-8 **UN:** 1910
CaO **M.W.** 56.08 g/mol
Boiling Pt: 2850 °C (1013 hPa) **Melting Pt:** 2580 °C **Density:** 3,38 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 92 %

Cat. No.	Pk	Pack type
22645.260	500 g	Plastic bottle for solids
22645.360	5 kg	Bucket (Plastic)

Calcium phosphate tribasic

See tri-Calcium phosphate..... p.78

Calcium phosphate

See tri-Calcium phosphate..... p.78

tri-Calcium phosphate GPR RECTAPUR®

CAS 7758-87-4
$Ca_3(PO_4)_2$
M.W. 310.18 g/mol
Density: 3,14 g/cm³ (20 °C)

Assay (calculated as Ca)..... 34 - 40 %
Heavy metals (as Pb)..... Max. 20 ppm
Cl (Chloride)..... Max. 0.02 %
SO_4 (Sulphate)..... Max. 0.25 %
Fe (Iron)..... Max. 0.02 %

Cat. No.	Pk	Pack type
22420.237	250 g	Plastic bottle for solids

Calcium removal from tissue sections prior to cutting and staining

See Decalcifiers, DC1 slow-acting..... p.105

Calcium stearate TECHNICAL

CAS 1592-23-0
$C_{36}H_{70}CaO_4$
M.W. 607.03 g/mol
Melting Pt: 147-149 °C
Density: 1,065 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as CaO)..... 9 - 11 %

Cat. No.	Pk	Pack type
22442.368	5 kg	Bucket (Plastic)

Calcium sulphate hemihydrate TECHNICAL

CAS 10034-76-1
$CaSO_4 \cdot 0{,}5H_2O$
M.W. 145.15 g/mol
Melting Pt: > 1400 °C
Density: 2,73 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification..... Passes test

Cat. No.	Pk	Pack type
22441.296	1 kg	Plastic bottle for solids

Calcium sulphate dihydrate AnalaR NORMAPUR® analytical reagent

CAS 10101-41-4
$CaSO_4 \cdot 2H_2O$
M.W. 172.17 g/mol
Density: 2,32 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... 99.0 - 102.0 %
Heavy metals (as Pb)..... Max. 20 ppm
Cl (Chloride)..... Max. 50 ppm
NO_3 (Nitrate)..... Passes test
Insolubility in hydrochloric acid..... Max. 100 ppm
Fe (Iron)..... Max. 10 ppm

Cat. No.	Pk	Pack type
22452.294	1 kg	Plastic bottle for solids

Calcium sulphate dihydrate GPR RECTAPUR®, precipitated

CAS 10101-41-4
$CaSO_4 \cdot 2H_2O$
M.W. 172.17 g/mol
Density: 2,32 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (complexometric)..... Min. 98 %
Heavy metals (as Pb)..... Max. 20 ppm
Cl (Chloride)..... Max. 100 ppm
Fe (Iron)..... Max. 100 ppm

Cat. No.	Pk	Pack type
22451.360	5 kg	Bucket (Plastic)

Calcium sulphate saturated solution in water Reag. Ph. Eur. 1015201

CAS 7778-18-9
$CaSO_4$
M.W. 136.14 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87803.290	1 l	Plastic bottle

NEW Calcium sulphate saturated solution in water USP test solutions (TS)

CAS 7778-18-9
$CaSO_4$
M.W. 136.14 g/mol
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85339.180	100 ml	Plastic bottle
85339.260	500 ml	Plastic bottle

Patton and Reeder's reagent

See Patton-Reeders reagent (Calconcarboxylic acid)..... p.329

Cal-Red®

See Patton-Reeders reagent (Calconcarboxylic acid)..... p.329

Canada balsam TECHNICAL

CAS 8007-47-4
UN: 1993
Density: 0,915 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification..... Passes test

Cat. No.	Pk	Pack type
21776.137	25 g	Glass bottle
21776.183	100 g	Glass bottle

Caps

Description	Pk	Cat. No.
Cap with tap for 10 L (DIN51) plastic carboys	1	29548.042
Cap with tap for 25 L (DIN 61) plastic carboys	1	29548.043
Cap with pouring flex for 10 L (DIN 51) plastic carboys	1	29548.075
Cap with pouring flex for 20 or 25 L plastic carboys (DIN 61)	1	29548.086
Cap with tap for 10 litre plastic container	1	223-0059

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CAPS (3-(Cyclohexylamino)propanesulphonic acid), high purity

CAS 1135-40-6
$C_6H_{11}NH(CH_2)_3SO_3H$ **M.W.** 221.32 g/mol
Melting Pt: 324 °C
Storage Temperature: Ambient

pKa @25°C ..... 10.3 - 10.5
Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0365-250G	250 g	Plastic bottle for solids
0365-500G	500 g	Plastic bottle for solids
0365-1KG	1 kg	Bucket (Plastic)

Transfer buffer concentrate, CAPS 10X

For transfer of protein to membranes for sequencing or blotting.

Cat. No.	Pk	Pack type
K872-500ML	500 ml	Plastic bottle

Carbamide

See Urea p.506

N-(Carbamoylmethyl)taurine

See N-(2-Acetamido)-2-aminoethanesulphonic acid (ACES) p.1

Carbenicillin disodium salt, ultrapure

Danger

CAS 4800-94-6
$C_{17}H_{16}N_2Na_2O_6S$
Storage Temperature: Refrigerator
Synthetic derivative of penicillin.

Expiration Date ..... REPORT
Identification (Sodium) ..... PASS
Moisture (KF) ..... 6.0 %
pH (1%, Water) @25 °C ..... 6.5 - 8.0
Potency (Anhydrous) ..... 770 mcg/mg

Cat. No.	Pk	Pack type
J358-250MG	250 mg	Glass bottle
J358-1G	1 g	Glass bottle

Carbinol

See Methanol p.255

Carbinol-D4

See Methanol-[D4] p.259

Carbolic acid

See Phenol p.347

Carbonyldiamide

See Urea p.506

Carborundum TECHNICAL 0.037 mm

CAS 409-21-2
SiC **M.W.** 40.1 g/mol
Boiling Pt: < 2700 °C (1013 hPa) **Melting Pt:** 2700 °C **Density:** 3,23 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
22540.298	1 kg	Plastic bottle for solids

Carborundum TECHNICAL 0.105 mm

CAS 409-21-2
SiC **M.W.** 40.1 g/mol
Boiling Pt: < 2700 °C (1013 hPa) **Melting Pt:** 2700 °C **Density:** 3,23 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
22505.297	1 kg	Plastic bottle for solids

Carborundum TECHNICAL 0.210 mm

CAS 409-21-2
SiC **M.W.** 40.1 g/mol
Boiling Pt: < 2700 °C (1013 hPa) **Melting Pt:** 2700 °C **Density:** 3,23 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
22499.295	1 kg	Plastic bottle for solids

Carborundum TECHNICAL 0.500 mm

CAS 409-21-2
SiC **M.W.** 40.1 g/mol
Boiling Pt: < 2700 °C (1013 hPa) **Melting Pt:** 2700 °C **Density:** 3,23 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
22495.292	1 kg	Plastic bottle for solids

Carborundum TECHNICAL 1.190 mm

CAS 409-21-2
SiC **M.W.** 40.1 g/mol
Boiling Pt: < 2700 °C (1013 hPa) **Melting Pt:** 2700 °C **Density:** 3,23 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
22490.295	1 kg	Plastic bottle for solids

Carborundum TECHNICAL 1.680 mm

CAS 409-21-2
SiC **M.W.** 40.1 g/mol
Boiling Pt: < 2700 °C (1013 hPa) **Melting Pt:** 2700 °C **Density:** 3,23 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
22488.297	1 kg	Plastic bottle for solids

Carboxymethyl cellulose sodium salt, medium viscosity TECHNICAL

CAS 9004-32-4
Melting Pt: >300 °C
Storage Temperature: Ambient

Viscosity (25°C; 2 %; water) ..... 300 - 600 mPa.s
Water ..... Max. 8 %

Cat. No.	Pk	Pack type
22525.296	1 kg	Plastic bottle for solids

CARREZ I Solution

See Potassium hexacyanoferrate (II) 0.25 mol/l in aqueous solution p.365

Casein acc. to Hammarsten

High molecular weight phosphoprotein prepared from milk

Assay (ex N, calc. on dried substance): Min 95 %
Free acid (as lactic acid): Max 0.1 %
Water-soluble matter: Max 0.2 %
Fats: Max 0.1 %
Sulfated ash (800 °C): Max 1.5 %
Microbiological test: passes test
Lactose (HPLC): Max 0.5 %
Glucose (HPLC): Max 0.5 %

Cat. No.	Pk	Pack type
440203H	100 g	Plastic bottle
44020LC	1 kg	Plastic bottle

Casein, high purity

Loss on Drying: 10%
Purity: 95 %
Residue on Ignition: 3 %
Solubility (2.5%, 0.02N NaOH): PASS

Cat. No.	Pk	Pack type
E666-500G	500 g	Plastic bottle for solids

Casein, technical grade

Proteins (on anhydrous product): Min. 92.5 %
Free acidity: Max. 0.25 meq/g
Fats: Max. 2.5 %
Ignition residue (SO_4): Max. 2.75 %
Water: Max. 12 %

Cat. No.	Pk	Pack type
22544.292	1 kg	Plastic bottle for solids

Castor oil, sulphated

See Turkey Red Oil p.504

NEW Reagents for detection of catalase activity

The catalase test can differentiate or identify microorganisms by checking their ability to produce catalase, an enzyme that protects microorganisms from toxic oxygen metabolites. Usually only aerobic microorganisms produce catalase.

- A simple test to identify aerotolerant strains
- Allows identification of Gram-positive cocci
- Easy to use

Cat. No.	Pk	Pack type
941970ZA	30 ml	Plastic bottle

Catalysts for mineralisation

See Kjeldahl tablets p.231

Cation exchange membranes 125 x 125 mm

Cat. No.	Pk	Pack type
551652U	6	Cardboard carton

Cation multi component standard 1 in water with a trace of nitric acid ARISTAR® for ion chromatography

Cation in dilute HNO_3

Ca	1000 ppm	Mg	200 ppm
K	200 ppm	Na	200 ppm
Li	50 ppm	NH_4	400 ppm

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458352K	100 ml	Plastic bottle

Cation multi component standard 2 in water with a trace of nitric acid ARISTAR® for ion chromatography

Cation in dilute HNO_3

Ca	100 ppm	Mg	100 ppm
K	100 ppm	Na	100 ppm
Li	100 ppm	NH_4	100 ppm

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458362M	100 ml	Plastic bottle

Caustic potash

See Potassium hydroxide p.367

Caustic soda

See Sodium hydroxide..... p.421

CDTA monohydrate

See trans-1,2-Diaminocyclohexane-N,N,N′,N′-tetraacetic acid monohydrate p.108

Celite® 545, filter aid TECHNICAL for synthesis

Warning

CAS 68855-54-9

SiO_2 **M.W.** 60.08 g/mol

Diatomaceous silica for filtration.

Identification ..... Passes test

Cat. No.	Pk	Pack type
22552.290	1 kg	Bucket (Plastic)

VWR Handy Solution Guides

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Celite® Hyflo Super-cel®, filter aid TECHNICAL

Warning

CAS 61790-53-2
Boiling Pt: 2200 °C (1013 hPa) **Melting Pt:** 1710 °C **Density:** 2,3 g/cm³ (20 °C)
Diatomaceous silica for filtration.

Identification ..... Passes test

Cat. No.	Pk	Pack type
24718.290	1 kg	Bucket (Plastic)
24718.365	5 kg	Bucket (Plastic)

Cellulase, from Trichoderma viride

10.000 units is the quantity of enzyme which will degrade 2 cm² of cellulose filter paper (17 mg) in 1 minute in 0.1 M acetate buffer at pH 4.0.

Cat. No.	Pk	Pack type
390744E	50 g	Glass bottle

Cellulose methyl ether, 400 mPa.s (2% solution in water)

See Methyl cellulose Methocel® A4C p.261

Ceric sulphate tetrahydrate

See Cerium (IV) sulphate tetrahydrate p.81

Cerium (reagents for the analysis of)

1,10-Phenanthroline hydrochloride monohydrate analytical reagent p.347
8-Quinolinol AnalaR NORMAPUR® analytical reagent p.383

NEW Cerium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Cerium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457224C
Cerium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85557.180

Cerium standard solution, 10,000 mg/l Ce in dil. nitric acid (from $(NH_4)_2Ce(NO_3)_6$) ARISTAR® standard for ICP

$(NH_4)_2$ $Ce(NO_3)_6$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455192A	100 ml	Plastic bottle

Cerium standard solution, 1,000 mg/l Ce in dil. nitric acid (from $(NH_4)_2Ce(NO_3)_6$) ARISTAR® standard for ICP

$(NH_4)_2$ $Ce(NO_3)_6$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455182V	100 ml	Plastic bottle
455184A	500 ml	Plastic bottle

Cerium standard solution, 1,000 mg/l Ce in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86669.180	100 ml	Plastic bottle
86669.260	500 ml	Plastic bottle

Cerium disulphate tetrahydrate

See Cerium (IV) sulphate tetrahydrate p.81

Cerium (IV) sulphate tetrahydrate analytical reagent

Warning

CAS 10294-42-5 **UN:** 3260
$Ce(SO_4)_2 \cdot 4H_2O$
M.W. 404.3 g/mol
Melting Pt: 180-200 °C **Density:** 3,91 g/cm³ (20 °C)

Assay ..... Min. 98.0 %
Heavy metals (as Pb) ..... Max. 50 ppm
Insolubility in diluted H_2SO_4 ..... Max. 50 ppm
Cl (Chloride) ..... Max. 10 ppm
PO_4 (Phosphate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
22604.153	50 g	Plastic bottle for solids

Cerium (IV) sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 13590-82-4 **UN:** 3264
$Ce(SO_4)_2$

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
190475N	2,5 l	Glass bottle

Cerium (IV) sulphate 0.05 mol/l (0.05 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 13590-82-4 **UN:** 3264
$Ce(SO_4)_2$

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31307.294	1 l	Plastic bottle

Cerium (IV) ammonium nitrate

See Ammonium cerium (IV) nitrate p.31

Cerium (IV) ammonium sulphate dihydrate

See Ammonium cerium (IV) sulphate dihydrate..... p.31

NEW Cesium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Cesium	1000 ppm	2% HNO_3	Plastic bottle	100 ml	457235D
Cesium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85560.180

Cesium standard solution, 10,000 mg/l Cs in dil. nitric acid (from $CsNO_3$) ARISTAR® standard for ICP

$CsNO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455212K	100 ml	Plastic bottle
455214M	500 ml	Plastic bottle

Cesium standard solution, 1,000 mg/l Cs in dil. nitric acid (from $CsNO_3$) ARISTAR® standard for ICP

$CsNO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455202Y	100 ml	Plastic bottle
455204K	500 ml	Plastic bottle

Cesium standard solution, 1,000 mg/l Cs in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86672.180	100 ml	Plastic bottle
86672.260	500 ml	Plastic bottle

NEW Cesium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84959.180	100 ml	Plastic bottle

Cesium chloride AnalaR NORMAPUR® analytical reagent

CAS 7647-17-8

CsCl **M.W.** 168.36 g/mol

Boiling Pt: 1303 °C (1013 hPa) **Melting Pt:** 646 °C **Density:** 3,7808 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Total N (Nitrogen)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm	Al (Aluminium)	Max. 5 ppm
Cu (Copper)	Max. 3 ppm	Fe (Iron)	Max. 3 ppm
K (Potassium)	Max. 20 ppm	Li (Lithium)	Max. 0.5 ppm
Mg (Magnesium)	Max. 5 ppm	Na (Sodium)	Max. 20 ppm
Pb (Lead)	Max. 1 ppm	Rb (Rubidium)	Max. 80 ppm
Zn (Zinc)	Max. 3 ppm		

Cat. No.	Pk	Pack type
22960.131	25 g	Plastic bottle for solids
22960.180	100 g	Plastic bottle for solids

Cesium chloride GPR RECTAPUR®

CAS 7647-17-8

CsCl **M.W.** 168.36 g/mol

Boiling Pt: 1303 °C (1013 hPa) **Melting Pt:** 646 °C **Density:** 3,7808 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
22959.136	25 g	Plastic bottle for solids

Cesium chloride Gen-Apex®, high purity Molecular biology grade

CAS 7647-17-8

CsCl **M.W.** 168.36 g/mol

Boiling Pt: 1303 °C (1013 hPa) **Melting Pt:** 646 °C **Density:** 3,7808 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.99 %
Colouration (0,25 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 20 ppm
Transmittance (260 nm) (50 %)	Min. 99 %
Transmittance (280 nm) (50 %)	Min. 99 %

Cat. No.	Pk	Pack type
33605.297	1 kg	Plastic bottle for solids

Cesium chloride Electran® Molecular biology grade

CAS 7647-17-8

CsCl **M.W.** 168.36 g/mol

Boiling Pt: 1303 °C (1013 hPa) **Melting Pt:** 646 °C **Density:** 3,7808 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.50 %	Appearance	Colourless fine crystals
DNases	Not detected	RNases	Not detected
Proteases	Not detected	Absorbance (260 nm) (3 mol/l)	Max. 0.100
Absorbance (280 nm) (3 mol/l)	Max. 0.020	Al (Aluminium)	0.0001 %
Ba (Barium)	Max. 0.0001 %	Ca (Calcium)	Max. 0.0001 %
Cr (Chromium)	Max. 0.0001 %	Fe (Iron)	Max. 0.0001 %
K (Potassium)	Max. 0.0005 %	Li (Lithium)	Max. 0.0001 %
Na (Sodium)	Max. 0.0005 %	Pb (Lead)	Max. 0.0001 %

Cat. No.	Pk	Pack type
443792F	100 g	Plastic bottle
443794H	500 g	Plastic bottle
443795Y	1 kg	Plastic bottle

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Cesium chloride, ultrapure

CAS 7647-17-8
CsCl **M.W.** 168.36 g/mol
Boiling Pt: 1303 °C (1013 hPa) **Melting Pt:** 646 °C **Density:** 3,7808 g/cm³ (20 °C)

Storage Temperature: Ambient

Abs.@260nm (50%, Water)	< = 0.05	Chromium	<= 0.0001 %
Copper	<= 0.0001 %	Iron	<= 0.0001 %
Lead	<= 0.0001 %	Lithium	< 0.001 %
Magnesium	< 0.0001 %	Nickel	< 0.0001 %
Potassium	< 0.001 %	Purity	> 99.9 %
Rubidium	< 0.03 %	Sodium	< 0.03 %

Cat. No.	Pk	Pack type
0415-50G	50 g	Plastic bottle for solids
0415-100G	100 g	Plastic bottle for solids
0415-250G	250 g	Plastic bottle for solids

Cetane

See n-Hexadecane p.186

Cetrimide agar

See Microbiology

Cetrimonium bromide AnalaR NORMAPUR® analytical reagent

Danger

CAS 57-09-0 **UN:** 3077
$CH_3(CH_2)_{15}N(Br)(CH_3)_3$ **M.W.** 364.45 g/mol
Melting Pt: 237-243 °C

Storage Temperature: Ambient

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.1 %	Water	Max. 1 %
Fe (Iron)	Max. 10 ppm		

Cat. No.	Pk	Pack type
22610.132	25 g	Plastic bottle for solids
22610.180	100 g	Plastic bottle for solids
22610.290	1 kg	Plastic bottle for solids

Cetrimonium bromide, high purity

Warning

CAS 57-09-0 **UN:** 3077
$CH_3(CH_2)_{15}N(Br)(CH_3)_3$ **M.W.** 364.45 g/mol
Melting Pt: 237-243 °C

Storage Temperature: Ambient

Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0833-500G	500 g	Plastic bottle
0833-1KG	1 kg	Plastic bottle

1-Cetylpyridinium chloride monohydrate TECHNICAL

Danger

CAS 6004-24-6 **UN:** 2811
$C_{21}H_{38}ClN{\cdot}1H_2O$ **M.W.** 358.01 g/mol
Melting Pt: 77-83 °C

Storage Temperature: Ambient

Melting point ..... 80 - 84 °C

Cat. No.	Pk	Pack type
22608.180	100 g	Plastic bottle for solids

Cetyltrimethylammonium bromide

See Cetrimonium bromide p.83

N-Cetyl-N,N,N-trimethylammonium bromide

See Cetrimonium bromide p.83

CHAPS (3-[(3-Cholamidopropyl) dimethylammonio]-1-propane sulphate), ultrapure

Warning

CAS 75621-03-3
$C_{32}H_{58}N_2O_7S$ **M.W.** 614.89 g/mol
Melting Pt: 116 °C

Storage Temperature: Refrigerator
Zwitterionic detergent.

Conductivity (10%, Water)	< = 50 umhos
DNase	none
Solubility (20%, Water)	pass
pH (10%, Water) @25°C	5 - 7
Protease	none detected
RNase	none detected
Residue on Ignition	< 0.1 %

Cat. No.	Pk	Pack type
0465-5G	5 g	Plastic bottle for solids
0465-10G	10 g	Plastic bottle for solids
0465-50G	50 g	Plastic bottle for solids

CHAPS (3-[(3-Cholamidopropyl) dimethylammonio]-1-propane sulphate), proteomics grade

Warning

CAS 75621-03-3
$C_{32}H_{58}N_2O_7S$ **M.W.** 614.89 g/mol
Melting Pt: 116 °C

Storage Temperature: Refrigerator
Zwitterionic detergent.

Conductivity (10%, Water)	50 umhos
DNase	NONE
pH (10%, Water) @25 °C	5.0 - 7.0
Protease	NONE
Purity (TLC)	ONE SPOT
Residue on Ignition	0.1 %
RNase	NONE
Solubility (20 %, Water)	PASS

Cat. No.	Pk	Pack type
M127-10G	10 g	Plastic bottle

3-[(3-Cholamidopropyl)dimethylammonio]-1-propane sulphate (CHAPS) 10% in aqueous solution, reagent grade

Warning

CAS 75621-03-3
$C_{32}H_{58}N_2O_7S$
Storage Temperature: Refrigerator

Cat. No.	Pk	Pack type
N907-1L	1 l	Plastic bottle

Charcoal activated

CAS 7440-44-0 **UN:** 1362
C **M.W.** 12.01 g/mol
Melting Pt: 3550 °C **Density:** 2 g/cm³ (20 °C)
REACh: 01-2119488894-16

Decolourising value	Min. 20 ml
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 7 %
Loss on drying (120°C)	Max. 8 %
Solubility in diluted HCl	Max. 10.0 %
Solubility in ethanol	Max. 0.2 %
Solubility in water	Max. 2.0 %
Soluble chlorides	Max. 0.1 %
Soluble sulphates	Max. 100 ppm
Ca (Calcium)	Max. 1 %
Fe (Iron)	Max. 0.03 %
Zn (Zinc)	Max. 10 ppm

Cat. No.	Pk	Pack type
87126.230	250 g	Plastic bottle for solids

Charcoal activated vegetable, powder TECHNICAL

CAS 7440-44-0 **UN:** 1362
C **M.W.** 12.01 g/mol
Melting Pt: 3550 °C **Density:** 2 g/cm³ (20 °C)
REACh: 01-2119488894-16

Mean particle size ..... Max. 80 µm
Ignition residue ..... Max. 6 %
Water ..... Max. 10 %

Cat. No.	Pk	Pack type
22637.293	1 kg	Plastic bag

Charcoal activated, granulated for gas adsorption

CAS 7440-44-0 **UN:** 1362
C **M.W.** 12.01 g/mol
Melting Pt: 3550 °C **Density:** 2 g/cm³ (20 °C)
REACh: 01-2119488894-16

Identification ..... Passes test
Benzene adsorption ..... 38 - 42 %
Ignition residue ..... Max. 12 %
Loss on drying (105°C) ..... Max. 10 %

Cat. No.	Pk	Pack type
22631.293	1 kg	Plastic bag
22631.362	5 kg	Plastic bottle for solids
22631.460	20 kg	Cardboard carton

China Clay

See Bole white (Kaolin) p.60

Chloral hydrate GPR RECTAPUR®

Danger

CAS 302-17-0 **UN:** 2811
$Cl_3CCH(OH)_2$ **M.W.** 165.4 g/mol
Boiling Pt: 97,5 °C (1013 hPa) **Melting Pt:** 52 °C **Density:** 1,901 g/cm³ (20 °C)
Storage Temperature: Ambient

pH (10 %) ..... 4.0 - 5.5
Evaporation residue ..... Max. 0.15 %
Heavy metals (as Pb) ..... Max. 100 ppm
Ignition residue (SO_4) ..... Max. 0.1 %
Cl (Chloride) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
22682.265	500 g	Plastic bottle for solids

Chloral hydrate 80% in aqueous solution Reag. Ph. Eur. 1017901

Danger

CAS 302-17-0 **UN:** 2811
$Cl_3CCH(OH)_2$ **M.W.** 165.4 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87804.180	100 ml	Plastic bottle

Chloramine T (sodium salt) trihydrate TECHNICAL

Danger

CAS 7080-50-4 **UN:** 3263
$CH_3C_6H_4SO_2NClNa{\cdot}3H_2O$ **M.W.** 281.69 g/mol
Melting Pt: 167-170 °C **Density:** 1,43 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Assay (Active chlorine) ..... Min. 12.3 %

Cat. No.	Pk	Pack type
22685.265	500 g	Plastic bottle for solids

Chloramphenicol, ultrapure

Danger

CAS 56-75-7
$Cl_2CHCONHCH(CH_2OH)CH(OH)C_6H_4NO_2$ **M.W.** 323.13 g/mol
Boiling Pt: 645 °C (1013 hPa) **Melting Pt:** 150 °C **Density:** 1,49 g/cm³ (20 °C)
Storage Temperature: Ambient

Inhibits protein synthesis at peptidyltransferase. Recommended working concentration: 20 µg/ml.

Chromatographic Purity ..... PASS
Crystallinity ..... PASS
Expiration Date ..... REPORT
Identification ..... PASS
Melting Range (°C) ..... 149 – 153
pH (2.5%, Water) @ 25 °C ..... 4.5 – 7.5
Purity (%) ..... 97.0 – 103.0
Specific Rotation (Degrees) ..... +17.0 – +20.0

Cat. No.	Pk	Pack type
0230-EU-100G	100 g	Plastic bottle for solids

NEW Chlorate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84960.180	100 ml	Plastic bottle

Chloride standard solution, 1,000 mg/l Cl- in water (from NaCl) ARISTAR® standard for ion chromatography

(Cl in H_2O)

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458012Q	100 ml	Plastic bottle
458014S	500 ml	Plastic bottle

NEW Chloride 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84962.180	100 ml	Plastic bottle
84962.260	500 ml	Plastic bottle

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Chloride standard solution, 200 mg/l Cl- in water (from NaCl) ARISTAR® standard for ion chromatography

(Cl in H_2O)

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458082H	100 ml	Plastic bottle

NEW Chlorite 1,000 mg/l in NaOH solution standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84961.180	100 ml	Plastic bottle

Free chlorine (reagents for the analysis of)

o-Tolidine TECHNICAL p.490
o-Tolidine 0.1 % (1.6 M) hydrochloric solution for chlorine determination in water according to the NF T 90-010 standard p.491

VWR LIFE SCIENCE 4-Chloro-1-naphthol, ultrapure

CAS 604-44-4
$ClC_{10}H_6OH$ **M.W.** 178.62 g/mol
Boiling Pt: 307 °C (1013 hPa) **Melting Pt:** 123 °C **Density:** 1,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Distinct blue-purple colour is easily photographed for blotting and immunohistochemical staining procedures.

Insolubles	< = 0.1 %
Melting Range	118 °C - 121 °C
Purity	> 98 %

Cat. No.	Pk	Pack type
0398-25G	25 g	Plastic bottle for solids

Chloroacetic acid AnalaR NORMAPUR® analytical reagent

Danger

CAS 79-11-8 **UN:** 1751
$ClCH_2COOH$ **M.W.** 94.5 g/mol
Boiling Pt: 188 °C (1013 hPa) **Melting Pt:** 56-57 °C **Density:** 1,4043 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Melting point	61 - 63 °C
Heavy metals (as Pb)	Max. 10 ppm	Ignition residue (SO_4)	Max. 0.05 %
Water	Max. 0.5 %	Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 100 ppm	Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20245.238	250 g	Plastic bottle for solids

tetra-Chloroauric (III) acid trihydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 16961-25-4 **UN:** 3260
$HAuCl_4 \cdot 3H_2O$ **M.W.** 393.83 g/mol
Melting Pt: 30 °C **Density:** 3,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (Au)	Min. 48 %	Alkali metals	Max. 0.05 %

Cat. No.	Pk	Pack type
1028.0001	1 g	Plastic bottle

VWR LIFE SCIENCE tetra-Chloroauric (III) acid trihydrate ACS

Danger

CAS 16961-25-4 **UN:** 3260
$HAuCl_4 \cdot 3H_2O$ **M.W.** 393.83 g/mol
Melting Pt: 30 °C **Density:** 3,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Alkalies & Other Metals	< 0.2%
Insoluble in Ether	<= 0.1%
Purity (Au)	> = 49%

Cat. No.	Pk	Pack type
0240-1G	1 g	Glass bottle for solids

Chlorobenzene AnalaR NORMAPUR® analytical reagent

Warning

CAS 108-90-7 **UN:** 1134
C_6H_5Cl **M.W.** 112.56 g/mol
Boiling Pt: 130 °C (1013 hPa) **Melting Pt:** -45 °C **Density:** 1,11 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119432722-45

Assay	Min. 99.5 %	IR Spectrum	Passes test
Colouration	Max. 10 APHA	Density (20/4)	1.100 - 1.110
Evaporation residue	Max. 0.05 %	Water	Max. 0.05 %
Al (Aluminium)	Max. 2.0 ppm	Ba (Barium)	Max. 1.0 ppm
Ca (Calcium)	Max. 5.0 ppm	Cd (Cadmium)	Max. 0.5 ppm
Co (Cobalt)	Max. 0.2 ppm	Cr (Chromium)	Max. 0.2 ppm
Cu (Copper)	Max. 0.2 ppm	Fe (Iron)	Max. 2.0 ppm
K (Potassium)	Max. 1.0 ppm	Mg (Magnesium)	Max. 0.5 ppm
Mn (Manganese)	Max. 0.2 ppm	Na (Sodium)	Max. 5.0 ppm
Ni (Nickel)	Max. 0.2 ppm	Pb (Lead)	Max. 0.5 ppm
Sr (Strontium)	Max. 0.2 ppm	Zn (Zinc)	Max. 1 ppm

Cat. No.	Pk	Pack type
103386D	2,5 l	Glass bottle

Chlorobenzene GPR RECTAPUR®

Warning

CAS 108-90-7 **UN:** 1134
C_6H_5Cl **M.W.** 112.56 g/mol
Boiling Pt: 130 °C (1013 hPa) **Melting Pt:** -45 °C **Density:** 1,11 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119432722-45

Assay	Min. 99 %
Boiling point	131 - 133 °C
Density (20/4)	1.100 - 1.110
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
22702.298	1 l	Glass bottle
22702.323	2,5 l	Glass bottle
22702.367	5 l	Aluminium bottle
22702.460	25 l	Metal drum

1-Chlorobutane HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-69-3 **UN:** 1127
$CH_3(CH_2)_3Cl$ **M.W.** 92.57 g/mol
Boiling Pt: 78,4 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,8862 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (GC)	Min. 99.70 %
Water	Max. 0.0100 %
Water (KF)	Max. 0.0005 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Transmittance (227 nm)	Min. 50.0 %
Transmittance (232 nm)	Min. 80.0 %
Transmittance (250 nm)	Min. 98.0 %
Conforms to BDH 15294	Passes test

Cat. No.	Pk	Pack type
83631.320	2,5 l	Glass bottle

Organic reference standard, Chloroethane 200 µg/ml in methanol

Cat. No.	Pk	Pack type
123482M	1 ml	Glass ampoule

Organic reference standard, Chloroethylene 200 µg/ml in methanol

Cat. No.	Pk	Pack type
123462Y	1 ml	Glass ampoule

Chloroform stabilised HiPerSolv CHROMANORM® for HPLC

Stabilised with 2-methyl-2-butene 20 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$
M.W. 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay (GC)	Min. 99.80 %
Water	Max. 0.0500 %
Non-volatile residue	Max. 0.001 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Transmittance (250 nm)	Min. 50.0 %
Transmittance (260 nm)	Min. 84.00 %
Transmittance (280 nm)	Min. 95.0 %
Transmittance (300 nm)	Min. 98.0 %
Conforms to BDH 15283	Passes test

Cat. No.	Pk	Pack type
83626.290	1 l	Glass bottle
83626.320	2,5 l	Glass bottle

Chloroform stabilised HiPerSolv CHROMANORM® for HPLC

Stabilised with ethanol 0.6 %
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$
M.W. 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,48320 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay (+ stabilizing agent)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 10 ppm
Water	Max. 0.05 %
Absorbance (250 nm)	Max. 0.3
Absorbance (260 nm)	Max. 0.1
Absorbance (280 nm)	Max. 0.02
Absorbance (300 nm)	Max. 0.01
Transmittance (250 nm)	Min. 50 %
Transmittance (260 nm)	Min. 84 %
Transmittance (280 nm)	Min. 95 %
Transmittance (300 nm)	Min. 98 %

Cat. No.	Pk	Pack type
83627.290	1 l	Glass bottle
83627.320	2,5 l	Glass bottle

Chloroform stabilised SPECTRONORM® for spectroscopy

Stabilised with ethanol 0.6 %
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$
M.W. 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay	99.0 - 99.6 %
Boiling point	59.5 - 60.5 °C
Density (20/4)	1.473 - 1.489
Evaporation residue	Max. 5 ppm
Transmittance (250 nm)	Min. 50 %
Transmittance (260 nm)	Min. 85 %
Transmittance (270 nm)	Min. 95 %
Transmittance (280 nm)	Min. 96 %
Transmittance (from 290 nm)	Min. 98 %

Cat. No.	Pk	Pack type
22715.293	1 l	Glass bottle

Chloroform stabilised AnalaR NORMAPUR® ACS Reag. Ph. Eur. analytical reagent

Stabilised with ethanol 0.4-1 %

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$
M.W. 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Appearance	Clear colourless liquid	Assay	99.0 - 99.4 %
Assay (+ stabilizing agent)	Min. 99.8 %	Insolubility in alcohol	Passes test
IR Spectrum	Passes test	Suited for determination with dithizone.	Passes test
Acidity	Max. 0.00014 meq/g	Boiling point	59.5 - 60.5 °C
Colouration	Max. 10 APHA	Density (20/4)	1.476 - 1.485
Density (20/20)	1.475 - 1.488	Formaldehyde-sulphuric colouration	Max. 60 APHA
Substances coloured by H_2SO_4	Max. 35 APHA	Carbon tetrachloride	Max. 100 ppm
Carbonyl compounds (as CO)	Max. 50 ppm	Dichloromethane	Max. 100 ppm
Ethanol	0.4 - 1.0 %	Evaporation residue	Max. 5 ppm
Free chlorine	Max. 0.3 ppm	Ionised chlorine	Max. 0.5 ppm
Tetrachloroethylene	Max. 100 ppm	Trichloroethylene	Max. 100 ppm
Water	Max. 100 ppm	Cl (Chloride)	Max. 0.2 ppm
Al (Aluminium)	Max. 0.05 ppm	B (Boron)	Max. 0.01 ppm
Ba (Barium)	Max. 0.01 ppm	Ca (Calcium)	Max. 0.1 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.01 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.01 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.01 ppm	Sn (Tin)	Max. 0.05 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.05 ppm
Conforms to Reag. Ph.Eur.	Passes test	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
22711.260	500 ml	Glass bottle
22711.244	1 l	Glass bottle SAFEBREAK
22711.290	1 l	Glass bottle
22711.324	2,5 l	Glass bottle
22711.461	25 l	Metal drum

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Chloroform, anhydrous (max. 0.005% H_2O) stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with 2-methyl-2-butene

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay (calculated on anhydrous)	Min. 99.5 %	Colour value	Max. 10 APHA
Acidity	Max. 0.0005 %	Residue on evaporation	Max. 0.0005 %
Water (K.F.)	Max. 0.0050 %	Dichloromethane	Max. 0.0100 %
Carbon tetrachloride	Max. 0.0100 %	Trichloroethene	Max. 0.0100 %
1,1,2,2-Tetrachlorethane	Max. 0.0100 %	Formaldehyde-sulphuric colouration	Max. 60 APHA
Substances discoloured by H_2SO_4	Max. 35 APHA	Free chlorine	Max. 0.00003 %
Cl (Chloride)	Max. 0.5 ppm	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.05 ppm

Cat. No.	Pk	Pack type
22709.292	1 l	Glass bottle

Chloroform stabilised

Stabilised with ethanol 0.6 %

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Not licenced for use as an anaesthetic in human or veterinary applications.

Appearance	Clear colourless liquid	Identification	Passes test
Distillation range	Passes test	Weight per ml	1.474 - 1.479 g
Acidity or alkalinity	Passes test	Cl (Chloride)	Passes test
Free chlorine	Passes test	Aldehydes	Passes test
Foreign chlorine compounds	Passes test	Related substances	Passes test
Ethanol	Passes test	Non-volatile matter	Max. 40 mg/l
Residual solvents	Passes test		

Cat. No.	Pk	Pack type
22705.323	2,5 l	Glass bottle

Chloroform stabilised GPR RECTAPUR®

Stabilised with ethanol 0.6 %

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay	99.0 - 99.6 %
Boiling point	59.5 - 60.5 °C
Density (20/4)	1.473 - 1.489
Ethanol	0.1 - 1.0 %
Evaporation residue	Max. 50 ppm
Free chlorine	Max. 10 ppm
Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
22706.292	1 l	Glass bottle
22706.326	2,5 l	Glass bottle
22706.361	5 l	Fluorinated plastic bottle
22706.463	25 l	Metal drum
22706.554	200 l	Metal drum

Chloroform stabilised GPR RECTAPUR®

Stabilised with 2-methyl-2-butene 0.002 %

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay	Min. 99 %
Boiling point	59.5 - 61.5 °C
Density (20/4)	1.478 - 1.489
Evaporation residue	Max. 10 ppm
Free chlorine	Max. 10 ppm
Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
22707.295	1 l	Glass bottle
22707.320	2,5 l	Glass bottle
22707.364	5 l	Fluorinated plastic bottle
22707.466	25 l	Metal drum
22707.550	200 l	Metal drum

Chloroform, dehydrated (max. 0.01% H_2O) stabilised GPR RECTAPUR® for synthesis

Stabilised with ethanol 0.6 %

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay	99.0 - 99.6 %
Density (20/4)	1.473 - 1.489
Ethanol	0.1 - 1.0 %
Evaporation residue	Max. 50 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
22710.321	2,5 l	Glass bottle

VWR LIFE SCIENCE Chloroform stabilised for biotechnology

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Purity >99.8%. Commonly mixed with phenol to enhance the extraction of DNA. Used to recover the aqueous phase overlaid with mineral oil in PCR procedures.

Abs.@ 245nm	< = 1	Abs.@ 255nm	<= 0.25
Abs.@ 260nm	<= 0.15	Abs.@ 270nm	<= 0.05
Abs.@ 290nm	<= 0.01	Abs.@ 400nm	< 0.01
Chloride	< 10 ppm	Color (APHA)	< 10
Lead	< 0.05 ppm	Moisture (KF)	< 0.05 %
Purity	> 99.8 %	Residue After Evaporation	< 0.001 %
Titratable Free Acid	< 0.5 meq/g		

Cat. No.	Pk	Pack type
0757-500ML	500 ml	Glass bottle
0757-950ML	950 ml	Glass bottle

Chloroform stabilised TECHNICAL

Stabilised with ethanol 0.6 %

Danger

CAS 67-66-3 **UN:** 1888
$CHCl_3$ **M.W.** 119.38 g/mol
Boiling Pt: 61,7 °C (1013 hPa) **Melting Pt:** -63 °C **Density:** 1,4832 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486657-20

Assay ..... Min. 98 %
Density (20/4) ..... 1.473 - 1.489
Ethanol ..... 0.1 - 1.0 %

Cat. No.	Pk	Pack type
22720.360	5 l	Fluorinated plastic bottle
22720.462	25 l	Metal drum
22720.550	200 l	Metal drum

NEW Chloroform-[D1] 99.96% for NMR spectroscopy

Warning

CAS 865-49-6 **UN:** 1888
$CDCl_3$ **M.W.** 120.37 g/mol
Boiling Pt: 60,8 °C (1013 hPa) **Melting Pt:** -64,1 °C **Density:** 1,5 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.96 %
Water ..... Max. 0.005 %

Cat. No.	Pk	Pk Info	Pack type
84890.0007	1 SET	10× 0.75 ml	Glass ampoule

Chloroform-[D1] (99,8% D) for NMR spectroscopy

Warning

CAS 865-49-6 **UN:** 1888
$CDCl_3$ **M.W.** 120.37 g/mol
Boiling Pt: 60,8 °C (1013 hPa) **Melting Pt:** -64,1 °C **Density:** 1,5 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay (on anhydrous substance) ..... Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.80 %
Water ..... Max. 0.01 %

Cat. No.	Pk	Pk Info	Pack type
87153.0010	10 ml	-	Glass bottle
87153.0025	25 ml	-	Glass bottle
87153.0100	100 ml	-	Glass bottle
87153.0500	500 ml	-	Glass bottle
87153.0006	1 Pack	10 x 0,6 ml	Glass ampoules

Chloroform-[D1] 0.03% TMS (99,8% D) + 0.03% TMS for NMR spectroscopy

Warning

CAS 865-49-6 **UN:** 1888
$CDCl_3$ **M.W.** 120.37 g/mol
Boiling Pt: 60,8 °C (1013 hPa) **Melting Pt:** -64,1 °C **Density:** 1,5 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay (on anhydrous substance) ..... Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.80 %
Water ..... Max. 0.01 %

Cat. No.	Pk	Pack type
84111.0100	100 ml	Glass bottle
84111.0500	500 ml	Glass bottle

VWR LIFE SCIENCE Chloroform : iso-Amyl alcohol (24:1 v:v) for biotechnology

Warning

UN: 1888
Storage Temperature: Ambient

A premixed solution of 24 parts chloroform to 1 part isoamyl alcohol. Combined with phenol (1:1) for nucleic acid purification procedures.

Specific Gravity (20 °C) ..... 1.446 - 1.463 g/ml
Water (KF) ..... 0.1 %

Cat. No.	Pk	Pack type
X205-450ML	450 ml	Glass bottle
X205-950ML	950 ml	Glass bottle

Chlorotoluron (3-(3-Chloro-p-tolyl)-1,1-dimethylurea), extra pure

Warning

CAS 15545-48-9 **UN:** 3077
$(C_6H_3ClCH_3)NC(S)NH_2$ **M.W.** 212.68 g/mol
Melting Pt: 159-160 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
123702F	10 mg	Glass ampoule

3-(3-Chloro-p-tolyl)-1,1-dimethylurea

See Chlorotoluron (3-(3-Chloro-p-tolyl)-1,1-dimethylurea) p.88

Chlorpyrifos, extra pure

Danger

CAS 2921-88-2 **UN:** 2811
$C_9H_{11}Cl_3NO_3PS$ **M.W.** 350.59 g/mol
Boiling Pt: 276 °C (1013 hPa) **Melting Pt:** 41-42 °C **Density:** 1,4 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
123682S	10 mg	Glass ampoule

Chlorpyrifos, pesticide reference standard, 100 µg/ml in methanol

Cat. No.	Pk	Pack type
123692U	1 ml	Glass ampoule

3-[(3-Cholamidopropyl)dimethylammonio]-1-propane sulphate

See CHAPS (3-[(3-Cholamidopropyl)dimethylammonio]-1-propane sulphate)p.83

(3-((3-Cholamidopropyl)dimethylammonio) propanesulphonate)

See CHAPS (3-[(3-Cholamidopropyl)dimethylammonio]-1-propane sulphate)p.83

Cholesterol GPR RECTAPUR®

CAS 57-88-5
$C_{27}H_{46}O$ **M.W.** 386.66 g/mol
Boiling Pt: 360 °C (1013 hPa) **Melting Pt:** 147-150 °C **Density:** 1,07 g/cm³ (20 °C)
Storage Temperature: Freezer

Assay (Total sterols) ..... Min. 99 %
Melting point ..... 147 - 150 °C
Spec. optical rotation (10 %;chloroform) ..... -41 to -37 °
Heavy metals (as Pb) ..... Max. 20 ppm
Ignition residue (SO_4) ..... Max. 0.1 %
Fe (Iron) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
22749.233	250 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

VWR LIFE SCIENCE Cholesterol, ultrapure

CAS 57-88-5
$C_{27}H_{46}O$ **M.W.** 386.66 g/mol
Boiling Pt: 360 °C (1013 hPa) **Melting Pt:** 147-150 °C **Density:** 1,07 g/cm³ (20 °C)
Storage Temperature: Freezer

Loss on Drying ..... <= 0.3 %
Melting Point ..... 146 °C - 150 °C
Residue on Ignition ..... <= 0.1 %
Specific Rotation ..... -38 to -34 °

Cat. No.	Pk	Pack type
0433-250G	250 g	Plastic bottle for solids
0433-1KG	1 kg	Plastic bottle for solids

NEW Chromate (in Cr(VI)) 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84963.180	100 ml	Plastic bottle

Chromic anhydride

See Chromium (VI) oxide p.90

Chromic oxide

See Chromium (III) oxide p.90

Chromic-sulphuric acid mixture (0.8% chromium (VI) oxide in sulphuric acid 95%) TECHNICAL

Danger

CAS 1333-82-0 **UN:** 3264
CrO_3 **M.W.** 99.99 g/mol

Saturated solution of hexavalent chromium oxide in H_2SO_4 95 %

Identification ..... Passes test

Cat. No.	Pk	Pack type
25333.247	1 l	Glass bottle SAFEBREAK
25333.327	2,5 l	Glass bottle SAFEBREAK

Chromium (reagents for the analysis of)

Chromotropic acid disodium salt dihydrate analytical reagent p.90
1,5-Diphenylcarbazide analytical reagent p.124

NEW Chromium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Chromium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456702E
Chromium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85559.180

Chromium standard solution, 10,000 mg/l Cr in 10% hydrochloric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP

$(NH_4)_2Cr_2O_7$ in HCl 2-10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455252S	100 ml	Plastic bottle
455254U	500 ml	Plastic bottle

Chromium standard solution, 10,000 mg/l Cr in dil. nitric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP

$(NH_4)_2Cr_2O_7$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455232X	100 ml	Plastic bottle
455234Q	500 ml	Plastic bottle

Chromium standard solution, 1,000 mg/l Cr in 10% hydrochloric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP

$(NH_4)_2Cr_2O_7$ in HCl 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455242Q	100 ml	Plastic bottle
455244S	500 ml	Plastic bottle

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VWR2GO

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Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP

$(NH_4)_2Cr_2O_7$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455222M	100 ml	Plastic bottle
455224X	500 ml	Plastic bottle

Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86671.180	100 ml	Plastic bottle
86671.260	500 ml	Plastic bottle

Chromium (III) chloride hexahydrate GPR RECTAPUR®

Warning

CAS 10060-12-5 **UN:** 3260

$CrCl_3 \cdot 6H_2O$ **M.W.** 266.45 g/mol

Melting Pt: 85 °C **Density:** 1,76 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 98 - 101 %
Insolubility in water ..... Max. 100 ppm
Substances not precipitated by NH_4OH ..... Max. 0.2 %
SO_4 (Sulphate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
84839.260	500 g	Plastic bottle for solids

Chromium (III) oxide TECHNICAL

CAS 1308-38-9

Cr_2O_3 **M.W.** 151.99 g/mol

Boiling Pt: 4000 °C (1013 hPa) **Melting Pt:** 2435 °C **Density:** 5,22 g/cm³ (25 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
22796.292	1 kg	Plastic bottle for solids

Chromium (VI) oxide AnalaR NORMAPUR® analytical reagent

Danger

CAS 1333-82-0 **UN:** 1463

CrO_3 **M.W.** 99.99 g/mol

Melting Pt: 195 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458868-17

Assay ..... Min. 99 %
Substances precipitated by NH_4OH .... Max. 0.02 %
Cl (Chloride) ..... Max. 50 ppm
Fe (Iron) ..... Max. 100 ppm
Na (Sodium) ..... Max. 0.2 %
Loss on drying (105°C) ..... Max. 1 %
Total N (Nitrogen) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 0.02 %
K (Potassium) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
20268.237	250 g	Plastic bottle for solids

Chromium (VI) oxide GPR RECTAPUR®

Danger

CAS 1333-82-0 **UN:** 1463

CrO_3 **M.W.** 99.99 g/mol

Melting Pt: 195 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458868-17

Assay ..... Min. 99 %
Insolubility in water ..... Max. 0.2 %
SO_4 (Sulphate) ..... Max. 0.1 %

Cat. No.	Pk	Pack type
20265.261	500 g	Glass bottle for solids
20265.294	1 kg	Glass bottle for solids

Chromium (III) potassium sulphate dodecahydrate GPR RECTAPUR®

Warning

CAS 7788-99-0

$CrK(SO_4)_2 \cdot 12H_2O$ **M.W.** 499.4 g/mol

Melting Pt: 89 °C **Density:** 1,83 g/cm³ (20 °C)

Assay ..... Min. 97 %
Insolubility in water ..... Max. 0.2 %
Cl (Chloride) ..... Max. 0.02 %
Cu (Copper) ..... Max. 10 ppm
Fe (Iron) ..... Max. 0.02 %
Pb (Lead) ..... Max. 50 ppm
Zn (Zinc) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
21095.293	1 kg	Plastic bottle for solids

Chromium (III) potassium bis(sulphate) dodecahydrate

See Chromium (III) potassium sulphate dodecahydrate p.90

Chromocult coloform agar

See Microbiology

Chromotropic acid disodium salt dihydrate analytical reagent

Warning

CAS 5808-22-0

$(HO)_2C_{10}H_4(SO_3Na)_2 \cdot 2H_2O$ **M.W.** 400.29 g/mol

Melting Pt: > 300 °C

Storage Temperature: Ambient

Assay ..... Min. 98.0 %
Suited for formaldehyde reagent ..... Passes test
Suited for titanium reagent ..... Passes test
Water ..... Max. 10 %

Cat. No.	Pk	Pack type
20261.132	25 g	Plastic bottle for solids

Chrysene

Danger

CAS 218-01-9 **UN:** 2811

$C_{18}H_{12}$ **M.W.** 228.29 g/mol

Boiling Pt: 448 °C (1013 hPa) **Melting Pt:** 250-252 °C **Density:** 1,274 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
123002H	100 mg	Glass ampoule

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Chymostatin, ultrapure

A reversible serine protease inhibitor of α, β, γ, Δ-chymotrypsin. Also inhibits papain and many other cysteine proteases.

Cat. No.	Pk	Pack type
J584-5MG	5 mg	Glass bottle

NEW Citrate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84964.180	100 ml	Plastic bottle

Citric acid, anhydrous, powder AnalaR NORMAPUR®

Warning

CAS 77-92-9

HOC(COOH)(CH_2COOH)$_2$ **M.W.** 192.13 g/mol

Boiling Pt: 310 °C (1013 hPa) **Melting Pt:** 149-151 °C **Density:** 1,665 g/cm³ (18 °C, OECD 109)

Storage Temperature: Ambient **REACh:** 01-2119457026-42

Assay	Min. 99.8 %	Ignition residue (SO_4)	Passes test USP
Heavy metals (as Pb)	Max. 1 ppm	C_2O_4 (as $C_2H_2O_4$)	Max. 10 ppm
Cl (Chloride)	Max. 5 ppm	SO_4 (Sulphate)	Max. 30 ppm
Al (Aluminium)	Max. 0.2 ppm	As (Arsenic)	Max. 1 ppm
Ba (Barium)	Max. 1 ppm	Ca (Calcium)	Max. 20 ppm
Cu (Copper)	Max. 1 ppm	Fe (Iron)	Max. 1 ppm
Hg (Mercury)	Max. 1 ppm	Mg (Magnesium)	Max. 1 ppm
Pb (Lead)	Max. 0.5 ppm	Zn (Zinc)	Max. 1 ppm

Cat. No.	Pk	Pack type
84841.290	1 kg	Plastic bottle for solids

Citric acid, anhydrous, powder Ph. Eur.

Warning

CAS 77-92-9

HOC(COOH)(CH_2COOH)$_2$ **M.W.** 192.13 g/mol

Boiling Pt: 310 °C (1013 hPa) **Melting Pt:** 149-151 °C **Density:** 1,665 g/cm³ (18 °C, OECD 109)

Storage Temperature: Ambient **REACh:** 01-2119457026-42

Not suitable for parenteral use

Assay (calculated on anhydrous)	99.5 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test
Appearance of solution	Passes test
Readily carbonisable substances	Passes test
Oxalic acid	Max. 360 ppm
SO_4 (Sulphate)	Max. 150 ppm
Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 1.0 %
Sulphated ash	Max. 0.1 %
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
20282.293	1 kg	Plastic bottle for solids
20282.362	5 kg	Bucket (Plastic)
20282.464	25 kg	Bucket (Plastic)

Citric acid, anhydrous, powder GPR RECTAPUR®

Warning

CAS 77-92-9

HOC(COOH)(CH_2COOH)$_2$ **M.W.** 192.13 g/mol

Boiling Pt: 310 °C (1013 hPa) **Melting Pt:** 149-151 °C **Density:** 1,665 g/cm³ (18 °C, OECD 109)

Storage Temperature: Ambient **REACh:** 01-2119457026-42

Assay	Min. 99.5 %
Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 0.2 %
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
84842.290	1 kg	Plastic bottle for solids
84842.360	5 kg	Plastic bottle for solids

Citric acid monohydrate AnalaR NORMAPUR® ACS, USP, Reag.Ph.Eur analytical reagent

Warning

CAS 5949-29-1

HOC(COOH)(CH_2COOH)$_2$·H_2O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	99.7 - 100.5 %	Identification (IR)	Passes test
Readily carbonisable substances	Passes test	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.02 %	Insolubility in water	Max. 50 ppm
Oxalic acid (calculated on anhydrous)	Max. 360 ppm	Tartaric acid	Max. 0.2 %
Water	7.5 - 9.0 %	C_2O_4 (as $C_2H_2O_4$)	Max. 0.04 %
Cl (Chloride)	Max. 5 ppm	PO_4 (Phosphate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm	As (Arsenic)	Max. 0.1 ppm
Ca (Calcium)	Max. 20 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 3 ppm	Mg (Magnesium)	Max. 5 ppm
Ni (Nickel)	Max. 1 ppm	Pb (Lead)	Max. 2 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test
Conforms to Reag. USP	Passes test		

Cat. No.	Pk	Pack type
20276.235	250 g	Plastic bottle for solids
20276.292	1 kg	Plastic bottle for solids
20276.361	5 kg	Plastic bottle for solids
20276.460	25 kg	Cardboard carton

Citric acid monohydrate, powder Ph. Eur.

Warning

CAS 5949-29-1

HOC(COOH)(CH_2COOH)$_2$·H_2O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm³ (20 °C)

Storage Temperature: Ambient

Not suitable for parenteral use

Assay (calculated on anhydrous)	99.5 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test
Appearance of solution	Passes test
Readily carbonisable substances	Passes test
Oxalic acid (calculated on anhydrous)	Max. 360 ppm
SO_4 (Sulphate)	Max. 150 ppm
Heavy metals (as Pb)	Max. 10 ppm
Water	7.5 - 9.0 %
Sulphated ash	Max. 0.1 %
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
85514.290	1 kg	Plastic bottle for solids
85514.360	5 kg	Plastic bottle for solids
85514.460	25 kg	Bucket (Plastic)

Citric acid monohydrate, crystallised GPR RECTAPUR®

Warning

CAS 5949-29-1

HOC(COOH)(CH$_2$COOH)$_2$·H$_2$O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm^3 (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 20 ppm
Ignition residue (SO_4) ..... Max. 0.05 %
Cl (Chloride) ..... Max. 20 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
20273.292	1 kg	Plastic bottle for solids
20273.361	5 kg	Bucket (Plastic)
20273.460	25 kg	Bucket (Plastic)

Citric acid monohydrate, powder GPR RECTAPUR®

Warning

CAS 5949-29-1

HOC(COOH)(CH$_2$COOH)$_2$·H$_2$O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm^3 (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 20 ppm
Ignition residue (SO_4) ..... Max. 0.05 %
Cl (Chloride) ..... Max. 20 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
20275.298	1 kg	Plastic bottle for solids
20275.367	5 kg	Plastic bottle for solids

Citric acid monohydrate Molecular biology grade

Warning

CAS 5949-29-1

HOC(COOH)(CH$_2$COOH)$_2$·H$_2$O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm^3 (20 °C)

Storage Temperature: Ambient

Appearance ..... White crystalline powder
DNases ..... Not detected
RNases ..... Not detected
Proteases ..... Not detected
Assay ..... Min. 99.5 %
Pb (Lead) ..... Max. 0.001 %
Absorbance (260 nm) (0.1 mol/l) ..... Max. 0.05
Absorbance (280 nm) (0.1 mol/l) 0.05

Cat. No.	Pk	Pack type
444455S	1 kg	Plastic bottle

Citric acid monohydrate, crystallised TECHNICAL

Warning

CAS 5949-29-1

HOC(COOH)(CH$_2$COOH)$_2$·H$_2$O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm^3 (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
20278.298	1 kg	Plastic bottle for solids
20278.367	5 kg	Bucket (Plastic)
20278.460	25 kg	Bucket (Plastic)

Citric acid monohydrate for decalcifying

Warning

CAS 5949-29-1

HOC(COOH)(CH$_2$COOH)$_2$·H$_2$O **M.W.** 210.14 g/mol

Melting Pt: 135-152 °C **Density:** 1,552 g/cm^3 (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
84559.290	1 kg	Plastic bottle for solids

Citric acid di-ammonium salt

See di-Ammonium hydrogen citrate p.35

Citric acid tri-ammonium salt

See tri-Ammonium citrate p.33

Citric acid tri-potassium salt monohydrate

See tri-Potassium citrate monohydrate p.361

Citric acid tri-sodium salt dihydrate

See tri-Sodium citrate dihydrate p.413

Clarifying reagent of biological media

Danger

UN: 1993

This product has a specific odour, it may be colourless to light yellow. The yellowing does not affect adversely the clarifying efficiency of the reagent.

Identification ..... Passes test

Cat. No.	Pk	Pack type
27357.232	250 ml	Glass bottle

Clay

See Bole white (Kaolin) p.60

Clean-Lab Q Path® for paraffin removal

Solvent replacement for cleaning instruments and equipments in contact with paraffin wax. Paraffin wax is used to prepare histological sections for microscopy, but it is very difficult to remove its residuals on microtomes and other laboratory surfaces. Clean-Lab has been created to make the removal of paraffin very easy and quick.

- Perfect to remove paraffin and clean every surface in microscopy clinical labs
- Especially used for microtomes
- Also suitable for tools, furniture, embedding and trimming stations
- Quick and complete action in few seconds
- Free samples available on request

Description	Pk	Cat. No.
Clean-Lab Q Path® for paraffin removal	100 ml	10047400.

CLED Agar

See Microbiology

Dithiothreitol

See Dithiothreitol (DTT, Cleland's reagent) p.126

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Coagulase test

Confirmative Test for coagulase-positive Staphylococcus.

- Formulated according to ISO 6888-1
- Can be used to differentiate Staphylococcus aureus from coagulase-negative Staphylococci

Description	Pk	Cat. No.
Coagulase test	10 ml	673030ZL
Coagulase test, 3 ml	10 Ampoul	673333ZL

NEW Cobalt standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Cobalt	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457062W
Cobalt	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85558.180

Cobalt standard solution, 10,000 mg/l Co in dil. nitric acid (from Co) ARISTAR® standard for ICP

Co in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455272W	100 ml	Plastic bottle

Cobalt standard solution, 1,000 mg/l Co in dil. nitric acid (from Co) ARISTAR® standard for ICP

Co in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455262U	100 ml	Plastic bottle
455264W	500 ml	

Cobalt standard solution, 1,000 mg/l Co in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86670.180	100 ml	Plastic bottle
86670.260	500 ml	Plastic bottle

Cobalt diacetate tetrahydrate

See Cobalt (II) acetate tetrahydrate p.93

Cobalt dichloride hexahydrate

See Cobalt (II) chloride hexahydrate p.93

Cobalt dinitrate hexahydrate

See Cobalt (II) nitrate hexahydrate p.94

Cobalt (II) acetate tetrahydrate TECHNICAL

Danger

CAS 6147-53-1 **UN:** 3077

$(H_3CCOO)_2Co{\cdot}4H_2O$ **M.W.** 249.08 g/mol

Melting Pt: 140 °C **Density:** 1,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
22878.262	500 g	Plastic bottle for solids

Cobalt (II) chloride hexahydrate AnalaR NORMAPUR® ACS analytical reagent nickel free

Danger

CAS 7791-13-1 **UN:** 3077

$CoCl_2{\cdot}6H_2O$ **M.W.** 237.93 g/mol

Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** 56 °C **Density:** 1,92 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	98.0 - 102.0 %	Insolubility in water	Max. 100 ppm
NO_3 (Nitrate)	Max. 100 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ca (Calcium)	Max. 50 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 20 ppm	Mn (Manganese)	Max. 10 ppm
Na (Sodium)	Max. 100 ppm	Ni (Nickel)	Max. 50 ppm
Pb (Lead)	Max. 5 ppm	Zn (Zinc)	Max. 20 ppm
Conforms to ACS	Passes test		

Cat. No.	Pk	Pack type
22896.184	100 g	Plastic bottle for solids

Cobalt (II) chloride hexahydrate TECHNICAL

Danger

CAS 7791-13-1 **UN:** 3077

$CoCl_2{\cdot}6H_2O$ **M.W.** 237.93 g/mol

Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** 56 °C **Density:** 1,92 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
22892.261	500 g	Plastic bottle for solids
22892.294	1 kg	Plastic bottle for solids
22892.363	5 kg	Bucket (Plastic)
22892.465	25 kg	Bucket (Plastic)

Cobalt (II) chloride paper, in strips for detection of water vapour

Each book contains 20 leaves measuring 2.5 inches x 0.5 inches - (Cobaltous chloride)

Description	Pk	Cat. No.
Cobalt (II) chloride paper	10	310112H

Cobalt (II) nitrate hexahydrate GPR RECTAPUR®

Danger

CAS 10026-22-9
$Co(NO_3)_2 \cdot 6H_2O$

UN: 1477

M.W. 291.03 g/mol
Melting Pt: 57 °C **Density:** 1,88 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.02 %
Cu (Copper)	Max. 100 ppm
Fe (Iron)	Max. 100 ppm
Ni (Nickel)	Max. 0.6 %
Pb (Lead)	Max. 100 ppm

Cat. No.	Pk	Pack type
22912.237	250 g	Plastic bottle for solids

Cobalt (II) nitrate hexahydrate TECHNICAL

Danger

CAS 10026-22-9
$Co(NO_3)_2 \cdot 6H_2O$

UN: 1477

M.W. 291.03 g/mol
Melting Pt: 57 °C **Density:** 1,88 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 96 %

Cat. No.	Pk	Pack type
22910.264	500 g	Plastic bottle for solids
22910.468	25 kg	Bucket (Plastic)

Cobalt (II) sulphate heptahydrate AnalaR NORMAPUR® analytical reagent nickel free

Danger

CAS 10026-24-1
$CoSO_4 \cdot 7H_2O$

UN: 3077

M.W. 281.1 g/mol
Melting Pt: 735 °C **Density:** 2,03 g/cm³ (20 °C)

Assay	Min. 99.0 %	Cl (Chloride)	Max. 10 ppm
Total N (Nitrogen)	Max. 20 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 5 ppm
Na (Sodium)	Max. 100 ppm	Ni (Nickel)	Max. 50 ppm
Pb (Lead)	Max. 10 ppm	Zn (Zinc)	Max. 50 ppm

Cat. No.	Pk	Pack type
22929.188	100 g	Plastic bottle for solids

Cobalt (II) sulphate heptahydrate TECHNICAL

Danger

CAS 10026-24-1
$CoSO_4 \cdot 7H_2O$

UN: 3077

M.W. 281.1 g/mol
Melting Pt: 735 °C **Density:** 2,03 g/cm³ (20 °C)

Assay	Min. 97 %

Cat. No.	Pk	Pack type
22926.268	500 g	Plastic bottle for solids
22926.361	5 kg	Bucket (Plastic)

Cobaltous acetate tetrahydrate

See Cobalt (II) acetate tetrahydrate p.93

Cobaltous chloride hexahydrate

See Cobalt (II) chloride hexahydrate p.93

Cobaltous nitrate hexahydrate

See Cobalt (II) nitrate hexahydrate p.94

Cobaltous sulphate heptahydrate

See Cobalt (II) sulphate heptahydrate p.94

Colchicine

Danger

CAS 64-86-8
$C_{22}H_{25}NO_6$

UN: 1544

M.W. 399.44 g/mol
Melting Pt: 154-156 °C **Density:** 1,32 g/cm³ (20 °C)

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
278052W	1 g	Glass bottle
27805FM	5 g	Glass bottle

(S)-(-)-Colchicine

See Colchicine p.94

7α-H-Colchicine

See Colchicine p.94

Colour reference standards Ph. Eur.

See Colour standard solutions, Reag. Ph. Eur. p.387, 457

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Colour standards solutions

Ready to use solutions that are prepared gravimetrically on a weight/weight basis.

- Use either as calibration and/or quality control standards
- Designed specifically for use in ASTM analytical methods and produced in accordance with ASTM D1500, D6045, D1209
- Consistency of product - independent, traceable, certified
- Presented in high quality, tamper-evident bottles

Description	Page	Pk	Cat. No.
Colour standards, Platinum-Cobalt colour (Pt-Co, Hazen)			
0 Hazen	95	1000 ml	84806.290
10 Hazen	95	1000 ml	84807.290
25 Hazen	95	1000 ml	84808.290
40 Hazen	95	1000 ml	84809.290
50 Hazen	95	1000 ml	84810.290
80 Hazen	95	1000 ml	84811.290
100 Hazen	95	1000 ml	84812.290
250 Hazen	95	1000 ml	84813.290
500 Hazen	95	1000 ml	84814.290
Colour standards solutions ASTM			
ASTM Colour Standard Sample A1	95	100 ml	84834.180
ASTM Colour Standard Sample A1	95	500 ml	84834.260
ASTM Colour Standard Sample A3	95	100 ml	84796.180
ASTM Colour Standard Sample A3	95	500 ml	84796.260
ASTM Colour Standard Sample A5	95	100 ml	84797.180
ASTM Colour Standard Sample A5	95	500 ml	84797.260
ASTM Colour Standard Sample A7	95	100 ml	84798.180
ASTM Colour Standard Sample A7	95	500 ml	84798.260
Gardner colour standards			
Gardner Colour Standard 2	95	500 ml	84815.260
Gardner Colour Standard 4	95	500 ml	84816.260
Gardner Colour Standard 6	95	500 ml	84817.260
Gardner Colour Standard 8	95	500 ml	84818.260
Gardner Colour Standard 10	95	500 ml	84819.260
Gardner Colour Standard 12	95	500 ml	84820.260
Gardner Colour Standard 14	95	500 ml	84821.260
Gardner Colour Standard 16	95	500 ml	84822.260
Colour standards, Saybolt			
Saybolt Colour Standard +12	95	100 ml	84803.180
Saybolt Colour Standard +12	95	500 ml	84803.260
Saybolt Colour Standard +15	95	100 ml	84802.180
Saybolt Colour Standard +15	95	500 ml	84802.260
Saybolt Colour Standard +19	95	100 ml	84801.180
Saybolt Colour Standard +19	95	500 ml	84801.260
Saybolt Colour Standard +25	95	100 ml	84800.180
Saybolt Colour Standard +25	95	500 ml	84800.260
Saybolt Colour Standard +30	95	100 ml	84799.180
Saybolt Colour Standard +30	95	500 ml	84799.260
Saybolt Colour Standard -15	95	100 ml	84805.180
Saybolt Colour Standard -15	95	500 ml	84805.260
Saybolt Colour Standard 0	95	100 ml	84804.180
Saybolt Colour Standard 0	95	500 ml	84804.260

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See Microbiology

Complexometry (reagents for)

EDTA (Ethylenediamine tetraacetic acid) analytical reagent p.129
EDTA dipotassium salt dihydrate analytical reagent p.130
EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent p.130
EDTA disodium salt 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution p.131
EDTA disodium salt 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution p.131
EDTA disodium salt 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution p.131
EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N′,N′-tetraacetic acid) analytical reagent p.132
Eriochrome Black T TECHNICAL p.144
Murexide analytical reagent p.312
Patton-Reeders reagent (Calconcarboxylic acid) analytical reagent p.329
5-Sulphosalicylic acid dihydrate AnalaR NORMAPUR® analytical reagent . p.469
Triethanolamine (Trolamine) analytical reagent p.495
Xylenol orange tetrasodium salt TECHNICAL p.522

Conductivity standard solutions

See Conductivity standard solutions p.457, 458

Conductivity standards

Description	Cat. No.	Pk	Pack type
Conductivity standard, KCl 0,01 mol/l; 1413 µS/cm	83607.180	100 ml	Plastic bottle
Conductivity standard, KCl 0,01 mol/l; 1413 µS/cm	83607.260	500 ml	Plastic bottle
Conductivity standard, KCl 0,1 mol/l; 12 800 µS/cm	83608.260	500 ml	Plastic bottle
Conductivity standard, KCl 0,01 mol/l; 1413 µS/cm	83607.290	1 l	Plastic bottle
Conductivity standard, KCl 0,1 mol/l; 12 800 µS/cm	83608.290	1 l	Plastic bottle

Conductivity standard, Ph.Eur. 5000 µS/cm

Directly traceable to NIST, tested and certified to ISO17025

Cat. No.	Pk	Pack type
85645.260	500 ml	Plastic bottle

Conductivity standard 1,000 µS/cm (25°C; 0,007 mol/l; KCl) for conductivity measurement

Directly traceable to NIST, tested and certified to ISO17025

Cat. No.	Pk	Pack type
85642.180	100 ml	Plastic bottle

Congo Red TECHNICAL

Danger

CAS 573-58-0
$C_{32}H_{22}N_6Na_2O_6S_2$ **M.W.** 696.67 g/mol
Melting Pt: > 360 °C
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
34140.184	100 g	Glass bottle

Congo Red 1% in aqueous solution

CAS 573-58-0
$C_{32}H_{22}N_6Na_2O_6S_2$ **M.W.** 696.67 g/mol
Boiling Pt: ~100 °C (1013 hPa) **Density:** 1 g/cm³ (20 °C)
Storage Temperature: Ambient

Transition range: pH 3,0 - 5,2

Appearance ..... Dark red liquid
Identification ..... Passes test

Cat. No.	Pk	Pack type
31727.295	1 l	Glass bottle

VWR LIFE SCIENCE Coomassie® Brilliant Blue G-250, ultrapure

Commonly used stain for the detection of protein bands following electrophoresis.

Cat. No.	Pk	Pack type
0615-10G	10 g	Glass bottle
0615-25G	25 g	Glass bottle
0615-50G	50 g	Plastic bottle

VWR LIFE SCIENCE Coomassie® Brilliant Blue G-250, proteomics grade

CAS 6104-58-1
$C_{47}H_{48}N_3NaO_7S_2$ **M.W.** 854.04 g/mol
Density: > 1 g/cm³ (20 °C)
Storage Temperature: Ambient

Em (595nm, Water) ..... > 36300
Protease ..... none detected
Protein Staining ..... Pass
Appearance ..... Blue to red crystalline powder

Cat. No.	Pk	Pack type
M140-10G	10 g	Glass bottle
M140-25G	25 g	Glass bottle
M140-50G	50 g	Glass bottle

Coomassie® Brilliant Blue G-250

CAS 6104-58-1
$C_{47}H_{48}N_3NaO_7S_2$ **M.W.** 854.04 g/mol
Density: > 1 g/cm³ (20 °C)
Storage Temperature: Ambient

Appearance ..... Violet-black powder
E (1 cm; λ max.) (1 %; dried; pH 7.0) ..... 450 - 570
Electrophoresis test ..... 450 to 570
Identity (TLC) ..... 577 to 584 nm
Loss on drying (110°C) ..... Max. 5 %
λmax. (buffer pH 7.0) ..... 577 - 584 nm

Cat. No.	Pk	Pack type
443293X	25 g	Glass bottle

VWR LIFE SCIENCE Coomassie® Brilliant Blue R-250

Commonly used stain for the detection of protein bands following electrophoresis.

Cat. No.	Pk	Pack type
0472-10G	10 g	Glass bottle
0472-25G	25 g	Glass bottle
0472-50G	50 g	Plastic bottle

VWR LIFE SCIENCE Coomassie® Brilliant Blue R-250, proteomics grade

CAS 6104-59-2
$C_{45}H_{44}N_3NaO_7S_2$ **M.W.** 825.98 g/mol
Melting Pt: 174-180 °C
Storage Temperature: Ambient

Dye Content (Dry Basis) ..... > 65%
Em (550nm, Water, Dry Basis) ..... > 33000
Appearance ..... Blue to red crystalline powder
Loss on Drying ..... < 5 %
Protease ..... none detected
Solubility (0.020g/L, Water) ..... Pass

Cat. No.	Pk	Pack type
M128-10G	10 g	Glass bottle
M128-25G	25 g	Glass bottle

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Coomassie® Brilliant Blue R-250

CAS 6104-59-2
$C_{45}H_{44}N_3NaO_7S_2$ **M.W.** 825.98 g/mol
Melting Pt: 174-180 °C
Storage Temperature: Ambient

Identity	Passes test (UV/Vis)
Suitability for electrophoresis	Passes test
Loss on drying (105 °C)	Max 5 %
Absorptivity (A 1%/1cm, Lambda max, 0.005%, in pH 7.0 buffer)	Min 300
Absorption max. Lambda (buffer pH 7.0)	554 to 559 nm
TLC test	Passes test

Cat. No.	Pk	Pack type
443283M	25 g	Glass bottle

Copolymer CV/A 85/15 (Copolymer vinyl chloride about 86% and vinyl acetate about 14%) TECHNICAL

Copolymer vinyl chloride about 86% and vinyl acetate about 14%

Apparent density after settling	0.3 to 0.6
Particle size	Max. 4 mm

Cat. No.	Pk	Pack type
27337.290	1 kg	Plastic bottle for solids

Copper, turnings AnalaR NORMAPUR® analytical reagent

CAS 7440-50-8
Cu **M.W.** 63.55 g/mol
Boiling Pt: 2595 °C (1013 hPa) **Melting Pt:** 1083 °C **Density:** 8,94 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Insolubility in nitric acid	Max. 0.05 %
Ag (Silver)	Max. 50 ppm	Fe + Al	Max. 0.025 %
Pb (Lead)	Max. 0.05 %		

Cat. No.	Pk	Pack type
23055.232	250 g	Plastic bottle
23055.298	1 kg	Bucket (Plastic)

NEW Copper standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Copper	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456722Y
Copper	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85561.180

Copper standard solution, 10,000 mg/l Cu in dil. nitric acid (from Cu) ARISTAR® standard for ICP

Cu in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455292D	100 ml	Plastic bottle
455294F	500 ml	Plastic bottle

Copper standard solution, 1,000 mg/l Cu in dil. nitric acid (from Cu) ARISTAR® standard for ICP (Cu in HNO_3)

Cu in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455282B	100 ml	Plastic bottle
455284D	500 ml	Plastic bottle

Copper standard solution, 1,000 mg/l Cu in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86673.180	100 ml	Plastic bottle
86673.260	500 ml	Plastic bottle

Copper (II) acetate monohydrate AnalaR NORMAPUR®

Danger

CAS 6046-93-1 **UN:** 3077
$(H_3CCOO)_2Cu{\cdot}H_2O$ **M.W.** 199.65 g/mol
Melting Pt: 115 °C **Density:** 1,88 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	98.0 - 102.0 %	Insolubility in water (5 %)	Max. 0.03 %
Cl (Chloride)	Max. 30 ppm	SO_4 (Sulphate)	Max. 100 ppm
Ca (Calcium)	Max. 50 ppm	Fe (Iron)	Max. 20 ppm
K (Potassium)	Max. 100 ppm	Na (Sodium)	Max. 0.05 %
Ni (Nickel)	Max. 100 ppm		

Cat. No.	Pk	Pack type
84843.230	250 g	Plastic bottle for solids

Copper aluminium zinc alloy (50:45:5 w%)

See Devarda's alloy p.108

Copper (II) carbonate basic GPR RECTAPUR®, precipitated

Warning

CAS 12069-69-1 **UN:** 3288
$CuCO_3{\cdot}Cu(OH)_2$ **M.W.** 221.12 g/mol
Melting Pt: 200 °C **Density:** 4 g/cm³ (20 °C)
REACh: 01-2119513711-50

Assay (calculated as Cu)	55 - 58 %
Cl (Chloride)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.2 %
Fe (Iron)	Max. 0.1 %
Na (Sodium)	Max. 0.5 %
Pb (Lead)	Max. 0.05 %

Cat. No.	Pk	Pack type
23081.298	1 kg	Plastic bottle for solids

Copper (II) carbonate dihydroxide

See Copper (II) carbonate basic p.97

Copper (II) carbonate-copper (II) hydroxide (1:1)

See Copper (II) carbonate basic p.97

Copper (II) chloride dihydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 10125-13-0 **UN:** 2802

$CuCl_2 \cdot 2H_2O$

M.W. 170.48 g/mol

Melting Pt: 100 °C **Density:** 2,54 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (20°C; 5 %)	3.0 - 3.8
Insolubility in water	Max. 100 ppm	Total N (Nitrogen)	Max. 30 ppm
SO_4 (Sulphate)	Max. 50 ppm	As (Arsenic)	Max. 1 ppm
Fe (Iron)	Max. 30 ppm	Ni (Nickel)	Max. 10 ppm
Pb (Lead)	Max. 40 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
23093.233	250 g	Plastic bottle for solids
23093.290	1 kg	Plastic bottle for solids

Copper (II) chloride dihydrate TECHNICAL

Warning

CAS 10125-13-0 **UN:** 2802

$CuCl_2 \cdot 2H_2O$

M.W. 170.48 g/mol

Melting Pt: 100 °C **Density:** 2,54 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 96 %

Cat. No.	Pk	Pack type
23089.262	500 g	Plastic bottle for solids
23089.364	5 kg	Bucket (Plastic)

Copper dichloride dihydrate

See Copper (II) chloride dihydrate p.98

Copper edetate solution Reag. Ph. Eur. 1022300

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87807.290	1 l	Plastic bottle

NEW Copper (II) ethylenediamine 1 mol/l VOLUSOL

Danger

CAS 14552-35-3 **UN:** 1761

$Cu(H_2NCH_2CH_2NH_2)_2(OH)_2$

M.W. 217.76 g/mol

Density (20/4)	1.096 - 1.102
Copper	0.98 - 1.02 mol/l
Mol proportion (Ethylenediamine/Cu)	1.90 - 2.10

Cat. No.	Pk	Pack type
5761.5000	5 l	Plastic container

Copper (II) ethylenediamine complex 1 mol/l (3 N) aqueous solution TECHNICAL

Danger

CAS 13426-91-0 **UN:** 1761

$C_4H_{16}CuN_4$

M.W. 183.74 g/mol

Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Density (20/4)	1.096 - 1.100
Mol proportion (Etylenediamine/Cu)	1.96 - 2.04

Cat. No.	Pk	Pack type
24991.290	1 l	Glass bottle

Copper (II) nitrate hemipentahydrate GPR RECTAPUR®

Danger

CAS 19004-19-4 **UN:** 1477

$Cu(NO_3)_2 \cdot 2,5H_2O$

M.W. 232.59 g/mol

Melting Pt: 114 °C **Density:** 2,05 g/cm³ (20 °C)

Assay	Min. 98 %
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 100 ppm
Pb (Lead)	Max. 100 ppm

Cat. No.	Pk	Pack type
23123.294	1 kg	Plastic bottle for solids

Copper (II) nitrate hemipentahydrate TECHNICAL

Danger

CAS 19004-19-4 **UN:** 1477

$Cu(NO_3)_2 \cdot 2,5H_2O$

M.W. 232.59 g/mol

Melting Pt: 114 °C **Density:** 2,05 g/cm³ (20 °C)

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
23121.297	1 kg	Plastic bottle for solids
23121.366	5 kg	Bucket (Plastic)

Copper oxide

See Copper (II) oxide p.98

Copper (II) oxide, powder AnalaR NORMAPUR®

Warning

CAS 1317-38-0 **UN:** 3077

CuO

M.W. 79.55 g/mol

Boiling Pt: 2000 °C (1013 hPa) **Melting Pt:** 1326 °C **Density:** 4,9 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 97.0 %	Insolubility in hydrochloric acid	Max. 100 ppm
Cl (Chloride)	Max. 0.1 %	As (Arsenic)	Max. 50 ppm
Cd (Cadmium)	Max. 20 ppm	Fe (Iron)	Max. 100 ppm
Pb (Lead)	Max. 80 ppm	Zn (Zinc)	Max. 0.15 %

Cat. No.	Pk	Pack type
84844.180	100 g	Plastic bottle for solids
84844.260	500 g	Plastic bottle for solids

Copper (II) oxide, wire for micro analysis 3.00 x 0.50 mm

Warning

CAS 1317-38-0 **UN:** 3077

CuO

M.W. 79.55 g/mol

Boiling Pt: 2000 °C (1013 hPa) **Melting Pt:** 1326 °C **Density:** 4,9 g/cm³ (20 °C)

Storage Temperature: Ambient

Particle size (< 36 mesh) ..... Passes test

Cat. No.	Pk	Pack type
11005CK	5 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Copper (II) oxide, powder TECHNICAL

Warning

CAS 1317-38-0 **UN:** 3077
CuO **M.W.** 79.55 g/mol
Boiling Pt: 2000 °C (1013 hPa) **Melting Pt:** 1326 °C **Density:** 4,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 94 %

Cat. No.	Pk	Pack type
23144.263	500 g	Plastic bottle for solids

COD reagents

Concentrated solution

Dilute 1 volume in 9 volumes of water to obtain a COD theorical value of 100 mg/litre

Description	Pk	Cat. No.
Copper (II) phthalocyanine-tetrasulphonic acid tetrasodium salt 0.666 g/l aqueous solution for COD determination according to NFT 90-101 standard	1 l	84519.290

Copper (II) sulphate, anhydrous AnalaR NORMAPUR®

Warning

CAS 7758-98-7 **UN:** 3288
$CuSO_4$ **M.W.** 159.61 g/mol
Melting Pt: 200 °C **Density:** 3,603 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance).. Min. 99.0 %
Insolubility in water ..... Max. 100 ppm
Substances not precipitated by H_2S ..... Max. 0.2 %
Cl (Chloride) ..... Max. 50 ppm
Pb (Lead)..... Max. 100 ppm
Identification ..... Passes test
Loss on drying (250°C) ..... Max. 1 %
Total N (Nitrogen) ..... Max. 20 ppm
Fe (Iron)..... Max. 50 ppm

Cat. No.	Pk	Pack type
84845.230	250 g	Plastic bottle for solids
84845.290	1 kg	Plastic bottle for solids

Copper (II) sulphate, anhydrous TECHNICAL

Warning

CAS 7758-98-7 **UN:** 3288
$CuSO_4$ **M.W.** 159.61 g/mol
Melting Pt: 200 °C **Density:** 3,603 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay..... Min. 97 %

Cat. No.	Pk	Pack type
23168.265	500 g	Plastic bottle for solids

Copper (II) sulphate pentahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 7758-99-8 **UN:** 3077
$CuSO_4 \cdot 5H_2O$ **M.W.** 249.69 g/mol
Density: 2,284 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119520566-40

Assay..... 99.0 - 102.0 %
Total N (Nitrogen) ..... Max. 10 ppm
Ca (Calcium)..... Max. 50 ppm
K (Potassium)..... Max. 10 ppm
Na (Sodium)..... Max. 50 ppm
Pb (Lead)..... Max. 50 ppm
Conforms to ACS ..... Passes test
Insolubility in water ..... Max. 50 ppm
Cl (Chloride) ..... Max. 5 ppm
Fe (Iron)..... Max. 30 ppm
Mg (Magnesium) ..... Max. 50 ppm
Ni (Nickel) ..... Max. 50 ppm
Zn (Zinc)..... Max. 0.03 %
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
23174.233	250 g	Plastic bottle for solids
23174.290	1 kg	Plastic bottle for solids
23174.360	5 kg	Plastic bottle for solids

Copper(II) sulphate pentahydrate, crystallised Ph. Eur.

Warning

CAS 7758-99-8 **UN:** 3077
$CuSO_4 \cdot 5H_2O$ **M.W.** 249.69 g/mol
Density: 2,284 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119520566-40

Assay..... 99.0 - 101.0 %
Appearance ..... Conforms (see CoA/CoS)
Identification A..... Passes test
Identification C..... Passes test
Solution S..... Passes test
Appearance of solution ..... Passes test
Cl (Chloride) ..... Max. 100 ppm
Fe (Iron)..... Max. 100 ppm
Pb (Lead)..... Max. 50 ppm
Loss on drying (250°C) ..... 35 - 36.5 %
Residual solvents ..... Unlikely by manuf.process

Cat. No.	Pk	Pack type
83686.292	1 kg	Plastic bottle for solids
83686.361	5 kg	Plastic bottle for solids

Copper (II) sulphate pentahydrate, purified

Warning

CAS 7758-99-8 **UN:** 3077
$CuSO_4 \cdot 5H_2O$ **M.W.** 249.69 g/mol
Density: 2,284 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119520566-40

Assay..... Min. 98.5 %
Cl (Chloride) ..... Max. 20 ppm
Fe (Iron)..... Max. 100 ppm

Cat. No.	Pk	Pack type
23172.293	1 kg	Plastic bottle for solids
23172.362	5 kg	Bucket (Plastic)

Copper (II) sulphate pentahydrate TECHNICAL

Warning

CAS 7758-99-8 **UN:** 3077
$CuSO_4 \cdot 5H_2O$ **M.W.** 249.69 g/mol
Density: 2,284 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119520566-40

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
23165.298	1 kg	Plastic bottle for solids
23165.367	5 kg	Bucket (Plastic)

Copper (II) sulphate 0.5 mol/l Reag. Ph. Eur. 1022501

Warning

CAS 7758-98-7 **UN:** 3082
$CuSO_4$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87808.290	1 l	Plastic bottle

NEW Copper (II) sulphate (0.5 mol/l) USP test solutions (TS)

CAS 7758-98-7 **UN:** 3082
$CuSO_4$
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85343.180	100 ml	Plastic bottle
85343.260	500 ml	Plastic bottle

Copper tetramine complex in aqueous solution (Copper (II) hydroxide 10% in ammonia solution 20%) Reag. Ph. Eur. 1022600

Danger

CAS 20427-59-2 **UN:** 3266
$Cu(OH)_2$ **M.W.** 97.56 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87809.180	100 ml	Plastic bottle

Coverquick

See Q Path® Coverquick mounting agents for microscopy p.292

VWR LIFE SCIENCE Creatine phosphate disodium salt, high purity

CAS 922-32-7
$C_4H_8N_3Na_2O_5P$
Storage Temperature: Freezer

ATP	< = 0.002 %
Inorganic Phosphate	<= 0.5 %
Purity (Enzymatic)	> 97 %
Water (KF)	20 % - 24 %

Cat. No.	Pk	Pack type
0271-10G	10 g	Glass bottle
0271-25G	25 g	Plastic bottle for solids

m-Cresol GPR RECTAPUR®

Danger

CAS 108-39-4 **UN:** 2076
$CH_3C_6H_4OH$ **M.W.** 108.14 g/mol
Boiling Pt: 202,2 °C (1013 hPa) **Melting Pt:** 11,5 °C **Density:** 1,0336 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Bromine water test	Passes test
Colouration	Passes test
Ferric chloride test	Passes test
Identification	Passes test
Non-volatile residue	Max. 0.1 %
p- and o-Cresol and related substances	Max. 2.0 %

Cat. No.	Pk	Pack type
23048.261	500 ml	Glass bottle

o-Cresolphthalein 20 g/l in ethanol 70% VOLUSOL®

Danger

CAS 596-27-0 **UN:** 1170
$C_{22}H_{18}O_4$
Density: 0,886 g/cm³ (20 °C)
Storage Temperature: Ambient
An alternative to phenolphthalein in solution.

Transition range pH 8.2 - 9.8	Passes test

Cat. No.	Pk	Pack type
84599.180	100 ml	Plastic bottle
84599.260	500 ml	Plastic bottle

Cryo-Jet Lamb's freezing aerosol

See Norflurano, Cryo-Jet Lamb's freezing aerosol p.321

Cryolab Q Path® freezing aerosol

Warning

UN: 1950
Specially used for freezing of surgical parts before the cutting process with cryostat or with a freezing microtome.

Cat. No.	Pk	Pack type
00528200.	1 KIT	Aerosol can
13328202.	1 KIT	Aerosol can

VWR LIFE SCIENCE Crystal Violet USP

Danger

CAS 548-62-9 **UN:** 3077
$C_{25}H_{30}ClN_3$ **M.W.** 407.99 g/mol
Melting Pt: 189-194 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< = 0.001 %
Dye Content	96 - 100.5
Insolubles (Alcohol)	<= 1 %
Lead	< 0.003 %
Residue on Ignition	< 1.5 %
Water	< 7.5 %
Zinc	< 0.05 %

Cat. No.	Pk	Pack type
0528-100G	100 g	Glass bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Crystal violet solution Reag. Ph. Eur. 1022901

Danger

UN: 2789

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87811.180	100 ml	Plastic bottle

CTAB

See Cetrimonium bromide p.83

NEW Cupric citrate solution USP test solutions (TS)

Warning

UN: 3082

Boiling Pt: 100 °C **Density:** 1,31293 g/cm³ (20 °C)

Ready to use solutions.

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85342.180	100 ml	Glass bottle
85342.260	500 ml	Glass bottle

Cupri-citric solution Reag. Ph. Eur. 1023100

Warning

UN: 3082

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87812.290	1 l	Plastic bottle

Cupri-citric solution R1 Reag. Ph. Eur. 1023200

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87813.290	1 l	Plastic bottle

Cupric chloride dihydrate

See Copper (II) chloride dihydrate p.98

Cupric oxide

See Copper (II) oxide p.98

Cupric sulphate pentahydrate

See Copper (II) sulphate pentahydrate p.99

Cupric sulphate

See Copper (II) sulphate p.99

Cupri-tartaric solution R4 Reag. Ph. Eur. 1023304

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87815.290	1 l	Plastic bottle

Cyanomethane

See Acetonitrile p.10

Cyanomethane-D3

See Acetonitrile-[D3] p.13

2,5-Cyclohexadiene-1,4-dione, compd. with 1,4-benzenediol (1:1)

See Quinhydrone p.383

Cyclohexane HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-82-7 **UN:** 1145

C_6H_{12} **M.W.** 84.16 g/mol

Boiling Pt: 81 °C (1013 hPa) **Melting Pt:** 7 °C **Density:** 0,7785 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119463273-41

Assay (GC)	Min. 99.50 %
Water	Max. 0.0100 %
Non-volatile residue	Max. 0.0005 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Transmittance (230 nm)	Min. 75.0 %
Transmittance (240 nm)	Min. 80.0 %
Transmittance (250 nm)	Min. 98.0 %

Cat. No.	Pk	Pack type
83629.290	1 l	Glass bottle
83629.320	2,5 l	Glass bottle

Cyclohexane SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-82-7 **UN:** 1145

C_6H_{12} **M.W.** 84.16 g/mol

Boiling Pt: 81 °C (1013 hPa) **Melting Pt:** 7 °C **Density:** 0,7785 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119463273-41

Assay (on anhydrous substance)	Min. 99.7 %
Density (20/4)	0.778 - 0.779
Evaporation residue	Max. 10 ppm
Water	Max. 100 ppm
Transmittance (210 nm)	Min. 15 %
Transmittance (220 nm)	Min. 45 %
Transmittance (230 nm)	Min. 75 %
Transmittance (240 nm)	Min. 90 %
Transmittance (from 250 nm)	Min. 98 %

Cat. No.	Pk	Pack type
23225.296	1 l	Glass bottle

NEW Cyclohexane, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85656.180	100 ml	Glass bottle

NEW Cyclohexane PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 110-82-7 **UN:** 1145
C_6H_{12} **M.W.** 84.16 g/mol
Boiling Pt: 81 °C (1013 hPa) **Melting Pt:** 7 °C **Density:** 0,7785 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463273-41

Appearance	Clear colourless liquid
Identity (IR)	Conforms
Assay (calculated on anhydrous)	Min. 99.7 %
Residue after evaporation	Max. 0.0003 %(m)
Water	Max. 0.01 M%
Colour	Max. 10 APHA
GC/ECD dioxins, furans and PCB's	Max. 5 ng/l
GC/ECD any pesticide (as Lindane)	Max. 5 ng/l
GC/NPD any pesticide (as Parathion)	Max. 10 ng/l
GC/ECD 1,2,4-TCB to deca-PCB(as Lindane)	Max. 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max. 2.0 ng/ml
GC/MSD C_{10} to C_{40} (as Decane; 30-600amu)	Max. 2.0 ng/ml

Cat. No.	Pk	Pack type
85385.320	2,5 l	Glass bottle

Cyclohexane PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-82-7 **UN:** 1145
C_6H_{12} **M.W.** 84.16 g/mol
Boiling Pt: 81 °C (1013 hPa) **Melting Pt:** 7 °C **Density:** 0,7785 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463273-41

Assay (on anhydrous substance)	Min. 99.50 %
Evaporation residue	Max. 5 ppm
Water	Max. 0.0200 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83658.290	1 l	Glass bottle
83658.320	2,5 l	Glass bottle

Cyclohexane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 110-82-7 **UN:** 1145
C_6H_{12} **M.W.** 84.16 g/mol
Boiling Pt: 81 °C (1013 hPa) **Melting Pt:** 7 °C **Density:** 0,7785 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463273-41

Assay (on anhydrous substance)	Min. 99.5 %	IR Spectrum	Passes test
Readily carbonisable substances	Passes test	Boiling point	79 - 81 °C
Colouration	Max. 10 APHA	Density (20/4)	0.778 - 0.779
Density (20/20)	0.779 - 0.780	Free acidity	Max. 0.0003 meq/g
Solidification point	5.5 - 6.5 °C	Substances coloured by H_2SO_4	Max. 60 APHA
Benzene	Max. 100 ppm	Cyclohexene	Max. 100 ppm
Evaporation residue	Max. 10 ppm	Water	Max. 100 ppm
Al (Aluminium)	Max. 0.1 ppm	Ba (Barium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 1 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
23224.293	1 l	Glass bottle
23224.327	2,5 l	Glass bottle
23224.362	5 l	Aluminium bottle
23224.550	200 l	Metal drum

Cyclohexane GPR RECTAPUR®

Danger

CAS 110-82-7 **UN:** 1145
C_6H_{12} **M.W.** 84.16 g/mol
Boiling Pt: 81 °C (1013 hPa) **Melting Pt:** 7 °C **Density:** 0,7785 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463273-41

Assay	Min. 99 %
IR Spectrum	Passes test
Substances coloured by H_2SO_4	Passes test
Boiling point	79 - 81 °C
Density (20/4)	0.778 - 0.779
Free acidity	Max. 0.0002 meq/g
Solidification point	5.5 - 6.5 °C
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
23223.290	1 l	Glass bottle
23223.324	2,5 l	Glass bottle
23223.368	5 l	Metal can
23223.461	25 l	Metal drum
23223.552	200 l	Metal drum

trans-Cyclohexane-1,2-dinitrilotetraacetic acid monohydrate

See trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid monohydrate p.108

Cyclohexanone analytical reagent

Warning

CAS 108-94-1 **UN:** 1915
$C_6H_{10}(=O)$ **M.W.** 98.14 g/mol
Boiling Pt: 155,6 °C (1013 hPa) **Melting Pt:** -31 °C **Density:** 0,9478 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119453616-35

Assay	Min. 99.0 %
Acidity	Max. 0.005 meq/g
Boiling point	154.5 - 156.5 °C
Density (20/4)	0.946 - 0.948
n 20/D	1.449 - 1.451
Viscosity (25°C)	1.92 - 2.2 mPa.s
Cyclohexanol	Max. 0.5 %
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
23236.294	1 l	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Cyclohexanone GPR RECTAPUR®

Warning

CAS 108-94-1 **UN:** 1915
$C_6H_{10}(=O)$ **M.W.** 98.14 g/mol
Boiling Pt: 155,6 °C (1013 hPa) **Melting Pt:** -31 °C **Density:** 0,9478 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119453616-35

Assay	Min. 99 %
IR Spectrum	Passes test
n 20/D	1.449 - 1.451
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
23235.291	1 l	Glass bottle
23235.360	5 l	Plastic bottle
23235.462	25 l	Metal drum

Cyclohexatriene

See Benzene p.55

Cyclohexene GPR RECTAPUR®

Danger

CAS 110-83-8 **UN:** 2256
C_6H_{10} **M.W.** 82.15 g/mol
Boiling Pt: 83 °C (1013 hPa) **Melting Pt:** -104 °C **Density:** 0,81 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Boiling point	82 - 84 °C
Density (20/4)	0.810 - 0.820
n 20/D	1.445 - 1.447
Evaporation residue	Max. 0.02 %

Cat. No.	Pk	Pack type
23238.427	2,5 l	Glass bottle SAFEBREAK

VWR LIFE SCIENCE Cycloheximide, ultrapure

Danger

CAS 66-81-9 **UN:** 2811
$C_{15}H_{23}NO_4$ **M.W.** 281.35 g/mol
Storage Temperature: Ambient
Inhibitor of protein synthesis in eukaryotic organisms. Widely used to determine protein half-life and as a selection agent for yeast and fungi. Working concentration: 100 - 1000 µg/ml.

Cat. No.	Pk	Pack type
94271-100MG	100 mg	Glass bottle
94271-1G	1 g	Glass bottle
94271-5G	5 g	Glass bottle
94271-25G	25 g	Glass bottle

Cycloheximide

Danger

CAS 66-81-9 **UN:** 2811
$C_{15}H_{23}NO_4$ **M.W.** 281.35 g/mol
Storage Temperature: Ambient
Inhibits DNA and protein synthesis

Assay	Min. 90.0 %
Melting point	107 - 120 °C

Cat. No.	Pk	Pack type
441892A	1 g	Glass bottle
441894C	10 g	Glass bottle

trans-Cyclohex-1,2-ylenediaminetetra(acetic acid) monohydrate

See trans-1,2-Diaminocyclohexane-N,N,N′,N′-tetraacetic acid monohydrate p.108

Cyclopentane TECHNICAL

Danger

CAS 287-92-3 **UN:** 1146
C_5H_{10} **M.W.** 70.13 g/mol
Boiling Pt: 49 °C (1013 hPa) **Melting Pt:** -93,3 °C **Density:** 0,746 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
IR Spectrum	Passes test
Density (20/4)	0.740 - 0.745

Cat. No.	Pk	Pack type
23251.183	100 ml	Glass bottle

Cyclopentyl methyl ether (CPME) stabilised GPR RECTAPUR®

Stabilised with BHT (Ionol) 50 ppm

Danger

CAS 5614-37-9 **UN:** 3271
$C_6H_{12}O$ **M.W.** 100.16 g/mol
Melting Pt: -140 °C **Density:** 0,86 g/cm³ (20 °C)

Assay (on anhydrous substance)	Min. 99.9 %
Colouration	Max. 10 APHA
Peroxides (as H_2O_2)	Max. 50 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
84565.290	1 l	Glass bottle
84565.360	5 l	Plastic bottle

CyDTA monohydrate

See trans-1,2-Diaminocyclohexane-N,N,N′,N′-tetraacetic acid monohydrate p.108

VWR LIFE SCIENCE L(+)-Cysteine, high purity

Warning

CAS 52-90-4
$HSCH_2CH(NH_2)CO_2H$ **M.W.** 121.16 g/mol
Boiling Pt: 254 °C (1013 hPa) **Melting Pt:** 115 °C **Density:** 1,523 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 0.0002%
Assay	98 % - 102 %
Chloride	< 0.05 %
Heavy Metals	< 0.001 %
Iron	< 0.003 %
Loss on Drying	< 0.5 %
Residue on Ignition	< 0.2 %
Specific Rotation	7° - 9°
Sulphate	< 0.03 %

Cat. No.	Pk	Pack type
J994-100G	100 g	Plastic bottle for solids
J994-500G	500 g	Plastic bottle for solids

L(+)-Cysteine hydrochloride, high purity

CAS 52-89-1

$HSCH_2CH(NH_2)COOH{\cdot}HCl$ **M.W.** 157.62 g/mol

Melting Pt: 175 °C

Storage Temperature: Ambient

Arsenic ..... < 1.5 ppm
Chloride ..... 22 % - 23 %
Heavy Metals ..... < 0.0015 %
Purity ..... > 98.5 %
Residue after Ignition ..... < 0.4 %
Specific Rotation ..... 5.7 - 8.9
Sulphate ..... < 0.03 %

Cat. No.	Pk	Pack type
E305-50G	50 g	Plastic bottle for solids
E305-100G	100 g	Plastic bottle for solids

L(+)-Cysteine hydrochloride monohydrate for biochemistry

CAS 7048-04-6

$HSCH_2CH(NH_2)COOH{\cdot}HCl{\cdot}H_2O$ **M.W.** 175.64 g/mol

Melting Pt: 168-170 °C

Storage Temperature: Ambient

Assay (on anhydrous substance) ..... 98.5 - 101.0 %
Spec.opt.rot.(80 g/l;HCl 250 g/l; dried) ..... 5.5 - 7.0 °
Heavy metals (as Pb) ..... Max. 10 ppm
Loss on drying (Vacuum<0,7 kPa, P_2O_5, 24h) ..... 8 - 12 %
SO_4 (Sulphate) ..... Max. 0.03 %
Ninhydrin-positive substances (LC) .....
Ammonium (570 nm) ..... Max. 0.02 %
Any impurity ..... Max. 0.2 %
Impurity A (570 nm) ..... Max. 0.5 %
Total impurities ..... Max. 1.0 %

Cat. No.	Pk	Pack type
23257.183	100 g	Plastic bottle for solids

L(+)-Cysteine hydrochloride monohydrate, high purity

CAS 7048-04-6

$HSCH_2CH(NH_2)COOH{\cdot}HCl{\cdot}H_2O$ **M.W.** 175.64 g/mol

Melting Pt: 168-170 °C

Storage Temperature: Ambient

Arsenic ..... < 0.00015 %
Chloride Content ..... 19.8 % - 20.8 %
Heavy Metals (as Pb) ..... < 0.0015 %
Iron ..... < 0.003 %
Loss on Drying ..... 8 % - 12 %
Purity ..... > 99 %
Residue on Ignition ..... < 0.4 %
Specific Rotation ..... +5.7 to +6.8 °
Sulphate ..... < 0.03 %

Cat. No.	Pk	Pack type
0206-250G	250 g	Plastic bottle for solids
0206-500G	500 g	Plastic bottle for solids
0206-1KG	1 kg	Plastic bottle for solids

NEW L-Cystine dihydrochloride for biopharmaceutical production

CAS 30925-07-6

$C_6H_{12}N_2O_4S_2{\cdot}2HCl$ **M.W.** 313.23 g/mol

Melting Pt: 228-232 °C

Assay (dried substance) ..... 98.0 - 102.0 %
Appearance ..... Crystalline powder
Appearance (color) ..... White to pale yellow
Identification by IR ..... Conforms to structure
Solubility in water (100 mg/l) ..... Clear and complete
Spec.rot.(C=2;HCl 1N; 20°C; dried@105°C) ..... -225 to -210 °
Heavy metals (as Pb) ..... Max. 10 ppm
Loss on drying (105°C) ..... Max. 1.0 %
Residue on ignition ..... Max. 0.1 %
Cl (Chloride) ..... 22.2 - 23.5 %
SO_4 (Sulphate) ..... Max. 0.030 %
Bioburden ..... Max. 100 CFU/g
Cell culture toxicity (@ 0,06 g/l) ..... Passes test
Endotoxin (0,1 %; KTA) ..... Max. 0.1 EU/mg

Cat. No.	Pk	Pack type
21502.180	100 g	Plastic bottle for solids
21502.297	1 kg	Plastic bottle for solids
21502.366	5 kg	Bucket (Plastic)
21502.468	25 kg	Bucket (Plastic)

L(+)-Cysteine hydrochloride monohydrate TECHNICAL

CAS 7048-04-6

$HSCH_2CH(NH_2)COOH{\cdot}HCl{\cdot}H_2O$ **M.W.** 175.64 g/mol

Melting Pt: 168-170 °C

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
23255.186	100 g	Plastic bottle for solids

(R)-(+)-Cysteine hydrochloride monohydrate

See L(+)-Cysteine hydrochloride monohydrate p.104

Q Path® Cytofix

Q Path® Cytofix solution is a fixative commonly used in cytology. It is perfectly suited and recommended for urine, pleural or peritoneal fluid cytologies, bronchial washings and cervical/vaginal samples. The fixative combines the coagulant qualities of alcohol to enable a better fixation of nuclear and cytoplasmic elements. The erythrocytes are lysed and therefore do not obscure the observation of the elements of interest. This fixative can be used according to the Saccomanno method.

- Q Path® Cytofix is ready for use

Description	Pk	Cat. No.
Q Path® Cytofix	5 l	00656746.

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

DAB (3,3'-Diaminobenzidine tetrahydrochloride hydrate), reagent grade

Warning

CAS 868272-85-9
$C_{12}H_{14}N_4 \cdot 4HCl \cdot H_2O$
Storage Temperature: Freezer
Commonly used for detection of horseradish peroxidase in membrane-bound and *in situ* applications. Insoluble end product is resistant to alcohol and fading, making it ideal for immunohistochemistry.

Function Test ..... pass
Purity ..... > 98 %
Solubility (5%, Water) ..... pass

Cat. No.	Pk	Pack type
0430-5G	5 g	Glass bottle

DAB substrate system for biotechnology

Complete substrate system includes 20 DAB substrate tablets, peroxidase solution and a mixing/dispensing dropper bottle for fast and easy preparation. Each tablet will yield 10 ml of substrate solution, enough to effectively detect 50 cm^2 of membrane or about 20 slides.

Cat. No.	Pk	Pack type
E885-200ML	200 ml	Kit

DAB substrate tablets (5mg/240mg) for biotechnology

Danger

DAB is commonly used for detection of horseradish peroxidase in membrane-bound and *in situ* applications. Insoluble end product is resistant to alcohol and fading, making it ideal for immunohistochemistry. Each tablet contains 5 mg of DAB and will yield 10 ml of substrate solution, enough to effectively detect 50 cm^2 of membrane or about 20 slides.

Cat. No.	Pk	Pack type
E733-100TABS	100	Glass bottle
E733-50TABS	50 Tab.	Glass bottle

2,4'-DDE, extra pure

Danger

CAS 3424-82-6 **UN:** 2930
$C_{14}H_8Cl_4$ **M.W.** 318.03 g/mol
Boiling Pt: 64-65 °C (1013 hPa) **Melting Pt:** -98 °C
Storage Temperature: Refrigerator

Cat. No.	Pk	Pack type
123842Q	10 mg	Glass ampoule

o,p'-DDE

See 2,4'-DDE p.105

DEAE-Dextran, high purity

CAS 9015-73-0
Storage Temperature: Ambient

Ash ..... < = 1 %
Loss on Drying ..... <= 5 %
Nitrogen Content ..... 3 % - 3.5 %
pH (1%, 1M KCl) @25°C ..... 4 - 6
Specific Optical Rotation ..... 140 ° - 150 °

Cat. No.	Pk	Pack type
0445-50G	50 g	Plastic bottle for solids

Decahydronaphthalene (mixture of cis and trans isomers) TECHNICAL

Danger

CAS 91-17-8 **UN:** 1147
$C_{10}H_{18}$ **M.W.** 138.25 g/mol
Boiling Pt: 189-191 °C (1013 hPa) **Melting Pt:** ~ -40 °C **Density:** 0,8696 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119565127-37

Assay (calculated as mixture of isomers) ..... Min. 99 %
n 20/D ..... 1.473 - 1.475

Cat. No.	Pk	Pack type
23269.297	1 l	Glass bottle

Decalcifiers, DC1 slow-acting

Contains a mixture of formic acids and formalin. Ready to use for applications in histology and pathology laboratories. Recommended volume: 20x the fragment volume.

- Decalcify and simultaneously fix the smaller fragments no bigger then 5 mm in 2 to 4 hours

Description	Pk	Cat. No.
Decalcifier DC1 bag-in-box	5 l	11028303.
Decalcifier DC1	2,5 l	11028305.

Decalcifiers, DC2 medium-acting

Contains a mixture of hydrochloric acids. Ready to use for applications in histology and pathology laboratories. Recommended volume: 20x the fragment volume.

- No formalin in the mixture, so to be used for decalcify larger tissues that already have been fixated

Description	Pk	Cat. No.
Decalcifier DC2 medium bag-in-box	5 l	11028304.
Decalcifier DC2 medium	2,5 l	11028306.

Decalcifiers, DC3 fast-acting

Contains a mixture of hydrochloric acid and alcohols with some EDTA. Ready to use for applications in histology and pathology laboratories. Recommended volume: 20x the fragment volume.

- Decalcify larger tissues that already have been fixated

Description	Pk	Cat. No.
Decalcifier DC3 rapid	2,5 l	09128300.

Decalin

See Decahydronaphthalene (mixture of cis and trans isomers) p.105

1,10-Decanedioic acid di(2-ethylhexyl) ester

See Bis(2-ethylhexyl) sebacate p.59

N-Decyl-N,N-dimethyl-3-ammonio-1-propanesulphonate

See Sulfobetaine-10, SB-10 (N-Decyl-N,N-dimethyl-3-ammonio-1-propanesulphonate) p.469

Dehydrated buffered peptone water, pre-weighed

See Microbiology

Denhardt's solution, 100X, for biotechnology

A blocking reagent for Northern and Southern blots that prevents probe binding on open membrane space and non target nucleic acids.

Cat. No.	Pk	Pack type
E257-50ML	50 ml	Plastic bottle

Denhardt's solution, 50X, ultrapure

A blocking reagent used to help prevent probe binding to open membrane space and non target nucleic acids.

Cat. No.	Pk	Pack type
E717-50ML	50 ml	Plastic bottle

Density standards

See Density standards referenced at 15 °C ..... p. 446

Deoxy-Big CHAP (N,N-Bis[3-(D-gluconamido) propyl]deoxycholamide)

Warning

CAS 86303-23-3
$C_{42}H_{75}N_3O_{15}$
Storage Temperature: Refrigerator
Non ionic detergent.

IR ..... PASS
Solubility (10%, Water) ..... PASS

Cat. No.	Pk	Pack type
J570-500MG	500 mg	Glass bottle

2-Deoxy-D(-)-ribose, ultrapure

CAS 533-67-5
$C_5H_{10}O_4$ **M.W.** 134.13 g/mol
Boiling Pt: 292 °C (1013 hPa) **Melting Pt:** 95 - 97 °C
Storage Temperature: Ambient

Ash ..... 0.5 %
Expiration Date ..... REPORT
Iron ..... <0.0005 %
Loss on Drying ..... 0.25 %
Specific Rotation (1%, Water) ..... -58.0 to -54.0 °

Cat. No.	Pk	Pack type
0657-10G	10 g	Glass bottle

Deoxycholic acid sodium salt

See Sodium deoxycholate p.414

DEPC

See Diethyl pyrocarbonate p.116

Destaining solution Reag. Ph. Eur. 1012202

UN: 2921
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87788.290	1 l	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Deuterated NMR solvents

- Packed in 10x 0.6 (0.75) ml glass ampoules or 10, 25, 100 or 500 ml glass bottles
- Packed also in 10 ml with special septum caps (see codes ending in 0011)
- More than 99.9% purity, from 99.8% to 99.96% deuteration degree, with and without TMS
- These solvents also have a very low water content
- Isotopic enrichment (FT NM R 400 MH z) min. 99.80% D (99.5% for acetic acid D4)

Description	Page	Pk	Cat. No.
Acetone-[D6] (99,8% D) for NMR spectroscopy	8, 107	10 ml	87152.0010
Acetone-[D6] (99,8% D) for NMR spectroscopy	8, 107	10 ml	87152.0011
Acetone-[D6] (99,8% D) for NMR spectroscopy	8, 107	25 ml	87152.0025
Acetone-[D6] (99,8% D) for NMR spectroscopy	8, 107	100 ml	87152.0100
Acetone-[D6] (99,8% D) for NMR spectroscopy	8, 107	1 Pack	87152.0006
Acetonitrile-[D3] (99,8% D) for NMR spectroscopy	13, 107	10 ml	87155.0010
Acetonitrile-[D3] (99,8% D) for NMR spectroscopy	13, 107	10 ml	87155.0011
Benzene-[D6] (99,8% D) for NMR spectroscopy	55, 107	10 ml	87160.0010
Benzene-[D6] (99,8% D) for NMR spectroscopy	55, 107	10 ml	87160.0011
Benzene-[D6] (99,8% D) for NMR spectroscopy	55, 107	25 ml	87160.0025
Benzene-[D6] (99,8% D) for NMR spectroscopy	55, 107	100 ml	87160.0100
Chloroform-[D1] 99.96% for NMR spectroscopy	88, 107	1 SET	84890.0007
Chloroform-[D1] (99,8% D) for NMR spectroscopy	88, 107	10 ml	87153.0010
Chloroform-[D1] (99,8% D) for NMR spectroscopy	88, 107	25 ml	87153.0025
Chloroform-[D1] (99,8% D) for NMR spectroscopy	88, 107	100 ml	87153.0100
Chloroform-[D1] (99,8% D) for NMR spectroscopy	88, 107	500 ml	87153.0500
Chloroform-[D1] (99,8% D) for NMR spectroscopy	88, 107	1 Pack	87153.0006
Chloroform-[D1] 0.03% TMS (99,8% D) + 0.03% TMS for NMR spectroscopy	88, 107	100 ml	84111.0100
Deuterium oxide (99,96% D) for NMR spectroscopy	107, 108	10 ml	87156.0011
Deuterium oxide (99,96% D) for NMR spectroscopy	107, 108	25 ml	87156.0025
Deuterium oxide (99,96% D) for NMR spectroscopy	107, 108	100 ml	87156.0100
Deuterium oxide (99.92% D) for NMR spectroscopy	107, 108	500 ml	84541.0500
Dichloromethane-[D2] (99,8% D) for NMR spectroscopy	107, 112	10 ml	87161.0010
Dichloromethane-[D2] (99,8% D) for NMR spectroscopy	107, 112	25 ml	87161.0025
Dichloromethane-[D2] (99,8% D) for NMR spectroscopy	107, 112	1 Pack	87161.0006
Dimethyl sulphoxide-[D6] (99,8% D) for NMR spectroscopy	107, 122	10 ml	87154.0010
Dimethyl sulphoxide-[D6] (99,8% D) for NMR spectroscopy	107, 122	10 ml	87154.0011
Dimethyl sulphoxide-[D6] (99,8% D) for NMR spectroscopy	107, 122	25 ml	87154.0025
Dimethyl sulphoxide-[D6] (99,8% D) for NMR spectroscopy	107, 122	100 ml	87154.0100
Dimethyl sulphoxide-[D6] (99,8% D) for NMR spectroscopy	107, 122	1 Pack	87154.0006
Dimethyl sulphoxide-[D6] 0.03% TMS (99.8% D) + 0,03% TMS for NMR spectroscopy	107, 122	25 ml	84113.0025
Dimethyl sulphoxide-[D6] 0.03% TMS (99.8% D) + 0,03% TMS for NMR spectroscopy	107, 122	100 ml	84113.0100
Dimethyl sulphoxide-[D6] 0.03% TMS (99.8% D) + 0,03% TMS for NMR spectroscopy	107, 122	1 Pack	84113.0007
Dimethyl sulphoxide-[D6] (99.96% D) for NMR spectroscopy	107, 122	25 ml	84888.0025
Dimethyl sulphoxide-[D6] (99.96% D) for NMR spectroscopy	107, 122	1 SET	84888.0007
Dimethyl sulphoxide-[D6] + 0.03% TMS (99,96% D) for NMR spectroscopy	107, 122	1 SET	84889.0007
Methanol-[D4] (99.80% D) for NMR spectroscopy	107, 259	10 ml	87157.0010
Methanol-[D4] (99.80% D) for NMR spectroscopy	107, 259	10 ml	87157.0011
Methanol-[D4] (99.80% D) for NMR spectroscopy	107, 259	25 ml	87157.0025
Methanol-[D4] (99.80% D) for NMR spectroscopy	107, 259	100 ml	87157.0100
Methanol-[D4] (99.80% D) for NMR spectroscopy	107, 259	1 Pack	87157.0006
Methanol-[D4] (99.8% D) contains 0.03% TMS for NMR spectroscopy	107, 259	10 ml	84116.0010
Tetrahydrofuran-[D8] (99.5% D) for NMR spectroscopy	107, 484	10 ml	87158.0010
Toluene-[D8] (99.5% D) for NMR spectroscopy	107, 492	10 ml	87159.0010
Toluene-[D8] (99.5% D) for NMR spectroscopy	107, 492	25 ml	87159.0025

0011 - Glass bottle with septum cap
0007 - 10× 0.75 ml
0006 - 10× 0.6 ml

Deuterium oxide (99,96% D) for NMR spectroscopy

CAS 7789-20-0

D_2O **M.W.** 20 g/mol

Boiling Pt: 101,3 °C (1013 hPa) **Melting Pt:** 3,8 °C **Density:** 1,1 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.96 %

Cat. No.	Pk	Pack type
87156.0011	10 ml	Glass bottle with septum cap
87156.0025	25 ml	Glass bottle
87156.0100	100 ml	Glass bottle

Deuterium oxide (99.92% D) for NMR spectroscopy

CAS 7789-20-0

D_2O **M.W.** 20 g/mol

Boiling Pt: 101,3 °C (1013 hPa) **Melting Pt:** 3,8 °C **Density:** 1,1 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.92 %

Cat. No.	Pk	Pack type
84541.0500	500 ml	Glass bottle

Devarda's alloy, powder AnalaR NORMAPUR® analytical reagent

CAS 8049-11-4 **UN:** 3089

Boiling Pt: 906 °C (1013 hPa) **Melting Pt:** 490-560 °C **Density:** 5,79 g/cm³ (20 °C)

Storage Temperature: Ambient

N (Nitrogen) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
20942.181	100 g	Plastic bottle for solids
20942.294	1 kg	Plastic bottle for solids

Devarda's metal

See Devarda's alloy p.108

Dextran, reagent grade

CAS 9004-54-0

$(C_6H_{10}O_5)n$ **M.W.** 162.14 g/mol

Storage Temperature: Ambient

Loss on Drying ..... < = 7 %
pH (6%, Water) @25°C ..... 3.75 - 7
Residue after Ignition ..... <= 2 %

Cat. No.	Pk	Pack type
0665-10G	10 g	Plastic bottle for solids
0665-100G	100 g	Plastic bottle for solids

Dextran 150 (Mr ~ 150,000 g/mol), powder

CAS 9004-54-0

$(C_6H_{10}O_5)n$ **M.W.** 150000 g/mol

Appearance ..... White/almost white powder
Intrinsic viscosity (37°C) ..... 0.32 - 0.37
Loss on drying ..... Max. 10.0 %
pH range ..... 4.0 - 7.0
Solubility in water (1 %) ..... Passes test
Ashes ..... Max. 2.0 %

Cat. No.	Pk	Pack type
381082M	100 g	Glass bottle
381082M1	1 kg	Glass bottle

Dextran 250 (Mr ~ 250,000 g/mol), powder

CAS 9004-54-0

$(C_6H_{10}O_5)n$ **M.W.** 250000 g/mol

Appearance ..... White/almost white powder
Intrinsic viscosity (37°C) ..... 0.4 - 0.5
Loss on drying ..... Max. 10.0 %
pH range ..... 4.0 - 7.0
Solubility in water (1 %) ..... Passes test
Ashes ..... Max. 2.0 %

Cat. No.	Pk	Pack type
381092P	100 g	Glass bottle

Dextran sulphate 500 sodium salt (Mr ~500,000 g/mol), ultrapure

CAS 9011-18-1

$(C_6H_7Na_3O_{14}S_3)n$ **M.W.** 500000 g/mol

Storage Temperature: Refrigerator

Used for the detection of DNA or RNA in nucleic acid hybridisation procedures. It effectively "excludes" probe from solution, accelerating the rate of annealing.

DNase ..... none detected
Heavy Metals ..... <= 0.005 %
RNase ..... none detected
Iron ..... <= 0.001 %
Loss on Drying ..... <= 10 %
pH (1%, Water) @25°C ..... 6.4 - 8
Protease ..... none
Purity ..... > 98 %

Cat. No.	Pk	Pack type
0198-50G	50 g	Plastic bottle for solids
0198-250G	250 g	Plastic bottle for solids

Dextran sulphate sodium salt solution 50% for biotechnology

Warning

Used for the detection of DNA or RNA in nucleic acid hybridisation procedures. It effectively "excludes" probe from solution, accelerating the rate of annealing.

APHA (1:10) ..... Tan to yellow haze-free liquid
DNase ..... none detected
RNase ..... none detected
Sterility ..... Pass

Cat. No.	Pk	Pack type
E516-100ML	100 ml	Plastic bottle

DFB

See Decalcifiers, DC3 fast-acting p.105

Diacetone alcohol

See 4-Hydroxy-4-methyl-2-pentanone p.207

Diacetyl dioxime

See Dimethyl glyoxime p.120

Diacetyl glyoxime

See Dimethyl glyoxime p.120

(S)-(+)-2,6-Diaminocaproic acid monohydrochloride

See L(+)-Lysine monohydrochloride p.244

trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid monohydrate

Warning

CAS 125572-95-4

$C_{14}H_{22}N_2O_8 \cdot 1H_2O$ **M.W.** 364.35 g/mol

Melting Pt: 213-216 °C

Storage Temperature: Ambient

Assay (calculated on anhydrous) ..... Min. 99.0 %
Heavy metals (as Pb) ..... Max. 10 ppm
Ignition residue (SO_4) ..... Max. 0.1 %
SO_4 (Sulphate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
20284.153	50 g	Plastic bottle for solids

1,2-Diaminoethane

See Ethylenediamine p.155

(S)-(+)-2,6-Diaminohexanoic acid monohydrochloride

See L(+)-Lysine monohydrochloride p.244

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3,8-Diamino-5-methyl-6-phenylphenanthridinium bromide

See Dimidium bromide p.122

2,7-Diamino-10-methyl-9-phenylphenanthridinium bromide

See Dimidium bromide p.122

Diammonium hexanitratocerate

See Ammonium cerium (IV) nitrate p.31

Diammonium hydrogen 2-hydroxypropane-1,2,3-tricarboxylate

See di-Ammonium hydrogen citrate p.35

Diammonium hydrogenorthophosphate

See di-Ammonium hydrogen orthophosphate p.35

Diamondfuchsin

See Dyes and Stains p.290

Diaphragm cleaner with thiourea for pH-electrodes

Warning

UN: 3082

M.W. 76.12 g/mol
Melting Pt: 177 °C **Density:** 1,017 g/cm³ (20 °C)
Storage Temperature: Ambient

Control ..... Passes test

Cat. No.	Pk	Pack type
83604.260	500 ml	Plastic bottle

Diazinon, extra pure

Warning

CAS 333-41-5 **UN:** 3018
$C_{12}H_{21}N_2O_3PS$ **M.W.** 304.35 g/mol
Boiling Pt: 306 °C (1013 hPa) **Density:** 1,116-1,119g/cm³ (20 °C)

Cat. No.	Pk	Pack type
123962A	10 mg	Glass ampoule

Diazinon 100 µg/ml in methanol, pesticide reference standard

Cat. No.	Pk	Pack type
123972C	1 ml	Glass ampoule

Dibismuth carbonate dioxide

See Bismuth (III) carbonate basic p.59

Dibismuth trioxide

See Bismuth (III) oxide p.60

Dibutylamine, purified

Warning

CAS 111-92-2 **UN:** 2248
$C_8H_{19}N$ **M.W.** 129.25 g/mol
Boiling Pt: 159 °C (1013 hPa) **Melting Pt:** -62 °C **Density:** 0,759 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
23337.293	1 l	Glass bottle

Dicarboxylic-1,2 acids (reagents for the analysis of)

Resorcinol AnalaR NORMAPUR® analytical reagent p.388

1,2-Dichloroethane GPR RECTAPUR®

Danger

CAS 107-06-2 **UN:** 1184
ClH_2CCH_2Cl **M.W.** 98.96 g/mol
Boiling Pt: 83,5 °C (1013 hPa) **Melting Pt:** -35,5 °C **Density:** 1,254 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484658-20

Assay ..... Min. 99 %
Boiling point ..... 82.5 - 84.0 °C
Density (20/4) ..... 1.252 - 1.254
Evaporation residue ..... Max. 50 ppm

Cat. No.	Pk	Pack type
23341.297	1 l	Glass bottle

NEW 1,2-Dichloroethane, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85657.180	100 ml	Glass bottle

1,2-Dichloroethane AnalaR NORMAPUR® analytical reagent

Danger

CAS 107-06-2 **UN:** 1184
ClH_2CCH_2Cl **M.W.** 98.96 g/mol
Boiling Pt: 83,5 °C (1013 hPa) **Melting Pt:** -35,5 °C **Density:** 1,254 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484658-20

Assay ..... Min. 99.5 %
Boiling point ..... 82.5 - 84.0 °C
Evaporation residue ..... Max. 10 ppm
Water ..... Max. 0.03 %
Acidity ..... Max. 0.0005 meq/g
Density (20/4) ..... 1.252 - 1.254
Free chlorine ..... Max. 1 ppm

Cat. No.	Pk	Pack type
23343.294	1 l	Glass bottle
23343.328	2,5 l	Glass bottle

Dichloromethane stabilised HiPerSolv CHROMANORM® for HPLC

Stabilised with ethanol 0.1 %
Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,3300 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 10 ppm
Water	Max. 0.05 %
Absorbance (240 nm)	Max. 0.3
Absorbance (245 nm)	Max. 0.1
Absorbance (260 nm)	Max. 0.01
Transmittance (240 nm)	Min. 50 %
Transmittance (245 nm)	Min. 80 %
Transmittance (260 nm)	Min. 98 %

Cat. No.	Pk	Pack type
83623.290	1 l	Glass bottle
83623.320	2,5 l	Glass bottle

Dichloromethane stabilised HiPerSolv CHROMANORM® for HPLC

Stabilised with 2-methyl-2-butene 20 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 10 ppm
Water	Max. 0.05 %
Absorbance (240 nm)	Max. 0.3
Absorbance (245 nm)	Max. 0.1
Absorbance (260 nm)	Max. 0.01
Transmittance (240 nm)	Min. 50 %
Transmittance (245 nm)	Min. 80 %
Transmittance (260 nm)	Min. 98 %

Cat. No.	Pk	Pack type
23373.290	1 l	Glass bottle
23373.320	2,5 l	Glass bottle
23373.400	4 l	Glass bottle

NEW Dichloromethane stabilised HiPerSolv CHROMANORM® for preparative HPLC

Stabilised with 2-methyl-2-butene 20 ppm

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Cat. No.	Pk	Pack type
84534.550	189 l	Metal drum

Dichloromethane stabilised SPECTRONORM® for spectroscopy

Stabilised with 2-methyl-2-butene
Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39.8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1.322 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (GC)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.01 %
Transmittance (230 nm)	Min. 5 %
Transmittance (240 nm)	Min. 80 %
Transmittance (250 nm)	Min. 90 %
Transmittance (260 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84702.290	1 l	Glass bottle

Dichloromethane, anhydrous (max. 0.001 % H_2O) stabilised

Stabilised with 2-methyl-2-butene 20 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 10 ppm

Cat. No.	Pk	Pack type
83682.230	250 ml	Glass bottle with septum cap
83682.290	1 l	Glass bottle

NEW Dichloromethane (DCM) stabilised, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Stabilised with amylene.

Cat. No.	Pk	Pack type
85658.180	100 ml	Glass bottle

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NEW Dichloromethane stabilised PESTINORM® SUPRA TRACE for organic trace analysis

Stabilised with amylene 0.002-0.006 %
Filtered through a 0.2 µm filter, packaged under inert gas.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Appearance	Clear colourless liquid
Assay (calculated on anhydrous)	Min. 99.9 %
Identity (IR)	Conforms
Residue after evaporation	Max. 0.0003 %(m)
Water	Max. 0.005 %(m)
Colour	Max. 10 APHA
GC/ECD dioxins, furans and PCB's	Max. 2.0 ng/l
GC/ECD any pesticide (as Lindane)	Min. 2 ng/l
GC/NPD any pesticide (as Parathion)	Max. 5 ng/l
GC/ECD 1,2,4-TCB to deca-PCB(as Lindane)	Max. 2.0 pg/ml
GC/FID C_{10} to C_{40} (as n-Decane)	Max. 2.0 ng/ml
GC/MSD C_{10} to C_{40} (as Decane; 30-600amu)	Max. 2.0 ng/ml
Stabilizer (Amylene)	0.002 - 0.006 %(m)

Cat. No.	Pk	Pack type
85386.320	2,5 l	Glass bottle

Dichloromethane stabilised PESTINORM® for capillary GC analysis

Stabilised with 2-methyl-2-butene 20 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue (100°C)	Max. 0.0005 %
Water	Max. 0.05 %
Organic residue (as Octanol) (GC/FID)	Max. 10 ng/l
Halogenated residue (as Lindane)(GC/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83961.320	2,5 l	Glass bottle

Dichloromethane stabilised PESTINORM® for pesticide residue analysis

Stabilised with 2-methyl-2-butene 20 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (on anhydrous substance)	Min. 99.80 %
Water	Max. 0.0200 %
Evaporation residue	Max. 0.0005 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83665.290	1 l	Glass bottle
83665.320	2,5 l	Glass bottle
83665.400	4 l	Glass bottle

Dichloromethane, anhydrous (max. 0.005% H_2O) stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with 2-methyl-2-butene 20 ppm

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Appearance	Clear colourless liquid	Acidity	Max. 0.0010 %
Colour value	Max. 10 APHA	Assay (calculated on anhydrous)	Min. 99.8 %
Water (K.F.)	Max. 0.0050 %	Chloromethane	Max. 0.0100 %
Carbon tetrachloride	Max. 0.0100 %	Substances discoloured by H_2SO_4	Max. 60 APHA
Free chlorine	Max. 0.00003 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.3 ppm

Cat. No.	Pk	Pack type
25630.290	1 l	Glass bottle

Dichloromethane stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Stabilised with 2-methyl-2-butene 20 ppm

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (on anhydrous substance)	Min. 99.5 %	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test	IR Spectrum	Passes test
Acidity	Max. 0.0003 meq/g	Boiling point	39 - 40.5 °C
Colouration	Max. 10 APHA	Density (20/4)	1.322 - 1.327
Substances coloured by H_2SO_4	Max. 60 APHA	Carbon tetrachloride	Max. 100 ppm
Chloroform	Max. 100 ppm	Evaporation residue	Max. 10 ppm
Free halogens	Max. 0.3 ppm	2-Methyl-2-butene	10 - 55 ppm
Water	Max. 0.02 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
23366.293	1 l	Glass bottle
23366.327	2,5 l	Glass bottle

Dichloromethane stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with ethanol 0.2 %

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (on anhydrous substance)	Min. 99.5 %	Acidity	Max. 0.0005 meq/g
Boiling point	39.0 - 40.5 °C	Colouration	Max. 10 APHA
Density (20/4)	1.322 - 1.327	Substances coloured by H_2SO_4	Max. 60 APHA
Carbon tetrachloride	Max. 100 ppm	Chloroform	Max. 100 ppm
Ethanol	0.15 - 0.25 %	Evaporation residue	Max. 10 ppm
Free chlorine	Max. 0.3 ppm	Water	Max. 0.02 %
Al (Aluminium)	Max. 0.05 ppm	B (Boron)	Max. 0.01 ppm
Ba (Barium)	Max. 0.01 ppm	Ca (Calcium)	Max. 0.2 ppm
Cd (Cadmium)	Max. 0.02 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.01 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.05 ppm
Zn (Zinc)	Max. 1 ppm		

Cat. No.	Pk	Pack type
23354.292	1 l	Glass bottle
23354.326	2,5 l	Glass bottle

Dichloromethane stabilised Ph. Eur.

Stabilised with ethanol 0.1 %

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Appearance	Clear colourless liquid
Identification B	Passes test
Identification C	Passes test
Acidity	Passes test
Relative density	1.320 - 1.332
Refractive index (20°C)	1.423 - 1.425
Ethanol (V/V)	Max. 2 %
2-Methyl-2-butene (V/V)	Max. 300 ppm
Total of other impurities (V/V)	Max. 0.1 %
Impurity A (V/V)	Max. 10 ppm
Impurity B (V/V)	Max. 50 ppm
Free chlorine	Passes test
Heavy metals (as Pb)	Max. 1 ppm
Residue on evaporation	Max. 20 ppm
Water	Max. 0.02 %
Other residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
23365.290	1 l	Glass bottle
23365.461	25 l	Metal drum
23365.552	190 l	Metal drum

Dichloromethane stabilised GPR RECTAPUR®

Stabilised with 2-methyl-2-butene 20 ppm

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay	Min. 99 %
IR Spectrum	Passes test
Boiling point	39.0 - 40.5 °C
Acidity	Max. 0.0004 meq/g
Density (20/4)	1.322 - 1.327
Evaporation residue	Max. 10 ppm
Free chlorine	Max. 0.3 ppm
Heavy metals (as Pb)	Max. 2 ppm
Water	Max. 0.02 %
Cl (Chloride)	Max. 3 ppm

Cat. No.	Pk	Pack type
23367.296	1 l	Glass bottle
23367.321	2,5 l	Glass bottle
23367.365	5 l	Fluorinated plastic bottle
23367.467	25 l	Metal drum
23367.550	189 l	Metal drum

Dichloromethane stabilised GPR RECTAPUR®

Stabilised with ethanol 0.1 %

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay	Min. 99 %
Acidity	Max. 0.0004 meq/g
Boiling point	39.0 - 40.5 °C
Density (20/4)	1.322 - 1.327
Evaporation residue	Max. 20 ppm
Water	Max. 0.02 %

Cat. No.	Pk	Pack type
25631.293	1 l	Glass bottle
25631.327	2,5 l	Glass bottle
25631.362	5 l	Fluorinated plastic bottle
25631.464	25 l	Metal drum
25631.555	190 l	Metal drum

Dichloromethane, dehydrated (max. 0.01% H_2O) stabilised GPR RECTAPUR® for synthesis

Stabilised with ethanol 0.1 %

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay	Min. 99 %
Evaporation residue	Max. 50 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
23349.363	5 l	Fluorinated plastic bottle

Dichloromethane stabilised TECHNICAL

Stabilised with ethanol 0.15 %

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Boiling Pt: 39,8 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,322 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480404-41

Assay (on anhydrous substance)	Min. 98 %

Cat. No.	Pk	Pack type
25629.295	1 l	Glass bottle
25629.364	5 l	Fluorinated plastic bottle
25629.466	25 l	Metal drum
25629.557	190 l	Metal drum

Dichloromethane, acidified with 1% hydrochloric acid Reag. Ph. Eur. 1055901

Warning

CAS 75-09-2 **UN:** 1593
CH_2Cl_2 **M.W.** 84.93 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87871.180	100 ml	Plastic bottle

Dichloromethane-[D2] (99,8% D) for NMR spectroscopy

Warning

CAS 1665-00-5 **UN:** 1593
CD_2Cl_2 **M.W.** 86.92 g/mol
Boiling Pt: 40 °C (1013 hPa) **Melting Pt:** -97 °C **Density:** 1,36 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.80 %
Water	Max. 0.02 %

Cat. No.	Pk	Pk Info	Pack type
87161.0010	10 ml	-	Glass bottle
87161.0025	25 ml	-	Glass bottle
87161.0006	1 Pack	10× 0,6 ml	Glass ampoule

3,5-Dichloro-N-(1,1-dimethylprop-2-ynyl)benzamide

See Propyzamide p.380

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2,6-Dichlorophenolindophenol sodium salt, tablets for the determination of vitamin C

CAS 620-45-1
$C_{12}H_6Cl_2NNaO_2$ **M.W.** 290.08 g/mol
Storage Temperature: Ambient

An accurate determination of the Vitamin C content of urine in cases of suspected deficiency, or following the administration of a test dose, can be made within a few minutes by the use of compressed tablets, each containing an accurately standardized quantity of 2,6-dichlorophenolindophenol. Dichlorophenolindophenol tablets BDH contain an amount of the indicator which is reduced to its colourless form by 1 mg of Vitamin C (20 international units); that is to say 1 mg of Vitamin C is just sufficient to decolourise a solution containing one tablet.

Appearance	Purple tablets
Shape	Biconvex
Tablet weight	114 to 140 mg
Diameter	6.0 - 7.0 mm
Average hardness (kp)	Min. 2

Cat. No.	Pk	Pack type
230212X	20 Tab.	Plastic bottle

2,6-Dichlorophenolindophenol sodium salt hydrate, powder analytical reagent

CAS 620-45-1
$C_{12}H_6Cl_2NNaO_2 \cdot H_2O$ **M.W.** 308.1 g/mol
Melting Pt: > 300 °C

Assay (on anhydrous substance)	Min. 98 %
IR Spectrum	Passes test
Foreign dyestuffs	Passes test
Loss on drying (120°C)	Max. 14 %

Cat. No.	Pk	Pack type
23347.105	5 g	Glass bottle

NEW Diethanolamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84965.180	100 ml	Plastic bottle

Diethylamine GPR RECTAPUR®

Danger

CAS 109-89-7 **UN:** 1154
$(C_2H_5)_2NH$ **M.W.** 73.14 g/mol
Boiling Pt: 55,5 °C (1013 hPa) **Melting Pt:** -50 °C **Density:** 0,7048 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Boiling point	54 - 56 °C
Density (20/4)	0.700 - 0.710
Evaporation residue	Max. 0.05 %
Heavy metals (as Pb)	Max. 20 ppm

Cat. No.	Pk	Pack type
23378.261	500 ml	Glass bottle

(Diethylamino)ethane

See Triethylamine ... p.495

(Diethyldithiocarbamato-S,S')silver

See Silver diethyldithiocarbamate ... p.403

(Diethyldithiocarbamato-S,S')sodium trihydrate

See Sodium diethyldithiocarbamate trihydrate ... p.414

N,N-Diethyldithiocarbamic acid silver salt

See Silver diethyldithiocarbamate p.403

Diethyldithiocarbamic acid silver salt

See Silver diethyldithiocarbamate p.403

Diethyldithiocarbamic acid sodium salt trihydrate

See Sodium diethyldithiocarbamate trihydrate..... p.414

N,N-Diethyldithiocarbamic acid sodium salt trihydrate

See Sodium diethyldithiocarbamate trihydrate..... p.414

1,4-Diethylene dioxide

See 1,4-Dioxane p.123

Diethylene glycol monobutyl ether TECHNICAL

Warning

CAS 112-34-5
$CH_3(CH_2)_3OCH_2CH_2OCH_2CH_2OH$ **M.W.** 162.23 g/mol
Boiling Pt: 230,4 °C (1013 hPa) **Melting Pt:** -68 °C **Density:** 0,954 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
n 20/D	1.431 - 1.433

Cat. No.	Pk	Pack type
23831.291	1 l	Glass bottle

Diethyl ether stabilised HiPerSolv CHROMANORM® for HPLC

Stabilised with ethanol 1 %
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Assay (on anhydrous substance)	Min. 99.50 %
Water	Max. 0.050 %
Evaporation residue	Max. 0.0005 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Peroxides	Max. 5 ppm
Colour number (Hazen)	Max. 10
Transmittance (220 nm)	Min. 30.0 %
Transmittance (230 nm)	Min. 50.0 %
Transmittance (250 nm)	Min. 80.0 %
Transmittance (270 nm)	Min. 90.0 %
Transmittance (300 nm)	Min. 98.0 %

Cat. No.	Pk	Pack type
83624.320	2,5 l	Glass bottle

Diethyl ether, anhydrous (max. 0.005% H_2O) stabilised

Stabilised with BHT (Ionol) 7-10 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29
250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (calculated on anhydrous)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0003 %
Water	Max. 0.0050 %

Cat. No.	Pk	Pack type
83671.230	250 ml	Glass bottle with septum cap

NEW Diethyl ether, anhydrous (max. 0.005% H_2O) stabilised

Stabilised with BHT (Ionol) 7-10 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Cat. No.	Pk	Pack type
85022.290	1 l	Glass bottle

Diethyl ether stabilised PESTINORM® for pesticide residue analysis

Stabilised with ethanol < 1%
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Assay (on anhydrous substance)	Min. 99.50 %
Evaporation residue	Max. 5 ppm
Water	Max. 0.0200 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83659.320	2,5 l	Glass bottle

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Diethyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Stabilised with BHT (Ionol) 4-10 ppm

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Assay	Min. 99.7 %	Assay (Ionol/BHT)	4.0 - 10.0 ppm
Aldehydes	Not detected by GC	Insolubility in water	Passes test
IR Spectrum	Passes test	Acidity	Max. 0.0001 meq/g
Boiling point	34 - 35 °C	Colouration	Max. 10 APHA
Relative density	0.714 - 0.715	Substances coloured by H_2SO_4	Max. 10 APHA
Acetone	Max. 10 ppm	Aldehydes + ketones (as HCHO)	Max. 5 ppm
Carbonyl compounds (as HCHO)	Max. 10 ppm	Ethanol	Max. 0.05 %
Evaporation residue	Max. 5 ppm	Methanol	Max. 0.02 %
Peroxides (as H_2O_2)	Max. 0.15 ppm	Water	Max. 100 ppm
Al (Aluminium)	Max. 0.5 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.05 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Na (Sodium)	Max. 0.1 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Sr (Strontium)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.1 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
23811.290	1 l	Plastic bottle
23811.292	1 l	Glass bottle
23811.326	2,5 l	Glass bottle
23811.361	5 l	Aluminium bottle
23811.463	25 l	Steel drum

Diethyl ether stabilised Ph. Eur.

Stabilised with BHT (Ionol)

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Assay (Ionol/BHT)	Passes test
Appearance	Clear colourless liquid
Acidity	Passes test
Relative density	0.714 - 0.716
Distillation range	34 - 35 °C
Non-volatile matter	Max. 20 mg/l
Substances with a foreign odour	Passes test
Aldehydes	Passes test
Peroxides	Passes test
Water	Max. 2 g/l
Residual solvents	Passes test

Cat. No.	Pk	Pack type
23819.298	1 l	Glass bottle
23819.367	5 l	Aluminium bottle
23819.460	25 l	Steel drum

Diethyl ether stabilised GPR RECTAPUR® peroxide free

Stabilised with BHT (Ionol) 4-7 ppm

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Assay	Min. 99 %
Assay (Ionol/BHT)	4 - 10 ppm
Acidity or alkalinity	Max. 0.0002 meq/g
Aldehydes + ketones (as HCHO)	Max. 5 ppm
Evaporation residue	Max. 20 ppm
Peroxides (as H_2O_2)	Max. 0.15 ppm
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
23806.328	2,5 l	Glass bottle

Diethyl ether stabilised GPR RECTAPUR®

Stabilised with BHT (Ionol) 4-7 ppm

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Assay	Min. 99 %
Assay (Ionol/BHT)	4 - 10 ppm
Acidity	Max. 0.0003 meq/g
Evaporation residue	Max. 20 ppm
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
23809.294	1 l	Glass bottle
23809.328	2,5 l	Glass bottle
23809.363	5 l	Aluminium bottle
23809.465	25 l	Metal drum

Diethyl ether stabilised TECHNICAL, rectified

Stabilised with BHT (Ionol) 4-10 ppm

Danger

CAS 60-29-7 **UN:** 1155
$(CH_3CH_2)_2O$ **M.W.** 74.12 g/mol
Boiling Pt: 35 °C (1013 hPa) **Melting Pt:** -123 °C **Density:** 0,7135 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119535785-29

Identification	Passes test

Cat. No.	Pk	Pack type
23807.366	5 l	Aluminium bottle
23807.468	25 l	Metal drum
23807.550	195 l	Metal drum

Diethyl phthalate GPR RECTAPUR®

CAS 84-66-2
$C_{12}H_{14}O_4$ **M.W.** 222.24 g/mol
Boiling Pt: 298 °C (1013 hPa) **Melting Pt:** -3 °C **Density:** 1,12 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %
Density (20/4)	1.110 - 1.120
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
23395.362	5 l	Plastic bottle

Diethyl phthalate TECHNICAL

CAS 84-66-2

$C_{12}H_{14}O_4$ **M.W.** 222.24 g/mol
Boiling Pt: 298 °C (1013 hPa) **Melting Pt:** -3 °C **Density:** 1,12 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
23995.467	25 l	Metal drum

VWR LIFE SCIENCE Diethyl pyrocarbonate, high purity

Warning

CAS 1609-47-8

$O(COOC_2H_5)_2$ **M.W.** 162.14 g/mol
Boiling Pt: 93 °C (1013 hPa) **Density:** 1,123 g/cm³ (20 °C)
Storage Temperature: Refrigerator

DEPC is used to inactivate RNase enzymes from water and other laboratory utensils. DEPC covalently modifies histidine residues in RNase enzymes. DEPC can be used with PBS or MOPS buffer, but is incompatible with Tris and HEPES.

Purity (acid assay) ..... > 97.5 %

Cat. No.	Pk	Pack type
E174-5G	5 g	Glass bottle
E174-25G	25 g	Glass bottle
E174-100G	100 g	Glass bottle

O,O-Diethyl O-2-isopropyl 6-methyl pyrimidin-4-yl phosphorothionate

See Diazinon p.109

O,O-Diethyl O-2-isopropyl 6-methyl pyrimidin-4-yl thiophosphate

See Diazinon p.109

O,O-Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothionate

See Chlorpyrifos p.88

O,O-Diethyl O-3,5,6-trichloro-2-pyridyl thiophosphate

See Chlorpyrifos p.88

Diholmium trioxide

See Holmium (III) oxide p.191

1,2-Dihydroacenaphthylene

See Acenaphthene p.1

Dihydrogen hexachloroplatinate(IV) hexahydrate

See Hexachloroplatinic (IV) acid hexahydrate p.186

(6aS,11bR)-7,11b-Dihydro-6H-indeno[2,1-c]chromene-3,4,6a,9,10-pentol monohydrate

See Haematoxylin monohydrate p.290

beta-Dihydronicotinamide adenine dinucleotide disodium salt (NADH-Na_2, reduced form)

Cat. No.	Pk	Pack type
424237L	0,5 g	Glass bottle
424236K	2,5 g	Glass bottle

3,7-Dihydro-1,3,7-trimethyl-1H-purine-2,6-dione

See Caffeine p.73

1,3-Dihydroxybenzene

See Resorcinol p.388

1,4-Dihydroxybenzene

See Hydroquinone p.207

3α,12α-Dihydroxy-5β-cholan-24-oic acid sodium salt

See Sodium deoxycholate p.414

3α,12α-Dihydroxycholan-24-oic acid sodium salt

See Sodium deoxycholate p.414

3α,12α-Dihydroxy-5β-cholanic acid sodium salt

See Sodium deoxycholate p.414

3α,12α-Dihydroxycholanic acid sodium salt

See Sodium deoxycholate p.414

6,7-Dihydroxycumarin-6β-D-glucopyranoside sesquihydrate

See Aesculin sesquihydrate p.18

1,2-Dihydroxy ethane

See Ethylene glycol p.154

1,3-Dihydroxy propane

See 1,3-Propanediol p.376

(±)-1,2-Dihydroxy propane

See (±)-1,2-Propanediol p.376

4,5-Dihydroxy-2,7-naphthalenedisulphonic acid disodium salt dihydrate

See Chromotropic acid disodium salt dihydrate p.90

3,4-dihydroxyanthraquinon-2-ylmethyliminodi(acetic acid)

See Alizarin complexone p.22

4,5-Dihydroxynaphthalene-2,7-disulphonic acid disodium salt dihydrate

See Chromotropic acid disodium salt dihydrate p.90

(R,R)-(+)-2,3-Dihydroxysuccinic acid

See L(+)-Tartaric acid p.478

2,2'-Dihydroxy-4'-sulpho-1,1'-azonaphthalene-3-carboxylic acid

See Patton-Reeders reagent (Calconcarboxylic acid) p.329

2,6-Dihydroxy-1,3,7-trimethylpurine

See Caffeine p.73

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Diiodomethane AnalaR NORMAPUR® analytical reagent, for mineralogy

CAS 75-11-6 **UN:** 2810
CH_2I_2
M.W. 267.84 g/mol
Boiling Pt: 182 °C (1013 hPa) **Melting Pt:** 6 °C **Density:** 3,32537 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.4 %	Acidity	Max. 0.003 meq/g
Density (20/4)	3.310 - 3.322	Solidification point	5.6 - 6.2 °C

Cat. No.	Pk	Pack type
25633.186	100 ml	Glass bottle

Diiron trioxide

See Iron (III) oxide p.225

Diiron trissulphate hydrate

See Iron (III) sulphate hydrate p.226

Diisobutylene

See 2,4,4-Trimethylpentene p.498

NEW

Di-isopropyl ether, stabilised, secondary reference standard for GC, PESTINORM®

Stabilised with BHT (2,6-Di-tert-butyl-p-cresol, 2,6-Di-tert-butyl-4-methylphenol, Ionol) 40 ppm. A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85659.180	100 ml	Glass bottle

Diisopropyl ether stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Stabilised with BHT (Ionol) 10 ppm

Danger

CAS 108-20-3 **UN:** 1159
$(CH_3)_2CHOCH(CH_3)_2$
M.W. 102.18 g/mol
Boiling Pt: 68,5 °C (1013 hPa) **Melting Pt:** -86 °C **Density:** 0,726 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Acidity	Max. 0.0007 meq/g
Boiling point	67 - 69 °C	Colouration	Max. 10 APHA
Density (20/20)	0.723 - 0.728	Evaporation residue	Max. 50 ppm
Peroxides (as H_2O_2)	Max. 10 ppm	Water	Max. 0.05 %
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.2 ppm
Ba (Barium)	Max. 0.2 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.2 ppm	Co (Cobalt)	Max. 0.2 ppm
Cr (Chromium)	Max. 0.2 ppm	Cu (Copper)	Max. 0.2 ppm
Fe (Iron)	Max. 0.5 ppm	Mg (Magnesium)	Max. 0.2 ppm
Mn (Manganese)	Max. 0.2 ppm	Ni (Nickel)	Max. 0.2 ppm
Pb (Lead)	Max. 0.2 ppm	Sn (Tin)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.2 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
24900.296	1 l	Glass bottle

Diisopropyl ether stabilised TECHNICAL

Stabilised with BHT (Ionol) 10 ppm

Danger

CAS 108-20-3 **UN:** 1159
$(CH_3)_2CHOCH(CH_3)_2$
M.W. 102.18 g/mol
Boiling Pt: 68,5 °C (1013 hPa) **Melting Pt:** -86 °C **Density:** 0,726 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test
Peroxides	Not detectable
Propan-2-ol	Max. 1.5 %

Cat. No.	Pk	Pack type
24896.291	1 l	Glass bottle

(R,R)-1,4-Dimercapto-2,3-butandiol

See Dithiothreitol (DTT, Cleland's reagent) p.126

Dimethoxymethane

See Formaldehyde dimethyl acetal p.164

N,N-Dimethylacetamide HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 127-19-5 **UN:** 2810
$CH_3CON(CH_3)_2$
M.W. 87.12 g/mol
Boiling Pt: 166,1 °C (1013 hPa) **Melting Pt:** -20 °C **Density:** 0,937 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459339-27

Assay (GC)	Min. 99.50 %
Evaporation residue	Max. 0.0005 %
Water	Max. 500 ppm
Transmittance (270 nm)	Min. 10.0 %
Transmittance (290 nm)	Min. 98.0 %
Transmittance (310 nm)	Min. 89.00 %
Transmittance (320 nm)	Min. 94.0 %
Transmittance (400 nm)	Min. 98.0 %

Cat. No.	Pk	Pack type
83636.350	4 l	Glass bottle

NEW

N,N-Dimethylacetamide PESTINORM® for headspace gas chromatography

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 127-19-5 **UN:** 2810
$CH_3CON(CH_3)_2$
M.W. 87.12 g/mol
Boiling Pt: 166,1 °C (1013 hPa) **Melting Pt:** -20 °C **Density:** 0,937 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459339-27

Appearance	Clear colourless liquid
Assay (calculated on anhydrous)	99.99 - 100.00 %
Refractive index	1.436 - 1.438
Acidity	Max. 0.003 %
Water	Max. 0.02 M%
UV Cutoff	190 - 268 nm
Transmittance (268 nm)	Min. 10 %
Transmittance (275 nm)	Min. 55 %
Transmittance (300 nm)	Min. 85 %
Transmittance (350 nm)	Min. 98 %
Transmittance (400 nm)	Min. 99 %
Headspace test for O.V.I's	Passes test

Cat. No.	Pk	Pack type
85397.290	1 l	Glass bottle

NEW N,N-Dimethylacetamide, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85661.180	100 ml	Glass bottle

N,N-Dimethylacetamide AnalaR NORMAPUR® analytical reagent

Danger

CAS 127-19-5 **UN:** 2810

$CH_3CON(CH_3)_2$ **M.W.** 87.12 g/mol

Boiling Pt: 166,1 °C (1013 hPa) **Melting Pt:** -20 °C **Density:** 0,937 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119459339-27

Assay	Min. 99.5 %	Insolubility in water	Passes test
IR Spectrum	Passes test	Acidity	Max. 0.02 meq/g
Colouration	Max. 10 APHA	Non-volatile residue	Max. 100 ppm
Water	Max. 0.1 %	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 10 ppm	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 1 ppm	Pb (Lead)	Max. 1 ppm

Cat. No.	Pk	Pack type
103646E	2,5 l	Glass bottle

N,N-Dimethylacetamide TECHNICAL

Danger

CAS 127-19-5 **UN:** 2810

$CH_3CON(CH_3)_2$ **M.W.** 87.12 g/mol

Boiling Pt: 166,1 °C (1013 hPa) **Melting Pt:** -20 °C **Density:** 0,937 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119459339-27

Assay	Min. 99 %

Cat. No.	Pk	Pack type
23426.291	1 l	Glass bottle

4-(Dimethylamino)benzaldehyde AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

CAS 100-10-7

$(CH_3)_2NC_6H_4CHO$ **M.W.** 149.19 g/mol

Boiling Pt: 266 °C (1013 hPa) **Melting Pt:** 72 °C **Density:** 1,0254 g/cm³ (99,9 °C)

Storage Temperature: Ambient

Assay	Min. 99 %	Bases of indole type	Passes test
IR Spectrum	Passes test	Organic impurities	Passes test
Solution in acetic acid	Passes test	Melting point	72 - 74 °C
Heavy metals (as Pb)	Max. 10 ppm	Ignition residue (SO_4)	Max. 0.1 %
Insolubility in alcohol	Max. 100 ppm	Cl (Chloride)	Max. 50 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 10 ppm
Pb (Lead)	Max. 5 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
23439.158	50 g	Plastic bottle for solids
23439.238	250 g	Plastic bottle for solids

4-(Dimethylamino)benzaldehyde TECHNICAL

CAS 100-10-7

$(CH_3)_2NC_6H_4CHO$ **M.W.** 149.19 g/mol

Boiling Pt: 266 °C (1013 hPa) **Melting Pt:** 72 °C **Density:** 1,0254 g/cm³ (99,9 °C)

Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
23438.268	500 g	Plastic bottle for solids

Dimethylaminobenzaldehyde solution R6 Reag. Ph. Eur. 1029803

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87816.180	100 ml	Plastic bottle

4-(N,N-Dimethylamino)benzaldehyde

See 4-(Dimethylamino)benzaldehyde p.118

VWR LIFE SCIENCE N-(3-Dimethylaminopropyl)-N'-ethylcarbodiimide hydrochloride

Warning

CAS 25952-53-8

$C_8H_{18}ClN_3$ **M.W.** 191.7 g/mol

Melting Pt: 112-113 °C

Storage Temperature: Freezer

Carbon	49.7 % - 50.7 %
Appearance	White powder
Nitrogen	21.4 % - 22.4 %

Cat. No.	Pk	Pack type
N195-25G	25 g	Glass bottle for solids

1,2-Dimethylbenzene

See o-Xylene p.521

1,4-Dimethylbenzene

See p-Xylene p.521

Dimethylbenzene

See Xylene (mixture of isomers) p.521

Dimethyl carbinol

See 2-Propanol p.377

N,N-Dimethylcasein

A substrate for the determination of proteases

Cat. No.	Pk	Pack type
40058LH	10 g	Plastic bottle

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Dimethyldichlorosilane 2% in heptane Electran® for electrophoresis

Danger

CAS 75-78-5 **UN:** 1993
$(CH_3)_2SiCl_2$ **M.W.** 129.06 g/mol

Designed to give water repellant properties to glassware. Suitable for use in electrophoresis to prevent adhesion of gels to glass plates.

Cat. No.	Pk	Pack type
437494J	500 ml	Glass bottle

N,N-Dimethylformamide HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay (GC) ..... Min. 99.9 %
Acidity ..... Max. 0.0005 meq/g
Alkalinity ..... Max. 0.0002 meq/g
Evaporation residue ..... Max. 5 ppm
Water ..... Max. 0.02 %
Transmittance (270 nm) ..... Min. 10 %
Transmittance (275 nm) ..... Min. 50 %
Transmittance (290 nm) ..... Min. 80 %
Transmittance (300 nm) ..... Min. 90 %
Transmittance (330 nm) ..... Min. 98 %
Fluorescence (as quinine) (365 nm) ..... Max. 1 ppb
Conforms to BDH 15297 ..... Passes test

Cat. No.	Pk	Pack type
83634.320	2,5 l	Glass bottle

NEW N,N-Dimethylformamide PESTINORM® for headspace gas chromatography

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Appearance ..... Clear liquid
Assay (calculated on anhydrous) ..... 99.00 - 100.00 %
Refractive index ..... 1.429 - 1.431
Water ..... Max. 0.03 %(m)
UV Cutoff ..... 190 - 269 nm
Transmittance (270 nm) ..... Min. 20 %
Transmittance (275 nm) ..... Min. 55 %
Transmittance (300 nm) ..... Min. 85 %
Transmittance (320 nm) ..... Min. 95 %
Headspace test for O.V.I's ..... Passes test

Cat. No.	Pk	Pack type
85395.290	1 l	Glass bottle
85395.320	2,5 l	Glass bottle

N,N-Dimethylformamide SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay (GC) ..... Min. 99.8 %
Acidity ..... Max. 0.0005 meq/g
Residue on evaporation ..... Max. 0.0005 %
Water ..... Max. 0.05 %
Transmittance (270 nm) ..... Min. 30 %
Transmittance (280 nm) ..... Min. 70 %
Transmittance (290 nm) ..... Min. 80 %
Transmittance (300 nm) ..... Min. 90 %
Transmittance (330 nm) ..... Min. 98 %

Cat. No.	Pk	Pack type
84710.290	1 l	Glass bottle
84710.320	2,5 l	Glass bottle

N,N-Dimethylformamide, anhydrous (max. 0.005% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

250 ml bottle with a septum cap featuring six separate re-sealable puncture points

Assay (on anhydrous substance) ..... Min. 99.8 %
Acidity ..... Max. 0.0005 meq/g
Residue on evaporation ..... Max. 0.0005 %
Water (K.F.) ..... Max. 0.0050 %

Cat. No.	Pk	Pack type
83675.230	250 ml	Glass bottle with septum cap
83675.290	1 l	Glass bottle

N,N-Dimethylformamide for peptide synthesis

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay (calculated on anhydrous) ..... Min. 99.8 %
Acidity ..... Max. 0.001 %
Free amines ..... Max. 0.001 %
Residue on evaporation ..... Max. 0.001 %
Fe (Iron) ..... Max. 0.1 ppm
Pb (Lead) ..... Max. 0.1 ppm
Appearance ..... Clear colourless liquid
Colour value ..... Max. 10 APHA
Formaldehyde ..... Max. 0.002 %
Water ..... Max. 0.01 %
Mg (Magnesium) ..... Max. 0.1 ppm
Zn (Zinc) ..... Max. 0.1 ppm

Cat. No.	Pk	Pack type
84571.320	2,5 l	Glass bottle

N,N-Dimethylformamide, dehydrated (max. 0.015% H_2O) for synthesis

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay (GC) ..... Min. 99.90 %
Acidity ..... Max. 0.0005 meq/g
Dimethylamine ..... Max. 10 ppm
Evaporation residue ..... Max. 10 ppm
Water ..... Max. 150 ppm

Cat. No.	Pk	Pack type
83691.320	2,5 l	Glass bottle

N,N-Dimethylformamide AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay (on anhydrous substance)	Min. 99.8 %	IR Spectrum	Passes test
Acidity	Max. 0.00025 meq/g	Alkalinity	Max. 0.003 meq/g
Boiling point	152 - 155 °C	Colouration	Max. 10 APHA
Density (20/4)	0.946 - 0.950	Density (20/20)	0.949 - 0.952
n 20/D	1.429 - 1.431	Evaporation residue	Max. 10 ppm
Water	Max. 0.05 %	Al (Aluminium)	Max. 0.5 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.01 ppm
Sr (Strontium)	Max. 0.05 ppm	Zn (Zinc)	Max. 0.05 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
23466.298	1 l	Glass bottle
23466.323	2,5 l	Glass bottle

N,N-Dimethylformamide GPR RECTAPUR®

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay	Min. 99.5 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test
Acidity	Max. 0.00025 meq/g
Alkalinity	Max. 0.003 meq/g
Boiling point	152 - 155 °C
Density (20/4)	0.940 - 0.950
n 20/D	1.429 - 1.431
Evaporation residue	Max. 100 ppm
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
23470.293	1 l	Glass bottle
23470.327	2,5 l	Plastic bottle
23470.442	20 l	Plastic drum

N,N-Dimethylformamide TECHNICAL

Danger

CAS 68-12-2 **UN:** 2265
HCON(CH$_3$)$_2$ **M.W.** 73.09 g/mol
Boiling Pt: 153 °C (1013 hPa) **Melting Pt:** -60,5 °C **Density:** 0,949 g/cm^3 (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475605-32

Assay	Min. 98 %
n 20/D	1.429 - 1.431

Cat. No.	Pk	Pack type
23469.298	1 l	Plastic bottle
23469.367	5 l	Plastic bottle

NEW N,N-Dimethylformamide, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85662.180	100 ml	Glass bottle

Dimethyl glyoxime AnalaR NORMAPUR® analytical reagent

Danger

CAS 95-45-4
CH$_3$C(=NOH)C(=NOH)CH$_3$ **M.W.** 116.12 g/mol
Boiling Pt: 240-241 °C **Melting Pt:** 238 - 242 °C **Density:** 1,37 g/cm^3 (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Melting point	238 - 242 °C
Ignition residue (SO$_4$)	Max. 0.05 %	Insolubility in ethanol 96 % vol	Max. 0.05 %

Cat. No.	Pk	Pack type
23474.150	50 g	Plastic bottle for solids

NEW 1,3-Dimethyl-2-imidazolidinone PESTINORM® for headspace gas chromatography

Danger

CAS 80-73-9 **UN:** 2810
C$_5$H$_{10}$N$_2$O **M.W.** 114.15 g/mol
Boiling Pt: 225,5 °C (1013 hPa) **Melting Pt:** 8 °C **Density:** 1,04 g/cm^3 (20 °C)

Assay (on anhydrous substance)	Min. 99.5
Refractive index (20/D)	1.470-1.473
Water	Max. 0.03%
Transmittance (275 nm)	Min 40%
Transmittance (300 nm)	Min 65%
Transmittance (325 nm)	Min 80%
Transmittance (350 nm)	Min 90%
Headspace test for O.V.I's	Passes HS test for O.V.I's

Cat. No.	Pk	Pack type
85448.290	1 l	Glass bottle

Dimethyl ketone

See Acetone p.6

Dimethyl ketone-D6

See Acetone-[D6] p.8

2,9-Dimethyl-1,10-phenanthroline hydrochloride monohydrate

See Neocuproine hydrochloride monohydrate p.313

2,9-Dimethyl-1,10-phenanthrolinium chloride monohydrate

See Neocuproine hydrochloride monohydrate p.313

N,N-Dimethyl-1,4-phenylenediammonium dichloride analytical reagent

Danger

CAS 536-46-9 **UN:** 2811
(CH$_3$)$_2$NC$_6$H$_4$NH$_2$·2HCl **M.W.** 209.12 g/mol
Melting Pt: 208-212 °C
Storage Temperature: Ambient

Assay	Min. 99.0 %
Ignition residue (SO$_4$)	Max. 0.1 %

Cat. No.	Pk	Pack type
23484.132	25 g	Glass bottle

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NEW Dimethyl sulphoxide PESTINORM® for headspace gas chromatography

Filtered through a 0.2 µm filter, packaged under nitrogen.

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Appearance	Clear colourless liquid
Assay (calculated on anhydrous)	99.99 - 100.00 %
Refractive index	1.4770 - 1.4800
Water	Max. 0.0300 %(m)
UV Cutoff	190.0 - 265.0 nm
Transmittance (268 nm)	Min. 30.0 %
Transmittance (275 nm)	Min. 60.0 %
Transmittance (300 nm)	Min. 85.0 %
Transmittance (350 nm)	Min. 95.0 %
Transmittance (400 nm)	Min. 98.0 %
Headspace test for O.V.I's	Passes test

Cat. No.	Pk	Pack type
85396.290	1 l	Glass bottle
85396.320	2,5 l	Glass bottle

NEW Dimethylsulphoxide (DMSO), secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85663.180	100 ml	Glass bottle

Dimethyl sulphoxide, anhydrous (max. 0.005% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50
250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 50 ppm

Cat. No.	Pk	Pack type
83673.230	250 ml	Glass bottle with septum cap
83673.290	1 l	Glass bottle

Dimethyl sulphoxide, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Assay (calculated on anhydrous)	Min. 99.5 %	Fe (Iron)	Max. 0.0001 %
Heavy metals (as Pb)	Max. 0.00010 %	Residue on evaporation	Max. 0.0010 %
Water	Max. 0.0100 %		

Cat. No.	Pk	Pack type
23488.294	1 l	Glass bottle

Dimethyl sulphoxide, dehydrated (max. 0.03% H_2O) AnalaR NORMAPUR® analytical reagent

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Assay	Min. 99.5 %	IR Spectrum	Passes test
Substances coloured by H_2SO_4	Passes test	Acidity	Max. 0.0002 meq/g
Alkalinity	Max. 0.0002 meq/g	Colouration	Max. 10 APHA
Melting point	Min. 18 °C	Evaporation residue	Max. 10 ppm
Heavy metals (as Pb)	Max. 1 ppm	Water	Max. 0.03 %
Al (Aluminium)	Max. 0.2 ppm	Ba (Barium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.02 ppm	Na (Sodium)	Max. 5 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
23500.260	500 ml	Glass bottle
23500.297	1 l	Glass bottle
23500.322	2,5 l	Glass bottle
23500.460	25 l	Plastic container

VWR LIFE SCIENCE Dimethyl sulphoxide ACS

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Abs.@270nm	< 0.4
Abs.@290nm	<= 0.18
Abs.@310nm	<= 0.06
Abs.@330nm	<= 0.02
Abs.@350-400nm	<= 0.01
Purity	>= 99.9%
Residue After Evaporation	<= 0.01%
Titrable Free Acid	<= 0.001 meq/g
Water (KF)	<= 0.1%

Cat. No.	Pk	Pack type
0231-500ML	500 ml	Glass bottle
0231-4L	4 l	Glass bottle

Dimethyl sulphoxide stationary phase for GC

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Assay	Min. 99.5 %

Cat. No.	Pk	Pack type
23487.291	1 l	Glass bottle

Dimethyl sulphoxide Ph. Eur.

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Appearance	Conforms (see CoA/CoS)
Identification C	Passes test
Acidity	Passes test
Relative density	1.100 - 1.104
Refractive index (20°C)	1.478 - 1.480
Related substances	Passes test
Solidification point	Min. 18.3 °C
Absorbance	Passes test
Water	Max. 0.2 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
83529.290	1 l	Glass bottle

Dimethyl sulphoxide GPR RECTAPUR®

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

IR Spectrum ..... Passes test
Assay ..... Min. 99 %
Evaporation residue ..... Max. 50 ppm
Water ..... Max. 0.05 %
Cu (Copper) ..... Max. 5 ppm
Fe (Iron) ..... Max. 5 ppm
Pb (Lead) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
282164K	500 ml	Glass bottle

Dimethyl sulphoxide (DMSO), ultrapure

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Acidity Test ..... Pass
Congealing Point ..... > = 18.3°C
Appearance ..... Clear colorless liquid.
Non volatile Residue ..... < = 5 mg
Product Lock Test C9481
Purity ..... > = 99.9 %
Refractive Index ..... 1.4755 - 1.4775
Specific Gravity ..... 1.095 - 1.101
Sterility ..... Pass
Water (KF) ..... < = 0.1 %

Cat. No.	Pk	Pack type
N182-5X10ML	5	Plastic tube

Dimethyl sulphoxide TECHNICAL

CAS 67-68-5
$(CH_3)_2SO$ **M.W.** 78.14 g/mol
Boiling Pt: 189 °C (1013 hPa) **Melting Pt:** 18,5 °C **Density:** 1,101 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119431362-50

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
23486.297	1 l	Plastic bottle
23486.322	2,5 l	Plastic bottle

NEW Dimethyl sulphoxide-[D6] (99.96% D) for NMR spectroscopy

CAS 2206-27-1
$D_3CS(O)CD_3$ **M.W.** 84.09 g/mol
Boiling Pt: 189 °C (5 mmHg) **Melting Pt:** 20,2 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.96 %
Water ..... Max. 0.02 %

Cat. No.	Pk	Pk Info	Pack type
84888.0025	25 ml	-	Glass bottle
84888.0007	1 SET	10× 0.75 ml	Glass ampoule

Dimethyl sulphoxide-[D6] (99,8% D) for NMR spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

CAS 2206-27-1
$D_3CS(O)CD_3$ **M.W.** 84.09 g/mol
Boiling Pt: 189 °C (5 mmHg) **Melting Pt:** 20,2 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance) ..... Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.80 %
Water ..... Max. 0.02 %

Cat. No.	Pk	Pk Info	Pack type
87154.0010	10 ml	-	Glass bottle
87154.0011	10 ml	-	Glass bottle with septum cap
87154.0025	25 ml	-	Glass bottle
87154.0100	100 ml	-	Glass bottle
87154.0006	1 Pack	10× 0.6 ml	Glass ampoules
87154.0007	1 Pack	10× 0.75 ml	Glass ampoules

NEW Dimethyl sulphoxide-[D6] + 0.03% TMS (99,96% D) for NMR spectroscopy

CAS 2206-27-1
$D_3CS(O)CD_3$ **M.W.** 84.09 g/mol
Boiling Pt: 189 °C (5 mmHg) **Melting Pt:** 20,2 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pk Info	Pack type
84889.0007	1 SET	10× 0.75 ml	Glass ampoule

Dimethyl sulphoxide-[D6] 0.03% TMS (99.8% D) + 0,03% TMS for NMR spectroscopy

CAS 2206-27-1
$D_3CS(O)CD_3$ **M.W.** 84.09 g/mol
Boiling Pt: 189 °C (5 mmHg) **Melting Pt:** 20,2 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance) ..... Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D) ..... Min. 99.80 %
Water ..... Max. 0.02 %

Cat. No.	Pk	Pk Info	Pack type
84113.0011	10 ml	-	Glass bottle with septum cap
84113.0025	25 ml	-	Glass bottle
84113.0100	100 ml	-	Glass bottle
84113.0007	1 Pack	10× 0.75 ml	Glass ampoules

3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide, ultrapure

Warning

CAS 298-93-1
$C_{18}H_{16}N_5BrS$ **M.W.** 414.33 g/mol
Storage Temperature: Refrigerator

MTT, a yellow tetrazole dye, can be reduced to a water-insoluble purple formazan compound by mitochondrial reductase enzymes. Since reduction only occurs in living cells, the quantitation of formazan can be equated to the number of viable cells in the population.

- Sensitive colorimetric substitute for radioisotopes in cell proliferation and cytotoxicity studies
- Applications include cell viability assays, dose response curves and cytotoxicity assays

Melting Range w/ Decomposition ..... >= 187 °C
Purity ..... >= 98 %

Cat. No.	Pk	Pack type
0793-500MG	500 mg	Glass bottle
0793-1G	1 g	Glass bottle
0793-5G	5 g	Glass bottle

O,O-Dimethyl-4-oxobenzotriazin-3-ylmethyl phosphorodithioate

See Azinphos-methyl p.51

Dimidium bromide GPR RECTAPUR®

Warning

CAS 518-67-2 **UN:** 2811
$C_{20}H_{18}BrN_3$ **M.W.** 380.29 g/mol
Melting Pt: 243-248 °C
Storage Temperature: Ambient

Dye content (spectrophotometrically) ..... Min. 95 %
Identity (UV/VIS-Spectrum) ..... Passes test
Absorption max. (in methanol) ..... 523 - 528 nm
Spec.Absorptivity (?m;0,0005 %;methanol) ..... 166 - 175
TLC-Test ..... Passes test
Loss on drying (110°C) ..... Max. 5 %

Cat. No.	Pk	Pack type
201272P	1 g	Glass ampoule

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Dinitrobenzoic acid solution Reag. Ph. Eur. 1031301

Danger

UN: 1993

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87819.290	1 l	Plastic bottle

2,6-Dinitro-N,N-dipropyl-4-trifluoromethylaniline

See Trifluralin p.496

2,2'-Dinitro-5,5'-dithiodibenzoic acid

See 5,5'-Dithiobis(2-nitrobenzoic acid) (Ellmans reagent, DTNB) p.125

1,4-Dioxacyclohexane

See 1,4-Dioxane p.123

1,4-Dioxane unstabilised HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 123-91-1 **UN:** 1165

$C_4H_8O_2$ **M.W.** 88.11 g/mol

Boiling Pt: 101,1 °C (1013 hPa) **Melting Pt:** 11,8 °C **Density:** 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.80 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 0.0005 %
Water	Max. 0.0500 %
Transmittance (245 nm)	Min. 50.0 %
Transmittance (270 nm)	Min. 80.0 %
Transmittance (300 nm)	Min. 98.0 %
Conforms to BDH 15290	Passes test

Cat. No.	Pk	Pack type
83628.320	2,5 l	Glass bottle

1,4-Dioxane unstabilised SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 123-91-1 **UN:** 1165

$C_4H_8O_2$ **M.W.** 88.11 g/mol

Boiling Pt: 101,1 °C (1013 hPa) **Melting Pt:** 11,8 °C **Density:** 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.02 %
Transmittance (270 nm)	Min. 70 %
Transmittance (280 nm)	Min. 85 %
Transmittance (290 nm)	Min. 95 %
Transmittance (300 nm)	Min. 97 %
Transmittance (310 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84715.290	1 l	Glass bottle

NEW 1,4-Dioxane, stabilised, secondary reference standard for GC, PESTINORM®

Stabilised with BHT (2,6-Di-tert-butyl-p-cresol, 2,6-Di-tert-butyl-4-methylphenol, Ionol) 20 ppm. A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85664.180	100 ml	Glass bottle

1,4-Dioxane, anhydrous (max. 0.003% H_2O) stabilised

Stabilised with BHT (Ionol)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 123-91-1 **UN:** 1165

$C_4H_8O_2$ **M.W.** 88.11 g/mol

Boiling Pt: 101,1 °C (1013 hPa) **Melting Pt:** 11,8 °C **Density:** 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 3 ppm
Water	Max. 30 ppm

Cat. No.	Pk	Pack type
83674.230	250 ml	Glass bottle with septum cap

1,4-Dioxane, dehydrated (max. 0.01% H_2O) stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with BHT (Ionol) 20 ppm

Danger

CAS 123-91-1 **UN:** 1165

$C_4H_8O_2$ **M.W.** 88.11 g/mol

Boiling Pt: 101,1 °C (1013 hPa) **Melting Pt:** 11,8 °C **Density:** 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Acidity or alkalinity	Max. 0.001 meq/g
Colouration	Max. 10 APHA	Peroxides (as H_2O_2)	Max. 0.0100 %
Water	Max. 0.0100 %	Acetyls and carbonyl derivatives	Max. 40 ppm
Evaporation residue	Max. 50 ppm	Fe (Iron)	Max. 1 ppm

Cat. No.	Pk	Pack type
23539.291	1 l	Glass bottle

1,4-Dioxane stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with BHT (Ionol) 25 ppm

Danger

CAS 123-91-1 **UN:** 1165

$C_4H_8O_2$ **M.W.** 88.11 g/mol

Boiling Pt: 101,1 °C (1013 hPa) **Melting Pt:** 11,8 °C **Density:** 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.5 %	Acidity or alkalinity	Max. 0.001 meq/g
Boiling point	100 - 102 °C	Colouration	Max. 10 APHA
Density (20/4)	1.030 - 1.035	Solidification point	Min. 11 °C
Acetaldehyde	Max. 30 ppm	Acetone	Max. 5 ppm
Evaporation residue	Max. 50 ppm	Formaldehyde	Max. 5 ppm
Peroxides	Max. 100 ppm	Water	Max. 0.1 %
Fe (Iron)	Max. 1 ppm		

Cat. No.	Pk	Pack type
23540.295	1 l	Glass bottle
23540.320	2,5 l	Glass bottle

1,4-Dioxane stabilised GPR RECTAPUR®

Stabilised with BHT (Ionol) 25 ppm

Danger

CAS 123-91-1 **UN:** 1165
$C_4H_8O_2$ **M.W.** 88.11 g/mol
Boiling Pt: 101,1 °C (1013 hPa) **Melting Pt:** 11,8 °C **Density:** 1,03 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Boiling point	99 - 102 °C
Density (20/4)	1.030 - 1.035

Cat. No.	Pk	Pack type
23532.297	1 l	Glass bottle
23532.366	5 l	Fluorinated plastic bottle
23532.468	25 l	Metal drum

1,4-Dioxane 0.1% in aqueous solution Reag. Ph. Eur. 1032001

CAS 123-91-1 **UN:** 1165
$C_4H_8O_2$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87820.180	100 ml	Plastic bottle

1,4-Dioxane 0.05% in aqueous solution Reag. Ph. Eur. 1032002

CAS 123-91-1 **UN:** 1165
$C_4H_8O_2$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87821.180	100 ml	Plastic bottle

1,3-Dioxolane stabilised GPR RECTAPUR® for synthesis

Stabilised with BHT (Ionol) 0.03 %

Danger

CAS 646-06-0 **UN:** 1166
$C_3H_6O_2$ **M.W.** 74.08 g/mol
Boiling Pt: 75 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 1,066 g/cm³ (15 °C)

Assay	Min. 99.0 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test
Formaldehyde	Max. 0.1 %
Methanol	Max. 0.1 %
Water	Max. 0.05 %

Cat. No.	Pk	Pack type
87135.290	1 l	Glass bottle
87135.360	5 l	Plastic bottle

Diphenylamine AnalaR NORMAPUR® analytical reagent

Danger

CAS 122-39-4 **UN:** 3077
$(C_6H_5)_2NH$ **M.W.** 169.23 g/mol
Boiling Pt: 302 °C (1013 hPa) **Melting Pt:** 53-54 °C **Density:** 1,165 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Melting point	52.5 - 54.0 °C
Aniline	Max. 0.1 %	Ignition residue (SO_4)	Max. 0.03 %
Insolubility in ethanol 96 % vol	Max. 100 ppm		

Cat. No.	Pk	Pack type
23543.182	100 g	Plastic bottle for solids

Diphenylamine 1% in sulphuric acid 96% Reag. Ph. Eur. 1032102

Danger

CAS 122-39-4 **UN:** 1830
$(C_6H_5)_2NH$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87823.290	1 l	Plastic bottle

Diphenylamine 0.1% in sulphuric acid 96% Reag. Ph. Eur. 1032101

Danger

CAS 122-39-4 **UN:** 1830
$(C_6H_5)_2NH$
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
85826.180	100 ml	Plastic bottle

Diphenylamine-4-sulphonic acid, barium salt

See Barium diphenylamine-4-sulphonate p.53

Diphenylcarbazide

See 1,5-Diphenylcarbazide p.124

1,5-Diphenylcarbazide analytical reagent

Warning

CAS 140-22-7
$C_{13}H_{14}N_4O$ **M.W.** 242.28 g/mol
Boiling Pt: 454 °C (1013 hPa) **Melting Pt:** 170-172 °C **Density:** 1,31 g/cm³ (20 °C)

Assay	Min. 97.0 %
Suited for Cr^{6+} reagent	Passes test
Melting point	171 - 173 °C
Ignition residue (SO_4)	Max. 0.1 %
Insolubility in methanol	Max. 100 ppm

Cat. No.	Pk	Pack type
23550.120	10 g	Plastic bottle for solids
23550.153	50 g	Plastic bottle

1,5-Diphenylcarbonohydrazide

See 1,5-Diphenylcarbazide p.124

1,5-Diphenylthiocarbazone

See Dithizone p.126

Dipotassium dihydrogen ethylenediaminetetraacetate dihydrate

See EDTA dipotassium salt dihydrate p.130

Dipotassium disulphite

See di-Potassium disulphite p.364

Dipotassium hydrogenorthophosphate

See di-Potassium hydrogen phosphate p.366

Dipotassium peroxodisulphate

See Potassium peroxodisulphate p.373

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(+)-Dipotassium L-tartrate hemihydrate

See di-Potassium L(+)-tartrate hemihydrate p.374

(R,R)-(+)-Dipotassium tartrate hemihydrate

See di-Potassium L(+)-tartrate hemihydrate p.374

N,N-Dipropyl-2,6-dinitro-4-trifluoromethylaniline

See Trifluralin p.496

DipSlide

See Microbiology

VWR LIFE SCIENCE DIPSO, ultrapure

CAS 68399-80-4
$C_7H_{17}NO_6S$
Storage Temperature: Ambient
Biological buffer useful for cell culture *in vitro*, enzyme assays and some electrophoretic applications at physiological pH.

Heavy Metals (as Pb)	< 0.0005%
Melting Point	189°C- 192°C
Purity	> = 98%
Solubility (25%, Water)	Pass
Water (KF)	<= 7%

Cat. No.	Pk	Pack type
J591-100G	100 g	Plastic bottle for solids

Direct Red 28

See Congo Red p.96

Disilver sulphate

See Silver sulphate p.405

Disodium dihydrogen ethylenediaminetetraacetate dihydrate

See EDTA disodium salt dihydrate p.130

Disodium disulphite

See Sodium metabisulphite p.429

Disodium hydrogenorthophosphate

See di-Sodium hydrogen phosphate p.419

Disodium 2-[4-[(1-hydroxy-4-sulphonato-2-naphthyl)azo] phenyl]-6-methylbenzothiazole-7-sulphonate

See Thiazine red p.485

Disodium 2-(3-oxo-6-oxidoxanthen-9-yl)benzoate

See Fluorescein disodium salt p.160

Disodium pentacyanonitrosylferrate (III) dihydrate

See Sodium nitroprusside dihydrate p.430

Disodium peroxodisulphate

See Sodium peroxodisulphate p.432

(+)-Disodium L-tartrate dihydrate

See di-Sodium L(+)-tartrate dihydrate p.435

(R,R)-(+)-Disodium tartrate dihydrate

See di-Sodium L(+)-tartrate dihydrate p.435

Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)

See Congo Red p.96

Disodium 4,5-dihydroxynaphthalene-2,7-disulphonate dihydrate

See Chromotropic acid disodium salt dihydrate p.90

(+)-Disodium-L-tartrat dihydrate

See di-Sodium L(+)-tartrate dihydrate p.435

Disodium 2-(2,4,5,7-tetrabromo-6-oxido-3-oxoxanthen-9-yl) benzoate

See Dyes and Stains p.290

5,5'-Dithiobis(2-nitrobenzoic acid) (Ellmans reagent, DTNB)

Warning

CAS 69-78-3
$C_{14}H_8N_2O_8S_2$ **M.W.** 396.36 g/mol
Melting Pt: 240-244 °C
Storage Temperature: Ambient

A sensitive sulphydryl reagent.

Assay	Min. 98.0 %
Appearance	Yellow crystalline powder

Cat. No.	Pk	Pack type
422592J	5 g	Glass bottle
422593K	25 g	Glass bottle

3,3'-Dithiobis(6-nitrobenzoic acid)

See 5,5'-Dithiobis(2-nitrobenzoic acid) (Ellmans reagent, DTNB) p.125

VWR LIFE SCIENCE 1,4-Dithioerythritol (DTE), ultrapure

Warning

CAS 6892-68-8
$C_4H_{10}O_2S_2$ **M.W.** 154.25 g/mol
Boiling Pt: 286 °C (1013 hPa) **Melting Pt:** 82-83 °C
Storage Temperature: Ambient

Abs.@285nm (0.02M, Water)	< 0.15
Melting Range	81°C - 85°C
Purity	> = 99%
Solubility (5%, Water)	Pass
Thin Layer Chromatography (TLC)	One Spot

Cat. No.	Pk	Pack type
0425-5G	5 g	Glass bottle
0425-25G	25 g	Plastic bottle for solids

Dithiothreitol (DTT, Cleland's reagent) Electran® Molecular biology grade

Warning

CAS 3483-12-3

$C_4H_{10}O_2S_2$ **M.W.** 154.25 g/mol

Boiling Pt: < 125 °C (1013 hPa) **Melting Pt:** 42-44 °C

Storage Temperature: Refrigerator

Assay	Min. 99.00 %
Appearance	White crystalline powder
DNases	Not detected
RNases	Not detected
Proteases	Not detected
DTT (oxidised)	Max. 0.50 %
Melting point	40.0 - 43.0 °C
pH (0.1 mol/l)	4.00 - 6.00
Loss on drying	Max. 0.5 %
Water	Max. 0.50 %
Absorbance (260 nm) (0,1 mol/l)	Max. 0.50
Absorbance (280 nm) (0,1 mol/l)	Max. 0.100
Absorbance (283 nm) (0.02 mol/l)	Max. 0.050
Heavy metals (as Pb)	Max. 0.001 %

Cat. No.	Pk	Pack type
443852A	5 g	Glass bottle
443853B	10 g	Glass bottle

Dithiothreitol (DTT, Cleland's reagent) ≥98%

Warning

CAS 3483-12-3

$C_4H_{10}O_2S_2$ **M.W.** 154.25 g/mol

Boiling Pt: < 125 °C (1013 hPa) **Melting Pt:** 42-44 °C

Storage Temperature: Refrigerator

Assay	Min. 98 %
IR Spectrum	Passes test
Melting point	40 - 43 °C
Heavy metals (as Pb)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
441494N	5 g	Glass bottle
441496P	25 g	Plastic bottle for solids

Dithiothreitol (DTT, Cleland's reagent) for biotechnology

Warning

CAS 3483-12-3

$C_4H_{10}O_2S_2$ **M.W.** 154.25 g/mol

Boiling Pt: < 125 °C (1013 hPa) **Melting Pt:** 42-44 °C

Storage Temperature: Refrigerator

Abs.@283nm (0.02M, Water)	<= 0.05
DNase	none detected
Loss on Drying	< 0.5 %
Melting Point	39 °C - 43 °C
Oxidized DTT	< 0.5 %
Protease	none detected
Purity (-SH Content)	> 99.4 %
RNase	none detected
Solubility (5%, Water)	pass

Cat. No.	Pk	Pack type
0281-5G	5 g	Glass bottle
0281-25G	25 g	Plastic bottle for solids

Dithiothreitol (DTT, Cleland's reagent), proteomics grade

Warning

CAS 3483-12-3

$C_4H_{10}O_2S_2$ **M.W.** 154.25 g/mol

Boiling Pt: < 125 °C (1013 hPa) **Melting Pt:** 42-44 °C

Storage Temperature: Refrigerator

Abs.@283nm (0.02M, Water)	<= 0.05
DNase	none detected
Electrophoresis (P/F)	Pass
IR	Pass
Loss on Drying	<= 0.5%
Melting Point	39- 43°C
Oxidized DTT	<= 0.5%
Protease	none detected
Purity (-SH Content)	>= 99.4%
RNase	none detected
Solubility (5%, Water)	Pass

Cat. No.	Pk	Pack type
M109-5G	5 g	Glass bottle
M109-25G	25 g	Plastic bottle for solids

DL-threo-Dithiothreitol

See Dithiothreitol (DTT, Cleland's reagent) p.126

Dithizone analytical reagent

Warning

CAS 60-10-6

$C_6H_5NHNHCSN{=}NC_6H_5$ **M.W.** 256.33 g/mol

Boiling Pt: 406 °C (1013 hPa) **Melting Pt:** 168 °C

Assay	Min. 98.0 %

Cat. No.	Pk	Pack type
23570.106	5 g	Plastic bottle for solids

Dithizone solution R2 Reag. Ph. Eur. 1033903

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87827.180	100 ml	Plastic bottle

DMF

See N,N-Dimethylformamide p.119

DMK

See Acetone p.6

DMK-D6

See Acetone-[D6] p.8

DMSO

See Dimethyl sulphoxide p.121

DMSO-D6

See Dimethyl sulphoxide-[D6] p.122

DNA Polymerase

See PCR

DNAse Test Agar

See Microbiology

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dNTP mix

See PCR

Dodecamolybdophosphoric acid hydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 51429-74-4
$H_3[P(Mo_3O_{10})_4]\cdot nH_2O$
UN: 3085
M.W. 1843.27 g/mol
Melting Pt: 78-90 °C
Density: 1,62 g/cm³ (25 °C)
Storage Temperature: Ambient

Heavy metals (as Pb)	Max. 50 ppm	Insolubility in water	Max. 100 ppm
Cl (Chloride)	Max. 50 ppm	NH_4 (Ammonium)	Max. 30 ppm
SO_4 (Sulphate)	Max. 100 ppm	Ca (Calcium)	Max. 100 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 20 ppm
Pb (Lead)	Max. 20 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20616.184	100 g	Plastic bottle for solids

n-Dodecane GPR RECTAPUR®

Danger

CAS 112-40-3
$H_3C(CH_2)_{10}CH_3$
Boiling Pt: 216 °C (1013 hPa)
Melting Pt: -9,6 °C
M.W. 170.34 g/mol
Density: 0,7487 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Density (20/4)	0.749 - 0.752
n 20/D	1.420 - 1.422

Cat. No.	Pk	Pack type
23586.293	1 l	Glass bottle

Dodecawolframophosphoric acid hydrate

See Phosphotungstic acid hydrate p.353

Dodecyl sulphate sodium salt

See Sodium dodecyl sulphate (SDS) p.416

Dodecyl sulphuric acid sodium salt

See Sodium dodecyl sulphate (SDS) p.416

VWR LIFE SCIENCE n-Dodecyl-β-D-maltoside, high purity

Warning

CAS 69227-93-6
$C_{24}H_{46}O_{11}$
Storage Temperature: Freezer
Non ionic detergent.

Abs.@225 nm (1%, Water)	0.1
Abs.@260 nm (1%, Water)	0.06
Abs.@280 nm (1%, Water)	0.04
Abs.@340 nm (1%, Water)	0.02
Alpha (HPLC)	15 %
pH (1%, Water) @25C	5 - 8
Purity	99.0 %
Solubility (1%, Water)	PASS

Cat. No.	Pk	Pack type
J424-1G	1 g	Glass bottle

Dragendorff's reagent for analysis of alkaloids

Warning

UN: 3264
Boiling Pt: 77 °C (1013 hPa)
Density: 1,2 g/cm³ (20 °C)
Storage Temperature: Ambient
Made of potassium bismuth iodide

Identification	Passes test

Cat. No.	Pk	Pack type
30989.236	250 ml	Glass bottle

Drug test kit

This kit provides a convenient means of screening suspect material for restricted drugs.
The scheme and reagents were developed at the Laboratory of the Government Chemist.
Each kit provides sufficient reagents for at least 200 tests.

- Kit comprises:
- 20 (4 boxes of 5, 0,2 ml) ampoules of Marquis reagent
- 1×10 ml cocaine reagent
- 1×10 ml barbiturate reagent
- 1×10 ml LSD reagent
- 1×20 ml cannabis reagent 1
- 1×10 ml cannabis reagent 2
- 1×5 g cannabis special solid reagent
- 1×20 g neutraliser
- 4 boxes of Whatman filter papers
- 1 microspatula
- 20 ampoule breakers
- 25 disposable spatulas
- forceps
- 4 watch glasses
- Instruction leaflet

Description	Pk	Cat. No.
Drug test kit		
BDH Drug test kit (cocaine, barbiturates, LSD, cannabis)	1	321481P
Replacement packs for drug test kit		
Barbiturate reagent	10 ml	321652Q
Cannabis reagent 1	20 ml	321602G
Cannabis reagent 2	10 ml	321612Y
Cannabis special solid reagent	5 g	321622K
Cocaine reagent	10 ml	321642X
LSD reagent	10 ml	321632M

Marquis test kit

Suitable for testing of a range of substances including amphetamines and opiates. Kit comprises materials for 40 tests:

- 8 packs of 5 ampoules each containing 0.2 ml of Marquis
- 40 ampoule breakers
- 50 stirrers

Description	Pk	Cat. No.
Marquis kit for 40 tests	1 KIT	321761U

DTNB

See 5,5'-Dithiobis(2-nitrobenzoic acid) (Ellmans reagent, DTNB) p.125

DTT

See Dithiothreitol (DTT, Cleland's reagent)..... p.126

Dursban®

See Chlorpyrifos..... p.88

Dyes (Dry)

Aniline blue water soluble TECHNICAL p.47
Congo Red TECHNICAL p.96
Fluorescein TECHNICAL..... p.160
Fluorescein disodium salt TECHNICAL p.160
Indigo carmine analytical reagent p.219
Methyl blue TECHNICAL..... p.290
Methylene blue for microscopy..... p.290
Methylene blue NZ TECHNICAL extra..... p.261
Nuclear Fast Red TECHNICAL p.321
Patent blue V calcium salt TECHNICAL p.329
Thymol blue 0.04% in ethanol TECHNICAL..... p.487
Toluidine blue O TECHNICAL..... p.493
Xylenol orange tetrasodium salt TECHNICAL p.522

Dyes in solution

Bromocresol green 0.04% in ethanol TECHNICAL p.64
Bromophenol blue 0.04% in ethanol TECHNICAL p.65
Bromothymol blue 0.04% in ethanol TECHNICAL p.65
Congo Red 1% in aqueous solution..... p.96
Methyl orange 0.04% in aqueous solution TECHNICAL pH-indicator..... p.262
Methyl red 0.2 g/l in ethanol TECHNICAL..... p.264
Universal indicator ethanol solution TECHNICAL p.214
Thymol blue 0.04% in ethanol TECHNICAL..... p.487
o-Tolidine 0.1 % (1.6 M) hydrochloric solution for chlorine determination in water according to the NF T 90-010 standard p.491

NEW Dysprosium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Supplied with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Dysprosium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457246F
Dysprosium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85562.180

Dysprosium standard solution, 1,000 mg/l Dy in dil. nitric acid (from Dy_2O_3) ARISTAR® standard for ICP

Dy_2O_3 in 2-5% HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455302L	100 ml	Plastic bottle
455304N	500 ml	Plastic bottle

Dysprosium standard solution, 1,000 mg/l Dy in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86674.180	100 ml	Plastic bottle
86674.260	500 ml	Plastic bottle

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E-64 ((2S,3S)-(+)-trans-Epoxy succinyl-L-leucylamido-4-guanidino butane), ultrapure

An irreversible inhibitor of cysteine proteases like papain, calpain, and cathepsin B, H, L and S. Also an effective inhibitor of collegenase.

Purity (HPLC) ≥98%

Cat. No.	Pk	Pack type
J586-5MG	5 mg	Glass bottle

Easyfix cytological fixative Q Path®

Danger

IVD

CAS 64-17-5 **UN:** 1170

Storage Temperature: Ambient

Easyfix ready to use fixative for cell samples. Pots can be used for storage and transport. Can be used as part of the Turbitec technique for cervical cancer analysis.

The fixative allows the DNA to be stored with a view to detecting HPV (human papillomavirus)

- using the Hybrid Capture II method designed by Qiagen.
- INNO-LIPA technique designed by Innogenetics.
- Papillocheck Technique designed by Greiner bio-one.
- Abbott HR HPV Technique.

Cat. No.	Pk	Pack type
11056746.	5 l	Pot

Q Path® Easyfix

Fixation, conservation and transport of cytology specimens.

Description	Pk	Pk Info	Cat. No.
Q Path® Easyfix cytological fixative	100	10 ml in a 20 ml pot	EAS0020AF59001
Q Path® Easyfix cytological fixative	50	20 ml in a 60 ml pot	EAS0060CF59001

EBT

See Eriochrome Black T p.144

Edetic acid dipotassium salt dihydrate

See EDTA dipotassium salt dihydrate..... p.130

Edetic acid disodium salt dihydrate

See EDTA disodium salt dihydrate p.130

Edetic acid iron (III) monosodium salt

See EDTA ferric monosodium salt..... p.131

Edetic acid iron (III) sodium salt

See EDTA ferric monosodium salt..... p.131

Edetic acid tetrasodium salt

See EDTA tetrasodium salt..... p.132

Edetic acid

See EDTA (Ethylenediamine tetraacetic acid)..... p.129

EDTA (Ethylenediamine tetraacetic acid) analytical reagent

Warning

CAS 60-00-4

$C_{10}H_{16}N_2O_8$ **M.W.** 292.25 g/mol

Boiling Pt: 614 °C (1013 hPa) **Melting Pt:** 220 °C **Density:** 0.86 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119486399-18

Assay..... Min. 99 %
Heavy metals (as Pb)..... Max. 20 ppm
Ignition residue (SO_4)..... Max. 0.2 %
Water..... Max. 0.2 %
Cl (Chloride)..... Max. 0.05 %
SO_4 (Sulphate)..... Max. 0.05 %
Fe (Iron)..... Max. 10 ppm

Cat. No.	Pk	Pack type
20301.186	100 g	Plastic bottle for solids
20301.290	1 kg	Plastic bottle for solids

EDTA (Ethylenediamine tetraacetic acid) GPR RECTAPUR®

Warning

CAS 60-00-4

$C_{10}H_{16}N_2O_8$ **M.W.** 292.25 g/mol

Boiling Pt: 614 °C (1013 hPa) **Melting Pt:** 220 °C **Density:** 0.86 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119486399-18

Assay..... 98.0 - 100.5 %
Heavy metals (as Pb)..... Max. 10 ppm
Water..... Max. 0.5 %
Fe (Iron)..... Max. 50 ppm

Cat. No.	Pk	Pack type
280214S	500 g	Plastic bottle for solids
28021CA	25 kg	Bucket (Plastic)

EDTA (Ethylenediamine tetraacetic acid), ultrapure

Warning

CAS 60-00-4

$C_{10}H_{16}N_2O_8$ **M.W.** 292.25 g/mol

Boiling Pt: 614 °C (1013 hPa) **Melting Pt:** 220 °C **Density:** 0,86 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119486399-18

DNase..... none detected
Heavy Metals (as Pb)..... <= 0.001%
Insolubles (5%, 1N NaOH)..... Pass
Iron..... <= 0.005%
Magnesium..... <= 0.0005%
Nitrilotriacetic Acid..... <= 0.1%
pH (5%, Water) @25°C..... 2.5 - 3.5
Protease..... none detected
Purity..... >= 99.5%
Residue after Ignition..... <= 0.2%
RNase..... none detected

Cat. No.	Pk	Pack type
0322-500G	500 g	Plastic bottle for solids
0322-1KG	1 kg	Plastic bottle for solids

EDTA (Ethylenediamine tetraacetic acid) TECHNICAL

Warning

CAS 60-00-4

$C_{10}H_{16}N_2O_8$ **M.W.** 292.25 g/mol

Boiling Pt: 614 °C (1013 hPa) **Melting Pt:** 220 °C **Density:** 0.86 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119486399-18

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
20294.294	1 kg	Plastic bottle for solids

EDTA, 0.5 M sterile solution, pH 8.0, for biotechnology

Cat. No.	Pk	Pack type
E177-100ML	100 ml	Plastic bottle
E177-500ML	500 ml	Plastic bottle

EDTA buffer solution pH 8.0 (0.5 mol/l) for biotechnology, sterile

Cat. No.	Pk	Pack type
E522-100ML	100 ml	Plastic bottle

EDTA dipotassium salt dihydrate analytical reagent

CAS 25102-12-9

$C_{10}H_{14}K_2N_2O_8 \cdot 2H_2O$ **M.W.** 404.46 g/mol

Melting Pt: 272 °C **Density:** 1 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 97.0 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20490.188	100 g	Plastic bottle for solids

EDTA disodium salt dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 6381-92-6

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol

Melting Pt: 255 °C

Storage Temperature: Ambient

Assay	99.0 - 101.0 %	pH (25°C; 5 %)	4.0 - 5.5
Identification (IR)	Passes test	Identification B	Passes test Ph.Eur.
Identification (Na)	Passes test	Solution S	Passes test Ph.Eur.
Appearance of solution S	Passes test Ph.Eur.	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Loss on drying (150°C)	9 - 10 %
Nitrilotriacetic acid	Max. 0.05 %	Cl (Chloride)	Max. 40 ppm
CN (Cyanide)	Max. 10 ppm	SO_4 (Sulphate)	Max. 0.02 %
Cu (Copper)	Max. 1 ppm	Fe (Iron)	Max. 5 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
20302.180	100 g	Plastic bottle for solids
20302.236	250 g	Plastic bottle for solids
20302.260	500 g	Plastic bottle for solids
20302.293	1 kg	Plastic bottle for solids
20302.464	25 kg	Bucket (Plastic)

EDTA disodium salt dihydrate Ph. Eur.

CAS 6381-92-6

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol

Melting Pt: 255 °C

Storage Temperature: Ambient

Appearance	White crystalline powder
Assay	98.5 - 101 %
Identification A	Passes test
Identification B	Passes test
Identification D	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (5 %)	4 - 5.5
Impurity A	Max. 0.1 %
Fe (Iron)	Max. 80 ppm
Heavy metals (as Pb)	Max. 20 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
20309.296	1 kg	Plastic bottle for solids
20309.365	5 kg	Bucket (Plastic)
20309.460	25 kg	Bucket (Plastic)

EDTA disodium salt dihydrate Gen-Apex® Molecular biology grade

CAS 6381-92-6

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol

Melting Pt: 255 °C

Storage Temperature: Ambient

Assay	Min. 99 %
Identification (IR)	Passes test
Identification B	Passes test Ph.Eur.
Identification (Na)	Passes test
Colouration (0,2 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 5 ppm
Transmittance (260 nm) (0.2 mol/l)	Min. 50 %
Transmittance (280 nm) (0.2 mol/l)	Min. 90 %
Transmittance (320 nm) (0.2 mol/l)	Min. 95 %

Cat. No.	Pk	Pack type
33600.267	500 g	Plastic bottle for solids

EDTA disodium salt dihydrate Electran® Molecular biology grade

CAS 6381-92-6

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol

Melting Pt: 255 °C

Storage Temperature: Ambient

Assay	Min. 99.0 %
Appearance	White powder
Identity (IR)	Passes test
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Absorbance (260 nm) (0.1 mol/l)	Max. 0.200
Absorbance (280 nm) (0.1 mol/l)	Max. 0.020
Loss on drying	9.0 - 10.0 %
pH (25°C; 5 %)	4 - 5
Heavy metals (as Pb)	Max. 0.001 %
SO_4 (Sulphate)	Max. 0.01 %
As (Arsenic)	Max. 0.0005 %
Cl (Chloride)	Max. 0.005 %
Cu (Copper)	Max. 0.001 %
Fe (Iron)	Max. 0.001 %
Pb (Lead)	Max. 0.001 %

Cat. No.	Pk	Pack type
443882G	100 g	Glass bottle for solids
443885J	1 kg	Glass bottle for solids

EDTA disodium salt dihydrate, proteomics grade

CAS 6381-92-6

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol

Melting Pt: 255 °C

Storage Temperature: Ambient

DNase	NONE
Heavy Metals (as Pb)	0.005 %
Identification (FTIR)	PASS
Insolubles	0.005 %
Iron	0.01 %
Loss on Drying	8.7 - 11.4 %
Nitrilotriacetic Acid	0.1 %
pH (5%, Water) @25 °C	4.0 - 6.0
Protease	NONE
Purity	99.0 %
RNase	NONE

Cat. No.	Pk	Pack type
M101-500G	500 g	Plastic bottle for solids
M101-1KG	1 kg	Plastic bottle for solids
M101-2.5KG	2,5 kg	Plastic bottle for solids

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EDTA disodium salt dihydrate for biotechnology

CAS 6381-92-6
$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol
Melting Pt: 255 °C
Storage Temperature: Ambient

DNase	none detected
Heavy Metals (as Pb)	<= 0.005%
Insolubles	<= 0.005%
Iron	<= 0.01%
Loss on Drying	8.7% - 11.4%
Nitrilotriacetic Acid	<= 0.1%
pH (5%, Water) @25°C	4.0 - 6.0
Protease	none detected
Purity	>= 99%
RNase	none detected

Cat. No.	Pk	Pack type
0105-500G	500 g	Plastic bottle for solids
0105-1KG	1 kg	Plastic bottle for solids
0105-2.5KG	2,5 kg	Bucket (Plastic)

EDTA disodium salt dihydrate TECHNICAL

CAS 6381-92-6
$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ **M.W.** 372.24 g/mol
Melting Pt: 255 °C
Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
20296.260	500 g	Plastic bottle for solids
20296.291	1 kg	Plastic bottle for solids
20296.360	5 kg	Bucket (Plastic)
20296.462	25 kg	Bucket (Plastic)

NEW

EDTA disodium salt concentrated aqueous solution 0.1 mol/l ConvoL NORMADOSE® volumetric solution

CAS 139-33-3
$C_{10}H_{14}N_2Na_2O_8$
Storage Temperature: Ambient
Dose for preparation of 1 litre of solution of concentration 0.1 mol/l

Titer (20°C)	0.0995 - 0.1005 mol/l

Cat. No.	Pk	Pack type
84864.600	170 ml	Plastic ampoule

EDTA disodium salt 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

CAS 139-33-3
$C_{10}H_{14}N_2Na_2O_8$
Storage Temperature: Ambient

Titer (20°C)	0.00995 - 0.01005 mol/l

Cat. No.	Pk	Pack type
32068.603	60 ml	Plastic ampoule

EDTA disodium salt 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 139-33-3
$C_{10}H_{14}N_2Na_2O_8$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.0998 - 0.1002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
28662.290	1 l	Plastic bottle
28662.370	5 l	Bag-in-box (Cubitainer)

EDTA disodium salt 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 139-33-3
$C_{10}H_{14}N_2Na_2O_8$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.0499 - 0.0501 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
30031.294	1 l	Plastic bottle
30031.408	10 l	Bag-in-box (Cubitainer)

EDTA disodium salt 0.0178 mol/l (N/28) in aqueous solution AVS TITRINORM®, for hardness of water determinations

CAS 139-33-3
$C_{10}H_{14}N_2Na_2O_8$
Density: 1.001 g/cm³ (20 °C)
Storage Temperature: Ambient
1 ml = 1°dH/100 ml H_2O

Titer (20°C; real value 0.2 % accuracy)	0.017764 - 0.01784 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
30029.412	10 l	Plastic drum

EDTA disodium salt 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 139-33-3
$C_{10}H_{14}N_2Na_2O_8$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.00998 - 0.01002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
160226G	5 l	Plastic container

EDTA ferric monosodium salt

Warning

CAS 15708-41-5
$C_{10}H_{12}FeN_2NaO_8$ **M.W.** 367.05 g/mol
Melting Pt: 80 °C
Storage Temperature: Ambient

Assay (EDTA)	66 - 71 %
Assay (calculated as Fe(III))	12.5 - 14.0 %
Insolubility in water	Max. 0.1 %
Cl (Chloride)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.2 %
As (Arsenic)	Max. 3 ppm
Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
280233V	250 g	Plastic bottle for solids

EDTA tetrasodium salt hydrate, ultrapure

Danger

CAS 13235-36-4
$C_{10}H_{12}N_2Na_4O_8 \cdot H_2O$ **M.W.** 398.19 g/mol
Melting Pt: > 300 °C **Density:** 6,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Heavy Metals (as Pb)	< = 0.001 %
Solubility (5%, Water)	pass
Iron	<= 0.005 %
Moisture (KF)	12.4 % - 19.2 %
Nitrilotriacetic Acid	<= 0.1 %
pH (1%, Water) @25°C	10.7 - 11.7
Purity (Dry Basis)	> 99.5 %

Cat. No.	Pk	Pack type
0245-2.5KG	2,5 kg	Plastic bottle

EDTA tetrasodium salt TECHNICAL

Danger

CAS 64-02-8
$C_{10}H_{12}N_2Na_4O_8$ **M.W.** 380.17 g/mol
Melting Pt: > 300 °C **Density:** 6.9 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 83 %

Cat. No.	Pk	Pack type
20299.291	1 kg	Plastic bottle for solids

Egg albumin

See Albumin from chicken egg, technical grade p.22

Egg yolk emulsion

Additive for Cereus selective agar base acc. to Mossel.

• Irradiated

Description	Pk	Cat. No.
Egg Yolk emulsion 50%, 100 ml	6	8140.
Egg Yolk emulsion 50%, 4500 ml	4,5 l	EY4500

NEW Egg yolk emulsion, sterile

Cat. No.	Pk	Pack type
536262U	100 ml	Glass bottle

NEW Egg yolk tellurite emulsion

Cat. No.	Pk	Pack type
536252S	50 ml	Glass bottle

NEW Egg yolk tellurite emulsion, γ-irradiated

Cat. No.	Pk	Pk Info	Pack type
8141.	6	6×100 ml	Glass bottle

EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N′,N′-tetraacetic acid) analytical reagent

CAS 67-42-5
$C_{14}H_{24}N_2O_{10}$ **M.W.** 380.35 g/mol
Melting Pt: 240-244 °C
Storage Temperature: Ambient

Assay (calculated on anhydrous) ..... Min. 98.5 %
Ignition residue (SO_4) ..... Max. 0.2 %
Water ..... Max. 2.0 %

Cat. No.	Pk	Pack type
20308.156	50 g	Plastic bottle for solids

VWR LIFE SCIENCE EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N′,N′-tetraacetic acid), ultrapure

CAS 67-42-5
$C_{14}H_{24}N_2O_{10}$ **M.W.** 380.35 g/mol
Melting Pt: 240-244 °C
Storage Temperature: Ambient

DNase ..... none detected
Heavy Metals (as Pb) ..... <= 0.001 %
Loss on Drying ..... <= 1 %
Melting Range w/Decomposition ..... >= 238 °C
Protease ..... none
Purity ..... > 97 %
RNase ..... none detected

Cat. No.	Pk	Pack type
0732-10G	10 g	Plastic bottle for solids
0732-50G	50 g	Plastic bottle for solids
0732-100G	100 g	Plastic bottle for solids

EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N′,N′-tetraacetic acid) Electran® Molecular biology grade

CAS 67-42-5
$C_{14}H_{24}N_2O_{10}$ **M.W.** 380.35 g/mol
Melting Pt: 240-244 °C
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
437012C	10 g	Glass bottle for solids
437013D	25 g	Glass bottle for solids

Electrode cleaning solutions

For full information concerning health and safety data please see the www.vwr.com website.

Description	Pk	Cat. No.
Electrode cleaning solution Pepsin/Hydrochloric acid for removal of proteins	100 ml	83603.180
Electrode cleaning solution Pepsin/Hydrochloric acid for removal of proteins	500 ml	83603.260
Electrode cleaning solution Pepsin/Hydrochloric acid for removal of proteins	1 l	83603.290

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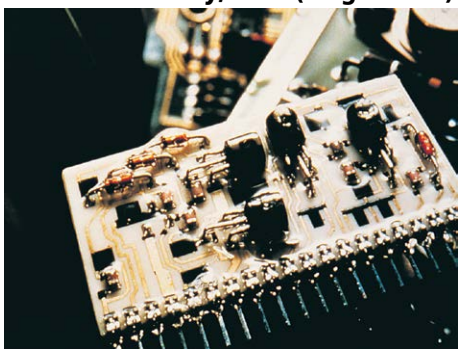
Electronic industry, BASF (reagents for)



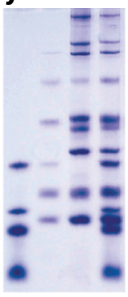
BASF is a leading supplier of high quality chemicals for the electronics and semi-conductor industry and for the production of flatscreens. The typical etch and cleaning materials used in the semi-conductor industry are supplemented by other innovative products such as specific etch mixtures, strippers and many others.

For full details of the specifications and hazards of the products listed below please visit the website or contact the local VWR sales office. For the full range of chemicals available for the electronics industry please ask for details.

Description	Page	Pk	Cat. No.
Acetone VLSI Selectipur® for the electronics industry	8, 133	2,5 l	50488858.
Acetone Selectipur® for the electronics industry	8, 133	146 kg	55954791.
Ammonia 28% Selectipur® for the electronics industry	27, 133	24,4 kg	50451647.
Ammonia 28% VLSI Selectipur® for the electronics industry	27, 133	2,5 l	50488905.
Ammonia 28% SLSI Selectipur® for the electronics industry	27, 133	2,25 kg	51152938.
Etch Mixture PES 77-19-04 Selectipur® for the electronics industry	133, 145	2,5 l	50488882.
Etch Mixture SF 83(65)-17 Selectipur® for the electronics industry	133, 145	240 kg	52135981.
Ethylene glycol VLSI Selectipur® for the electronics industry	133, 155	2,5 l	50488857.
HMDS (1,1,1,3,3,3-Hexamethyldisilazane) VLSI Selectipur® for the electronics industry	133, 191	2,5 l	51152885.
Hydrochloric acid 36% VLSI Selectipur® for the electronics industry	133, 198	2,5 l	50489136.
Hydrochloric acid 36% SLSI Selectipur® for the electronics industry	133, 198	220 kg	57004879.
Hydrofluoric acid 5% VLSI Selectipur® for the electronics industry	133, 206	2,5 l	50488881.
Hydrofluoric acid 40% VLSI Selectipur® for the electronics industry	133, 205	2,5 l	50489103.
Hydrofluoric acid 50% VLSI Selectipur® for the electronics industry	133, 204	2,5 l	50488860.
Hydrogen peroxide 31% unstabilised VLSI Selectipur® for the electronics industry	133, 206	2,5 l	50489142.
Hydrogen peroxide 31% unstabilised VLSI Selectipur® for the electronics industry	133, 206	205 kg	55210671.
Losolin® IV Selectipur® for the electronics industry	133, 243	2,5 l	51153203.
N-Methyl-2-pyrrolidone (NMP) VLSI Selectipur® for the electronics industry	133, 264	2,5 l	50489118.
N-Methyl-2-pyrrolidone (NMP) for the electronics industry	133, 264	210 kg	52010265.
Nitric acid 69% VLSI Selectipur® for the electronics industry	133, 318	2,5 l	50489134.
Orthophosphoric acid 85% VLSI Selectipur® for the electronics industry	133, 324	2,5 l	51151401.
2-Propanol VLSI Selectipur® for the electronics industry	133, 379	20 kg	52107626.
2-Propanol VLSI Selectipur® for the electronics industry	133, 379	2,5 l	51152037.
2-Propanol SLSI Selectipur® for the electronics industry	133, 379	2,5 l	51153150.
2-Propanol SLSI Selectipur® for the electronics industry	133, 379	147 kg	56998148.
2-Propanol Selectipur® for the electronics industry	133, 379	150 kg	52106195.
Sioetch® MT 25/01 VLSI Selectipur® for the electronics industry	133, 406	2,5 l	51152461.
Spinetch® D VLSI Selectipur® for the electronics industry	133, 442	276 kg	50438060.
Spinetch® E Selectipur® for the electronics industry	133, 442	320 kg	56996346.
Sulphuric acid 96% VLSI Selectipur® for the electronics industry	133, 471	2,5 l	51151507.
Sulphuric acid 96% VLSI Selectipur® for the electronics industry	133, 471	340 kg	57384943.

VWR® COLLECTION designed for your applications

Acrylamide solutions, NEXT GEL®



Resolution of a wide range of proteins on a 10% NEXT GEL®. Low (K880, lane 1), Mid/Low (J450, lane 2), and Wide (K494, lane 3) Range Protein Molecular Weight Markers were loaded on a 10% NEXT GEL® individually and as a mixture of all three markers (lane 4). The gel was post-stained with Coomassie® Blue and destained using standard procedures. The NEXT GEL® shows resolution of proteins from 3.5 kDa to 212.0 kDa.

Premixed, ready to pour acrylamide solution and 20X running buffer for the SDS PAGE analysis of proteins.

- Ready to pour SDS polyacrylamide solutions - just add APS and TEMED
- Faster gel casting with no stacking gel required
- Broad range of separation - 3,5 kDa to 212 kDa on the same gel
- High resolution of protein bands

Concentration	Separation range
7,5%	20 – 300 kDa
10%	10 – 200 kDa
12,5%	3,5 – 100 kDa
15%	2.5 –100 kDa

Description	Pk	Cat. No.
NEXT GEL® 5% acrylamide solution	100 ml	M254-100ML
NEXT GEL® 5% acrylamide solution	500 ml	M254-500ML
NEXT GEL® 7,5% acrylamide solution, MW separation range: 20 to 300 kDa	100 ml	M255-100ML
NEXT GEL® 7,5% acrylamide solution, MW separation range: 20 to 300 kDa	500 ml	M255-500ML
NEXT GEL® 10% acrylamide solution	100 ml	M256-100ML
NEXT GEL® 10% acrylamide solution	500 ml	M256-500ML
NEXT GEL® 12,5% acrylamide solution, MW separation range: 3,5 to100 kDa	100 ml	M257-100ML
NEXT GEL® 12,5% acrylamide solution, MW separation range: 3,5 to100 kDa	500 ml	M257-500ML
NEXT GEL® 15% acrylamide solution	100 ml	M258-100ML
NEXT GEL® 15% acrylamide solution	500 ml	M258-500ML

Agarose, DNA grade (100 bp - 23 kb), Electran®

DNA grade agarose is suitable for the majority of routine DNA or RNA separations, but is ideal for separation of DNA fragments larger than 1000 bp. For applications where a more stringent specification is required DNA pure grade agarose is recommended.

- Free from DNase and RNase

Description	Pk	Cat. No.	Pack type
Agarose, DNA grade (100 bp - 23 kb)	100 g	438792U	Plastic bottle
Agarose, DNA grade (100 bp - 23 kb)	1 kg	438795A	Plastic bottle

Agarose, DNA pure grade (100 bp - 23 kb), Electran®

Agarose DNA pure grade ensures reliable digestion and ligations from recovered DNA or RNA fragments from 100 bp to 23 kb. It is particularly suitable for both preparative and analytical separation procedures with nucleic acids ≥1000 base pairs, where a low melting point is not required. The agarose gives rise to firm gels even at low concentrations and gives low background after ethidium bromide staining.

- Best choice for DNA/RNA recovery and cloning applications
- Free from DNase and RNase

Description	Pk	Cat. No.	Pack type
Agarose, DNA pure grade (100 bp - 23 kb)	500 g	443666A	Plastic bottle

Agarose, wide range low melting (200 bp-25 kb), Electran®

Agarose, wide range low melting, is a low melting temperature agarose (≤65 °C). Confidently resolve fragments from 200 bp to 25 kb prior to PCR, cloning, digesting, or sequencing in the presence of re-melted agarose, without additional purification steps. Ideal resolution of DNA fragments >1000 bp.

Description	Pk	Cat. No.	Pack type
Agarose, wide range low melting (200 bp - 25 kb)	25 g	444152G	Plastic bottle
Agarose, wide range low melting (200 bp - 25 kb)	125 g	444153H	Plastic bottle

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Agarose, high resolution low melting (50 bp-1 kb), Electran®

Agarose high resolution (HR) has low melting and gelling temperatures but differs from traditional low melting point molecular biology grade agaroses in the gel separation range. Using this agarose in electrophoresis allows fine and consistent resolution of nucleic acids below 1000 base pairs, which differ by only a few base pairs. The properties of Agarose HR allow consistent gel separations (analytical and preparative) and performance of *in-vitro* translation and transcription mapping as well as *in-vivo* ligation and transformation. For analytical gel separation of DNA/RNA below 1000 base pairs where a higher gel strength for ease of manipulation is required, we recommend the use of Agarose, high resolution, Electran® (436552V/436553W).

- Free from DNase and RNase

Description	Pk	Cat. No.	Pack type
Agarose high resolution, low melting (50 bp - 1 kb)	25 g	437122H	Plastic bottle
Agarose high resolution, low melting (50 bp - 1 kb)	125 g	437123Y	Plastic bottle

Agarose, high resolution (50 bp-1 kb), Electran®

Agarose high resolution is optimised to give the exceptional separation on agarose of nucleic acid fragments below 1000 base pairs and differing by only a few base pairs. It retains the low gelling characteristics of the standard Agarose HR Plus with significantly increased gel strength at the expense of a higher melting temperature. This results in gels which are flexible and easy to handle. These properties make it the agarose of choice for analytical gel separations to check the quality and size of amplified fragments and for use in restriction mapping involving small digestion fragments.

- DNase and RNase free

Description	Pk	Cat. No.	Pack type
Agarose, high resolution (50 bp - 1 kb)	25 g	436552V	Plastic bottle
Agarose, high resolution (50 bp - 1 kb)	100 g	436553W	Plastic bottle

Agarose 15, Electran®, for protein separation

Agarose 15 is ideal for serum protein electrophoresis and suitable for immunoelectrophoresis (IEP). May also be used for DNA electrophoresis. It has a medium range of electroendosmosis and high gel strength.

- DNase and RNase free

Description	Pk	Cat. No.	Pack type
Agarose 15	25 g	443023R	Plastic bottle
Agarose 15	125 g	443024S	Plastic bottle
Agarose 15	500 g	443025T	Plastic bottle

Agarose 25, Electran®, for protein separation

Agarose 25 is suitable for use in a wide range of protein electrophoresis techniques and is particularly recommended for counter immunoelectrophoresis. In this application the higher electroendosmosis permits optimum positioning during antibody/antigen contact.

- DNase and RNase free

Description	Pk	Cat. No.	Pack type
Agarose 25	25 g	442492P	Plastic bottle
Agarose 25	125 g	442494R	Plastic bottle

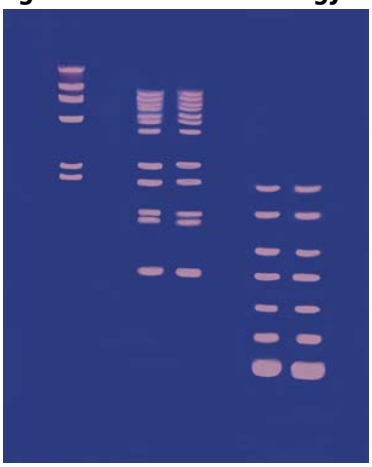
Agarose IEF, Electran®

Agarose IEF is highly purified agarose for isoelectric focusing (IEF). It is designed to be free of electroendosmosis (EEO), which makes it ideal for IEF applications with all pH ranges. Agarose has distinct advantages over polyacrylamide gels for IEF. Separation in agarose is rapid, and agarose gels can be used to separate proteins up to 2000 kDa.

- DNase and RNase free

Description	Pk	Cat. No.	Pack type
Agarose IEF	25 g	443173H	Plastic bottle
Agarose IEF	100 g	443174Y	Plastic bottle

Agarose I™ for biotechnology



Agarose I™ is a standard melting/gelling agarose, suitable for routine nucleic acid analytical/preparative applications (250 bp - 22 kb). Agarose I™ has a low EEO (electroendosmosis) for shorter electrophoretic runs without compromising resolution. Agarose I™ is excellent for blotting techniques and general manipulations.

- All-purpose, high purity agarose
- Exceptional band resolution and clarity
- Nuclease and protease-free
- Convenient tablet format available - no weighing required

Description	Pk	Cat. No.	Pack type
Agarose I™	25 g	0710-25G	Plastic bottle
Agarose I™	100 g	0710-100G	Plastic bottle
Agarose I™	250 g	0710-250G	Plastic bottle
Agarose I™	500 g	0710-500G	Plastic bottle
Agarose I™ tablets, 500 mg	100 Tab.	K857-100TABS	Plastic bottle

Agarose LF™

Agarose LF™ (Large Fragment, 1 kb - 40 kb) is optimised for pulsed-field gel electrophoresis (PFGE) applications. The exceptionally low EEO (electroendosmosis) and high gel strength of Agarose LF™ facilitates faster electrophoresis running times in low concentration gels. This agarose is best suited for resolving large (>20 kb) DNA fragments.

- Optimised for pulsed field gel electrophoresis (PFGE)
- Ideal for resolving large (>20 kb) DNA fragments
- Nuclease and protease-free

Description	Pk	Cat. No.	Pack type
Agarose LF™	25 g	X174-25G	Plastic bottle
Agarose LF™	100 g	X174-100G	Plastic bottle
Agarose LF™	250 g	X174-250G	Plastic bottle

Agarose SFR™ for biotechnology

Agarose SFR™ (Super Fine Resolution) is a high resolution sieving agarose with excellent clarity. DNA bands differing in size by 2% can be resolved in the range of 200 bp to 1000 bp. This agarose is suitable for the analysis of AFLPs (Amplified Fragment Length Polymorphisms), STRs (Short Tandem Repeats) and tetranucleotide repeats. The low melting temperature of Agarose SFR™ makes it an excellent medium for analytical and preparative electrophoresis.

- Super fine resolution - resolve 238 bp and 242 bp bands
- Low melting point
- Nuclease and protease-free

Description	Pk	Cat. No.	Pack type
Agarose SFR™	25 g	J234-25G	Plastic bottle
Agarose SFR™	100 g	J234-100G	Plastic bottle
Agarose SFR™	250 g	J234-250G	Plastic bottle

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Agarose 3:1 HRB™ for biotechnology

Agarose 3:1 HRB™ (High Resolution Blend) is a mixture of agarose formulated to provide high resolution of small nucleic acids and PCR products. This product is specially designed for analysis of DNA fragments less than 1000 bp. Agarose 3:1 HRB™ displays precise banding patterns without smearing or high background fluorescence. The high gel strength allows for easy to handle gels that are optimal for blotting applications.

- High resolution blend
- Optimal for small nucleic acid fragments and PCR products
- Easy to handle due to high gel strength
- Nuclease and protease-free

Description	Pk	Cat. No.	Pack type
Agarose 3:1 HRB™	25 g	E776-25G	Plastic bottle
Agarose 3:1 HRB™	100 g	E776-100G	Plastic bottle
Agarose 3:1 HRB™	250 g	E776-250G	Plastic bottle

Agarose RA™ (Routine Analysis)

Agarose RA™ (Routine Analysis) is a general application agarose that provides good resolution and is cost effective for high volume users. It was developed specifically for quick checks of PCR products, plasmids preps, screening and cloning. Agarose RA™ features high resolution, easy preparation and set up, a low EEO (electroendosmosis) and excellent sensitivity with low background when stained. For recovery and blotting applications Agarose I™ is recommended.

- Ideal agarose for high throughput
- High resolution
- Easy preparation
- Excellent sensitivity

Description	Pk	Cat. No.	Pack type
Agarose RA™	25 g	N605-25G	Plastic bottle
Agarose RA™	100 g	N605-100G	Plastic bottle
Agarose RA™	250 g	N605-250G	Plastic bottle
Agarose RA™	500 g	N605-500G	Plastic bottle
Agarose RA™	1 kg	N605-1KG	Plastic bottle

Destaining bags

Destaining bags are designed to safely remove ethidium bromide from solution during overnight treatment. Each bag extracts up to 5 mg of ethidium bromide from solution, thus minimising the exposure of research personnel to this toxic material. The special absorbent mixture retains dye molecules in a convenient bag for removal and incineration.

- Removes up to 5 mg ethidium bromide per bag
- Minimises exposure to toxic materials
- Easiest ethidium bromide removal available

Description	Pk	Cat. No.
Destaining bags	25	E732-25

Ethidium bromide solution

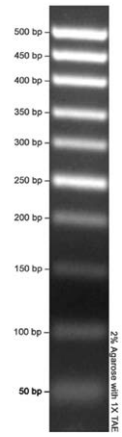
A convenient format of ethidium bromide solution. One drop added to 50 ml will produce a solution of ethidium bromide with a final concentration of 0,5 µg/ml.

Description	Pk	Cat. No.	Pack type
Ethidium bromide 0,0625% (0,625 mg/ml) aqueous solution	10 ml	429932N	Glass bottle

Ethidium bromide Electran®

Description	Pk	Cat. No.	Pack type
Ethidium bromide 10 mg/ml in aqueous solution Electran® for electrophoresis	10 ml	443922U	Glass bottle

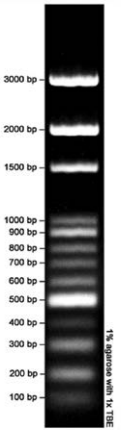
DNA ladder, 50 bp, Ready Ladder™



Ladder with 10 fragments ranging from 50 to 500 bp for easy band identification. Ready to use formula pre-mixed with loading dye.

Description	Pk	Cat. No.
50 bp Ready Ladder™, pre-mixed with loading dye, sufficient for 100 lanes	1 KIT	N746-100RXN

DNA ladder, 100 bp



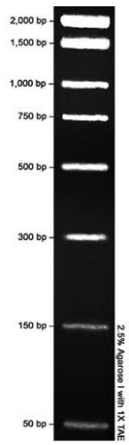
Ladder with 13 fragments ranging from 100 to 3000 bp for easy band identification.

Description	Pk	Cat. No.
100 bp ladder, sufficient for 50 lanes	250 µl	K180-250UL
100 bp Ready Ladder™, pre-mixed with loading dye, sufficient for 50 lanes	300 µl	N550-300UL

DNA ladders

Description	Pk	Cat. No.
High range DNA ladder, 200 - 12 000 bp, 100 lanes, 1×0,5 ml	1 KIT	733-2577
Low range DNA ladder, 100 - 1000 bp, 100 lanes, 1×0,5 ml	1 KIT	733-2578
PCR ladder, 100 - 3000 bp, 100 lanes, 1×0,5 ml	1 KIT	733-2579

PCR DNA Marker™



PCR DNA Marker™ offers 8 fragments ranging from 50 to 2000 bp. The marker contains high intensity reference bands that are ideal for quick sizing of PCR products and restriction digests. Simply mix 10 µl of PCR DNA Marker™ with required quantity of loading buffer and load into well. There is sufficient material for 100 assays.

- High resolution marker optimal for size estimation of PCR fragments

Description	Pk	Cat. No.
PCR DNA Marker™	1 KIT	E854-100RXN

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

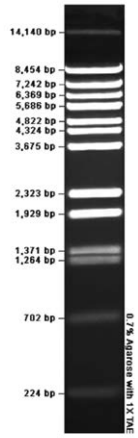
DNA MW marker, High-Range

High-Range DNA MW (molecular weight) marker offers 10 fragments ranging from 1503 to 48 502 bp. There is sufficient material for 75 - 150 assays.

- Optimal for evaluation fragments >10 kb
- Easy band identification

Description	Pk	Cat. No.
DNA MW marker, High-Range	150 µG	E255-150UG

DNA MW marker, Low-Range I™



Low-Range I™ marker offers 14 fragments ranging from 224 to 14 140 bp. Combine 5 µl of marker with 5 µl of 2X loading buffer and load into well. There is sufficient material for 50 assays.

- Easy band identification

Description	Pk	Cat. No.
DNA MW marker, Low-Range I™	100 µG	E261-100UG

DNA MW marker, Wide-Range

The Wide-Range marker has 24 fragments ranging from 100 to 48 500 bp. Superior for gene mapping and RFLP analysis. There is sufficient material for 100 - 200 assays.

Description	Pk	Cat. No.
DNA MW marker, Wide-Range	200 µG	E273-200UG

VWR Mobile
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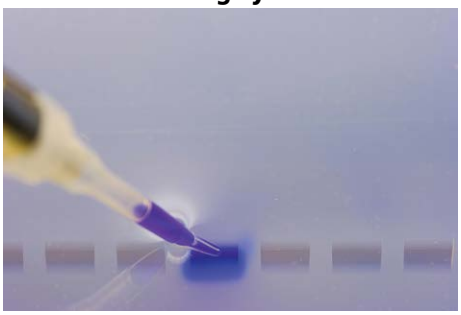
GET IT ON Google play
VWR.com in your pocket

VWR2GO

VWR2Go provides the essential features from our web-based shop system on mobile phones and tablets
Real time, intuitive searching and ordering of over one million items

Download today!

Nucleic acid loading dye



Designed to optimise loading nucleic acids in agarose gels, the loading dye imparts colour to the sample to facilitate the loading process and increase the density of the sample to ensure efficient sample distribution into each well. The dye migrates independently from the sample, allowing estimation of the migration of nucleic acids.

- Ready to use
- Eliminates exposure to irritating and harmful powdered dyes
- Free from DNase, RNase and protease
- Functionally and analytically tested

Description	Pk	Cat. No.
Agarose gel loading dye, 6X, containing 3 tracking dyes and 15% Ficoll	5 ml	E190-5ML
Glycerol gel loading dye, 5X, containing 3 tracking dyes and 30% glycerol	1 ml	E269-1ML
Glycerol gel loading dye, 5X, containing 3 tracking dyes and 30% glycerol	5 ml	E269-5ML
Sucrose gel loading dye, 5X, containing 3 tracking dyes and 40% sucrose	5 ml	E274-5ML
Gel loading buffer (BPB), 4X, containing bromophenol blue	5 ml	K945-5ML

Loading dye

Description	Pk	Cat. No.
Loading buffer, red (5×1 ml)	1 KIT	733-2574
Loading buffer, blue (5×1 ml)	1 KIT	733-2575
Loading buffer, orange (5×1 ml)	1 KIT	733-2576

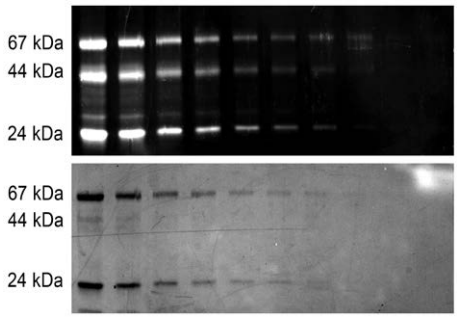
EZ Vision® BlueLight

Fluorescent Dye, EZ Vision® BlueLight is a sensitive, non mutagenic and environmentally safe fluorescent dye that is compatible with gel documentation using blue light excitation.

- Available as a 10 000X concentrated solution
- In-gel and post-gel staining
- Sensitivity down to 1 - 3 ng DNA
- Does not affect DNA integrity for downstream applications

Description	Pk	Cat. No.
EZ Vision® BlueLight	0,5 ml	1B1680-0.5ML

VividPro™

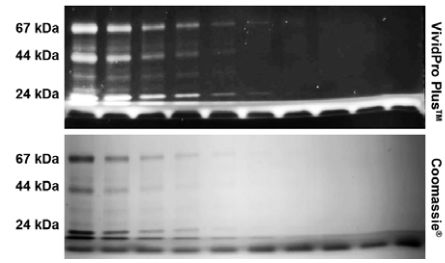


VividPro™ is a generic fluorescent stain for protein gel electrophoresis that can be used to visualise proteins in SDS PAGE gels with a sensitivity that is intermediate between ruthenium based dyes and Coomassie stains. Visualisation can be achieved following the electrophoretic run using a fast staining protocol.

- Fast fluorescent staining in under 45 minutes
- Sensitivity to 10 ng per band of protein
- Excitation 284, 366 nm / emission 471 nm (in presence of 0,2 mg/ml BSA)
- Compatible with mass spectrometry

Description	Pk	Cat. No.
VividPro™	200 µl	1B1772-200UL
VividPro™	500 µl	1B1772-500UL

VividPro Plus™



VividPro Plus™ is a fluorescent protein stain that can be used in a fast co-electrophoretic protocol to visualise proteins in SDS PAGE gels with a sensitivity that is intermediate between ruthenium based dyes and Coomassie® stains. Visualisation can be achieved quickly following the electrophoretic run without fixation, and is compatible with downstream manipulation such as mass spectrometry, and Western blotting. VividPro Plus™ can also be used with a longer post-staining protocol that requires gel fixation and provides a staining pattern that has a longer time stability.

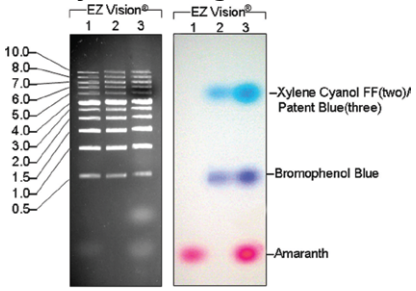
- Choice of two fluorescent staining protocols: co-electrophoretic and post-electrophoretic
- Co-electrophoretic staining requires only 15 minute post-electrophoresis washing
- Sensitivity to 10 ng per band of protein
- Excitation 300, 496 nm / emission 506 nm (in presence of 0,2 mg/ml BSA)
- Compatible with mass spectrometry and Western blotting

VividPro Plus™ can be visualised both by a common UV transilluminator or gel documentation box equipped with a transilluminator at 312 nm, and by gel documentation systems with blue LED light or laser scanners using a 488 nm blue laser.

Description	Pk	Cat. No.
VividPro Plus™	0,4 ml	1B1773-0.4ML
VividPro Plus™	1 ml	1B1773-1ML

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

DNA dye as loading buffer, EZ-Vision®



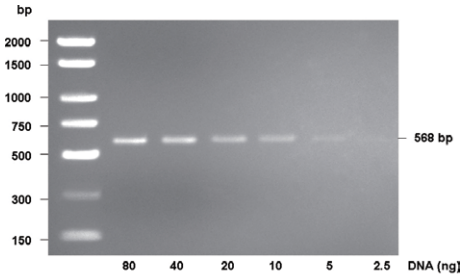
Electrophoretic Migration of EZ-Vision® One, Two and Three. Left image: 1% TAE agarose gel showing the fluorescence of AMRESCO's 1 kb Ladder (K181) stained with EZ-Vision® One (lane 1), EZ-Vision® Two (lane 2) and EZ-Vision® Three (lane 3) captured with a Syngene GBox-HR GelDoc System. Right image: Digital camera photograph of the same gel as left image, showing the colors and migration position of the one fast migrating tracking dye of EZ-Vision® One (lane 1), the two tracking dyes of EZ-Vision® Two (lane 2), and the three tracking dyes of EZ-Vision® Three (lane 3).

EZ-Vision® DNA dye as loading buffer provides a non mutagenic, environmentally friendly alternative to ethidium bromide for instantaneous fluorescent DNA band visualisation.

- Low background
- Requires no post-electrophoresis staining or destaining
- Works with most existing filters for gel documentation
- Broad emission spectra with peak near 450 nm
- Completely eliminates the need for ethidium bromide

Description	Pk	Cat. No.
EZ-Vision® 3 DNA dye kit, with dyes migrating at ~4000 bp, 400 bp and 10 bp in a 1% agarose gel, 5×1 ml	1 KIT	N313-KIT
EZ-Vision® 1 DNA dye kit, with dye migrating at ~10 bp in a 1% agarose gel, 5×1 ml	1 KIT	N472-KIT
EZ-Vision® 2 DNA dye kit, with dyes migrating at ~4000 bp and 400 bp in a 1% agarose gel, 5×1 ml	1 KIT	N650-KIT

EZ-Vision® In-Gel Solution



EZ-Vision® In-Gel Sensitivity. DNA (2.5 ng - 80 ng) was mixed with 6X Agarose Gel Loading Buffer (E190) and applied to a 1% TAE agarose gel. Samples were resolved for 1 hour at 6.4 V/cm in 1X TAE buffer. Fluorescent visualization of DNA was achieved with a 500 msec UV exposure using a SYBR® Green filter with the Syngene GBox-HR Gel Doc System.

EZ-Vision® In-Gel Solution is a non mutagenic, non toxic fluorescent DNA dye that is used as an in-gel or post-run stain to visualise DNA in agarose gels. EZ-Vision® In-Gel Solution is an excellent replacement for the often used, but hazardous, ethidium bromide. As an in-gel preparation for electrophoresis, EZ-Vision® In-Gel Solution is simply added to molten agarose prior to gel casting, allowing instant visualisation of DNA bands upon UV exposure. Alternatively, EZ-Vision® In-Gel Solution can be used to stain the gel after electrophoresis.

- Immediate results
- Easy and convenient
- Eliminates the use of ethidium bromide

Description	Pk	Cat. No.
EZ-Vision® In-Gel Solution, dropper bottle	15 ml	N391-15MLDRP
EZ-Vision® In-Gel Solution, dropper bottle	5 ml	N391-5MLDRP
EZ-Vision® In-Gel Solution, 10 000X concentrate	0,5 ml	N391-0.5ML

Ellman's reagent

See 5,5'-Dithiobis(2-nitrobenzoic acid) (Ellmans reagent, DTNB) p.125

EMB Agar

See Microbiology

α-Endosulfan, neat

Danger

CAS 959-98-8 **UN:** 2761
$C_9H_6Cl_6O_3S$ **M.W.** 406.93 g/mol
Boiling Pt: 450 °C (1013 hPa) **Melting Pt:** 108-110 °C

Cat. No.	Pk	Pack type
124082E	10 mg	Glass ampoule

Endosulfan (α- and β-isomers), neat

Danger

CAS 115-29-7
$C_9H_6Cl_6O_3S$ **M.W.** 406.93 g/mol
Boiling Pt: 106 °C (0,7 torr) **Melting Pt:** 70 °C **Density:** 1.745 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
124122S	10 mg	Glass ampoule

Endosulfan I

See α-Endosulfan p.142

Endrin, neat

Danger

CAS 72-20-8 **UN:** 2761
$C_{12}H_8Cl_6O$ **M.W.** 380.91 g/mol
Boiling Pt: 416 °C (1013 hPa) **Melting Pt:** 240 °C **Density:** 1.7 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
124142W	10 mg	Glass ampoule

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Powder Packs, reagents for Hach® instruments

VWR Powder Pack reagents are designed to be used on all the laboratory and portable Hach® instruments. No calibration data is necessary; they can be used with the Hach® instrument calibrations, handling is identical to the corresponding Hach® reagents. The pillows, individually sealed in aluminium foil packs, are unaffected by ambient conditions and contain pre-measured powder reagents for accuracy, convenience and great solubility.

- Accurate
- Fast and convenient - easier dissolution than tablets and long shelf life
- No calibration necessary
- Identical handling to the corresponding Hach® reagents

Description	Pk	Cat. No.
Aluminium, RS 10 ml	100 Tests	85600.620
Ammonia, RS 10 ml	200 Tests	85617.620
Ammonia, TUBES HR	50 Tests	85616.610
Ammonia, TUBES LR	50 Tests	85615.610
Chlorine-free (DPD), PP 10 ml	100 Tests	85601.620
Chlorine-free (DPD), PP 10 ml	1000 Tests	85601.680
Chlorine-free (DPD), PP 25 ml	100 Tests	85602.620
Chlorine-free (DPD), PP 25 ml	1000 Tests	85602.680
Chlorine total (DPD), PP 10 ml	100 Tests	85603.620
Chlorine total (DPD), PP 10 ml	1000 Tests	85603.680
Chlorine total (DPD), PP 25 ml	100 Tests	85604.620
Chlorine total (DPD), PP 25 ml	1000 Tests	85604.680
Copper, PP 10 ml	100 Tests	85605.620
Copper, PP 10 ml	1000 Tests	85605.680
DEHA, RS	100 Tests	85620.620
Iron, PP 10 ml	100 Tests	85607.620
Iron, PP 10 ml	1000 Tests	85607.680
Iron, TPTZ, PP 10 ml	100 Tests	85606.620
Manganese, RS 10 ml HR	100 Tests	85609.620
Manganese, RS 10 ml LR	100 Tests	85608.620
Molybdenum, PP 10 ml	100 Tests	85610.620
Molybdenum, PP 25 ml	100 Tests	85611.620
Nitrate TUBES, RS	50 Tests	85612.620
Nitrite, PP 10 ml	100 Tests	85614.620
Nitrite, PP 25 ml	100 Tests	85613.620
Nitrite, PP 25 ml	1000 Tests	85613.680
Nitrogen, RS	50 Tests	85618.610
Nitrogen, RS	50 Tests	85619.610
Phosphate (DPD), PP 10 ml	100 Tests	85621.610
Phosphate (DPD), PP 10 ml	1000 Tests	85621.680
Phosphate reactive, RS	50 Tests	85622.610
Phosphate total, RS	50 Tests	85623.610
Phosphate total / acid hydrolysable, RS	50 Tests	85624.610
Silica, RS 10 ml HR	100 Tests	85626.620
Silica, RS 10 ml LR	100 Tests	85625.620
Silica, RS 25 ml HR	100 Tests	85627.620
Sulphate, PP 10 ml	100 Tests	85629.620
Sulphate, PP 25 ml	100 Tests	85628.620
Sulphate, PP 25 ml	1000 Tests	85628.680

RS = Powder Pillow reagent set
PP = Powder Pillow
DEHA = N,N-Diethylhydroxylamine

Eosin-Methylene blue dye Wright

Dyes and Stains p.290

Eosin and methylene blue Wright

See Dyes and Stains p.290

Eosin Y disodium salt

See Dyes and Stains p.290

Eosin Y aqueous solution Q Path® for microscopy

IVD

CAS 17372-87-1
Storage Temperature: Ambient
Ready to use eosin solution for HES histological staining.

Appearance	Clear liquid
Colour of solution	Orange-red
Density (20/4)	0.9 - 1.1
pH (20°C)	5 - 5.5
Absorbance (0.1 %)	514 - 518 nm

Cat. No.	Pk	Pack type
10047001.	450 ml	Pouch
10047101.	2,5 l	Plastic bottle

Eosin Y alcoholic Q Path® for microscopy

Danger

IVD

CAS 17372-87-1 **UN:** 1170
Storage Temperature: Ambient
Ready to use solution for HES histological staining.

Cat. No.	Pk	Pack type
10047003.	450 ml	Pouch
10047103.	2,5 l	Plastic bottle
00607121.	5 l	Bag-in-box (Cubitainer)

Eosin yellowish

See Dyes and Stains 290

NEW Erbium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities.

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Erbium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457257G
Erbium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85563.180

Erbium standard solution, 1,000 mg/l Er in dil. nitric acid (from Er_2O_3) ARISTAR® standard for ICP

Er_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

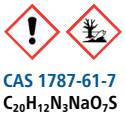
Cat. No.	Pk	Pack type
455324R	500 ml	Plastic bottle

Erbium standard solution, 1,000 mg/l Er in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86675.180	100 ml	Plastic bottle
86675.260	500 ml	Plastic bottle

Eriochrome Black T TECHNICAL



Warning

CAS 1787-61-7 **UN:** 3077
$C_{20}H_{12}N_3NaO_7S$ **M.W.** 461.39 g/mol
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
26002.183	100 g	Glass bottle

Eriochrome Black T triturate 1% in sodium chloride Reag. Ph. Eur. 1056801

Warning

CAS 1787-61-7 **UN:** 3077
$C_{20}H_{12}N_3NaO_7S$ **M.W.** 461.39 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87873.180	100 g	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Etch Mixture PES 77-19-04 Selectipur® for the electronics industry

UN: 3264
Storage Temperature: Ambient
Phosphoric/Acetic/Nitric acid mixture

Product from BASF

Cat. No.	Pk	Pack type
50488882.	2,5 l	Glass bottle

Etch Mixture SF 83(65)-17 Selectipur® for the electronics industry

UN: 2922
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
52135981.	240 kg	Steel drum

Ethanal

See Acetaldehyde p.1

1,2-Ethanediamine

See Ethylenediamine p.155

Ethanedioic acid dihydrate

See Oxalic acid dihydrate p.325

1,2-Ethanediol

See Ethylene glycol p.154

Ethanenitrile

See Acetonitrile p.10

Ethanoic acid nitrile

See Acetonitrile p.10

Ethanoic acid

See Acetic acid p.2

Ethanol absolute, anhydrous (max. 0.003% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43
Bottle with a septum cap featuring six separate re-sealable puncture points

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay ..... Min. 99.8 %
Acidity ..... Max. 0.0005 meq/g
Residue on evaporation ..... Max. 0.0005 %
Water ..... Max. 0.0030 %

Cat. No.	Pk	Pack type
83672.230	250 ml	Glass bottle with septum cap
83672.290	1 l	Glass bottle
83672.320	2,5 l	Glass bottle

NEW Ethanol, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85665.180	100 ml	Glass bottle

Ethanol absolute HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (calculated on anhydrous) ..... Min. 99.8 %
Acidity ..... Max. 0.0001 meq/g
Alkalinity ..... Max. 0.0003 meq/g
Evaporation residue ..... Max. 10 ppm
Water ..... Max. 0.2 %
Absorbance (250 nm) ..... Max. 0.05
Absorbance (280 nm) ..... Max. 0.01
Transmittance (280 nm) ..... Min. 98 %
Transmittance (220 nm) ..... Min. 50 %
Transmittance (250 nm) ..... Min. 90 %
Transmittance (280 nm) ..... Min. 98 %

Cat. No.	Pk	Pack type
153385E	1 l	Glass bottle
153386F	2,5 l	Glass bottle

Ethanol absolute AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (on anhydrous substance)	Min. 99.8 %	Assay (V/V)	Min. 99.85 %
IR Spectrum	Passes test	Solubility in water	Passes test ACS
Volatile impurities	Passes test Ph.Eur.	Acidity	Max. 0.0001 meq/g
Alkalinity	Max. 0.0001 meq/g	Boiling point	78.0 - 78.5 °C
Colouration	Max. 10 APHA	Density (20/20)	0.790 - 0.793
n 20/D	1.360 - 1.362	Substances coloured by H_2SO_4	Max. 20 APHA
Aldehydes (as CH_3CHO)	Max. 5 ppm	Aldehydes + ketones (as CH_3CHO)	Max. 10 ppm
iso-Amyl alcohol	Max. 0.05 %	Benzene	Max. 2 ppm
Evaporation residue	Max. 5 ppm	Formaldehyde	Max. 1 ppm
Furaldehyde	Max. 1 ppm	Higher alcohols (standard mixture)	Max. 0.02 %
Ketones (as CH_3COCH_3)	Max. 10 ppm	Methanol	Max. 100 ppm
2-Propanol	Max. 30 ppm	Substances reducing $KMnO_4$ (as O)	Max. 3 ppm
Total heavy alcohols	Max. 100 ppm	Water	Max. 0.1 %
Al (Aluminium)	Max. 0.02 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.02 ppm	Ca (Calcium)	Max. 0.2 ppm
Cd (Cadmium)	Max. 0.02 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.01 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 0.05 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.01 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.05 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.1 ppm
Absorbance (240 nm) (5 cm)	Max. 0.4	Absorbance (250-260 nm) (5 cm)	Max. 0.3
Absorbance (270-340 nm) (5 cm)	Max. 0.1	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20821.296	1 l	Glass bottle
20821.310	1 l	Plastic bottle
20821.321	2,5 l	Glass bottle
20821.330	2,5 l	Plastic bottle
20821.365	5 l	Plastic bottle
20821.467	25 l	Metal drum
20821.558	200 l	Metal drum

Ethanol absolute Ph. Eur., USP

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (V/V) (15,56°C)"	Min. 99.5 %	Assay (V/V)	Min. 99.5 %
Assay (15,56°C)	Min. 99.2 %	Assay	Min. 99.2 %
Appearance	Conforms (see CoA/CoS)	Clarity of solution	Passes test USP
Colour of solution	Passes test USP	Identification (IR)	Passes test
Appearance test	Passes test Ph.Eur.	Acidity or alkalinity (as CH_3COOH)	Max. 30 ppm
Specific gravity (15,56°C)	Max. 0.7962	Relative density (20°C)	0.790 - 0.793
Absorbance (240 nm)	Max. 0.40	Absorbance (250-260 nm)	Max. 0.30
Absorbance (270-340 nm)	Max. 0.10	The absorption curve is smooth	Passes test
Methanol (V/V)	Max. 200 ppm	Acetaldehyde + acetal (as C_2H_4O) (V/V)	Max. 10 ppm
Benzene (V/V)	Max. 2 ppm	Total of other impurities (V/V)	Max. 300 ppm
Disregard limit	Max. 9 ppm	Residue on evaporation (W/V)	Max. 25 ppm
Residues of metal catalysts or reagents . Unlikely by manuf.process		Residual solvents	Passes test
Conforms to Ph.Eur./USP	Passes test		

Cat. No.	Pk	Pack type
20816.298	1 l	Glass bottle
20816.367	5 l	Plastic bottle
20816.470	25 l	Plastic drum

Ethanol absolute ≥99.5% GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay	Min. 99.5 %
Assay (V/V)	Min. 99.5 %
IR Spectrum	Passes test
n 20/D	1.360 - 1.362
Evaporation residue	Max. 20 ppm

Cat. No.	Pk	Pack type
20820.362	5 l	Plastic bottle
20820.464	25 l	Plastic drum
20820.550	200 l	Metal drum

Ethanol absolute Electran® Molecular biology grade

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay	Min. 99.8 %
Appearance	Clear colourless liquid
DNases (exo- and endonucleases)	Not detected
RNases	Not detected
Proteases	Not detected
Acidity or alkalinity	Max. 0.0002 meq/g
Heavy metals (as Pb)	Max. 1 ppm
Non-volatile residue	Max. 0.0010 %
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
437433T	250 ml	Glass bottle
437433TDP	250 ml	Plastic bottle

Ethanol absolute TechniSolv®, pure

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (V/V)	Min. 99.5 %
Density (20/20)	0.788 - 0.794
Water	Max. 0.5 %

Cat. No.	Pk	Pack type
83813.360	5 l	Plastic container
83813.410	10 l	Plastic drum
83813.440	20 l	Plastic drum
83813.550	200 l	Metal drum

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Ethanol absolute VLSI

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
M.W. 46.07 g/mol
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR.
For duty paid orders in the UK please add DP to the product code.

Cat. No.	Pk	Pack type
85651.320	2,5 l	Plastic bottle
85651.360	5 l	Plastic bottle

Ethanol 95-97% (v/v) HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (on anhydrous substance)	Min. 99.8 %
Assay (V/V)	96.0 - 96.3 %
Acidity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Absorbance (210 nm)	Max. 0.5
Absorbance (254 nm)	Max. 0.02
Absorbance (280 nm)	Max. 0.01
Transmittance (210 nm)	Min. 30 %
Transmittance (254 nm)	Min. 96 %
Transmittance (280 nm)	Min. 98 %

Cat. No.	Pk	Pack type
20825.290	1 l	Glass bottle
20825.324	2,5 l	Glass bottle

Ethanol 95-97% (v/v) SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (on anhydrous substance)	Min. 99.8 %
Assay (V/V)	96.0 - 96.3 %
Evaporation residue	Max. 5 ppm
Water	5.4 - 7.5 %
Transmittance (210 nm)	Min. 35 %
Transmittance (220 nm)	Min. 55 %
Transmittance (230 nm)	Min. 72 %
Transmittance (240 nm)	Min. 90 %
Transmittance (250 nm)	Min. 95 %
Transmittance (from 270 nm)	Min. 98 %

Cat. No.	Pk	Pack type
20822.290	1 l	Glass bottle

Ethanol 95-97% (v/v) AnalaR NORMAPUR® analytical reagent

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (on anhydrous substance)	Min. 99.8 %	Assay (V/V)	96.0 - 96.3 %
IR Spectrum	Passes test	UV Spectrum	Passes test
Acidity	Max. 0.0002 meq/g	Alkalinity	Max. 0.0001 meq/g
Boiling point	78.0 - 78.5 °C	Colouration	Max. 10 APHA
Substances coloured by H_2SO_4	Max. 20 APHA	Aldehydes (as CH_3CHO)	Max. 5 ppm
Aldehydes + ketones (as CH_3CHO)	Max. 10 ppm	Benzene	Max. 5 ppm
Evaporation residue	Max. 5 ppm	Formaldehyde	Max. 1 ppm
Furaldehyde	Max. 1 ppm	Ketones (as CH_3COCH_3)	Max. 10 ppm
Methanol	Max. 0.02 %	Propan-2-ol	Max. 100 ppm
Substances reducing $KMnO_4$ (as O)	Max. 4 ppm	Total heavy alcohols	Max. 100 ppm
Water	5.4 - 7.5 %	Al (Aluminium)	Max. 0.1 ppm
Ba (Barium)	Max. 0.02 ppm	Ca (Calcium)	Max. 0.2 ppm
Cd (Cadmium)	Max. 0.02 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.01 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 0.05 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.01 ppm
Na (Sodium)	Max. 1 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.05 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
20823.290	1 l	Plastic bottle
20823.293	1 l	Glass bottle
20823.327	2,5 l	Glass bottle
20823.362	5 l	Plastic bottle
20823.460	25 l	Plastic drum

Ethanol 96% (v/v) Ph. Eur.

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (V/V)	95.1 - 96.9 %
Appearance	Conforms (see CoA/CoS)
Identification (IR)	Passes test
Appearance test	Passes test
Acidity or alkalinity	Passes test
Relative density	0.805 - 0.812
Absorbance (240 nm)	Max. 0.4
Absorbance (250-260 nm)	Max. 0.30
Absorbance (270-340 nm)	Max. 0.10
The absorption curve is smooth	Passes test
Methanol (V/V)	Max. 200 ppm
Acetaldehyde + acetal (as C_2H_4O) (V/V)	Max. 10 ppm
Benzene (V/V)	Max. 2 ppm
Impurities (as 4-methylpentan-2-ol)(V/V)	Max. 300 ppm
Disregard limit	Max. 9 ppm
Residue on evaporation (W/V)	Max. 25 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
20905.296	1 l	Glass bottle
20905.320	2,5 l	Glass bottle
20905.365	5 l	Plastic bottle
20905.467	25 l	Plastic drum

Ethanol 95-97% (v/v) GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (on anhydrous substance)	Min. 99.8 %
Assay (V/V)	96.0 - 96.3 %
Acidity	Max. 0.0002 meq/g
Aldehydes (as CH_3CHO)	Max. 15 ppm
Evaporation residue	Max. 20 ppm

Cat. No.	Pk	Pack type
20824.296	1 l	Plastic bottle
20824.321	2,5 l	Plastic bottle
20824.365	5 l	Plastic bottle
20824.467	25 l	Plastic drum
20824.558	200 l	Metal drum

Ethanol 96% (v/v) TechniSolv®, pure

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78.3 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0.7895 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457610-43

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay	Min. 95 %
Assay (V/V)	Min. 95 %
Density (20/20)	0.805 - 0.811

Cat. No.	Pk	Pack type
83804.360	5 l	Plastic container
83804.410	10 l	Plastic drum
83804.440	20 l	Plastic drum
83804.550	200 l	Metal drum

Ethanol 90% (v/v) TechniSolv®, pure

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Storage Temperature: Ambient

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay	Min. 89.5 %
Density (20/20)	0.827 - 0.833 kg/l

Cat. No.	Pk	Pack type
83811.360	5 l	Plastic container
83811.410	10 l	Plastic drum

Ethanol 70% (v/v)

Filtered 0.2 µm filter.

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Storage Temperature: Ambient

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (Ethanol) (V/V)	69 - 71 %
Appearance	Clear colourless liquid
Relative density	0.885 - 0.890

Cat. No.	Pk	Pack type
93003.1006	6 l	Plastic bottle

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Ethanol 70% (v/v) GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Density: 0.85 g/cm³ (20 °C)
Storage Temperature: Ambient

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (on anhydrous substance) ..... Min. 99 %
Assay (V/V) ..... 69 - 71 %
Evaporation residue ..... Max. 50 ppm

Cat. No.	Pk	Pack type
98193.418	10 l	Plastic drum

Ethanol 70% (v/v) TechniSolv®, pure

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Density: 0.8692 g/cm³ (20°C)
Storage Temperature: Ambient

WARNING : This alcohol is regulated. Please contact VWR. For duty paid orders in the UK please add DP to the product code.

Assay (V/V) ..... Min. 69.5 %
Density (20/20) ..... 0.884 - 0.890

Cat. No.	Pk	Pack type
83801.290	1 l	Plastic bottle
83801.360	5 l	Plastic container
83801.410	10 l	Plastic drum

Ethanol 50% fixative Q Path® for microscopy

Danger IVD

CAS 64-17-5 **UN:** 1170
Storage Temperature: Ambient
Ethanol ready to use fixative for cells. Pots can be used for storage and transport

Each 60 ml Pot contains 20 ml. Each 150 ml Pot contains 40 ml.
IVD registered. Instructions for use on vwr.com- just search for the product

Appearance ..... Colourless liquid
Density (20/4) ..... 0.922 - 0.935

Cat. No.	Pk	Pk Info	Pack type
ALC0150AF59001	32	150 ml pots contain 40ml	Pot
ALC0060AF59001	50	60 ml pots contain 20ml	Pot

Ethanol 99.5 % denatured with 1 % MEK GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
M.W. 46.07 g/mol
Density: 0.79 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (GC) ..... Min. 99.3 %
Assay (Ethanol) (V/V) ..... Min. 98.3 %
Appearance ..... Clear colourless liquid
Identification (IR) ..... Passes test
Density (20/4) ..... 0.780 - 0.800
Ethyl isoamyl ketone ..... Min. 150 ppm
Methyl ethyl ketone (V/V) ..... 0.95 - 1.50 %
Methyl isopropyl ketone ..... Min. 250 ppm
Evaporation residue ..... Max. 50 ppm
Water ..... Max. 0.3 %
Denat. BrStV §44 ,1a ..... Conform

Cat. No.	Pk	Pack type
85033.320	2,5 l	Plastic bottle
85033.360	5 l	Plastic bottle
85033.460	25 l	Plastic drum
85033.550	200 l	Metal drum

Ethanol 99% denatured with methanol (industrial methylated spirit) GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
M.W. 46.07 g/mol
Storage Temperature: Ambient

Alcohol ..... 99.1 - 99.5 %
Density (20/4) ..... 0.792 - 0.794 g/cm3
Colour number (Hazen) ..... Max. 20.0 APHA

Cat. No.	Pk	Pack type
23684.329	2,5 l	Plastic bottle
23684.360	5 l	Plastic bottle
23684.444	25 l	Metal drum
23684.469	25 l	Plastic drum

Ethanol euro denatured 99% GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78 °C (1013 hPa) **Melting Pt:** -114 °C **Density:** 0.79 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (V/V) ..... Min. 91.5 %
Denatonium benzoate (11,4 -13,4 ppm) ..... Passes test
Methyl ethyl ketone (V/V) ..... 2.55 - 3.11 %
2-Propanol (V/V) ..... 2.55 - 3.11 %

Cat. No.	Pk	Pack type
84835.290	1 l	Plastic bottle
84835.320	2,5 l	Plastic bottle
84835.360	5 l	Plastic bottle
84835.410	10 l	Plastic bottle
84835.460	25 l	Plastic drum
84835.550	200 l	Plastic drum

Ethanol euro denatured 99% TechniSolv®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78 °C (1013 hPa) **Melting Pt:** -114 °C **Density:** 0,79 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (V/V) ..... Min. 91,5 %
Denatonium benzoate (11.4 -13.4 ppm) ..... Passes test
Methyl ethyl ketone (V/V) ..... 2,55 - 3,11 %
2-Propanol (V/V) ..... 2,55 - 3,11 %

Cat. No.	Pk	Pack type
84857.360	5 l	Plastic bottle
84857.440	20 l	Plastic drum

Ethanol 98% denatured with methanol (industrial methylated spirit) GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Storage Temperature: Ambient

Density (20/4) ..... 0.79 to 0.794
Free acidity ..... Max. 0.001 meq/g
Methanol ..... Max. 4 %

Cat. No.	Pk	Pack type
302444E	2,5 l	Glass bottle
30244DN	25 l	Plastic drum
30244FP	205 l	Metal drum with liner

Ethanol euro denatured 96% GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78 °C (1013 hPa) **Density:** 0.800 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (V/V) ..... Min. 90.0 %
Denatonium benzoate (11,8 -13,1 ppm) ..... Passes test
Methyl ethyl ketone (V/V) ..... 2.45 - 2.99 %
Propan-2-ol (V/V) ..... 2.45 - 2.99 %

Cat. No.	Pk	Pack type
84836.290	1 l	Plastic bottle
84836.320	2,5 l	Plastic bottle
84836.360	5 l	Plastic bottle
84836.410	10 l	Plastic bottle
84836.460	25 l	Plastic drum
84836.550	200 l	Plastic drum

Ethanol euro denatured 96% TechniSolv®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Boiling Pt: 78 °C (1013 hPa) **Density:** 0,805 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (V/V) ..... Min. 90 %
Denatonium benzoate (11.8 -13.1 ppm) ..... Passes test
Methyl ethyl ketone (V/V) ..... 2.45 to 2.99 %
2-Propanol (V/V) ..... 2.45 to 2.99 %

Cat. No.	Pk	Pack type
84860.360	5 l	Plastic bottle
84860.440	20 l	Plastic drum

Ethanol 95% denatured with methanol (industrial methylated spirit) GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78 °C (1013 hPa) **Melting Pt:** -114 °C **Density:** 0,789 g/cm³ (25 °C)
Storage Temperature: Ambient

Alcohol ..... 94.70 - 95.10 %
Density (20/4) ..... 0.811 - 0.813 g/cm³
Colour number (Hazen) ..... Min. 20 CO

Cat. No.	Pk	Pack type
23685.325	2,5 l	Plastic bottle
23685.465	25 l	Plastic drum

Ethanol 90% denatured with methanol (industrial methylated spirit) GPR RECTAPUR®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH **M.W.** 46.07 g/mol
Boiling Pt: 78,3 °C (1013 hPa)
Storage Temperature: Ambient

Density (20/4) ..... 0.811 to 0.816
Free acidity ..... Max. 0.001 meq/g

Cat. No.	Pk	Pack type
302434C	2,5 l	Glass bottle
30243EM	25 l	Metal drum

NEW Ethanol euro denatured 80%

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Density: 0,87 g/cm³
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
84859.410	10 l	Plastic bottle

Ethanol euro denatured 80% TechniSolv®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Density: 0,87 g/cm³
Storage Temperature: Ambient

Assay (V/V) ..... Min. 75.9 %
Denatonium benzoate (8.8 - 9.8 ppm) ..... Passes test
Methyl ethyl ketone (V/V) ..... 2.06 to 2.52 %
2-Propanol (V/V) ..... 2.06 to 2.52 %

Cat. No.	Pk	Pack type
84856.440	20 l	Plastic drum

Ethanol 70% (v/v) (denatured) TechniSolv®, pure

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Storage Temperature: Ambient

Denaturing agent : Camphor+Tartrazine

Assay ..... Min. 67 %
Density (20/20) ..... 0.884 - 0.89 g/cm³

Cat. No.	Pk	Pack type
83805.360	5 l	Plastic bottle
83805.440	20 l	Plastic drum

Ethanol euro denatured 70% TechniSolv®

Danger

CAS 64-17-5 **UN:** 1170
H_3CCH_2OH
Density: 0,885 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (V/V) ..... Min. 66.9 %
Denatonium benzoate (7,5 -8,4 ppm) ..... Passes test
Methyl ethyl ketone (V/V) ..... 1.81 - 2.22 %
Propan-2-ol (V/V) ..... 1.81 - 2.22 %

Cat. No.	Pk	Pack type
84858.290	1 l	Plastic bottle
84858.360	5 l	Plastic bottle
84858.440	20 l	Plastic drum

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Ethanolamine GPR RECTAPUR® for scintillation

Danger

CAS 141-43-5 **UN:** 2491
$NH_2CH_2CH_2OH$ **M.W.** 61.08 g/mol
Boiling Pt: 171 °C (1013 hPa) **Melting Pt:** 10,5 °C **Density:** 1,0164 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Identification	Passes test
Boiling point	170 - 172 °C
Density (20/4)	1.010 - 1.020
Solidification point	9.0 - 10.5 °C
Water	Max. 1 %

Cat. No.	Pk	Pack type
23782.291	1 l	Glass bottle

NEW Monoethanolamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84979.180	100 ml	Plastic bottle

Ether

See Diethyl ether p.114

VWR LIFE SCIENCE Ethidium bromide for biotechnology

Danger

CAS 1239-45-8 **UN:** 2811
$C_{21}H_{20}BrN_3$ **M.W.** 394.31 g/mol
Boiling Pt: 72 °C (0,1 torr) **Melting Pt:** 261-264 °C **Density:** 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

DNase	none detected
Loss on Drying	<= 5 %
Protease	none detected
Purity (Dry Basis)	>= 98 %
RNase	none

Cat. No.	Pk	Pack type
0492-5G	5 g	Glass bottle
0492-25G	25 g	Plastic bottle for solids

VWR LIFE SCIENCE Ethidium bromide

At a concentration of 0,5 µg/ml, ethidium bromide is useful in agarose or acrylamide gels for band detection. It is used to detect as little as 10 ng of nucleic acid. At higher concentrations (0,5 - 1,0 µg/ml), it may be used to facilitate purification of DNA in a caesium chloride gradient.

Cat. No.	Pk	Pack type
X328-10ML	10 ml	Plastic bottle

Ethidium bromide

Ethidium bromide provided in 0,625 mg/ml dropper bottle. One drop diluted into 50 ml of molten agarose or buffer yields a final concentration of 0,5 µg/ml. At a concentration of 0,5 µg/ml, ethidium bromide is useful in agarose or acrylamide gels for band detection. It is used to detect as little as 10 ng of nucleic acid. At higher concentrations (0,5 - 1,0 µg/ml), it may be used to facilitate purification of DNA in a caesium chloride gradient.

Cat. No.	Pk	Pack type
E406-5ML	5 ml	Plastic bottle
E406-15ML	15 ml	Plastic bottle

Ethoxyethane

See Diethyl ether p.114

2-Ethoxyethanol AnalaR NORMAPUR® analytical reagent

Danger

CAS 110-80-5 **UN:** 1171
$C_2H_5OCH_2CH_2OH$ **M.W.** 90.12 g/mol
Boiling Pt: 135 °C (1013 hPa) **Melting Pt:** -70 °C **Density:** 0,932 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119560582-38

Assay	Min. 99.5 %	IR Spectrum	Passes test
Acidity	Max. 0.0008 meq/g	Colouration	Max. 20 APHA
Density (20/4)	0.929 - 0.930	Evaporation residue	Max. 100 ppm
Peroxides (as H_2O_2)	Max. 0.02 %	Water	Max. 0.1 %
Al (Aluminium)	Max. 10 ppm	Ba (Barium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Na (Sodium)	Max. 2 ppm
Ni (Nickel)	Max. 0.05 ppm	Pb (Lead)	Max. 0.5 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 50 ppm

Cat. No.	Pk	Pack type
103426R	2,5 l	Glass bottle

2-Ethoxyethanol TECHNICAL

Danger

CAS 110-80-5 **UN:** 1171
$C_2H_5OCH_2CH_2OH$ **M.W.** 90.12 g/mol
Boiling Pt: 135 °C (1013 hPa) **Melting Pt:** -70 °C **Density:** 0,932 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119560582-38

Assay	Min. 99 %
n 20/D	1.405 - 1.407

Cat. No.	Pk	Pack type
24043.294	1 l	Glass bottle

(±)-2-Ethyl-1-hexanol TECHNICAL

Warning

CAS 104-76-7
$CH_3(CH_2)_3CH(C_2H_5)CH_2OH$ **M.W.** 130.23 g/mol
Boiling Pt: 183 °C (1013 hPa) **Melting Pt:** -76 °C **Density:** 0,83 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119487289-20

Assay	Min. 99 %

Cat. No.	Pk	Pack type
20849.361	5 l	Metal can
20849.463	25 l	Metal drum

NEW Ethyl acetate HiPerSolv CHROMANORM® for LC-MS

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Filtered 0,2 µm filter. Packaged under nitrogen.

Appearance	Clear colorless liquid
Acidity (as Acetic acid)	max. 0.003 %
Alkalinity (as Ammonia)	max. 0.0005 %
Color (APHA, Pt-Co)	max. 10 5
Assay (GC, on anhydrous basis)	min. 99.9 %
Residue after evaporation	max. 0.0005 %
Water (KF)	max. 0.05 %
T260nm	min. 75 %
T275nm	min. 98 %
LC-MS suitability test	Complies
Ag (Silver)	max. 0.1 ppm
Al (Aluminum)	max. 0.05 ppm
Ba (Barium)	max. 0.1 ppm
Bi (Bismuth)	max. 0.1 ppm
Ca (Calcium)	max. 0.05 ppm
Cd (Cadmium)	max. 0.05 ppm
Co (Cobalt)	max. 0.05 ppm
Cr (Chromium)	max. 0.02 ppm
Cu (Copper)	max. 0.02 ppm
Fe (Iron)	max. 0.02 ppm
K (Potassium)	max. 0.05 ppm
Li (Lithium)	max. 0.1 ppm
Mg (Magnesium)	max. 0.05 ppm
Mn (Manganese)	max. 0.02 ppm
Mo (Molybdenum)	max. 0.05 ppm
Na (Sodium)	max. 0.05 ppm
Ni (Nickel)	max. 0.02 ppm
Pb (Lead)	max. 0.02 ppm
Sn (Tin)	max. 0.05 ppm
Sr (Strontium)	max. 0.05 ppm
Zn (Zinc)	max. 0.1 ppm

Cat. No.	Pk	Pack type
85481.320	2,5 l	Glass bottle

Ethyl acetate HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.1 %
Absorbance (260 nm)	Max. 0.15
Absorbance (270 nm)	Max. 0.05
Absorbance (300 nm)	Max. 0.02
Transmittance (260 nm)	Min. 70 %
Transmittance (270 nm)	Min. 90 %
Transmittance (300 nm)	Min. 96 %

Cat. No.	Pk	Pack type
83621.290	1 l	Glass bottle
83621.320	2,5 l	Glass bottle

Ethyl acetate HiPerSolv CHROMANORM® for preparative HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (calculated on anhydrous)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 0.0005 %
Water	Max. 0.02 %

Cat. No.	Pk	Pack type
84532.460	25 l	Metal drum
84532.550	200 l	Metal drum

Ethyl acetate, anhydrous (max. 0.005% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (calculated on anhydrous)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.0050 %

Cat. No.	Pk	Pack type
83681.230	250 ml	Glass bottle with septum cap
83681.290	1 l	Glass bottle

NEW Ethyl acetate, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85666.180	100 ml	Glass bottle

NEW Ethyl acetate PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (on anhydrous substance)	Min. 99.9 %
Evaporation residue	Max 0.0003%
Colouration	Max 10 APHA
Water	Max 0.03%
GC/ECD Dioxins, Furans & PCB's	Max 5 ng/l
GC/ECD any pesticide (as Lindane)	Max 5 ng/l
GC/NPD any pesticide (as Parathion)	Max 10 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane)	Max 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max 2 ng/l
GC/FID C10 to C40 (as n-Decane)	Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu)	Max 2 ng/l
Filtered through 0.2um, filled under inert gas	Conforms

Cat. No.	Pk	Pack type
85387.320	2,5 l	Glass bottle

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Ethyl acetate PESTINORM® for capillary GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue (100°C)	Max. 0.0005 %
Water	Max. 0.05 %
Organic residue (as Octanol) (GC/FID)	Max. 10 ng/l
Halogenated residue (as Lindane)(GC/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83963.320	2,5 l	Glass bottle

Ethyl acetate PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (on anhydrous substance)	Min. 99.70 %
Evaporation residue	Max. 0.0005 %
Water	Max. 0.0300 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83660.290	1 l	Glass bottle
83660.320	2,5 l	Glass bottle

Ethyl acetate for peptide synthesis

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (calculated on anhydrous)	Min. 99.9 %
Appearance	Clear colourless liquid
Acidity	Max. 0.003 %
Residue on evaporation	Max. 0.0003 %
Water	Max. 0.02 %
Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm
Pb (Lead)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
84579.320	2,5 l	Glass bottle

Ethyl acetate, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Appearance	Clear colourless liquid	Acidity	Max. 0.0050 %
Colour value	Max. 10 APHA	Assay	Min. 99.8 %
Residue on evaporation	Max. 0.0010 %	Water (K.F.)	Max. 0.0100 %
Formaldehyde-sulphuric colouration	Max. 60.0 APHA	Ethanol	Max. 0.1 %
Methanol	Max. 0.1 %	Methyl acetate	Max. 0.1 %
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
23881.293	1 l	Glass bottle

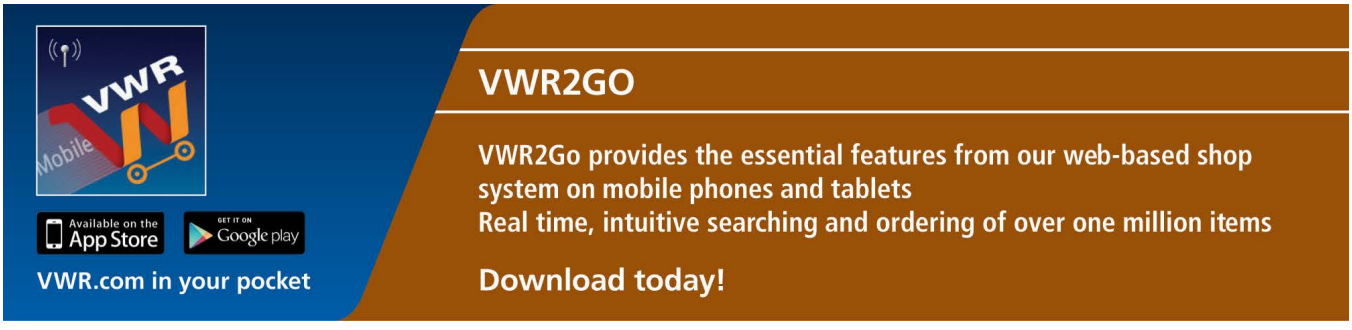
Ethyl acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay (on anhydrous substance)	Min. 99.5 %	IR Spectrum	Passes test
Organic impurities	Passes test	Acidity	Max. 0.0006 meq/g
Boiling point	76.0 - 77.5 °C	Colouration	Max. 10 APHA
Density (20/4)	0.899 - 0.901	Density (20/20)	0.901 - 0.904
Substances coloured by H_2SO_4	Max. 60 APHA	Ethanol	Max. 0.1 %
Evaporation residue	Max. 10 ppm	Methanol	Max. 0.1 %
Methyl acetate	Max. 0.1 %	iso-Propyl acetate	Max. 0.06 %
n-Propyl acetate	Max. 0.5 %	Water	Max. 0.03 %
Al (Aluminium)	Max. 0.1 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.02 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
23882.296	1 l	Glass bottle
23882.310	1 l	Plastic bottle
23882.321	2,5 l	Glass bottle
23882.330	2,5 l	Plastic bottle
23882.360	5 l	Plastic bottle
23882.467	25 l	Metal drum



Ethyl acetate Reag. Ph. Eur. 1035301

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87829.290	1 l	Plastic bottle

Ethyl acetate GPR RECTAPUR®

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77.1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0.902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay ..... Min. 99 %
IR Spectrum ..... Passes test
Acidity ..... Max. 0.008 meq/g
Boiling point ..... 76.0 - 77.5 °C
Density (20/4) ..... 0.899 - 0.901
n 20/D ..... 1.371 - 1.373
Substances coloured by H_2SO_4 ..... Max. 60 APHA
Ethanol ..... Max. 0.5 %
Evaporation residue ..... Max. 10 ppm
Heavy metals (as Pb) ..... Max. 2 ppm
Water ..... Max. 0.05 %

Cat. No.	Pk	Pack type
23880.290	1 l	Glass bottle
23880.324	2,5 l	Plastic bottle
23880.368	5 l	Plastic container
23880.461	25 l	Plastic drum
23880.552	200 l	Metal drum

Ethyl acetate TECHNICAL

Danger

CAS 141-78-6 **UN:** 1173
$CH_3COOC_2H_5$ **M.W.** 88.11 g/mol
Boiling Pt: 77,1 °C (1013 hPa) **Melting Pt:** -83 °C **Density:** 0,902 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475103-46

Assay ..... Min. 99 %
Appearance ..... Clear colourless liquid
IR Spectrum ..... Passes test

Cat. No.	Pk	Pack type
23879.295	1 l	Plastic bottle
23879.364	5 l	Plastic container
23879.466	25 l	Plastic drum
23879.557	200 l	Metal drum

Ethyl alcohol

See Ethanol absolute p.145

Ethyl 4-aminobenzoate

See Benzocaine (Ethyl 4-aminobenzoate) p.56

Ethyl carbinol

See 1-Propanol p.376

(±)-Ethyl methyl carbinol

See (±)-2-Butanol p.71

Ethyl methyl ketone

See Methyl ethyl ketone p.261

N-Ethyldiisopropylamine for peptide synthesis

Danger

CAS 7087-68-5 **UN:** 2733
$[(CH_3)_2CH]_2NC_2H_5$ **M.W.** 129.25 g/mol
Boiling Pt: 127 °C (1013 hPa) **Melting Pt:** -50 °C **Density:** 0,76 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous) ..... Min. 99.5 %
Appearance ..... Clear liquid
Colour value ..... Max. 25.0 APHA
Identity (IR) ..... Passes test
Primary and secondary amines ..... Max. 0.002 %
Residue on evaporation ..... Max. 0.001 %
Water ..... Max. 0.03 %

Cat. No.	Pk	Pack type
84574.290	1 l	Glass bottle

Ethylene chloride

See 1,2-Dichloroethane p.109

Ethylene dichloride

See 1,2-Dichloroethane p.109

Ethylene glycol AnalaR NORMAPUR® analytical reagent

Warning

CAS 107-21-1
$HOCH_2CH_2OH$ **M.W.** 62.07 g/mol
Boiling Pt: 196-198 °C (1013 hPa) **Melting Pt:** -13 °C **Density:** 1,115 g/cm³ (20 °C)
Storage Temperature: Refrigerator **REACh:** 01-2119456816-28

Assay (on anhydrous substance) ..... Min. 99.7 %
IR Spectrum ..... Passes test
Alkalinity ..... Max. 0.0002 meq/g
Density (20/4) ..... 1.111 - 1.115
Formaldehyde ..... Max. 20 ppm
Ignition residue (SO_4) ..... Max. 30 ppm
Water ..... Max. 0.1 %
SO_4 (Sulphate) ..... Max. 20 ppm
Fe (Iron) ..... Max. 0.5 ppm
Appearance of soln. (50 % V/V; water) ..... Passes test
Acidity ..... Max. 0.0001 meq/g
Colouration ..... Max. 10 APHA
Substances coloured by H_2SO_4 ..... Max. 150 APHA
Heavy metals (as Pb) ..... Max. 1 ppm
Substances reducing $KMnO_4$ (as O) ..... Max. 3 ppm
Cl (Chloride) ..... Max. 0.2 ppm
Cu (Copper) ..... Max. 1 ppm
Pb (Lead) ..... Max. 1 ppm

Cat. No.	Pk	Pack type
24041.297	1 l	Glass bottle
24041.320	2,5 l	Glass bottle
24041.366	5 l	Plastic bottle
24041.446	20 l	Plastic drum

Ethylene glycol Reag. Ph. Eur.

Warning

CAS 107-21-1
$HOCH_2CH_2OH$ **M.W.** 62.07 g/mol
Boiling Pt: 196-198 °C (1013 hPa) **Melting Pt:** -13 °C **Density:** 1.115 g/cm³ (20 °C)
Storage Temperature: Refrigerator **REACh:** 01-2119456816-28

Assay ..... Min. 99.0 %
Appearance ..... Clear viscous liquid
Relative density ..... 1.113 - 1.115
n 20/D (± 1.432) ..... Passes test
Boiling point (± 198 °C) ..... Passes test
Acidity ..... Passes test
Water ..... Max. 0.2 %

Cat. No.	Pk	Pack type
85512.290	1 l	Plastic bottle
85512.360	5 l	Plastic container

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Ethylene glycol TECHNICAL

Warning

CAS 107-21-1
HOCH$_2$CH$_2$OH **M.W.** 62.07 g/mol
Boiling Pt: 196-198 °C (1013 hPa) **Melting Pt:** -13 °C **Density:** 1.115 g/cm^3 (20 °C)
Storage Temperature: Refrigerator **REACh:** 01-2119456816-28

Assay (on anhydrous substance) ..... Min. 98 %
Appearance of solution (50 % V/V; water) ..... Passes test

Cat. No.	Pk	Pack type
24407.292	1 l	Plastic bottle
24407.326	2,5 l	Plastic bottle
24407.361	5 l	Plastic bottle
24407.463	25 l	Plastic drum

Ethylene glycol VLSI Selectipur® for the electronics industry

Warning

CAS 107-21-1
HOCH$_2$CH$_2$OH **M.W.** 62.07 g/mol
Boiling Pt: 196-198 °C (1013 hPa) **Melting Pt:** -13 °C **Density:** 1.115 g/cm^3 (20 °C)
Storage Temperature: Refrigerator **REACh:** 01-2119456816-28

Product from BASF

Cat. No.	Pk	Pack type
50488857.	2,5 l	Glass bottle

Ethylene glycol-O,O'-bis(2-aminoethyl)-N,N,N',N'-tetraacetic acid

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N',N'-tetraacetic acid) ... p.132

Ethylene glycol bis(2-aminoethyl ether)-N,N,N',N'-tetraacetic acid

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N',N'-tetraacetic acid) ... p.132

Ethylene glycol bis(2-aminoethyl ether)tetraacetic acid

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N',N'-tetraacetic acid) ... p.132

Ethylene glycol monobutyl ether

See 2-Butoxyethanol p.71

Ethylene glycol monophenyl ether

See 2-Phenoxyethanol p.350

Ethylene tetrachloride

See Tetrachloroethylene p.482

Ethylenebis(oxyethylenenitrilo)tetra(acetic acid)

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N',N'-tetraacetic acid) ... p.132

Ethylenediamine tetraacetic acid

See EDTA (Ethylenediamine tetraacetic acid) p.129

Ethylenediamine TECHNICAL

Danger

CAS 107-15-3 **UN:** 1604
C$_2$H$_8$N$_2$ **M.W.** 60.1 g/mol
Boiling Pt: 117 °C (1013 hPa) **Melting Pt:** 8.5 °C **Density:** 0.898 g/cm^3 (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
24039.290	1 l	Glass bottle

Ethylenediaminetetra-acetic acid dipotassium salt dihydrate

See EDTA dipotassium salt dihydrate p.130

Ethylenediaminetetra-acetic acid disodium salt dihydrate

See EDTA disodium salt dihydrate p.130

Ethylenediaminetetra-acetic acid iron (III) monosodium salt

See EDTA ferric monosodium salt p.131

Ethylenediaminetetra-acetic acid iron (III) sodium salt

See EDTA ferric monosodium salt p.131

Ethylenediaminetetra-acetic acid tetrasodium salt

See EDTA tetrasodium salt p.132

Ethylenedinitrilotetra-acetic acid dipotassium salt dihydrate

See EDTA dipotassium salt dihydrate p.130

Ethylenedinitrilotetra-acetic acid disodium salt dihydrate

See EDTA disodium salt dihydrate p.130

Ethylenedinitrilotetra-acetic acid iron (III) monosodium salt

See EDTA ferric monosodium salt p.131

Ethylenedinitrilotetra-acetic acid iron (III) sodium salt

See EDTA ferric monosodium salt p.131

Ethylenedinitrilotetra-acetic acid tetrasodium salt

See EDTA tetrasodium salt p.132

Ethylenedinitrilotetra-acetic acid

See EDTA (Ethylenediamine tetraacetic acid) p.129

NEW Europium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Europium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457268H
Europium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85564.180

Europium standard solution, 1,000 mg/l Eu in dil. nitric acid (from Eu_2O_3) ARISTAR® standard for ICP

Eu_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455342T	100 ml	Plastic bottle
455344V	500 ml	Plastic bottle

Europium standard solution, 1,000 mg/l Eu in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86676.180	100 ml	Plastic bottle
86676.260	500 ml	Plastic bottle

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Fehling's reagent I (Copper (II) sulphate solution, concentrated solution) for qualitative determination of reducing sugars

Warning

CAS 7758-98-7 **UN:** 1760
$CuSO_4$ **M.W.** 159.61 g/mol
Storage Temperature: Ambient
Fehling's reagent solution A

5 ml of solution A + 5 ml of solution B corresponds to about 0,050 g of anhydrous glucose

Identification ..... Passes test

Cat. No.	Pk	Pack type
31965.264	500 ml	Glass bottle

Fehling's reagent I (Copper (II) sulphate solution) for qualitative determination of reducing sugars

Warning

CAS 7758-98-7 **UN:** 3082
$CuSO_4$ **M.W.** 159.61 g/mol
Boiling Pt: >100 °C (1013hPa) **Density:** 1 g/cm³ (20 °C)
Storage Temperature: Ambient
Fehling's reagent solution A

10 ml of solution A + 10 ml of solution B corresponds to about 0,050 g of anhydrous glucose

Identification ..... Passes test

Cat. No.	Pk	Pack type
31963.291	1 l	Plastic bottle

Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution, concentrated solution) for qualitative determination of reducing sugars

Danger

UN: 1824
Fehling's reagent solution B

5 ml of solution A + 5 ml of solution B corresponds to about 0,050 g of anhydrous glucose

Identification ..... Passes test

Cat. No.	Pk	Pack type
31966.267	500 ml	Glass bottle

Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution) for qualitative determination of reducing sugars

Danger

UN: 1824
Density: 1,2 g/cm³ (20 °C)
Fehling's reagent solution B

Cat. No.	Pk	Pack type
230245A	1 l	Plastic bottle

Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution) for qualitative determination of reducing sugars

Danger

UN: 1824
Density: 1,2 g/cm³ (20 °C)
Potassium-sodium tartrate, alkaline solution

10 ml of solution A + 10 ml of solution B corresponds to about 0,050 g of anhydrous glucose

Identification ..... Passes test

Cat. No.	Pk	Pack type
31964.294	1 l	Plastic bottle

Fehling's reagent (kit, contains solution I and II) Reag. Ph. Eur. 1023300 for qualitative determination of reducing sugars

UN: 3316

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87814.290	1 l	Plastic bottle

Fehling's reagent (kit, contains solution I and II) for qualitative determination of reducing sugars

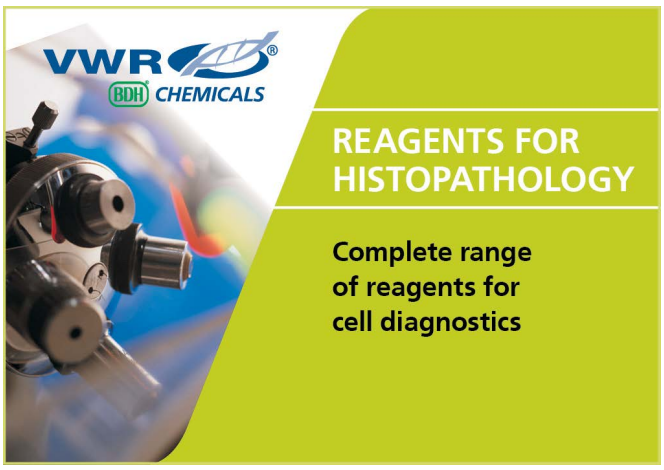
Danger

UN: 3266
Density: 1,24 g/cm³ (20 °C)

10 ml of solution corresponds to about 0,050 g of anhydrous glucose

Appearance ..... Clear blue liquid
Identification ..... Passes test

Cat. No.	Pk	Pack type
31701.296	1 l	Glass bottle



Ferric ammonium sulphate solution R2 Reag. Ph. Eur. 1037702

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87830.290	1 l	Plastic bottle

Ferric ammonium sulphate solution R5 Reag. Ph. Eur. 1037704

Danger

UN: 1760

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87831.180	100 ml	Plastic bottle

Ferric ammonium sulphate solution R6 Reag. Ph. Eur. 1037705

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87832.180	100 ml	Plastic bottle

NEW Ferric ammonium sulphate (Ammonium iron (III) sulphate) in aqueous solution USP test solutions (TS)

Danger

UN: 1755

Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85346.180	100 ml	Plastic bottle
85346.260	500 ml	Plastic bottle

Ferric chloride hexahydrate

See Iron (III) chloride hexahydrate p.224

Ferric chloride 105 g/l in aqueous solution Reag. Ph. Eur. 1037801

Danger

CAS 7705-08-0 **UN:** 2582

$FeCl_3$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87833.290	1 l	Plastic bottle

Ferric chloride 13 g/l in aqueous solution Reag. Ph. Eur. 1037802

Warning

CAS 7705-08-0 **UN:** 2582

$FeCl_3$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87834.290	1 l	Plastic bottle

Ferric chloride solution R3 Reag. Ph. Eur. 1037803

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87835.180	100 ml	Plastic bottle

NEW Ferric chloride in aqueous solution USP test solutions (TS)

CAS 7705-08-0 **UN:** 2582

$FeCl_3$

Storage Temperature: Ambient

Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85347.180	100 ml	Plastic bottle
85347.260	500 ml	Plastic bottle

Ferric chloride

See Iron (III) chloride p.223

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Ferric chloride-sulfamic acid reagent Reag. Ph. Eur. 1037804

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87836.290	1 l	Plastic bottle

Ferric nitrate nonahydrate

See Iron (III) nitrate nonahydrate p.224

Ferric oxide

See Iron (III) oxide p.225

Ferric sulphate hydrate

See Iron (III) sulphate hydrate p.226

Ferroin (1,10-Phenanthroline-ferrous sulphate-complex) 0.025 mol/l in aqueous solution Reag. Ph. Eur. 1038100 redox indicator

CAS 14634-91-4
$C_{36}H_{24}FeN_6SO_4$

M.W. 692.54 g/mol
Density: 1,01 g/cm³ (20 °C)

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87702.180	100 ml	Plastic bottle

Ferroin indicator (1,10-Phenanthroline-Iron (II) sulphate complex, 7 mg/ml $FeSO_4$) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard

CAS 14634-91-4
$C_{36}H_{24}FeN_6SO_4$

M.W. 692.54 g/mol

1 ml of solution corresponds to 0.007 g $FeSO_4$

Identification ..... Passes test

Cat. No.	Pk	Pack type
30890.188	100 ml	Glass bottle

Ferrous chloride tetrahydrate

See Iron (II) chloride tetrahydrate p.223

Ferrous sulphate heptahydrate

See Iron (II) sulphate heptahydrate p.225

Fibrowax (formulation Raymond A. Lamb), in pastille form

Warning

Storage Temperature: Ambient
Formulation Raymond A. Lamb

Special blend of paraffin wax and microcrystalline wax, for superior sectioning. Recommended for fibrous tissue.

Appearance (65°C) ..... Passes test
Cutting/ribboning ..... Passes test
Congealing range ..... 55 - 58 °C

Cat. No.	Pk	Pack type
361427G	10 kg	Plastic bottle

Ficoll® 400, molecular biology grade

Ficoll® 400 is a neutral, hydrophilic polymer of sucrose, which readily dissolves in aqueous solutions.

Ficoll® is a trademark owned by GE Healthcare companies.

Description	Pk	Cat. No.
Ficoll® 400, molecular biology grade	25 g	437092S
Ficoll® 400, molecular biology grade	250 g	437093T

VWR LIFE SCIENCE FITC (Fluorescein 5-isothiocyanate, Fluorescein isothiocyanate isomer I) for conjugation

Warning

CAS 3326-32-7
$C_{21}H_{11}NO_5S$
Storage Temperature: Refrigerator
Features an excitation wavelength of 494 nm and an emission wavelength of 520 nm. Used widely in immunohistochemistry, flow cytometry, FACS analysis and molecular structure and functional studies.

Em (499nm, Methanol, NaOH) ..... >= 75000
Isomer I ..... >= 90 %

Cat. No.	Pk	Pack type
0633-500MG	500 mg	Glass bottle

Fixing solution (0.02% formaldehyde and 0.01% citric acid in aqueous solution) Reag. Ph. Eur. 1122500

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87969.260	500 ml	Plastic bottle

Fixing solution (0.02% formaldehyde in methanol 50% (v/v)) Reag. Ph. Eur. 1122600

Danger

UN: 1230

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87970.260	500 ml	Plastic bottle

Fixing solution for isoelectric focusing in polyacrylamide gel Reag. Ph. Eur. 1138700

Danger

UN: 3265

M.W. 218.19 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87972.260	500 ml	Plastic bottle

Florisil® 30-60 mesh for chromatography

CAS 1343-88-0

Identification ..... Passes test
Particle size (30-60 US Mesh) ..... Min. 70 %

Cat. No.	Pk	Pack type
150243C	250 g	Plastic bottle for solids

Florisil® 60-100 mesh for chromatography

CAS 1343-88-0

Identification ..... Passes test

Cat. No.	Pk	Pack type
24278.182	100 g	Plastic bottle for solids
24278.230	250 g	Plastic bottle for solids
24278.295	1 kg	Plastic bottle for solids

Florisil® 60-100 mesh for pesticide residue analysis

CAS 1343-88-0

Identification ..... Passes test

Cat. No.	Pk	Pack type
24279.185	100 g	Plastic bottle for solids

Florisil® 100-200 mesh for chromatography

CAS 1343-88-0

Identification ..... Passes test
Particle size (100-200 US Mesh) ..... Min. 70 %

Cat. No.	Pk	Pack type
150263G	250 g	Plastic bottle for solids

Fluid Thioglycollate Medium

See Microbiology

FluoranSafe 2 Scintran®

Warning

UN: 1992

Density: 0,91 g/cm³ (20 °C)

A general purpose, biodegradable scintillation cocktail for use with aqueous samples. This cocktail has high sample holding capacities but still exhibits good counting efficiencies.

Cat. No.	Pk	Pack type
145166V	4 l	Plastic bottle

Fluorescein sodium salt

See Fluorescein disodium salt p.160

Fluorescein TECHNICAL

CAS 2321-07-5

$C_{20}H_{12}O_5$ **M.W.** 332.31 g/mol

Melting Pt: 314-316 °C

Storage Temperature: Ambient

Ignition residue (SO_4) ..... Max. 2 %
Loss on drying (100-105°C) ..... Max. 1 %

Cat. No.	Pk	Pack type
6539.1000	1 kg	Plastic bottle for solids

Fluorescein disodium salt, high purity

CAS 518-47-8

$C_{20}H_{10}Na_2O_5$ **M.W.** 376.28 g/mol

Melting Pt: > 300 °C **Density:** 1,601 g/cm³ (20 °C)

Storage Temperature: Ambient

Yellow fluorine dye soluble in water as a sodium salt. Biological applications include use as a fluorescent labelling reagent for proteins.

Lambda Max ..... 487 nm - 493 nm
O.D.@ Lambda Max (0.0124g/2L 0.001M CO3 Buffer) ..... 1 - 1.25

Cat. No.	Pk	Pack type
0681-100G	100 g	Glass bottle
0681-500G	500 g	Glass bottle

Fluorescein disodium salt for biotechnology

CAS 518-47-8

$C_{20}H_{10}Na_2O_5$ **M.W.** 376.28 g/mol

Melting Pt: > 300 °C **Density:** 1,601 g/cm³ (20 °C)

Storage Temperature: Ambient

Employed in fluorescence microscopy. A useful industrial tracking dye.

DNase ..... NONE
Loss on Drying ..... <= 8 %
Purity (dried basis) ..... 90.0 - 102.0 %
RNase ..... NONE

Cat. No.	Pk	Pack type
0577-500G	500 g	Glass bottle

Fluorescein disodium salt TECHNICAL

CAS 518-47-8

$C_{20}H_{10}Na_2O_5$ **M.W.** 376.28 g/mol

Melting Pt: > 300 °C **Density:** 1,601 g/cm³ (20 °C)

Storage Temperature: Ambient

IR Spectrum ..... Passes test
UV Spectrum ..... Passes test
Loss on drying (110°C) ..... Max. 10 %
Absorption max. (buffer pH 8,0) ..... 490 - 492 nm
Spec.absorptivity(Lm;0,005g/l;pH8,0;dry) ..... Min. 1200

Cat. No.	Pk	Pack type
260983T	100 g	Glass bottle
26098CF	5 kg	Bucket (Plastic)

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Fluoride standard solution, 1,000 mg/l F- in water (from NaF) ARISTAR® standard for ion chromatography

(F in H_2O)

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458002X	100 ml	Plastic bottle
458004Q	500 ml	Plastic bottle

NEW Fluoride 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84966.180	100 ml	Plastic bottle
84966.260	500 ml	Plastic bottle

VWR LIFE SCIENCE 5-Fluorouracil USP

Danger

CAS 51-21-8 **UN:** 2811

$C_4H_3FN_2O_2$ **M.W.** 130.08 g/mol

Boiling Pt: 347 °C (1013 hPa) **Melting Pt:** 282-283 °C

Storage Temperature: Ambient

Product is Tested to USP Specifications

Fluorine Content	13.9 % - 15 %
Heavy Metals	<= 0.002 %
Loss on Drying	<= 0.5 %
Purity	98 % - 102 %
Residue after Ignition	< 0.1 %

Cat. No.	Pk	Pack type
0597-5G	5 g	Glass bottle

Folin-Ciocalteu's reagent for analysis of phenols

Warning

UN: 3264

Density: 1,22 g/cm³ (20 °C)

Identification	Passes test

Cat. No.	Pk	Pack type
31360.264	500 ml	Glass bottle

Folin-Denis' reagent for analysis of uric acid

Warning

Density: 1,1 g/cm³ (20 °C)

Identification	Passes test

Cat. No.	Pk	Pack type
31351.296	1 l	Glass bottle

Formal

See Formaldehyde dimethyl acetal p.164

Formaldehyde 37% Electran® Molecular biology grade

Danger

CAS 50-00-0 **UN:** 1198

CH_2O

Boiling Pt: 100 °C **Density:** 1,09 g/cm³ (20 °C)

Storage Temperature: Ambient

This product may polymerise at temperatures below 9° C. Presence of polymers does not affect product properties. Any precipitate can be removed by filtration.

Cat. No.	Pk	Pack type
437533W	250 ml	Glass bottle
437536C	2,5 l	Glass bottle

VWR LIFE SCIENCE Formaldehyde 37% stabilised for biotechnology

Stabilised with methanol 10.5-13 %

Danger

CAS 50-00-0 **UN:** 1198

CH_2O

Storage Temperature: Ambient

Warning : Store this product at ambient temperature (above 15°C), because it may polymerise at temperatures below 9°C. Presence of polymers does not affect product properties. Precipitate can be removed by filtration.

Acidity	< 0.03%
Color (APHA)	<= 10
Formaldehyde	37% -37.5%
Methanol	10.5% - 13%

Cat. No.	Pk	Pack type
0493-200ML	200 ml	Plastic bottle
0493-500ML	500 ml	Glass bottle

VWR LIFE SCIENCE Formaldehyde 37% stabilised, proteomics grade

Stabilised with methanol 10.5-13 %

Danger

CAS 50-00-0 **UN:** 1198

CH_2O

Storage Temperature: Ambient

Warning : Store this product at ambient temperature (above 15°C), because it may polymerise at temperatures below 9°C. Presence of polymers does not affect product properties. Precipitate can be removed by filtration.

Acidity	< 0.03%
Color (APHA)	<= 10
Formaldehyde	37% - 37.5%
Methanol	10.5% - 13%

Cat. No.	Pk	Pack type
M134-200ML	200 ml	Glass bottle
M134-500ML	500 ml	Glass bottle

Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Stabilised with methanol 10 %

Danger

CAS 50-00-0 **UN:** 2209
CH_2O
Boiling Pt: 100 °C **Density:** 1,088 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	36.5 - 38.0 %	Acidity	Passes test Ph.Eur.
Appearance of solution	Passes test Ph.Eur.	Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.	Identification C	Passes test Ph.Eur.
IR Spectrum	Passes test	Solution S	Passes test Ph.Eur.
Acidity	Max. 0.006 meq/g	Colouration	Max. 10 APHA
Density (20/4)	1.083 - 1.093	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 50 ppm	Methanol	8 - 10 %
Methanol (V/V)	9.0 - 15.0 %	Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 20 ppm	Fe (Iron)	Max. 2 ppm
Pb (Lead) (ISO)	Max. 2 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20909.290	1 l	Glass bottle
20909.330	2,5 l	Plastic bottle
20909.368	5 l	Plastic bottle
20909.448	20 l	Plastic drum

Formaldehyde 36% (39% w/v) stabilised GPR RECTAPUR®

Stabilised with methanol 10 %

Danger

CAS 50-00-0 **UN:** 2209
CH_2O
Density: 1,088 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	35 - 38 %
Density (20/4)	1.083 - 1.093
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.02 %
Methanol	8 - 12 %

Cat. No.	Pk	Pack type
20910.294	1 l	Plastic bottle
20910.328	2,5 l	Glass bottle SAFEBREAK
20910.330	2,5 l	Plastic bottle
20910.363	5 l	Plastic bottle
20910.443	20 l	Plastic drum

Formaldehyde 35% stabilised Reag. Ph. Eur. 1039101

Stabilised with methanol 9.0- 15.0 % Vol.

Danger

CAS 50-00-0 **UN:** 1198
CH_2O
Storage Temperature: Ambient

Warning : Store this product at ambient temperature (above 15°C), because it may polymerise at temperatures below 9°C. Presence of polymers does not affect product properties. Precipitate can be removed by filtration.

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87837.180	100 ml	Plastic bottle

Formaldehyde 35% stabilised TECHNICAL

Stabilised with methanol 10-15 %

Danger

CAS 50-00-0 **UN:** 2209
CH_2O
Density: 1,088 g/cm³ (20 °C)
Storage Temperature: Ambient

Warning : Store this product at ambient temperature (above 15°C), because it may polymerise at temperatures below 9°C. Presence of polymers does not affect product properties. Precipitate can be removed by filtration.

Assay Min. 34.5 %

Cat. No.	Pk	Pack type
90240.5000	5 l	Plastic bottle
90240.9010	10 l	Plastic drum
90240.9025	25 l	Plastic drum

Formaldehyde 30-35%, buffered (pH 7.0 ± 0.2) stabilised

Danger

CAS 50-00-0 **UN:** 2209
CH_2O
Storage Temperature: Ambient

Warning : Store this product at ambient temperature (above 15°C), because it may polymerise at temperatures below 9°C. Presence of polymers does not affect product properties. Precipitate can be removed by filtration.

Assay (Formaldehyde) 30 to 35 %

Cat. No.	Pk	Pack type
5526.5000	5 l	Plastic container

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Formaldehyde 30% Q Path®

Danger

CAS 50-00-0 **UN:** 2209
CH_2O
Storage Temperature: Ambient
Formalin 30% fixative for tissue samples.

Assay	28.5 - 31.5 %
Appearance	Clear colourless liquid
Density (20/4)	1.055 - 1.085
Ashes	Max. 0.08 %
Heavy metals	Max. 8 ppm
Formic acid	Max. 0.08 %
Methanol	4 - 12,5 %
Fe (Iron)	Max. 8 ppm

Cat. No.	Pk	Pack type
11699031.	5 l	Plastic container

Formaldehyde 24% stabilised TECHNICAL

Stabilised with methanol 0.5-1.5

Danger

CAS 50-00-0 **UN:** 3287
CH_2O
Storage Temperature: Ambient

Warning : Store this product at ambient temperature (above 15°C), because it may polymerise at temperatures below 9°C. Presence of polymers does not affect product properties. Precipitate can be removed by filtration.

Assay	22 - 24 %

Cat. No.	Pk	Pack type
5785.5000	5 l	Plastic container

Formaldehyde 10% stabilised

Stabilised with methanol 0,5-1,5 %

Danger

CAS 50-00-0 **UN:** 3334
CH_2O
Storage Temperature: Ambient

Assay (Formaldehyde)	8 - 12 %
pH (20°C)	8.2 - 8.4

Cat. No.	Pk	Pack type
5167.1000	1 l	Plastic bottle

Formaldehyde 7.5%, buffered (pH 7.0 ± 0.2) TECHNICAL

Danger

CAS 50-00-0
CH_2O
Storage Temperature: Ambient

Assay (Formaldehyde)	7 - 9 %
pH (20°C)	6.8 - 7.2

Cat. No.	Pk	Pack type
5534.1000	1 l	Plastic bottle
5534.9010	10 l	Plastic drum

Formaldehyde 4% (= 10% Formaline solution), buffered (pH 7.0 ± 0.1) stabilised TECHNICAL

Stabilised with methanol 0.5-1.5 %

Danger

CAS 50-00-0
CH_2O
Storage Temperature: Ambient
Formalin 10 % v/v

Assay (Formaldehyde)	3.5 - 4.5 %
pH (20°C)	6.9 - 7.1
Methanol	0.5 - 1.5 %

Cat. No.	Pk	Pack type
9713.1000	1 l	Plastic bottle
9713.5000	5 l	Plastic container
9713.6010	10 l	Bag-in-box (Cubitainer)
9713.9010	10 l	Plastic drum
9713.9025	25 l	Plastic drum

Formaldehyde 4% buffered Q Path®

Danger

IVD

CAS 50-00-0

Density: 1,013 g/cm³ (20 °C)

Storage Temperature: Ambient
Formalin ready to use fixative for tissue samples. Pots and buckets can be used for storage.

Formaldehyde 4% is approximately equal to Formalin 10%

Appearance	Colourless liquid
Test formaldehyde	Passes test
Density (20/4)	1,012 - 1,014
pH (20°C)	6,8 - 7,2

Cat. No.	Pk	Pk Info	Pack type
FOR0150AF59001	32	80 ml in a 150 ml plastic pot	Pot
FOR0060AF59001	50	25 ml in a 60 ml plastic pot	Pot
FOR0070AF59001	50	30 ml in a 70 ml plastic pot	Pot
FOR0020AF59001	102	5 ml in a 20 ml plastic pot	Pot
10099464.	250 ml	250 ml in 500 ml plastic pot	Pot
10099465.	500 ml	500 ml in 1 litre plastic pot	Pot
11699455.	1 l	-	Plastic bottle
11699404.	5 l	-	Plastic container
11699408.	10 l	-	Bag-in-box (Cubitainer)
FOR010LAF59001	10 l	-	Plastic container

Formaldehyde 4% buffered (pink) Q Path®

Danger

CAS 50-00-0

Density: 1,013 g/cm³ (20 °C)

Storage Temperature: Ambient
Formalin pink ready to use fixative for tissue samples. Pots can be used for storage and transport.
Contains traces of pink dye to help see section.

Formaldehyde 4% is approximately equal to Formalin 10%

Appearance	Pink liquid
Test formaldehyde	Passes test
Density (20/4)	1,012 - 1,014
pH (20°C)	6,8 - 7,2

Cat. No.	Pk	Pk Info	Pack type
FOR0153AF59001	32	80 ml in a 150 ml plastic pot	Pot
FOR0063AF59001	50	25 ml in a 60 ml plastic pot	Pot
FOR0023AF59001	102	5 ml in 20 ml plastic pot	Pot

Formaldehyde 0.4% in sulphuric acid 95% Reag. Ph. Eur. 1086805

Danger

CAS 50-00-0 **UN:** 1830
CH_2O
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87951.180	100 ml	Plastic bottle

Formaldehyde neutraliser Q Path®

Danger

Formalin neutralizer.

125 g of neutraliser are used to neutralise 1 litre of formalin 4%. Agitate, wait 24 hours and the process is completed.

Appearance ..... Colourless crystals

Cat. No.	Pk	Pack type
00699030.	5 kg	Bucket (Plastic)

Formaldehyde dimethyl acetal GPR RECTAPUR®

Danger

CAS 109-87-5 **UN:** 1234
$CH_2(OCH_3)_2$ **M.W.** 76.1 g/mol
Boiling Pt: 42 °C (1013 hPa) **Melting Pt:** -105 °C **Density:** 0,821 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Boiling point ..... 41.5 - 43.5 °C
Density (20/4) ..... 0.850 - 0.860
Evaporation residue ..... Max. 50 ppm
Methanol ..... Max. 1.0 %

Cat. No.	Pk	Pack type
25475.293	1 l	Glass bottle

Formaldehyde dimethyl acetal TECHNICAL

Danger

CAS 109-87-5 **UN:** 1234
$CH_2(OCH_3)_2$ **M.W.** 76.1 g/mol
Boiling Pt: 42 °C (1013 hPa) **Melting Pt:** -105 °C **Density:** 0,821 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 91 - 95 %
Methanol ..... 5.5 - 7.5 %

Cat. No.	Pk	Pack type
25473.365	5 l	Fluorinated plastic bottle

Formalin

See Formaldehyde 37% p.161

Formalin is an aqueous solution of formaldehyde. A saturated solution of formalin contains approximately 37% by weight or 40% by volume of formaldehyde.

Formalin acetic acid Q Path®

Danger

IVD

CAS 50-00-0
CH_2O
Storage Temperature: Ambient
Formalin acetic acid ready to use fixative for tissue samples.

Appearance ..... Colourless liquid
Density (20/4) ..... 1,012 - 1,022
pH (20°C) ..... 2,1 - 2,5

Cat. No.	Pk	Pack type
11699025.	5 l	Plastic container

Formamide AnalaR NORMAPUR® analytical reagent

Danger

CAS 75-12-7
$HCONH_2$ **M.W.** 45.04 g/mol
Boiling Pt: 210 °C (1013 hPa) **Melting Pt:** 2 °C **Density:** 1,1334 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Assay (on anhydrous substance) ..... Min. 99.0 %
Ignition residue (SO_4) ..... Max. 50 ppm
Cl (Chloride) ..... Max. 1 ppm
Heavy metals (as Pb) ..... Max. 1 ppm
Water ..... Max. 0.2 %
Fe (Iron) ..... Max. 1 ppm

Cat. No.	Pk	Pack type
24311.291	1 l	Glass bottle
24311.320	2,5 l	Glass bottle

Formamide, (max. 0.1% H_2O) GPR RECTAPUR® for synthesis

Danger

CAS 75-12-7
$HCONH_2$ **M.W.** 45.04 g/mol
Boiling Pt: 210 °C (1013 hPa) **Melting Pt:** 2 °C **Density:** 1,1334 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Assay ..... Min. 99 %
Ignition residue (SO_4) ..... Max. 100 ppm
Water ..... Max. 0.1 %

Cat. No.	Pk	Pack type
24312.294	1 l	Glass bottle

Formamide Electran® Molecular biology grade

Danger

CAS 75-12-7
$HCONH_2$ **M.W.** 45.04 g/mol
Boiling Pt: 210 °C (1013 hPa) **Melting Pt:** 2 °C **Density:** 1,1334 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Assay ..... Min. 99.00 %
Appearance ..... Colourless liquid
Identity (IR) ..... Passes test
DNases ..... Not detected
RNases ..... Not detected
Proteases ..... Not detected
Absorbance (260 nm) (0.5 mol/l) ..... Max. 0.080
Absorbance (270 nm) (0.5 mol/l) ..... Max. 0.050
Absorbance (280 nm) (0.5 mol/l) ..... Max. 0.030
Heavy metals (as Pb) ..... Max. 0.0001 %
Water ..... Max. 0.10 %
Cl (Chloride) ..... Max. 0.00005 %
Fe (Iron) ..... Max. 0.00001 %
Pb (Lead) ..... Max. 0.00001 %

Cat. No.	Pk	Pack type
444472T	100 ml	Glass bottle
444475W	1 l	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Formamide, high purity

Danger

CAS 75-12-7
HCONH$_2$
Boiling Pt: 210 °C (1013 hPa) **Melting Pt:** 2 °C **M.W.** 45.04 g/mol **Density:** 1,1334 g/cm^3 (20 °C)

Storage Temperature: Refrigerator
Ideal for denaturing nucleic acids in hybridisation and DNA sequencing procedures.

Abs.@280nm..... < = 0.1
Conductivity..... <= 350 umhos
Copper..... < 0.0001 %
Freezing Range..... 1 °C - 3 °C
Iron..... <= 0.0005 %
Lead..... < 0.0001 %
Purity..... > 99 %
Zinc..... < 0.0001 %

Cat. No.	Pk	Pack type
0314-500ML	500 ml	Plastic bottle
0314-950ML	950 ml	Plastic bottle

Formamide, ultrapure

Danger

CAS 75-12-7
HCONH$_2$
Boiling Pt: 210 °C (1013 hPa) **Melting Pt:** 2 °C **M.W.** 45.04 g/mol **Density:** 1,1334 g/cm^3 (20 °C)

Storage Temperature: Refrigerator

Abs.@280nm..... < = 0.05
Conductivity..... <= 100 umhos
Copper..... < 0.00001 %
DNase..... none detected
Freezing Range..... 1 °C - 3 °C
Iron..... < 0.0005 %
Lead..... < 0.00005 %
Moisture (KF)..... < 0.75 %
Purity..... > 99.5 %
RNase..... none
Zinc..... < 0.00005 %

Cat. No.	Pk	Pack type
0606-100ML	100 ml	Plastic bottle for solids
0606-500ML	500 ml	Plastic bottle
0606-950ML	950 ml	Plastic bottle

Formamide TECHNICAL

Danger

CAS 75-12-7
HCONH$_2$
Boiling Pt: 210 °C (1013 hPa) **Melting Pt:** 2 °C **M.W.** 45.04 g/mol **Density:** 1,1334 g/cm^3 (20 °C)

Storage Temperature: Refrigerator

Identification..... Passes test

Cat. No.	Pk	Pack type
24313.366	5 l	Plastic bottle

Formamide, treated Reag. Ph. Eur. 1039201

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87838.180	100 ml	Plastic bottle

NEW Formate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84967.180	100 ml	Plastic bottle

Formdimethylamide

See N,N-Dimethylformamide..... p.119

NEW Formic acid ≥99% HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 64-18-6 **UN:** 1779
HCO$_2$H
Boiling Pt: 100-101 °C (1013 hPa) **Melting Pt:** 8,2-8,4 °C **M.W.** 46.03 g/mol **Density:** 1,22 g/cm^3 (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119491174-37

Assay (on anhydrous substance)..... Min. 99 %
Evaporation residue..... Max. 0.0001 %
Ca (Calcium) (0.1 %)..... Max. 0.2 ppm
K (Potassium) (0.1 %)..... Max. 0.2 ppm
Mg (Magnesium) (0.1 %)..... Max. 0.2 ppm
Na (Sodium) (0.1 %)..... Max. 0.5 ppm
Transmittance (225 nm) (0.1 %)..... Min. 20 %
Transmittance (235 nm) (0.1 %)..... Min. 50 %
Transmittance (240 nm) (0.1 %)..... Min. 80 %
Transmittance (250 nm) (0.1 %)..... Min. 95 %
Transmittance (260 nm) (0.1 %)..... Min. 99 %
Suitability for LC-MS (0.1 %)..... Passes test

Cat. No.	Pk	Pack type
84865.180	100 ml	Glass bottle
84865.260	500 ml	Glass bottle
84865.290	1 l	Glass bottle

NEW Formic acid ≥99% HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 64-18-6 **UN:** 1779
HCO$_2$H
Boiling Pt: 100-101 °C (1013 hPa) **Melting Pt:** 8,2-8,4 °C **M.W.** 46.03 g/mol **Density:** 1,22 g/cm^3 (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119491174-37

Assay (on anhydrous substance)..... Min 99 %
Evaporation residue..... Max 0.0001 %
Ca (Calcium) (0.1 %)..... Max 0.2 ppm
K (Potassium) (0.1 %)..... Max 0.2 ppm
Mg (Magnesium) (0.1 %)..... Max 0.2 ppm
Na (Sodium) (0.1 %)..... Max 0.5 ppm
Transmittance (225 nm)(0.1 %)..... Min 20 %
Transmittance (235 nm)(0.1 %)..... Min 50 %
Transmittance (240 nm)(0.1 %)..... Min 80 %
Transmittance (250 nm)(0.1 %)..... Min 95 %
Transmittance (260 nm)(0.1 %)..... Min 99 %
Suitability for LC-MS (0.1 %)..... Passes test

Cat. No.	Pk	Pk Info	Pack type
85048.001	1 SET	10× 1 ml	Glass ampoule

Formic acid ≥98.0% ARISTAR® for trace analysis

Danger

CAS 64-18-6 **UN:** 1779
HCO_2H
M.W. 46.03 g/mol
Boiling Pt: 100-101 °C (1013 hPa) **Melting Pt:** 8,2-8,4 °C **Density:** 1,22 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119491174-37

Assay (acidimetric)	Min. 98.0 %	Colour	Max. 10 APHA
Cl (Chloride)	Max. 5 ppm	SO_4 (Sulphate)	Max. 0.5 ppm
Acetic acid	Max. 500 ppm	Ag (Silver)	Max. 0.001 ppm
Al (Aluminium)	Max. 0.005 ppm	Au (Gold)	Max. 0.005 ppm
Ba (Barium)	Max. 0.002 ppm	Be (Beryllium)	Max. 0.001 ppm
Bi (Bismuth)	Max. 0.002 ppm	Ca (Calcium)	Max. 0.05 ppm
Cd (Cadmium)	Max. 0.001 ppm	Co (Cobalt)	Max. 0.001 ppm
Cr (Chromium)	Max. 0.001 ppm	Cu (Copper)	Max. 0.002 ppm
Fe (Iron)	Max. 0.010 ppm	Ga (Gallium)	Max. 0.005 ppm
Hg (Mercury)	Max. 0.005 ppm	In (Indium)	Max. 0.002 ppm
K (Potassium)	Max. 0.02 ppm	Li (Lithium)	Max. 0.001 ppm
Mg (Magnesium)	Max. 0.01 ppm	Mn (Manganese)	Max. 0.001 ppm
Mo (Molybdenum)	Max. 0.001 ppm	Na (Sodium)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.002 ppm	Pb (Lead)	Max. 0.002 ppm
Sn (Tin)	Max. 0.001 ppm	Sr (Strontium)	Max. 0.001 ppm
Ti (Titanium)	Max. 0.001 ppm	Tl (Thallium)	Max. 0.001 ppm
V (Vanadium)	Max. 0.001 ppm	Zn (Zinc)	Max. 0.005 ppm
Non-volatile matter	Max. 2 ppm		

Cat. No.	Pk	Pack type
450122M	100 ml	Glass bottle

Formic acid 99-100% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 64-18-6 **UN:** 1779
HCO_2H
Boiling Pt: 100-101 °C (1013 hPa) **Melting Pt:** 8,2-8,4 °C **Density:** 1,22 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119491174-37

Assay	Min. 99.0 %	Dilution test	Passes test ACS
Colouration	Max. 10 APHA	Solidification point	7 - 8 °C
n 20/D	1.370 - 1.372	Density (20/20)	1.210 - 1.230
Acetic acid	Max. 0.4 %	Evaporation residue	Max. 30 ppm
Heavy metals (as Pb)	Max. 10 ppm	Ignition residue (SO_4)	Max. 20 ppm
Water	Max. 1.0 %	Cl (Chloride)	Max. 5 ppm
NH_4 (Ammonium)	Max. 20 ppm	SO_3 (Sulphite)	Max. 10 ppm
SO_4 (Sulphate)	Max. 10 ppm	Cd (Cadmium)	Max. 0.1 ppm
Cu (Copper)	Max. 0.1 ppm	Fe (Iron)	Max. 4 ppm
Pb (Lead)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
20318.297	1 l	Glass bottle
20318.320	2,5 l	Glass bottle
20318.322	2,5 l	Glass bottle SAFEBREAK
20318.446	20 l	Plastic drum

Formic acid 98% GPR RECTAPUR®

Danger

CAS 64-18-6 **UN:** 1779
HCO_2H
Boiling Pt: 100-101 °C (1013 hPa) **Melting Pt:** 8,2-8,4 °C **Density:** 1,22 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119491174-37

Assay	Min. 98 %
n 20/D	1.370 - 1.372
Acetic acid	Max. 0.2 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 100 ppm
Evaporation residue	Max. 100 ppm
Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 50 ppm

Cat. No.	Pk	Pack type
20320.295	1 l	Glass bottle
20320.320	2,5 l	Glass bottle SAFEBREAK
20320.364	5 l	Plastic bottle

VWR LIFE SCIENCE Formic acid ≥94,5%, high purity

Danger

CAS 64-18-6 **UN:** 1779
HCO_2H
M.W. 46.03 g/mol
Boiling Pt: 100-101 °C (1013 hPa) **Melting Pt:** 8,2-8,4 °C **Density:** 1,22 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119491174-37

Purity	> = 94.5%

Cat. No.	Pk	Pack type
0961-100ML	100 ml	Glass bottle

NEW Formic acid ≥90% Analar NORMAPUR® for analysis of viscosity

Danger

CAS 64-18-6 **UN:** 1779
CH_2O_2
Density: 1,208 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (at filling)	90.00 - 90.15 %
Density (20/4) (at filling)	1.2044 - 1.2047
Conforms to ISO 307	Passes test

Cat. No.	Pk	Pack type
85494.320	2,5 l	Glass Bottle

NEW Formic acid 90% Analar NORMAPUR®, ACS

Danger

CAS 64-18-6 **UN:** 1779
CH_2O_2
Density: 1,208 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	89.0 - 91.0 %
Dilution test	Passes test ACS
SO_3 (Sulphite)	Passes test
Colouration	Max. 10 APHA
Acetic acid	Max. 0.04 %
Evaporation residue	Max. 20 ppm
Heavy metals (as Pb)	Max. 5 ppm
Cl (Chloride)	Max. 10 ppm
NH_4 (Ammonium)	Max. 50 ppm
SO_4 (Sulphate)	Max. 20 ppm
Fe (Iron)	Max. 5 ppm
Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
85495.290	1 l	Glass Bottle

Formic acid 80% TECHNICAL

Danger

CAS 64-18-6 **UN:** 3412
HCO_2H
Storage Temperature: Ambient

Assay	79 - 81 %
n 20/D	1.369 - 1.372

Cat. No.	Pk	Pack type
20315.297	1 l	Glass bottle
20315.366	5 l	Plastic bottle
20315.446	20 l	Plastic drum

Formic acid ammonium salt

See Ammonium formate p.34

Formic acid dimethylamide

See N,N-Dimethylformamide p.119

Fraser broth

See Microbiology

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Freeze gel (Glue) Q Path®

IVD

Storage Temperature: Ambient

High viscosity mounting media for Cryotomy. Less viscous than O.C.T.

Appearance	Colourless liquid
Viscosity (20°C)	3500 - 4500 mPa.s
Viscosity (30°C)	2500 - 3500 mPa.s
Viscosity (40°C)	1500 - 2500 mPa.s
Viscosity (56-60°C)	500 - 1500 mPa.s

Cat. No.	Pk	Pack type
07111245.	125 ml	Dosing Bottle (Plastic)

Freezing aerosol

See Cryolab p.100

D(-)-Fructose AnalaR NORMAPUR® analytical reagent

CAS 57-48-7

$C_6H_{12}O_6$ **M.W.** 180.16 g/mol

Boiling Pt: 552 °C (1013 hPa) **Melting Pt:** 100-110 °C **Density:** 1,59 g/cm³ (20 °C, OECD 109)

Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 99.0 %
IR Spectrum	Passes test
Spec.opt.rot.(10 %;water)(on anhydrous)	-93.5 to -91.0 °
Glucose	Max. 0.5 %
Ignition residue (SO_4)	Max. 0.05 %
Insolubility in water	Max. 50 ppm
Water	Max. 0.5 %
Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 1 ppm
Cd (Cadmium)	Max. 1 ppm
Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 1 ppm
Pb (Lead)	Max. 1 ppm
Zn (Zinc)	Max. 5 ppm

Cat. No.	Pk	Pack type
103674Y	500 g	Plastic bottle for solids

D(-)-Fructose Ph. Eur.

CAS 57-48-7

$C_6H_{12}O_6$ **M.W.** 180.16 g/mol

Boiling Pt: 552 °C (1013 hPa) **Melting Pt:** 100-110 °C **Density:** 1,59 g/cm³ (20 °C, OECD 109)

Storage Temperature: Ambient

Appearance	Colourless crystals
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Identification D	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Spec. opt. rotation (calc. on anhydrous)	-93.5 to -91 deg
Foreign sugars	Passes test
5-Hydroxymethylfurfural + related subst.	Passes test
Ba (Barium)	Passes test
Lead in sugars	Max. 0.5 ppm
Water	Max. 0.5 %
Sulphated ash	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
24282.290	1 kg	Plastic bottle for solids
24282.368	5 kg	Plastic bottle for solids
24282.461	25 kg	Bucket (Plastic)

D(-)-Fructose GPR RECTAPUR®

CAS 57-48-7

$C_6H_{12}O_6$ **M.W.** 180.16 g/mol

Boiling Pt: 552 °C (1013 hPa) **Melting Pt:** 100-110 °C **Density:** 1,59 g/cm³ (20 °C, OECD 109)

Storage Temperature: Ambient

Specific optical rotation (10 %; water)	-94 to -90 °
Ignition residue (SO_4)	Max. 0.1 %
Water	Max. 0.5 %
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 100 ppm

Cat. No.	Pk	Pack type
24975.294	1 kg	Plastic bottle for solids

VWR LIFE SCIENCE D(-)-Fructose, high purity

CAS 57-48-7

$C_6H_{12}O_6$ **M.W.** 180.16 g/mol

Boiling Pt: 552 °C (1013 hPa) **Melting Pt:** 100-110 °C **Density:** 1,59 g/cm³ (20 °C, OECD 109)

Storage Temperature: Ambient

Arsenic	<= 0.0001%
Calcium & Magnesium	<= 0.005%
Chloride	<= 0.018%
Heavy Metals (as Pb)	<= 0.0005%
Loss on Drying	<= 0.5%
Purity	>= 99%
Residue on Ignition	<= 0.5%
Sulphate	<= 0.025%

Cat. No.	Pk	Pack type
0226-1KG	1 kg	Plastic bottle
0226-5KG	5 kg	Bucket (Plastic)
0226-12KG	12 kg	Bucket (Plastic)

Basic Fuchsin for microscopy

See Dyes and Stains p.290

Fuchsin solution, decolourised Reag. Ph. Eur. 1039401

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87839.180	100 ml	Plastic bottle

Fuchsin solution, decolourised R1 Reag. Ph. Eur. 1039402

UN: 1789

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87840.180	100 ml	Plastic bottle

2,5-Furanedione

See Maleic anhydride p.249

G418 disulphate, ultrapure

Warning

CAS 108321-42-2

$C_{20}H_{44}N_4O_{18}S_2$ **M.W.** 692.72 g/mol

Storage Temperature: Ambient

Activity	500 U/mg
Appearance	PASS
Expiration Date	REPORT
Identification (IR)	PASS
Moisture	10.0 %
Optical Rotation (1%, Water)@25 °C	REPORT
Solubility (80 mg/ml, PBS)	NONE

Cat. No.	Pk	Pack type
E859-1G	1 g	Glass bottle
E859-5G	5 g	Glass bottle

G418 antibiotic solution (Geneticin)

Used as a selection agent for both prokaryotic and eukaryotic transfected cells. An aminoglycoside similar to gentamycin, G418 is toxic to bacterial, yeast, higher plant and mammalian cells in addition to protozoans and helminths.

Transformants survive in G418 supplemented media by expression of an aminoglycoside-modifying enzyme.

Recommended working concentration: 400 µg/ml

Cat. No.	Pk	Pack type
J847-20ML	20 ml	Plastic bottle

NEW Gadolinium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Gadolinium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457279J
Gadolinium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85567.180

NEW Gadolinium standard solution, 10,000 mg/l Gd in dil. nitric acid (de Gd_2O_3) ARISTAR® standard for ICP

Gd_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455372C	100 ml	Plastic bottle
455374E	500 ml	Plastic bottle

Gadolinium standard solution, 1,000 mg/l Gd in dil. nitric acid (de Gd_2O_3) ARISTAR® standard for ICP

Gd_2O_3 in HNO_3 (2 - 5%)

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455362A	100 ml	Plastic bottle
455364C	500 ml	Plastic bottle

Gadolinium standard solution, 1,000 mg/l Gd in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86679.180	100 ml	Plastic bottle
86679.260	500 ml	Plastic bottle

D(+)-Galactose GPR RECTAPUR®

CAS 59-23-4

$C_6H_{12}O_6$ **M.W.** 180.16 g/mol

Boiling Pt: 527 °C (1013 hPa) **Melting Pt:** 163-169 °C **Density:** 1,5 g/cm³ (20 °C)

Storage Temperature: Ambient

Specific optical rotation (10 %; water)	79 - 82 °
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.1 %
Loss on drying (100°C)	Max. 1 %

Cat. No.	Pk	Pack type
24333.183	100 g	Plastic bottle for solids
24333.296	1 kg	Plastic bottle for solids

D(+)-Galactose, high purity

CAS 59-23-4

$C_6H_{12}O_6$ **M.W.** 180.16 g/mol

Boiling Pt: 527 °C (1013 hPa) **Melting Pt:** 163-169 °C **Density:** 1,5 g/cm³ (20 °C)

Storage Temperature: Ambient

Purity	>= 99
Specific Rotation (2%, Water 5 Hrs.)	79° - 81°

Cat. No.	Pk	Pack type
0637-100G	100 g	Plastic bottle for solids
0637-250G	250 g	Plastic bottle for solids
0637-500G	500 g	Plastic bottle for solids

VWR Handy Solution Guides

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Gallium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Gallium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457281A
Gallium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85566.180

Gallium standard solution, 10,000 mg/l Ga in dil. nitric acid (from Ga) ARISTAR® standard for ICP

Ga in HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455392G	100 ml	Plastic bottle

Gallium standard solution, 1,000 mg/l Ga in dil. nitric acid (from Ga) ARISTAR® standard for ICP

Ga in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455382E	100 ml	Plastic bottle
455384G	500 ml	Plastic bottle

Gallium standard solution, 1,000 mg/l Ga in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86678.180	100 ml	Plastic bottle
86678.260	500 ml	Plastic bottle

VWR BDH CHEMICALS

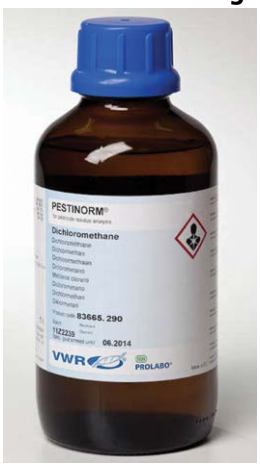
FIRST FOR TRACE ANALYSIS

From the most exacting sample preparation with NORMATOM® high purity acids to ARISTAR® ICP/ICP-MS and AVS® TITRINORM® AAS standards, VWR are able to offer a comprehensive trace analysis package.

All backed by our extensive Certificates of Analysis for specific batch results – not typical analyses.

If you don't see what you want then we also have a customised standard production service available in many countries too. Contact your local VWR sales office or distibutor for details and to request our trace analysis brochure.

GC solvents and reagents for pesticide residue analysis PESTINORM®



Detection of trace organic substances in the environment requires the use of highly purified solvents for all stages of analysis, starting with sample preparation.
PESTINORM® solvents are guaranteed specifically for use in pesticide residue analysis and designed to meet the day-to-day requirements of quality control laboratories.
These solvents contain extremely low levels of halogenated and other organic compounds to prevent sample contamination. They are ideal for research and analytical laboratories that test samples for the presence of pesticides or insecticides.

Impurities causing interfering peaks on gas chromatogram are not greater than:

- 5 ng/l of lindane by electron capture detection
- 10 ng/l of ethyl parathion by phosphorous nitrogen detection
- 10 ng/ml of octanol by flame ionisation detection
- Evaporation residue less than 5 ppm

Purified from selected raw materials under ISO 9001 conditions, these solvents are:

- Filtered at 0,2 µm
- Bottled under nitrogen
- Fitted with caps which have PTFE liners to prevent contamination
- Packed in standard glass bottles with DIN 45 closures

Detection of trace organic substances in the environment requires the use of highly purified solvents for all stages of analysis, starting with sample preparation. PESTINORM® solvents are guaranteed specifically for use in pesticide residue analysis. The range offers extremely low halogenated and other organic compounds to prevent sample contamination.

Description	Page	Pk	Cat. No.
Acetone PESTINORM® for capillary GC analysis	7, 170	2,5 l	83960.320
Acetone PESTINORM® for pesticide residue analysis	7, 170	1 l	83656.290
Acetone PESTINORM® for pesticide residue analysis	7, 170	2,5 l	83656.320
Acetone PESTINORM® SUPRA TRACE for organic trace analysis	7, 170	2,5 l	85384.320
Acetonitrile PESTINORM® for pesticide residue analysis	12, 170	1 l	83657.290
Acetonitrile PESTINORM® for pesticide residue analysis	12, 170	2,5 l	83657.320
Cyclohexane PESTINORM® for pesticide residue analysis	102, 170	1 l	83658.290
Cyclohexane PESTINORM® for pesticide residue analysis	102, 170	2,5 l	83658.320
Cyclohexane PESTINORM® SUPRA TRACE for organic trace analysis	102, 170	2,5 l	85385.320
Dichloromethane stabilised PESTINORM® for capillary GC analysis	111, 170	2,5 l	83961.320
Dichloromethane stabilised PESTINORM® for pesticide residue analysis	111, 170	1 l	83665.290
Dichloromethane stabilised PESTINORM® for pesticide residue analysis	111, 170	2,5 l	83665.320
Dichloromethane stabilised PESTINORM® SUPRA TRACE for organic trace analysis	111, 170	2,5 l	85386.320
Diethyl ether stabilised PESTINORM® for pesticide residue analysis	114, 170	2,5 l	83659.320
N,N-Dimethylacetamide PESTINORM® for headspace gas chromatography	117, 170	1 l	85397.290
N,N-Dimethylformamide PESTINORM® for headspace gas chromatography	119, 170	1 l	85395.290
N,N-Dimethylformamide PESTINORM® for headspace gas chromatography	119, 170	2,5 l	85395.320
Dimethyl sulphoxide PESTINORM® for headspace gas chromatography	121, 170	1 l	85396.290
Dimethyl sulphoxide PESTINORM® for headspace gas chromatography	121, 170	2,5 l	85396.320
Ethyl acetate PESTINORM® for capillary GC analysis	153, 170	2,5 l	83963.320
Ethyl acetate PESTINORM® for pesticide residue analysis	153, 170	1 l	83660.290
Ethyl acetate PESTINORM® for pesticide residue analysis	153, 170	2,5 l	83660.320
Ethyl acetate PESTINORM® SUPRA TRACE for organic trace analysis	152, 170	2,5 l	85387.320
Florisil® 60-100 mesh for pesticide residue analysis	160, 170	100 g	24279.185
n-Heptane PESTINORM® SUPRA TRACE for organic trace analysis	170, 185	2,5 l	85388.320
n-Hexane ≥99.0% PESTINORM® for capillary GC analysis	170, 188	2,5 l	83962.320
n-Hexane ≥95% PESTINORM® for pesticide residue analysis	170, 188	1 l	83661.290
n-Hexane ≥95% PESTINORM® for pesticide residue analysis	170, 188	2,5 l	83661.320
Hexane (mixture of isomers) PESTINORM® SUPRA TRACE for organic trace analysis	170, 187	2,5 l	85389.320
n-Hexane ≥99% PESTINORM® SUPRA TRACE for organic trace analysis	170, 188	2,5 l	85390.320
Methanol PESTINORM® for capillary GC analysis	170, 257	2,5 l	83966.320
Methanol PESTINORM® for purge and trap GC analysis	170, 257	2,5 l	83967.320
Methanol PESTINORM® for pesticide residue analysis	170, 257	1 l	83662.290
Methanol PESTINORM® for pesticide residue analysis	170, 257	2,5 l	83662.320
Methanol PESTINORM® SUPRA TRACE for organic trace analysis	170, 257	2,5 l	85394.320
N-Methyl-2-pyrrolidone (NMP) PESTINORM® for headspace gas chromatography	170, 263	1 l	85398.290
n-Pentane PESTINORM® for capillary GC analysis	170, 337	2,5 l	83964.320
Petroleum spirit 40-60°C PESTINORM® for pesticide residue analysis	170, 342	2,5 l	83663.320
Petroleum spirit 40-60°C PESTINORM® for capillary GC analysis	170, 342	2,5 l	83965.320
Petroleum spirit 40-60°C PESTINORM® SUPRA TRACE for organic trace analysis	170, 342	2,5 l	85392.320
2-Propanol PESTINORM® SUPRA TRACE for organic trace analysis	170, 377	2,5 l	85391.320
Sodium sulphate PESTINORM® for pesticide residue analysis	170, 434	1 kg	28116.293
Toluene PESTINORM® for pesticide residue analysis	170, 491	2,5 l	83664.320
Toluene PESTINORM® SUPRA TRACE for organic trace analysis	170, 491	2,5 l	85393.320

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Secondary reference standards for gas chromatography, PESTINORM®

VWR offers a wide range of secondary GC solvent reference standards for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Assay values are reported by mass balance according to ISO/IEC 17025 which allows the secondary standard to be used as reference material for qualitative or quantitative use.

The FDA, USP and EP all recognise the use of secondary standards and working standards that are established with reference to the corresponding primary standard. PESTINORM® secondary GC standards provide a convenient and cost effective alternative to pharmacopoeia primary standards and allow laboratories to focus resources on their core activities rather than preparing internal working standards. These standards are traceable to the current lots of USP, and if available to Ph.Eur.

VWR certificates of analysis will show the analytical methods for determining the purity and assay, together with the handling and storage conditions and manufacturing and expiry dates.

Description	Page	Pk	Cat. No.
Acetone standard for GC	6, 171	100 ml	85653.180
Acetonitrile standard for GC	12, 171	100 ml	85654.180
Butyl acetate standard for GC	71, 171	100 ml	85655.180
tert-Butyl methyl ether standard for GC	72, 171	100 ml	85671.180
iso-Butyl methyl ketone standard for GC	72, 171	100 ml	85673.180
Cyclohexane standard for GC	102, 171	100 ml	85656.180
1,2-Dichloroethane standard for GC	109, 171	100 ml	85657.180
Dichloromethane (DCM) standard for GC	110, 171	100 ml	85658.180
Di-iso- propyl ether standard for GC	117, 171	100 ml	85659.180
N,N-Dimethylacetamide standard for GC	118, 171	100 ml	85661.180
N,N-Dimethylformamide standard for GC	120, 171	100 ml	85662.180
Dimethylsulphoxide (DMSO) standard for GC	121, 171	100 ml	85663.180
1,4-Dioxan standard for GC	123, 171	100 ml	85664.180
Ethanol standard for GC	145, 171	100 ml	85665.180
Ethyl acetate standard for GC	152, 171	100 ml	85666.180
n-Heptane standard for GC	171, 185	100 ml	85667.180
n-Hexane standard for GC	171, 188	100 ml	85668.180
Methanol standard for GC	171, 257	100 ml	85670.180
MEK (Butanone) standard for GC	171, 261	100 ml	85672.180
1-Propanol standard for GC	171, 376	100 ml	85675.180
2-Propanol standard for GC	171, 377	100 ml	85676.180
Tetrahydrofuran (THF) standard for GC	171, 483	100 ml	85677.180
Toluene standard for GC	171, 491	100 ml	85678.180
2,2,4-Trimethylpentane standard for GC	171, 497	100 ml	85674.180

Gelatine, powder Ph. Eur.

Appearance: Pale yellow powder
Identification A: Passes test
Identification B: Passes test
Solution S: Passes test
pH (1 %): 3.8 to 7.6
Conductivity (30°C, 1 %, water): Max. 1 mS/cm
Sulphur dioxide: Max. 50 ppm
Peroxides: Max. 10 ppm
Gel strength (Bloom value): 90 to 130
Fe (Iron): Max. 30 ppm
Cr (Chromium): Max. 10 ppm
Zn (Zinc): Max. 30 ppm
Loss on drying (105°C): Max. 15.0 %
Microbial contamination: Passes test
Residual solvents: Unlikely by manufacturing process

Cat. No.	Pk	Pack type
24360.233	250 g	Plastic bottle for solids
24360.368	5 kg	Bucket (Plastic)

Gelatine, reagent grade

Bloom: 238 - 282
E. coli: NONE
Moisture: <13 %
pH @25 °C: 4.0 - 5.7
Salmonella: NONE
Standard Plate Count: 1000 /g
Viscosity: 38 - 50 mps

Cat. No.	Pk	Pack type
9764-100G	100 g	Plastic bottle for solids
9764-500G	500 g	Plastic bottle for solids

Gelatine, powder technical

Identification: Passes test

Cat. No.	Pk	Pack type
24350.262	500 g	Plastic bottle for solids

Gentamicin sulphate USP for tissue culture

Danger

CAS 1405-41-0
$C_{21}H_{45}N_5O_{11}S$ **M.W.** 575.68 g/mol
Melting Pt: 218-237 °C
Storage Temperature: Ambient
Antibiotic that primarily targets gram- bacteria by binding to the 30S subunit of bacterial ribosome. Recommended working concentration: 15 µg/ml.

Loss on Drying..... <= 18 %
Methanol..... <= 1 %
pH (4%, Water) @25°C..... 3.5 - 5.5
Potency (Dry Basis)..... >= 590 mcg/mg
Residue after Ignition..... < 1 %
Specific Rotation..... 107 °- 121 °

Cat. No.	Pk	Pack type
0304-5G	5 g	Glass bottle
0304-10G	10 g	Glass bottle

NEW Germanium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Germanium	1000 ppm	H_2O/tr HF	Plastic bottle	100 ml	456732K
Germanium	10 ppm	2% HNO_3/0,2% HF	Plastic bottle	100 ml	85568.180

Germanium standard solution, 10,000 mg/l Ge in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2GeF_6$) ARISTAR® standard for ICP

$(NH_4)_2GeF_6$ in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455412Q	100 ml	Plastic bottle

Germanium standard solution, 1,000 mg/l Ge in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2GeF_6$) ARISTAR® standard for ICP

$(NH_4)_2GeF_6$ in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455402X	100 ml	Plastic bottle

Germanium standard solution, 1,000 mg/l Ge in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86680.180	100 ml	Plastic bottle
86680.260	500 ml	Plastic bottle

Glass balls

Chemically resistant glass balls suitable for use as mixing beads, boiling stones, or packing for distillation columns.

Description	Pk	Cat. No.
Glass balls, 2.5 - 3.5 mm	500 g	332124G

Gln

See L(+)-Glutamine..... p.174

D(-)-Glucitol

See D(-)-Sorbitol..... p.439

D-Gluconic acid sodium salt

See Sodium D-gluconate..... p.418

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D(+)-Glucose AnalaR NORMAPUR® analytical reagent

CAS 50-99-7
$C_6H_{12}O_6$ **M.W.** 180.16 g/mol
Melting Pt: 146 °C **Density:** 1,54 g/cm³ (20 °C)
Storage Temperature: Ambient

IR Spectrum	Passes test	Specific optical rotation (10 %; water)	52.5 - 53.3 °
Ignition residue (SO_4)	Max. 0.03 %	Insolubility in water	Max. 30 ppm
Water	Max. 0.5 %	Cl (Chloride)	Max. 25 ppm
SO_3 (as SO_2)	Max. 5 ppm	SO_4 (Sulphate)	Max. 25 ppm
As (Arsenic)	Max. 0.2 ppm	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 1 ppm	Pb (Lead)	Max. 0.5 ppm

Cat. No.	Pk	Pack type
101174Y	500 g	Plastic bottle for solids
101175P	1 kg	Plastic bottle for solids
101176K	2,5 kg	Plastic bottle for solids
10117HV	25 kg	Cardboard carton

D(+)-Glucose, anhydrous Ph. Eur., USP

CAS 50-99-7
$C_6H_{12}O_6$ **M.W.** 180.16 g/mol
Melting Pt: 146 °C **Density:** 1,54 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	97.5 - 102.0 %
Appearance	White crystalline powder
Identification	Passes test USP
Identification B	Passes test
Appearance of solution	Passes test Ph.Eur.
Colour of solution	Passes test USP
Acidity	Passes test USP
Dextrin	Passes test
Soluble starch, sulfites	Max. 15 ppm
Soluble starch, sulfites	Max. 15 ppm
Resolution	Min. 1.3 %
Maltose and isomaltose	Max. 0.4 %
Maltotriose	Max. 0.2 %
Fructose	Max. 0.15 %
Unspecified impurities (for each)	Max. 0.1 %
Total unspecified impurities	Max. 0.5 %
Disregard limit	Max. 0.05 %
Conductivity	Max. 20 µS/cm
Spec. opt. rotation (calc. on anhydrous)	52.5 - 53.3 °
Specific optical rotation [USP]	52.6 - 53.2 °
Cl (Chloride)	Max. 125 ppm
SO_4 (Sulphate)	Max. 200 ppm
As (Arsenic)	Max. 1 ppm
Water (105°C; 16 h)	Max. 0.5 %
Residue on ignition	Max. 0.1 %
Residues of metal catalysts or reagents	Conforms
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
284504S	500 g	Plastic bottle for solids
284508W	5 kg	Bucket (Plastic)
28450BF	25 kg	Bucket (Plastic)

D(+)-Glucose, anhydrous GPR RECTAPUR®

CAS 50-99-7
$C_6H_{12}O_6$ **M.W.** 180.16 g/mol
Melting Pt: 146 °C **Density:** 1,54 g/cm³ (20 °C)
Storage Temperature: Ambient

Spec. opt. rotation (calc. on anhydrous)	52.5 - 53.3 °
Loss on drying (100°C)	Max. 1 %
Ignition residue (SO_4)	Max. 0.1 %
Cl (Chloride)	Max. 100 ppm

Cat. No.	Pk	Pack type
24379.294	1 kg	Plastic bottle for solids
24379.363	5 kg	Bucket (Plastic)
24379.465	25 kg	Bucket (Plastic)

VWR LIFE SCIENCE D(+)-Glucose for biotechnology

CAS 50-99-7
$C_6H_{12}O_6$ **M.W.** 180.16 g/mol
Melting Pt: 146 °C **Density:** 1,54 g/cm³ (20 °C)
Storage Temperature: Ambient
Sugar used as an energy source in specialised media.

Arsenic	<= 0.00004%	Chloride	<= 0.01%
DNase	none detected	Heavy Metals (as Pb)	<= 0.0005%
Insolubles	<= 0.005%	Iron	<= 0.0005%
Loss on Drying	<= 0.2%	Protease	none detected
Purity	>= 99.5%	Residue on Ignition	<= 0.02%
RNase	none detected	Specific Rotation	52.5°- 54 °
Sulphate & Sulphite	<= 0.005%		

Cat. No.	Pk	Pack type
0188-500G	500 g	Plastic bottle for solids
0188-1KG	1 kg	Plastic bottle for solids
0188-2.5KG	2,5 kg	Plastic bottle for solids
0188-5KG	5 kg	Bucket (Plastic)
0188-12KG	12 kg	Bucket (Plastic)
0188-50KG	50 kg	Plastic drum

D(+)-Glucose monohydrate Ph. Eur.

CAS 14431-43-7
$C_6H_{12}O_6 \cdot H_2O$ **M.W.** 198.17 g/mol
Melting Pt: 83 °C
Storage Temperature: Ambient
Where applicable, the substance is apyrogenic

Residual solvents	Passes test
Appearance	White crystalline powder
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Spec. opt. rotation (calc. on anhydrous)	52.5 - 53.3 deg
Foreign sugars, soluble starch, dextrins	Passes test
SO_3 (as SO_2)	Max. 15 ppm
Cl (Chloride)	Max. 125 ppm
SO_4 (Sulphate)	Max. 200 ppm
As (Arsenic)	Max. 1 ppm
Ba (Barium)	Passes test
Ca (Calcium)	Max. 200 ppm
Lead in sugars	Max. 0.5 ppm
Water	7 - 9.5 %
Sulphated ash	Max. 0.1 %

Cat. No.	Pk	Pack type
24369.290	1 kg	Plastic bottle for solids
24369.461	25 kg	Bucket (Plastic)

D(+)-Glucose monohydrate for biochemistry

CAS 14431-43-7
$C_6H_{12}O_6 \cdot H_2O$ **M.W.** 198.17 g/mol
Melting Pt: 83 °C
Storage Temperature: Ambient

Spec. opt. rotation (calc. on anhydrous)	52.5 - 53.3 deg
Heavy metals (as Pb)	Max. 10 ppm
Maltose	Max. 0.5 %
Water	7 - 9.5 %

Cat. No.	Pk	Pack type
24371.297	1 kg	Plastic bottle for solids
24371.366	5 kg	Bucket (Plastic)

VWR LIFE SCIENCE D(+)-Glucose monohydrate for biotechnology

CAS 14431-43-7
$C_6H_{12}O_6 \cdot H_2O$ **M.W.** 198.17 g/mol
Melting Pt: 83 °C
Storage Temperature: Ambient

DNase	none detected
Insolubles	<= 0.005 %
Loss on Drying	8 % - 9 %
Purity (Anhydrous)	>= 99.5 %
RNase	none detected
Specific Rotation	52.6 °- 53.2°

Cat. No.	Pk	Pack type
0643-1KG	1 kg	Plastic bottle for solids
0643-2.5KG	2,5 kg	Bucket (Plastic)

D(+)-Glucose monohydrate, powder TECHNICAL

CAS 14431-43-7
$C_6H_{12}O_6 \cdot H_2O$ **M.W.** 198.17 g/mol
Melting Pt: 83 °C
Storage Temperature: Ambient

Water ..... 7.0 - 9.5 %

Cat. No.	Pk	Pack type
24374.366	5 kg	Bucket (Plastic)

D(+)-Glucose 40% aqueous solution, ultrapure

CAS 50-99-7
$C_6H_{12}O_6$
Storage Temperature: Ambient

Appearance ..... Clear to slightly yellow liquid
Glucose ..... 35 % - 40 %
Sterility ..... Pass

Cat. No.	Pk	Pack type
E701-100ML	100 ml	Plastic bottle

D(+)-Glucose 20% aqueous solution for biotechnology

CAS 50-99-7
$C_6H_{12}O_6$
Storage Temperature: Ambient

Clarity ..... Pass
Sterility ..... Pass

Cat. No.	Pk	Pack type
E545-100ML	100 ml	Plastic bottle

Glucose oxidase, from Aspergillus niger, Amresco

Cat. No.	Pk	Pack type
0243-500KU	500 KU	Glass bottle

NEW Glucose oxidase, Aspergillus

Beta-D-Glucose oxidase with high purity grade and storage in frozen condition.

Cat. No.	Pk	Pack type
0243-100KU	100 KU	Glass bottle
0243-50KU	50.000 EU	Glass bottle

(S)-(+)-α-Glutamic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

L(+)-α-Glutamic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

L(+)-Glutamic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

(S)-(+)-Glutamic acid sodium salt monohydrate

See Sodium-L(+)-glutamate monohydrate p.418

L(+)-Glutamic acid Ph. Eur.

CAS 56-86-0
$HO_2CCH_2CH_2CH(NH_2)CO_2H$ **M.W.** 147.13 g/mol
Boiling Pt: 325 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,538 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance) ..... 98.5 - 100.5 %
Appearance ..... Conforms (see CoA/CoS)
Identification B ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Spec. opt. rotation (calc. on dried) ..... 30.5 - 32.5 °
Ninhydrin-positive substances ..... Passes test
Cl (Chloride) ..... Max. 200 ppm
SO_4 (Sulphate) ..... Max. 300 ppm
NH_4 (Ammonium) ..... Max. 200 ppm
Fe (Iron) ..... Max. 10 ppm
Heavy metals (as Pb) ..... Max. 10 ppm
Loss on drying (105°C) ..... Max. 0.5 %
Sulphated ash ..... Max. 0.1 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
20350.232	250 g	Plastic bottle for solids

L(+)-Glutamic acid, high purity

CAS 56-86-0
$HO_2CCH_2CH_2CH(NH_2)CO_2H$ **M.W.** 147.13 g/mol
Boiling Pt: 325 °C (1013 hPa) **Melting Pt:** 160 °C **Density:** 1,538 g/cm³ (20 °C)
Storage Temperature: Ambient
Animal-free amino acid. Polar. Acidic.

Heavy Metals (as Pb) ..... < = 0.002 %
Lead ..... <= 0.001 %
Loss on Drying ..... <= 0.1 %
Purity (Dried) ..... 98.5 % - 101.5 %
Specific Rotation (Dried) ..... 31.5 ° - 32.5 °

Cat. No.	Pk	Pack type
0421-1KG	1 kg	Plastic bottle for solids

L(+)-α-Glutamic acid

See L(+)-Glutamic acid p.174

(S)-(+)-Glutamic acid

See L(+)-Glutamic acid p.174

L(+)-Glutamine, high purity

CAS 56-85-9
$C_5H_{10}N_2O_3$ **M.W.** 146.15 g/mol
Boiling Pt: 355 °C (1013 hPa) **Melting Pt:** 185-186 °C **Density:** 1,5326 g/cm³ (130 °C)
Storage Temperature: Ambient

Arsenic ..... < 0.0001 %
Ash ..... <= 0.1 %
Chloride ..... < 0.02 %
Heavy Metals (as Pb) ..... < 0.001 %
Iron ..... <= 0.002 %
Loss on Drying ..... < 0.2 %
Purity ..... > 98.5 %
Solubility (10%, 2N HCl) ..... pass
Specific Rotation (1 g/25 ml Water) ..... 6.3 °- 7.3°
Sulphate ..... < 0.03 %
Thin Layer Chromatography (TLC) ..... One Spot

Cat. No.	Pk	Pack type
0374-500G	500 g	Plastic bottle for solids

L(+)-Glutamine TECHNICAL

CAS 56-85-9
$C_5H_{10}N_2O_3$ **M.W.** 146.15 g/mol
Boiling Pt: 355 °C (1013 hPa) **Melting Pt:** 185-186 °C **Density:** 1,5326 g/cm³ (130 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24378.187	100 g	Plastic bottle for solids

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(S)-(+)-Glutamine

See L(+)-Glutamine p.174

Glutaraldehyde 50% in aqueous solution, proteomics grade

Danger

CAS 111-30-8 **UN:** 2922
$C_5H_8O_2$ **M.W.** 100.12 g/mol
Density: 1,13 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Boiling Range	> 95°C
Color (APHA)	< 100
Glutaraldehyde	49 % - 52 %
Methanol	< 1 %
pH @25°C	< 5
Solidification Range	> -20°C
Specific Gravity	1.125 - 1.135

Cat. No.	Pk	Pack type
M155-100ML	100 ml	Plastic bottle
M155-500ML	500 ml	Plastic bottle

Glutaraldehyde 25% in aqueous solution TECHNICAL

Danger

CAS 111-30-8 **UN:** 2922
$C_5H_8O_2$ **M.W.** 100.12 g/mol
Boiling Pt: 101 °C (1013 hPa) **Melting Pt:** -6 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay	23 - 27 %

Cat. No.	Pk	Pack type
20879.238	250 ml	Glass bottle

L(-)-Glutathione (reduced form), high purity

CAS 70-18-8
$C_{10}H_{17}N_3O_6S$ **M.W.** 307.33 g/mol
Melting Pt: 185-195 °C **Density:** 1,475 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Iron	< = 0.002 %
Lead	<= 0.001 %
Loss on Drying	<= 1 %
Purity	>= 98 %
Specific Rotation	-18.5 to -15.5 °

Cat. No.	Pk	Pack type
0399-50G	50 g	Plastic bottle for solids
0399-250G	250 g	Plastic bottle for solids

L(-)-Glutathione (oxidised form), high purity

CAS 27025-41-8
$C_{20}H_{32}N_6O_{12}S_2$ **M.W.** 612.64 g/mol
Melting Pt: 185 °C
Storage Temperature: Refrigerator

Iron	< 0.002 %
Lead	< 0.001 %
Loss on Drying	<= 8 %
Purity	>= 95 %

Cat. No.	Pk	Pack type
0524-1G	1 g	Glass bottle
0524-5G	5 g	Glass bottle

Glycerin albumen GURR®

Storage Temperature: Ambient
Tissue section adhesive

Cat. No.	Pk	Pack type
361002Y	100 ml	Glass bottle
361004K	500 ml	Glass bottle

Glycerine ≥99.5% AnalaR NORMAPUR® ACS analytical reagent, redistilled

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Acrolein and glucose	Passes test
Appearance of solution (10 % V/V; water)	Passes test	Substances darkened by sulphuric acid	Passes test
Acidity	Max. 0.0004 meq/g	Alkalinity	Max. 0.0003 meq/g
Colouration	Max. 10 APHA	Density (20/4)	1.257 - 1.265
Acetaldehyde	Max. 10 ppm	Esters of fatty acids (as $C_{15}H_{26}O_6$)	Max. 0.05 %
Glyceraldehyde	Max. 30 ppm	Heavy metals (as Pb)	Max. 1 ppm
Ignition residue (SO_4)	Max. 50 ppm	Ketones (as CH_3COCH_3)	Max. 50 ppm
Water	Max. 0.5 %	Cl (Chloride)	Max. 1 ppm
NH_4 (Ammonium)	Max. 5 ppm	SO_4 (Sulphate)	Max. 5 ppm
As (Arsenic)	Max. 1 ppm	Ba (Barium)	Max. 5 ppm
Fe (Iron)	Max. 1 ppm	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
24388.238	250 ml	Glass bottle
24388.260	500 ml	Plastic bottle
24388.295	1 l	Glass bottle
24388.320	2,5 l	Glass bottle
24388.364	5 l	Plastic bottle
24388.444	20 l	Plastic drum

Glycerine (glycerol) Ph. Eur.

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	98.0 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Refractive index (20°C)	1.470 - 1.475
Aldehydes	Max. 10 ppm
Esters	Passes test
Impurity A and related substances	Passes test
Halogenated compounds	Max. 35 ppm
Sugars	Passes test
Cl (Chloride)	Max. 10 ppm
Heavy metals (as Pb)	Max. 5 ppm
Water	Max. 2 %
Sulphated ash	Max. 0.01 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
24386.298	1 l	Plastic bottle
24386.367	5 l	Plastic container
24386.460	25 l	Plastic drum

Glycerine ≥98% GPR RECTAPUR®

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Density (20/4)	1.257 - 1.265
Heavy metals (as Pb)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.05 %

Cat. No.	Pk	Pack type
24387.292	1 l	Plastic bottle
24387.326	2,5 l	Plastic bottle
24387.361	5 l	Plastic container
24387.463	25 l	Plastic drum
24387.554	200 l	Metal drum

Glycerine Electran® Molecular biology grade

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.00 %
Appearance	Clear viscous liquid
Identification	Passes test
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Density (20/4)	1.2560 - 1.2610
Fatty acids	0.02 %
Organic bound chlorine	Max. 0.0005 %
pH (5 mol/l)	5.50 - 8.00
Water	Max. 0.5 %
Absorbance (260 nm) (0.5 mol/l)	Max. 0.070
Absorbance (280 nm) (0,5 mol/l)	Max. 0.0200
Heavy metals (as Pb)	Max. 0.0005 %
SO_4 (Sulphate)	Max. 0.001 %
As (Arsenic)	Max. 0.0001 %
Cl (Chloride)	Max. 0.0001 %
Fe (Iron)	Max. 0.0005 %
Pb (Lead)	Max. 0.0001 %

Cat. No.	Pk	Pack type
444482V	100 ml	Plastic bottle
444485B	1 l	Plastic bottle

Glycerine for biotechnology, sterile

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 0.0003%
DNase	none detected
Heavy Metals (as Pb)	< 0.0005 %
Purity (Anhydrous)	> 99 %
Residue on Ignition	< 0.01 %
RNase	none detected
Specific Gravity	1.2615 - 1.2635
Sterility	Pass

Cat. No.	Pk	Pack type
E520-100ML	100 ml	Plastic bottle

Glycerine for biotechnology

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 0.0003 %
Chloride	<= 0.001 %
DNase	none detected
Heavy Metals (as Pb)	< 0.0005 %
Protease	none detected
Purity (Anhydrous)	> 99 %
Residue on Ignition	< 0.01 %
RNase	none detected
Specific Gravity Measurement	1.2615 - 1.2635
Sulphate	< 0.001 %
Water (KF)	< 1 %

Cat. No.	Pk	Pack type
0854-1L	1 l	Plastic bottle
0854-4L	4 l	Bag-in-box (Cubitainer)

Glycerine, proteomics grade, sterile

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 0.0003 %
Ash	0.01 %
DNase	NONE
Heavy Metals (as Pb)	<0.0005 %
Protease	NONE
Purity (Anhydrous)	99.0 %
RNase	NONE
Specific Gravity	1.250 - 1.265
Sterility	PASS

Cat. No.	Pk	Pack type
M153-100ML	100 ml	Plastic bottle

Glycerine, proteomics grade

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 0.0003 %
Chloride	0.001 %
DNase	NONE
Heavy Metals (as Pb)	<0.0005 %
Protease	NONE
Purity (Anhydrous)	99.0 %
Residue on Ignition	0.01 %
RNase	NONE
Specific Gravity Measurement	1.2615 - 1.2635
Sulfate	0.001 %
Water (KF)	1.0 %

Cat. No.	Pk	Pack type
M152-1L	1 l	Plastic bottle
M152-4L	4 l	Bag-in-box (Cubitainer)

Glycerine TECHNICAL

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$ **M.W.** 92.09 g/mol
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 18,6 °C **Density:** 1,26 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %

Cat. No.	Pk	Pack type
24397.296	1 l	Plastic bottle
24397.365	5 l	Plastic bottle
24397.410	10 l	Plastic drum
24397.467	25 l	Plastic drum

NEW Glycerine base solution USP test solutions (TS)

Danger

CAS 56-81-5 **UN:** 1824
$HOCH_2CH(OH)CH_2OH$

Density: 1,2102 g/cm³ (20 °C)

Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85348.180	100 ml	Plastic bottle
85348.260	500 ml	Plastic bottle

Glycerine 87% AnalaR NORMAPUR® analytical reagent

CAS 56-81-5
$HOCH_2CH(OH)CH_2OH$
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 86.0 %	Acidity	Max. 0.0004 meq/g
Alkalinity	Max. 0.0003 meq/g	Density (20/4)	1.220 - 1.230
Esters of fatty acids (as $C_{15}H_{26}O_6$)	Max. 0.05 %	Glyceraldehyde	Max. 30 ppm
Heavy metals (as Pb)	Max. 1 ppm	Ignition residue (SO_4)	Max. 50 ppm
Cl (Chloride)	Max. 1 ppm	NH_4 (Ammonium)	Max. 5 ppm
SO_4 (Sulphate)	Max. 5 ppm	Fe (Iron)	Max. 1 ppm
Water	12 - 14 %		

Cat. No.	Pk	Pack type
24385.295	1 l	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Glycerine (glycerol) 20% sterile for biotechnology

Warning

Used as a cryopreservative in bacterial preservation media.

Appearance	Colorless haze
free liquid	Pass
Bioburden Test	none
Glycerol ID Test	Pass
Water (KF)	76 % - 84 %

Cat. No.	Pk	Pack type
E550-100ML	100 ml	Plastic bottle

Glycerol

See Glycerine p.175

Glycerol triacetate

See Triacetin (Glycerol triacetate) p.493

Glyceryl triacetate

See Triacetin (Glycerol triacetate) p.493

Glycine AnalaR NORMAPUR® analytical reagent

CAS 56-40-6
NH_2CH_2COOH **M.W.** 75.07 g/mol
Boiling Pt: 181 °C (1013 hPa) **Melting Pt:** 83 °C **Density:** 1,64 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.7 %	IR Spectrum	Passes test
pH (20°C; 5 %)	5.9 - 6.3	Ignition residue (SO_4)	Max. 0.05 %
Insolubility in water	Max. 30 ppm	Ninhydrin-positive substances	Max. 0.1 %
Cl (Chloride)	Max. 70 ppm	NH_4 (Ammonium)	Max. 0.02 %
SO_4 (Sulphate)	Max. 25 ppm	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 1 ppm	Pb (Lead)	Max. 1 ppm

Cat. No.	Pk	Pack type
101194M	250 g	Plastic bottle for solids
101196X	1 kg	Plastic bottle for solids
10119CU	5 kg	Plastic bottle for solids
10119FA	25 kg	Bucket (Plastic)

Glycine GPR RECTAPUR®

CAS 56-40-6
NH_2CH_2COOH **M.W.** 75.07 g/mol
Boiling Pt: 181 °C (1013 hPa) **Melting Pt:** 83 °C **Density:** 1,64 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Ignition residue (SO_4)	Max. 0.2 %
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.02 %

Cat. No.	Pk	Pack type
24403.298	1 kg	Plastic bottle for solids
24403.367	5 kg	Bucket (Plastic)

Glycine Electran® Molecular biology grade

CAS 56-40-6
NH_2CH_2COOH **M.W.** 75.07 g/mol
Boiling Pt: 181 °C (1013 hPa) **Melting Pt:** 83 °C **Density:** 1,64 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %
Appearance	White crystalline powder
Identity (IR)	Passes test
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Absorbance (260 nm) (0.1 mol/l)	Max. 0.010
Absorbance (280 nm) (0.1 mol/l)	Max. 0.010
Heavy metals (as Pb)	Max. 0.001 %
Loss on drying	Max. 0.10 %
pH (5 %)	5.9 - 6.4
NH_4 (Ammonium)	Max. 0.0200 %
SO_4 (Sulphate)	Max. 0.005 %
As (Arsenic)	Max. 0.0001 %
Cl (Chloride)	Max. 0.004 %
Fe (Iron)	Max. 0.0005 %
Pb (Lead)	Max. 0.0005 %
Pb (Lead)	Max. 0.0005 %

Cat. No.	Pk	Pack type
444492A	100 g	Plastic bottle
444495D	1 kg	Plastic bottle

Glycine for biotechnology

CAS 56-40-6
NH_2CH_2COOH **M.W.** 75.07 g/mol
Boiling Pt: 181 °C (1013 hPa) **Melting Pt:** 83 °C **Density:** 1,64 g/cm³ (20 °C)
Storage Temperature: Ambient

Abs.@260nm (2M, Water)	< 0.05
Abs.@280nm (2M, Water)	<= 0.05
Chloride	<= 0.01%
DNase	none detected
Heavy Metals (as Pb)	<= 0.002%
Loss on Drying	<= 0.2%
pH (5%, Water) @25°C	5.9 - 6.4
Protease	none detected
Purity	>= 99%
RNase	none detected
Solubility (10%, Water)	Pass
Sulphate	<= 0.05%
Thin Layer Chromatography (TLC)	One Spot

Cat. No.	Pk	Pack type
0167-1KG	1 kg	Plastic bottle for solids
0167-5KG	5 kg	Bucket (Plastic)
0167-12KG	12 kg	Bucket (Plastic)

Glycine, proteomics grade

CAS 56-40-6
NH_2CH_2COOH **M.W.** 75.07 g/mol
Boiling Pt: 181 °C (1013 hPa) **Melting Pt:** 83 °C **Density:** 1,64 g/cm³ (20 °C)
Storage Temperature: Ambient

Abs.@280 nm (1 M, Water)	0.10
Chloride	0.01 %
DNase	NONE
Heavy Metals (as Pb)	<0.002 %
Loss on Drying	0.2 %
pH (5%, Water) @25 °C	5.9 - 6.4
Protease	NONE
Purity	99.0 %
RNase	NONE
Solubility (10%, Water)	PASS
Sulphate	0.05 %
Thin Layer Chromatography (TLC)	ONE SPOT

Cat. No.	Pk	Pack type
M103-1KG	1 kg	Plastic bottle for solids
M103-5KG	5 kg	Bucket (Plastic)

Glycogen solution (20 mg/ml)

Bioburden Test	NONE
DNA Contamination	none
DNase(EQC)	none detected
Performance/ Gel Visibility	Pass
RNase	none detected

Cat. No.	Pk	Pack type
N632-2X0.5ML	1 Pack	Plastic tube

Glycol

See Ethylene glycol p.154

NEW Glycolate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84968.180	100 ml	Plastic bottle

Glycolethylether

See 1,4-Dioxane p.123

VWR LIFE SCIENCE Glyoxal 40% in aqueous solution, high purity

Warning

CAS 107-22-2
OHCCHO

M.W. 58.04 g/mol
Density: 1,27 g/cm³ (20 °C)

Storage Temperature: Ambient

Acid ..... < = 2 %
Formaldehyde ..... <= 0.1 %
Glyoxal Content ..... 39 % - 41 %
pH @25°C ..... 2 - 3.5

Cat. No.	Pk	Pack type
0646-1KG	1 kg	Plastic bottle for solids

Glyoxalamine

See Imidazole p.213

Glyoxaline

See Imidazole p.213

Gold (reagents for the analysis of)

Hydroquinone GPR RECTAPUR® p.207
o-Tolidine TECHNICAL p.490

NEW Gold standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Gold	1000 ppm	10% HCl	Plastic bottle	100 ml	456742M
Gold	10 ppm	2% HCl	Plastic bottle	100 ml	85550.180

Gold standard solution, 10,000 mg/l Au in 10% hydrochloric acid (from Au) ARISTAR® standard for ICP

Au in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455432U	100 ml	Plastic bottle
455434W	500 ml	Plastic bottle

Gold standard solution, 1,000 mg/l Au in 10% hydrochloric acid (from Au) ARISTAR® standard for ICP

Au in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455422S	100 ml	Plastic bottle
455424U	500 ml	Plastic bottle

Gold standard solution, 1,000 mg/l Au in 5% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86662.180	100 ml	Plastic bottle
86662.260	500 ml	Plastic bottle

Gram's decolourising solution

Cat. No.	Pk	Pack type
911530ZA	1 l	Glass bottle

Graphite, powder TECHNICAL

CAS 7782-42-5
C

M.W. 12.01 g/mol
Melting Pt: 3827 °C
Density: 2,09-2,23g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
24489.363	5 kg	Plastic bag

Grease TECHNICAL for taps and sockets

Storage Temperature: Ambient
Hydrocarbons + lanolin

Identification ..... Passes test

Cat. No.	Pk	Pack type
24513.141	25 g	Plastic tube

Grease, Silicone

See Silicone

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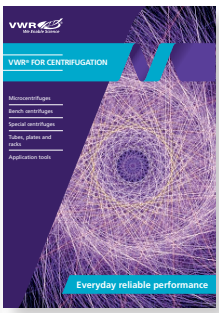

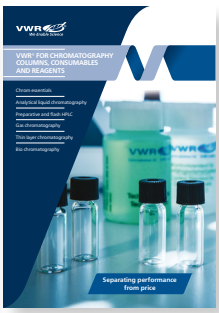

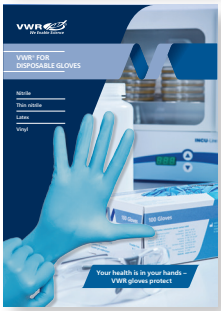

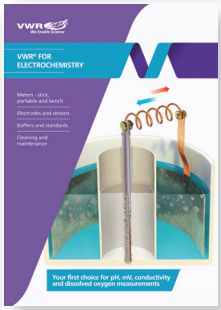

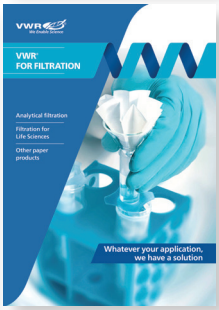

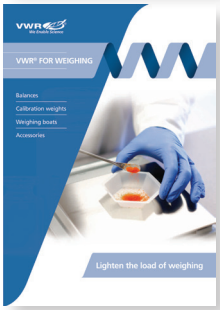

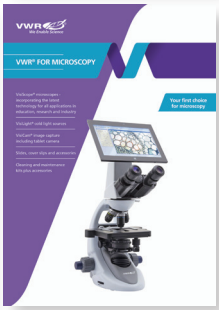

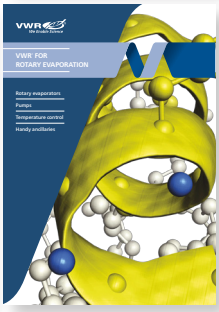

Equipment, consumables, chemicals, servicing and maintenance in one 'go to' handy guide.

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Green solvents

A lot of toxic solvents are used in organic synthesis. Some of them are known to be carcinogenic, mutagenic or harmful to reproduction (CMR) and an alternative is advised. ‚Green' solvents can offer opportunities for enhanced personal and environmental protection and financial savings.

- Methyl-2 THF is derived from corn. It can be used to replace solvents such as THF and diethyl ether in Grignard, organometalic and lithiation applications. It can also replace dichloromethane for biphasic reactions
- 1,3-Propane diol is also derived from corn. It has a low toxicity and can be used in polymerisation reactions. Its performance is similar to that of some petroleum derived solvents
- Dioxalane is a strong solvent, with good solubility in water, hydrophilic and hydrophobic solvents. It can be used as a potential alternative to dichloromethane, methyl ethyl ketone, and DMSO and has applications in polymerisation chemistry as a co-momomer in the synthesis of polyacetals. It will salt out in aqueous solutions easily if water-soluble salts are added
- Cyclopentyl methyl ether (CPME) is a new alternative to THF, tert-butylmethyl ether, 1,4- Dioxane and diethyl ether. It is characterised by a low water miscibility offering potential advantages in separation, recycling and drying applications. It's relatively stable with acids and caustics and has a higher flash point and lower peroxide formation when compared against those of other commonly used ether solvents

Description	Page	Pk	Cat. No.
Cyclopentyl methyl ether (CPME) stabilised GPR RECTAPUR®	103, 180	1 l	84565.290
Cyclopentyl methyl ether (CPME) stabilised GPR RECTAPUR®	103, 180	5 l	84565.360
1,3-Dioxolane stabilised GPR RECTAPUR® for synthesis	124, 180	1 l	87135.290
1,3-Dioxolane stabilised GPR RECTAPUR® for synthesis	124, 180	5 l	87135.360
(±)-2-Methyltetrahydrofuran stabilised GPR RECTAPUR® for synthesis	180, 264	1 l	87132.290
(±)-2-Methyltetrahydrofuran stabilised GPR RECTAPUR® for synthesis	180, 264	2,5 l	87132.320
(±)-2-Methyltetrahydrofuran stabilised GPR RECTAPUR® for synthesis	180, 264	25 l	87132.460
(±)-2-Methyltetrahydrofuran stabilised GPR RECTAPUR® for synthesis	180, 264	188 l	87132.550
Perlite for high clarity filtration	180, 340	1 kg	84101.290
Perlite for high clarity filtration	180, 340	5 kg	84101.360
1,3-Propanediol GPR RECTAPUR® for synthesis	180, 376	1 l	87134.290
1,3-Propanediol GPR RECTAPUR® for synthesis	180, 376	5 l	87134.360
Solvent PERTENE® D6 for degreasing	180, 438	1 l	28228.290

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Griess' reagent for analysis of nitrite

Warning

Identification ..... Passes test

Cat. No.	Pk	Pack type
31023.293	1 l	Glass bottle

Guanidine chloride

See Guanidinium chloride p.181

Guanadine hydrochloride

See Guanidinium chloride p.181

Guanidinium chloride GPR RECTAPUR®

Warning

CAS 50-01-1
$NH_2C(=NH)NH_2 \cdot HCl$ **M.W.** 95.53 g/mol
Melting Pt: 185 °C **Density:** 1,354 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
IR Spectrum ..... Passes test
Melting point ..... 180 - 188 °C

Cat. No.	Pk	Pack type
284674M	500 g	Plastic bottle for solids

Guanidinium chloride for biotechnology

Warning

CAS 50-01-1
$NH_2C(=NH)NH_2 \cdot HCl$ **M.W.** 95.53 g/mol
Melting Pt: 185 °C **Density:** 1,354 g/cm³ (20 °C)
Storage Temperature: Ambient
Suited for purification of nucleic acids or polypeptides from cell sources and inhibition of both RNase and protease activity.

Solubility (6M, Water) ..... pass
Abs.@260nm (6M, Water) ..... <= 0.03
Arsenic ..... <= 0.0005 %
DNase ..... none detected
Iron ..... <= 0.0005 %
Lead ..... < 0.0005 %
Melting Point ..... 181 °C - 187 °C
Protease ..... none detected
Purity ..... > 99.5 %
RNase ..... none

Cat. No.	Pk	Pack type
0287-100G	100 g	Glass bottle
0287-500G	500 g	Glass bottle

Guanidinium chloride, proteomics grade

Warning

CAS 50-01-1
$NH_2C(=NH)NH_2 \cdot HCl$ **M.W.** 95.53 g/mol
Melting Pt: 185 °C **Density:** 1,354 g/cm³ (20 °C)
Storage Temperature: Ambient
Suited for purification of nucleic acids or polypeptides from cell sources and inhibition of both RNase and protease activity.

Abs.@230nm (6M, Water) ..... < 0.15
Abs.@260nm (6M, Water) ..... < 0.03
Arsenic ..... < 0.0005 %
DNase ..... none detected
Iron ..... < 0.0005 %
Lead ..... < 0.0005 %
Melting Point ..... 181°C - 187°C
Protease ..... none detected
Purity ..... > 99.5 %
RNase ..... none
Solubility (6M, Water) ..... Pass

Cat. No.	Pk	Pack type
M110-100G	100 g	Glass bottle
M110-250G	250 g	Glass bottle

Guanidinium chloride, technical grade

Warning

CAS 50-01-1
$NH_2C(=NH)NH_2 \cdot HCl$ **M.W.** 95.53 g/mol
Melting Pt: 185 °C **Density:** 1,354 g/cm³ (20 °C)
Storage Temperature: Ambient

Ammonium Chloride ..... < = 0.5 %
Ash ..... <= 0.4 %
Moisture (KF) ..... <= 0.3 %
Purity ..... >= 98 %

Cat. No.	Pk	Pack type
0118-500G	500 g	Glass bottle
0118-1KG	1 kg	Plastic bottle for solids
0118-5KG	5 kg	Bucket (Plastic)

Guanidinium chloride 8 mol/l in aqueous solution, proteomics grade

Warning

CAS 50-01-1
$NH_2C(=NH)NH_2 \cdot HCl$
Storage Temperature: Ambient
A concentrated solution prepared with Biotechnology Grade powder for convenient use in nucleic acid and protein purification procedures.

Protease ..... none detected

Cat. No.	Pk	Pack type
M113-4L	4 l	Bag-in-box (Cubitainer)

Guanidinium chloride 8 mol/l in aqueous solution for biotechnology

Warning

CAS 50-01-1
$NH_2C(=NH)NH_2 \cdot HCl$
Storage Temperature: Ambient

Absorbance @ 230nm ..... REPORT
Absorbance @ 260nm ..... < 0.05
Absorbance @ 280nm ..... < 0.15
Conductivity @25°C (1:100, Water) ..... 8 - 10 mmhos
Specific Gravity ..... 1.1849 - 1.1949 g/ml
Titration ..... 7.5 - 8.5 Molar

Cat. No.	Pk	Pack type
J842-4L	4 l	Bag-in-box (Cubitainer)

Guanidinium thiocyanate for biotechnology

Warning

CAS 593-84-0

$NH_2C(=NH)NH_2 \cdot HSCN$ **M.W.** 118.16 g/mol

Melting Pt: 118 °C **Density:** 1,29 g/cm³ (20 °C)

Storage Temperature: Ambient

A powerful protein denaturant used to inactivate endogenous RNases during the isolation of RNA from tissues and bacterial cultures.

Abs.@280nm (70%, Water)	< = 0.8
Abs.@300nm (6M, Water)	< 0.1
Abs.@410nm (6M, Water)	< 0.1
Copper	< 0.0001 %
DNase	none detected
Solubility (70%, Water 50° C)	pass
Lead	< 0.0001 %
Melting Point	118 °C - 121 °C
Protease	none detected
Purity	> 99 %
RNase	none detected

Cat. No.	Pk	Pack type
0380-50G	50 g	Glass bottle
0380-250G	250 g	Glass bottle
0380-500G	500 g	Glass bottle

Guanidinium thiocyanate 6 mol/l in aqueous solution for biotechnology

Danger

CAS 593-84-0

$NH_2C(=NH)NH_2 \cdot HSCN$

Storage Temperature: Ambient

Colour (APHA)	< 20
DNase	NONE
pH @ 25 °C	4.5 - 7.0
Protease	NONE
RNase	NONE

Cat. No.	Pk	Pack type
K965-50ML	50 ml	Glass bottle
K965-250ML	250 ml	Glass bottle

Guanosine, ultrapure

CAS 118-00-3

$C_{10}H_{13}N_5O_5$

Storage Temperature: Ambient

Em(252.5nm,0.01M PO4 buffer)	12500 - 15000

Cat. No.	Pk	Pack type
0193-100G	100 g	Plastic bottle for solids

Gum tragacanth Ph. Eur., USP, NF

CAS 9000-65-1

Storage Temperature: Ambient

Appearance	Passes test Ph.Eur.
Identification A	Passes test USP
Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.
Identification C	Passes test Ph.Eur.
Identification D	Passes test Ph.Eur.
Acacia	Passes test Ph.Eur.
Methylcellulose	Passes test Ph.Eur.
Sterculia gum A+B	Passes test Ph.Eur.
Foreign matter	Max. 1 %
Flow time	Passes test Ph.Eur.
Total ash	Max. 4 %
Microbial contamination	Passes test Ph.Eur.
Microbial contamination	Passes test USP
Pb (Lead)	Max. 0.001 %
Karaya gum	Passes test USP
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
24437.260	500 g	Plastic bottle for solids

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Hach® (Reagents for Hach® Instruments)

See Environment

Harris´s Haematoxylin solution Q Path® for microscopy

Warning

IVD

Storage Temperature: Ambient
Ready to use solution for Papanicolaou cytological staining.

Appearance	Clear liquid
Colour of solution	Purplish red
Density (20/4)	1,053 - 1,059
pH (20°C)	2,2 - 2,6
Absorbance (0.5 %)	553 - 560 nm

Cat. No.	Pk	Pack type
10047007.	450 ml	Pouch
10047107.	2,5 l	Plastic bottle
00607131.	5 l	Bag-in-box (Cubitainer)

Mayer´s Hematoxylin solution Q Path® for microscopy

Warning

IVD

Storage Temperature: Ambient
Ready to use solution for HES histological staining.

Appearance	Clear liquid
Colour of solution	Purplish red
Density (20/4)	1,05 - 1,07
pH (20°C)	2,2 - 2,6
Absorbance (0.1 %)	559 - 561 nm

Cat. No.	Pk	Pack type
10047005.	450 ml	Pouch
10047105.	2,5 l	Plastic bottle
00607126.	5 l	Bag-in-box (Cubitainer)

NEW Hafnium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Hafnium	1000 ppm	2% HNO_3/0,5% HF	Plastic bottle	100 ml	457292B
Hafnium	10 ppm	2% HNO_3/0,5% HF	Plastic bottle	100 ml	85569.180

Hafnium standard solution, 1,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) (from HfO_2) ARISTAR® standard for ICP

HfO_2 in HNO_3 (2 - 5%) with traces HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455442W	100 ml	Plastic bottle
455444B	500 ml	Plastic bottle

NEW Hafnium standard solution, 10,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) (from HfO_2) ARISTAR® standard for ICP

HfO_2 in HNO_3 (2 - 5%) with traces HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455452B	100 ml	Plastic bottle
455454D	500 ml	Plastic bottle

Hafnium standard solution, 1,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86681.180	100 ml	Plastic bottle
86681.260	500 ml	Plastic bottle

Total hardness indicator, tablets for hardness of water determinations

Minimum weight	0.19 - 0.21 g
Maximum weight	Max. 0.21 g
Absorbance	Conforms
Application test	Conforms

Cat. No.	Pk	Pack type
160232E	100 Tab.	Plastic bottle

Heavy water

See Deuterium oxide p.108

HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid, high purity

CAS 7365-45-9
$C_8H_{18}N_2O_4S$ **M.W.** 238.31 g/mol
Melting Pt: 210-215 °C **Density:** 1,448 g/cm³ (20 °C)
Storage Temperature: Ambient
HEPES is a general purpose buffer available for biological research.

Has been used to advantage in tissue culture, oxidative phosphorylation, protein synthesis with cell-free bacterial systems, photophosphorylation, CO_2 fixation. Suitable buffer for TEM studies (Transmission Electron Microscopy) as it does not affect metal substrates. Recommended buffer for the glutamate binding assay, prevents binding to non receptor materials.

DNase	none detected
Heavy Metals (as Pb)	<= 0.0005 %
Iron	<= 0.0005 %
pKa @20°C	7.45 - 7.65
Protease	none detected
Purity (Dry Basis)	> 99 %
Residue on Ignition	< 0.2 %
RNase	none detected

Cat. No.	Pk	Pack type
0511-50G	50 g	Plastic bottle for solids
0511-250G	250 g	Plastic bottle for solids
0511-1KG	1 kg	Plastic bottle for solids

HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid for biochemistry

CAS 7365-45-9
$C_8H_{18}N_2O_4S$ **M.W.** 238.31 g/mol
Melting Pt: 210-215 °C **Density:** 1,448 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Appearance	White powder
Appearance of solution (1 mol/l)	Clear colourless liquid	IR Spectrum	Passes test
pH (1 %)	4.7 - 5.3	Ignition residue	Max. 0.1 %
Water	Max. 0.5 %	Cl (Chloride)	Max. 50 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 100 ppm
Al (Aluminium)	Max. 5 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm	Na (Sodium)	Max. 0.1 %
Pb (Lead)	Max. 5 ppm	Absorbance (260 nm) (1 mol/l)	Max. 0.05
Absorbance (280 nm) (1 mol/l)	Max. 0.04		

Cat. No.	Pk	Pack type
441485H	250 g	Plastic bottle for solids
441487M	1 kg	Plastic bottle for solids
44148BC	5 kg	Bucket (Plastic)

HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid

CAS 7365-45-9
$C_8H_{18}N_2O_4S$ **M.W.** 238.31 g/mol
Melting Pt: 210-215 °C **Density:** 1,448 g/cm³ (20 °C)
Storage Temperature: Ambient
Hepes is a widely used buffer in biological studies. In cell culture media, it is employed as a substitute for the bicarbonate buffer at a concentration of 25 mM or as a supplement to the bicarbonate buffer (concentration 10 - 15 mM).

Assay	Min. 99.5 %
Cl (Chloride)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.05 %
Heavy metals (as Pb)	Max. 10 ppm
pH (25°C; 1 %)	4.7 - 6.0
Water	Max. 0.5 %

Cat. No.	Pk	Pack type
441476L	1 kg	Plastic bottle
44147CR	5 kg	Plastic bottle

NEW HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid, anhydrous for biopharmaceutical production

CAS 7365-45-9
$C_8H_{18}N_2O_4S$ **M.W.** 238.31 g/mol
Melting Pt: 210-215 °C **Density:** 1,448 g/cm³ (20 °C)
Storage Temperature: Ambient
HEPES

Assay	Min. 99.5 %	Appearance	White crystalline powder
Cell culture toxicity	Passes test	DNases	Not detected
Identification by IR	Conforms to structure	Proteases	Not detected
RNases	Not detected	Solubility (1 mol/l)	Clear,colourless,complete
pKa (20°C)	7.45 - 7.65	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue	Max. 0.3 %	Water	Max. 0.5 %
Ca (Calcium)	Max. 5 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm	Mg (Magnesium)	Max. 5 ppm
Mn (Manganese)	Max. 5 ppm	Absorbance (260 nm) (1 mol/l)	Max. 0.05
Absorbance (280 nm) (1 mol/l)	Max. 0.04	Bioburden	Max. 100 CFU/g
Endotoxin (0,2 %)	Max. 0.1 EU/mg		

Cat. No.	Pk	Pack type
30487.297	1 kg	Plastic bottle for solids
30487.366	5 kg	Bucket (Plastic)
30487.468	25 kg	Bucket (Plastic)

Buffer, HEPES solution pH 7.3 (1 mol/l)

Cat. No.	Pk	Pack type
J848-100ML	100 ml	Plastic bottle
J848-500ML	500 ml	Plastic bottle

HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid sodium salt, high purity

CAS 75277-39-3
$C_8H_{17}N_2NaO_4S$ **M.W.** 260.29 g/mol
Melting Pt: > 105 °C
Storage Temperature: Ambient

DNase	none detected
Heavy Metals (as Pb)	< 0.0001 %
Loss on Drying	<= 3 %
pKa	7.45 - 7.65
Protease	none detected
Purity (Dry Basis)	> 99 %
RNase	none
Solubility (5%, Water)	pass

Cat. No.	Pk	Pack type
0485-25G	25 g	Glass bottle
0485-100G	100 g	Glass bottle
0485-500G	500 g	Glass bottle

NEW HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid sodium salt for biopharmaceutical production

CAS 75277-39-3
$C_8H_{17}N_2NaO_4S$ **M.W.** 260.29 g/mol
Melting Pt: > 105 °C
Storage Temperature: Ambient

Assay	Min. 99.5 %	Appearance	White crystalline powder
Cell culture toxicity	Passes test	DNases	Not detected
Identification by IR	Conforms to structure	Proteases	Not detected
RNases	Not detected	Solubility (1 mol/l)	Clear and complete
pH (1 %)	9.5 - 10.5	pKa (25°C)	7.4 - 7.7
Heavy metals (as Pb)	Max. 5 ppm	Loss on drying (105°C)	Max. 2.0 %
Ca (Calcium)	Max. 5 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm	Mg (Magnesium)	Max. 5 ppm
Mn (Manganese)	Max. 5 ppm	Zn (Zinc)	Max. 5 ppm
Absorbance (260 nm) (1 mol/l)	Max. 0.5	Absorbance (280 nm) (1 mol/l)	Max. 0.5
Bioburden	Max. 100 CFU/g	Endotoxin (0,2 %)	Max. 0.1 EU/mg

Cat. No.	Pk	Pack type
30567.297	1 kg	Plastic bottle for solids
30567.366	5 kg	Bucket (Plastic)
30567.468	25 kg	Bucket (Plastic)

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n-Heptane HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 142-82-5 **UN:** 1206
$H_3C(CH_2)_5CH_3$ **M.W.** 100.2 g/mol
Boiling Pt: 98,4 °C (1013 hPa) **Melting Pt:** -90,6 °C **Density:** 0,6838 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457603-38

Assay (on anhydrous substance)	Min. 99 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 10 ppm
Water	Max. 100 ppm
Absorbance (210 nm)	Max. 0.3
Absorbance (220 nm)	Max. 0.1
Absorbance (245 nm)	Max. 0.01
Transmittance (210 nm)	Min. 50 %
Transmittance (220 nm)	Min. 80 %
Transmittance (245 nm)	Min. 98 %

Cat. No.	Pk	Pack type
24539.290	1 l	Glass bottle
24539.320	2,5 l	Glass bottle

n-Heptane SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 142-82-5 **UN:** 1206
$H_3C(CH_2)_5CH_3$ **M.W.** 100.2 g/mol
Boiling Pt: 98,4 °C (1013 hPa) **Melting Pt:** -90,6 °C **Density:** 0,6838 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457603-38

Assay (GC)	Min. 99.0 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.01 %
Transmittance (200 nm)	Min. 10 %
Transmittance (210 nm)	Min. 50 %
Transmittance (220 nm)	Min. 80 %
Transmittance (230 nm)	Min. 90 %
Transmittance (250 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84712.320	2,5 l	Glass bottle

NEW n-Heptane, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85667.180	100 ml	Glass bottle

NEW n-Heptane PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 142-82-5 **UN:** 1206
$H_3C(CH_2)_5CH_3$ **M.W.** 100.2 g/mol
Boiling Pt: 98,4 °C (1013 hPa) **Melting Pt:** -90,6 °C **Density:** 0,6838 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Evaporation residue	Max 0.0003%
Colouration	Max 10 APHA
Water	Max 0.005%
GC/ECD Dioxins, Furans & PCB's	Max 2 ng/l
GC/ECD any pesticide (as Lindane)	Max 2 ng/l
GC/NPD any pesticide (as Parathion)	Max 5 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane)	Max 2 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max 1 ng/l
GC/FID C10 to C40 (as n-Decane)	Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu)	Max 2 ng/l
Filtered through 0.2um, filled under inert gas	Conforms

Cat. No.	Pk	Pack type
85388.320	2,5 l	Glass bottle

n-Heptane AnalaR NORMAPUR® analytical reagent

Danger

CAS 142-82-5 **UN:** 1206
$H_3C(CH_2)_5CH_3$ **M.W.** 100.2 g/mol
Boiling Pt: 98,4 °C (1013 hPa) **Melting Pt:** -90,6 °C **Density:** 0,6838 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457603-38

Assay	Min. 99.0 %	IR Spectrum	Passes test
Acidity	Max. 0.0001 meq/g	Alkalinity	Max. 0.0001 meq/g
Boiling point	98 - 99 °C	Bromine value	Max. 0.5
Colouration	Max. 10 APHA	Density (20/4)	0.681 - 0.685
Substances coloured by H_2SO_4	Max. 90 APHA	Aromatics (V/V)	Max. 0.1 %
Evaporation residue	Max. 10 ppm	Total S (as SO_4)	Max. 10 ppm
Water	Max. 100 ppm	Al (Aluminium)	Max. 0.1 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.1 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.02 ppm	Na (Sodium)	Max. 0.1 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.02 ppm
Sn (Tin)	Max. 0.1 ppm	Sr (Strontium)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
24551.290	1 l	Glass bottle
24551.324	2,5 l	Glass bottle
24551.368	5 l	Aluminium bottle
24551.461	25 l	Metal drum

n-Heptane GPR RECTAPUR®

Danger

CAS 142-82-5 **UN:** 1206
$H_3C(CH_2)_5CH_3$ **M.W.** 100.2 g/mol
Boiling Pt: 98,4 °C (1013 hPa) **Melting Pt:** -90,6 °C **Density:** 0,6838 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457603-38

Assay	Min. 99 %
IR Spectrum	Passes test
Boiling point	98 - 99 °C
Density (20/4)	0.681 - 0.685
Acidity	Max. 0.0008 meq/g
Substances coloured by H_2SO_4	Max. 90 APHA
Evaporation residue	Max. 20 ppm

Cat. No.	Pk	Pack type
24549.292	1 l	Glass bottle
24549.326	2,5 l	Glass bottle
24549.361	5 l	Metal can
24549.463	25 l	Metal drum
24549.554	200 l	Metal drum

Heptane (mixture of isomers) TECHNICAL

Danger

CAS 142-82-5 **UN:** 1206
$H_3C(CH_2)_5CH_3$ **M.W.** 100.2 g/mol
Boiling Pt: 97-98 °C (1013 hPa) **Melting Pt:** -90,5 °C **Density:** 0,68 g/cm³ (20 °C)
Storage Temperature: Ambient

n 20/D ..... 1.39 - 1.405
Evaporation residue ..... Max. 20 ppm
Boiling point ..... 90 - 100 °C

Cat. No.	Pk	Pack type
24548.298	1 l	Glass bottle
24548.367	5 l	Metal can
24548.460	25 l	Metal drum
24548.550	210 l	Metal drum

1-Heptanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC

CAS 22767-50-6
$H_3C(CH_2)_5CH_2SO_3Na$ **M.W.** 202.25 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient

Assay (calculated on dried substance) ..... Min. 99 %
IR Spectrum ..... Passes test
pH (10 %) ..... 5.5 - 7.5
Loss on drying (120°C; under vacuum) ..... Max. 2 %
Transmittance (200 nm) (0,005 mol/l) ..... Min. 70 %
Transmittance (220 nm) (0.005 mol/l) ..... Min. 90 %
Transmittance (250 nm) (0.005 mol/l) ..... Min. 96 %

Cat. No.	Pk	Pack type
152782J	25 g	Plastic bottle for solids
152783K	100 g	Plastic bottle for solids

1-Heptanesulphonic acid sodium salt for ion pair chromatography

CAS 22767-50-6
$H_3C(CH_2)_5CH_2SO_3Na$ **M.W.** 202.25 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
20335.104	5 g	Glass bottle

Hexaammonium heptamolybdate tetrahydrate

See Ammonium heptamolybdate tetrahydrate p.34

Hexachloroplatinic (IV) acid hexahydrate GPR RECTAPUR®

Danger

CAS 18497-13-7 **UN:** 2507
$H_2PtCl_6 \cdot 6H_2O$ **M.W.** 517.9 g/mol
Melting Pt: 150 °C **Density:** 2,434 g/cm³ (20 °C)

Assay (calculated as Pt) ..... Max. 40 %

Cat. No.	Pk	Pack type
277323W	5 g	Plastic bottle

1,2,3,4,7,7- Hexachloro-8,9,10-trinorborn-2-en-5,6-ylenedimethylene sulfite

See Endosulfan (α- and β-isomers) p.142

1,4,5,6,7,7-Hexachloro-8,9,10-trinorborn-5-en-2,3-ylenedimethylene sulfite

See Endosulfan (α- and β-isomers) p.142

n-Hexadecane TECHNICAL

Danger

CAS 544-76-3
$H_3C(CH_2)_{14}CH_3$ **M.W.** 226.45 g/mol
Boiling Pt: 287 °C (1013 hPa) **Melting Pt:** 18 °C **Density:** 0,77331 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24556.230	250 ml	Glass bottle

1-Hexadecylpyridinium chloride monohydrate

See 1-Cetylpyridinium chloride monohydrate p.83

Hexadecyltrimethylammonium bromide

See Cetrimonium bromide p.83

2,4-Hexadienoic acid potassium salt

See Potassium sorbate p.374

(2E,4E)-2,4-Hexadienoic acid potassium salt

See Potassium sorbate p.374

(E,E)-2,4-Hexadienoic acid potassium salt

See Potassium sorbate p.374

2,4-Hexadienoic acid

See Sorbic acid p.439

(2E,4E)-2,4-Hexadienoic acid

See Sorbic acid p.439

(E,E)-2,4-Hexadienoic acid

See Sorbic acid p.439

Hexafluorosilicic acid 31% in aqueous solution TECHNICAL

Danger

CAS 16961-83-4 **UN:** 1778
H_2SiF_6
Density: 1,29 g/cm³ (20 °C)

Assay ..... Min. 31 %

Cat. No.	Pk	Pack type
20313.291	1 l	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

1,1,1,3,3,3-Hexafluoro-2-propanol for peptide synthesis

Danger

CAS 920-66-1 **UN:** 1760
$C_3H_2F_6O$ **M.W.** 168.04 g/mol
Boiling Pt: 59,1 °C (1013 hPa) **Melting Pt:** -96 °C **Density:** 1,492 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 99.8 %
Appearance	Clear colourless liquid
Colour value	Max. 10 APHA
Free amines	Max. 0.0002 %
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.02 %
Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm
Pb (Lead)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
84576.180	100 ml	Glass bottle
84576.260	500 ml	Glass bottle

Hexamethylene

See Cyclohexane p.101

Hexamethylenetetramine

See Methenamine p.259

Hexamine

See Methenamine p.259

Hexane (mixture of isomers) HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 68-70 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 45.0 %
Acidity	Max. 0.001 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.01 %
Transmittance (210 nm)	Min. 60 %
Transmittance (220 nm)	Min. 80 %
Transmittance (230 nm)	Min. 95 %
Transmittance (240 nm)	Min. 98 %
Transmittance (250 nm)	Min. 99 %

Cat. No.	Pk	Pack type
83992.320	2,5 l	Glass bottle

NEW Hexane (mixture of isomers) PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 95%
Evaporation residue	Max 0.0003%
Colouration	Max 10 APHA
Water	Max 0.005%
GC/ECD Dioxins, Furans & PCB's	Max 2 ng/l
GC/ECD any pesticide (as Lindane)	Max 2 ng/l
GC/NPD any pesticide (as Parathion)	Max 5 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane)	Max 2 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max 1 ng/l
GC/FID C10 to C40 (as n-Decane)	Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu)	Max 2 ng/l
Filtered through 0.2um, filled under inert gas	Conforms

Cat. No.	Pk	Pack type
85389.320	2,5 l	Glass bottle

Hexane (mixture of isomers) TECHNICAL

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 68-70 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Boiling point	63 - 69 °C
Evaporation residue	Max. 20 ppm

Cat. No.	Pk	Pack type
24574.298	1 l	Glass bottle
24574.323	2,5 l	Glass bottle
24574.367	5 l	Metal can
24574.460	25 l	Metal drum
24574.551	200 l	Metal drum

n-Hexane ≥97% HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay (GC)	Min. 97 %
Acidity	Max. 0.0003 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 50 ppm
Absorbance (210 nm)	Max. 0.3
Absorbance (220 nm)	Max. 0.1
Absorbance (245 nm)	Max. 0.01
Transmittance (210 nm)	Min. 50 %
Transmittance (220 nm)	Min. 80 %
Transmittance (245 nm)	Min. 98 %

Cat. No.	Pk	Pack type
24575.290	1 l	Glass bottle
24575.320	2,5 l	Glass bottle
24575.400	4 l	Glass bottle

n-Hexane ≥95% HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay (on anhydrous substance)	Min. 95.0 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.01 %
Transmittance (200 nm)	Min. 50 %
Transmittance (210 nm)	Min. 70 %
Transmittance (220 nm)	Min. 90 %
Transmittance (230 nm)	Min. 98 %
Transmittance (240 nm)	Min. 99 %

Cat. No.	Pk	Pack type
83991.320	2,5 l	Glass bottle

n-Hexane ≥97% HiPerSolv CHROMANORM® for preparative HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480412-44
For preparative HPLC

Assay (calculated on anhydrous)	Min. 97.0 %
Acidity	Max. 0.0003 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 50 ppm

Cat. No.	Pk	Pack type
84530.460	25 l	Metal drum
84530.550	200 l	Metal drum

n-Hexane ≥98.5% SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay	Min. 98.50 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Colour number (Hazen)	Max. 10
Evaporation residue	Max. 5 ppm
Water	Max. 0.005 %
Fluorescence (as quinine) (365 nm)	Max. 0.001 ppm
Transmittance (195 nm)	Min. 10.0 %
Transmittance (210 nm)	Min. 50.0 %
Transmittance (217 nm)	Min. 80.0 %
Transmittance (225 nm)	Min. 90.0 %
Transmittance (245 nm)	Min. 98.0 %

Cat. No.	Pk	Pack type
140096E	2,5 l	Glass bottle

NEW n-Hexane, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85668.180	100 ml	Glass bottle

n-Hexane ≥99.0% PESTINORM® for capillary GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay (on anhydrous substance)	Min. 99.0 %
Acidity	Max. 0.0005 meq/g
Evaporation residue (100°C)	Max. 0.0005 %
Water	Max. 0.01 %
Organic residue (as Octanol)	Max. 10 ng/ml
Halogenated residue (as Lindane)(GC/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83962.320	2,5 l	Glass bottle

NEW n-Hexane ≥99% PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99 %
Evaporation residue	Max 0.0003%
Colouration	Max 10 APHA
Water	Max 0.005%
GC/ECD Dioxins, Furans & PCB's	Max 2 ng/l
GC/ECD any pesticide (as Lindane)	Max 2 ng/l
GC/NPD any pesticide (as Parathion)	Max 5 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane)	Max 2 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max 1 ng/l
GC/FID C10 to C40 (as n-Decane)	Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu)	Max 2 ng/l
Filtered through 0.2um, filled under inert gas	Conforms

Cat. No.	Pk	Pack type
85390.320	2,5 l	Glass bottle

n-Hexane ≥95% PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-54-3 **UN:** 1208
$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol
Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay (on anhydrous substance)	Min. 95.00 %
Evaporation residue	Max. 5 ppm
Water	Max. 0.0200 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83661.290	1 l	Glass bottle
83661.320	2,5 l	Glass bottle

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n-Hexane ≥95% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 110-54-3 **UN:** 1208

$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol

Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay (n-Hexane)	Min. 95.0 %	Assay (Isomers)	Min. 98.5 %
IR Spectrum	Passes test	Thiophene	Passes test
Acidity	Max. 0.0002 meq/g	Boiling point	68 - 69 °C
Bromine value	Max. 0.5	Colouration	Max. 10 APHA
Density (20/4)	0.658 - 0.662	Density (20/20)	0.659 - 0.663
n 20/D	1.375 - 1.376	Substances coloured by H_2SO_4	Max. 90 APHA
Benzene	Max. 100 ppm	Evaporation residue	Max. 10 ppm
Total S (as SO_4)	Max. 10 ppm	Water	Max. 100 ppm
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.01 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.1 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.01 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.01 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
24577.298	1 l	Glass bottle
24577.323	2,5 l	Glass bottle
24577.367	5 l	Aluminium bottle
24577.460	25 l	Metal drum

n-Hexane, anhydrous (max. 0.005% H_2O) ≥97% AnalaR NORMAPUR® analytical reagent

Danger

CAS 110-54-3 **UN:** 1208

$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol

Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119480412-44

Appearance	Clear colourless liquid	Acidity	Max. 0.001 %
Thiophene	Passes test	Colour value	Max. 10 APHA
Assay	Min. 97 %	Residue on evaporation	Max. 0.0100 %
Formaldehyde-sulphuric colouration	Max. 90 APHA	Benzene	Max. 0.01 %
Water	Max. 0.005 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.01 ppm

Cat. No.	Pk	Pack type
24603.290	1 l	Glass bottle

n-Hexane ≥99% AnalaR NORMAPUR® analytical reagent

Danger

CAS 110-54-3 **UN:** 1208

$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol

Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay	Min. 99.0 %	Acidity	Max. 0.0004 meq/g
Colouration	Max. 10 APHA	Density (20/4)	0.658 - 0.662
Benzene	Max. 100 ppm	Evaporation residue	Max. 10 ppm
Thiophene	Max. 1 ppm	Total S (as SO_4)	Max. 50 ppm
Water	Max. 100 ppm	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
24608.296	1 l	Glass bottle
24608.321	2,5 l	Glass bottle

n-Hexane, dehydrated (max. 0.01% H_2O) ≥95% GPR RECTAPUR® for synthesis

Danger

CAS 110-54-3 **UN:** 1208

$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol

Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay	Min. 95 %
Evaporation residue	Max. 50 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
24580.290	1 l	Glass bottle
24580.324	2,5 l	Glass bottle
24580.360	5 l	Aluminium bottle
24580.460	25 l	Metal drum
24580.550	200 l	Metal drum

n-Hexane ≥95% TECHNICAL

Danger

CAS 110-54-3 **UN:** 1208

$H_3C(CH_2)_4CH_3$ **M.W.** 86.18 g/mol

Boiling Pt: 69 °C (1013 hPa) **Melting Pt:** -94,3 °C **Density:** 0,659 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119480412-44

Assay	Min. 95 %
Boiling point	68 - 70 °C
Benzene	Max. 100 ppm
Evaporation residue	Max. 20 ppm

Cat. No.	Pk	Pack type
24611.297	1 l	Glass bottle
24611.366	5 l	Metal can
24611.468	25 l	Metal drum
24611.550	204 l	Metal drum

1,6-Hexanedioic acid

See Adipic acid p.18

trans,trans-2,4-Hexadienoic acid

See Sorbic acid p.439

trans,trans-2,4-Hexadienoic acid potassium salt

See Potassium sorbate p.374

1-Hexanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC

CAS 2832-45-3

$C_6H_{13}O_3SNa$ **M.W.** 188.22 g/mol

Melting Pt: 300 °C

Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99 %
IR Spectrum	Passes test
pH (10 %)	5.5 - 7.5
Loss on drying (120°C; under vacuum)	Max. 2 %
Transmittance (200 nm) (0,005 mol/l)	Min. 70 %
Transmittance (220 nm) (0,005 mol/l)	Min. 90 %
Transmittance (250 nm) (0.005 mol/l)	Min. 98 %

Cat. No.	Pk	Pack type
152792L	25 g	Plastic bottle for solids
152793M	100 g	Plastic bottle for solids

L(+)-Histidine monohydrochloride monohydrate FCC

CAS 5934-29-2
$C_6H_9N_3O_2 \cdot HCl \cdot H_2O$ **M.W.** 209.63 g/mol
Melting Pt: 259 °C **Density:** 1,485 g/cm³ (20 °C)
Storage Temperature: Ambient
Animal-free amino acid. Polar. Basic.

FCC	CERTIFIED
Identification	PASS
Lead	0.0005 %
Loss on Drying	0.3 %
Purity (Dried)	98.5 - 101.5 %
Residue on Ignition	0.1 %
Specific Rotation (dried)	+8.5 to +10.5 °

Cat. No.	Pk	Pack type
E806-25G	25 g	Plastic bottle for solids
E806-100G	100 g	Plastic bottle for solids

L(+)-Histidine monohydrochloride monohydrate for biochemistry

CAS 5934-29-2
$C_6H_9N_3O_2 \cdot HCl \cdot H_2O$ **M.W.** 209.63 g/mol
Melting Pt: 259 °C **Density:** 1,485 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	98.5 - 101.0 %
Assay (calculated on anhydrous)	99.0 - 101.0 %
Identity (IR)	Passes test
Spec.opt.rot.(110 g/l;HCl 120 g/l;dried)	9.2 - 10.6 °
Heavy metals (as Pb)	Max. 10 ppm
Ninhydrin-positive substances	Max. 0.5 %
Loss on drying (150°C)	7.0 - 10.0 %
NH_4 (Ammonium)	Max. 200 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 10 ppm
Sulphated ash	Max. 0.1 %

Cat. No.	Pk	Pack type
24601.180	100 g	Plastic bottle for solids

L(+)-Histidine monohydrochloride monohydrate TECHNICAL

CAS 5934-29-2
$C_6H_9N_3O_2 \cdot HCl \cdot H_2O$ **M.W.** 209.63 g/mol
Melting Pt: 259 °C **Density:** 1,485 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.5 %

Cat. No.	Pk	Pack type
24583.186	100 g	Plastic bottle for solids

(S)-(+)-Histidine monohydrochloride monohydrate

See L(+)-Histidine monohydrochloride monohydrate p.190

(2S)-(+)-Histidine monohydrochloride monohydrate

See L(+)-Histidine monohydrochloride monohydrate p.190

L(+)-Histidine, high purity

CAS 71-00-1
$C_6H_9N_3O_2$ **M.W.** 155.16 g/mol
Melting Pt: 272-273 °C **Density:** 1,44 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic	< 1.5 ppm
Chloride	< 0.05 %
Heavy Metals	< 0.0015 %
Iron	< 0.003 %
Loss on Drying	< 0.2 %
Purity (Dry Basis)	98.5 - 101.5 %
Residue after Ignition	< 0.2 %
Specific Rotation	12.4 - 14°
Sulphate	< 0.03 %

Cat. No.	Pk	Pack type
1B1164-500G	500 g	Plastic bottle
1B1164-1KG	1 kg	Plastic bottle

L(+)-Histidine TECHNICAL

CAS 71-00-1
$C_6H_9N_3O_2$ **M.W.** 155.16 g/mol
Melting Pt: 272-273 °C **Density:** 1,44 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
24581.134	25 g	Plastic bottle for solids

(S)-(+)-Histidine

See L(+)-Histidine p.190

(2S)-(+)-Histidine

See L(+)-Histidine p.190

Histological Fixative (Formal saline) GURR®

Danger

CAS 50-00-0 **UN:** 3334
CH_2O
Storage Temperature: Ambient

pH (25°C)	3.5 - 4.5

Cat. No.	Pk	Pack type
361367L	5 l	Plastic container
361368M	25 l	Metal drum

Histological fixative, AFA Q Path®

Danger IVD

UN: 1170
Storage Temperature: Ambient
Alcohol formalin acetic acid ready to use fixative for tissue samples. Pots can be used for storage and transport.

Appearance	Colourless liquid
Density (20/4)	0,902 - 0,912
pH (20°C)	2,8 - 3,2

Cat. No.	Pk	Pk Info	Pack type
AFA0150AF59001	32	150 ml pots contain 60 ml	Pots
AFA0060AF59001	50	60 ml pots contain 20ml	Pots
AFA0020AF59001	102	20 ml pots contain 5ml	Pots
11656713.	5 l		Plastic container

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Histological Fixative, AFA, containing Eosin Y GURR®

Danger

UN: 2920

Density: 0,91 g/cm³ (20 °C)

Storage Temperature: Ambient

Acidified alcoholic formalin for the fixation of glycogen

Contains acetic acid, ethanol and formaldehyde

Appearance ..... Orange-pink clear liquid
Identification ..... Passes test

Cat. No.	Pk	Pack type
81024.360	5 l	Plastic bottle

Histological Fixative AFA GURR®

Danger

UN: 1170

Density: 0,88 g/cm³ (20 °C)

Acidified alcoholic formalin for the fixation of glycogen

Reagent for replacement of Picoformol Bouin.
Contains acetic acid, ethanol and formaldehyde

Density (20/4) ..... 0.860 - 0.880

Cat. No.	Pk	Pack type
81009.362	5 l	Plastic container

HMDS (1,1,1,3,3,3-Hexamethyldisilazane) VLSI Selectipur® for the electronics industry

Danger

CAS 999-97-3
UN: 2924
$(CH_3)_3SiNHSi(CH_3)_3$
M.W. 161.39 g/mol
Boiling Pt: 126 °C (1013 hPa)
Melting Pt: -82 °C
Density: 0,7742 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119438176-38

Product from BASF

Cat. No.	Pk	Pack type
51152885.	2,5 l	Glass bottle

NEW Holmium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Holmium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457303C
Holmium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85571.180

Holmium standard solution, 1,000 mg/l Ho in dil. nitric acid (de Ho_2O_3) ARISTAR® standard for ICP

Ho_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455462D	100 ml	Plastic bottle
455464F	500 ml	Plastic bottle

Holmium standard solution, 1,000 mg/l Ho in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86683.180	100 ml	Plastic bottle
86683.260	500 ml	Plastic bottle

Holmium (III) oxide GPR RECTAPUR®

CAS 12055-62-8
Ho_2O_3
M.W. 377.86 g/mol
Boiling Pt: 2600 °C (1013 hPa)
Melting Pt: 2400 °C
Density: 3,79 g/cm³ (20 °C)

Assay ..... Min. 99.9 %

Cat. No.	Pk	Pack type
24591.105	5 g	Glass bottle

Holmium perchlorate solution Reag. Ph. Eur. 1043101

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87841.290	1 l	Plastic bottle

ACE®

Method Development Kits

Intelligent Solutions for UHPLC & HPLC Method Development

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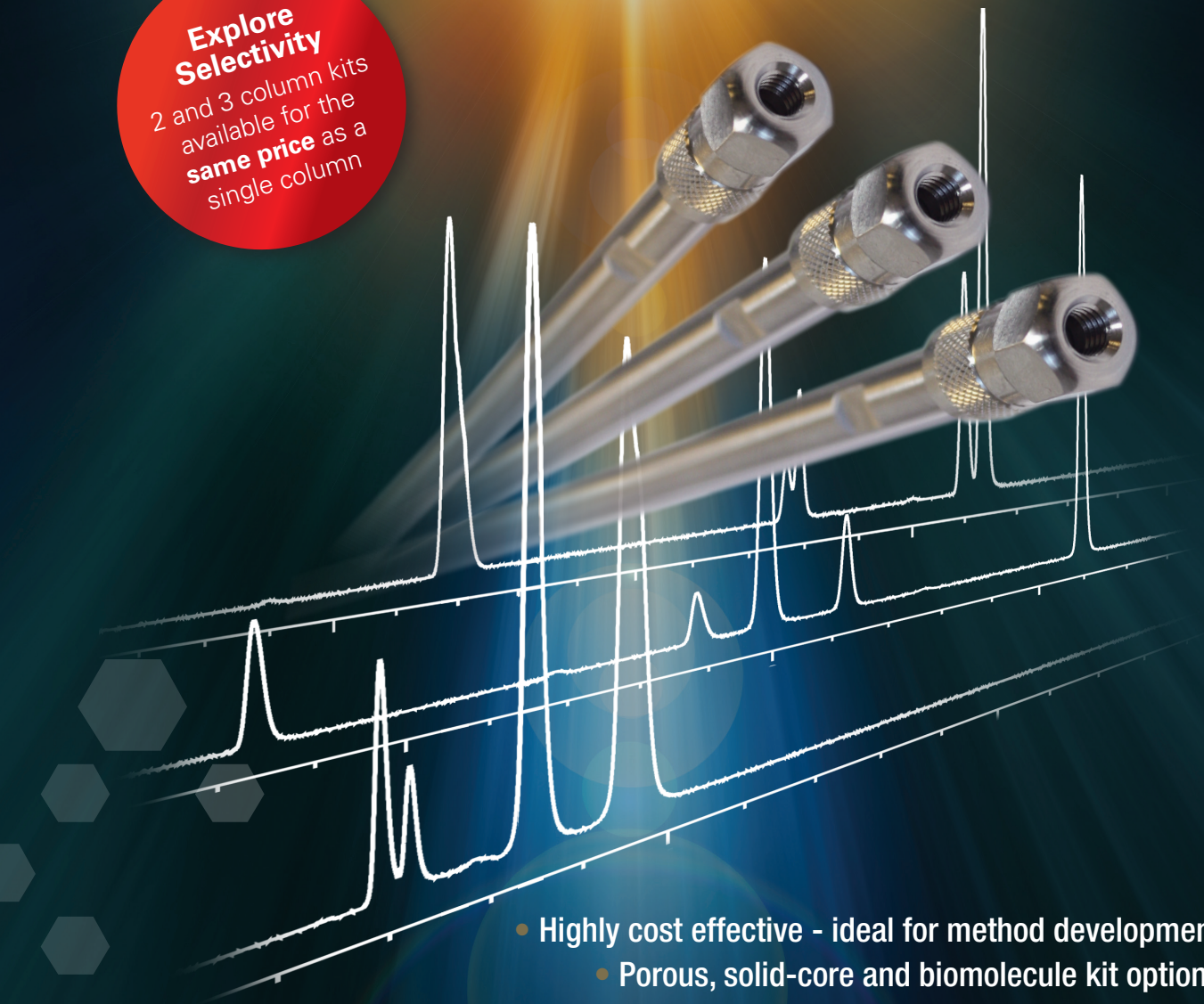
2 and 3 column kits available for the **same price** as a single column



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HPLC solvents, HiPerSolv CHROMANORM®

An extensive range of high purity solvents for HPLC applications, filtered at 0,2 µm and bottled under nitrogen.
Specified to meet the most demanding requirements of HPLC and LC-UV applications.

- High UV transmission
- Gradient test at 210, 235 and 254 nm
- Low residue on evaporation
- Excellent batch to batch reproducibility

Description	Page	Pk	Cat. No.
Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/UHPLC instruments	11, 193	1 l	83639.290
Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/UHPLC instruments	11, 193	2,5 l	83639.320
Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/UHPLC instruments	11, 193	4 l	83639.400
Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/UHPLC instruments	11, 193	5 l	83639.360
Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/UHPLC instruments	11, 193	10 l	83639.910
Acetonitrile, anhydrous (max. 0.003% H_2O) HiPerSolv CHROMANORM® Reag. Ph. Eur., USP, ACS, super gradient grade suitable for UPLC/UHPLC instruments	11, 193	28 l	83639.928
Acetonitrile HiPerSolv CHROMANORM®, gradient grade for HPLC	11, 193	1 l	20060.290
Acetonitrile HiPerSolv CHROMANORM®, gradient grade for HPLC	11, 193	2,5 l	20060.320
Acetonitrile HiPerSolv CHROMANORM®, isocratic grade for HPLC	11, 193	2,5 l	20048.320
1-Butanol ≥99.8% HiPerSolv CHROMANORM® for HPLC	70, 193	1 l	83633.290
tert-Butyl methyl ether HiPerSolv CHROMANORM® for HPLC	72, 193	1 l	22105.295
Chloroform stabilised HiPerSolv CHROMANORM® for HPLC	86, 193	1 l	83626.290
Chloroform stabilised HiPerSolv CHROMANORM® for HPLC	86, 193	2,5 l	83626.320
Chloroform stabilised HiPerSolv CHROMANORM® for HPLC	86, 193	1 l	83627.290
Chloroform stabilised HiPerSolv CHROMANORM® for HPLC	86, 193	2,5 l	83627.320
Cyclohexane HiPerSolv CHROMANORM® for HPLC	101, 193	1 l	83629.290
Cyclohexane HiPerSolv CHROMANORM® for HPLC	101, 193	2,5 l	83629.320
Dichloromethane stabilised HiPerSolv CHROMANORM® for HPLC	110, 193	1 l	83623.290
Dichloromethane stabilised HiPerSolv CHROMANORM® for HPLC	110, 193	2,5 l	83623.320
Dichloromethane stabilised HiPerSolv CHROMANORM® for HPLC	110, 193	1 l	23373.290
Dichloromethane stabilised HiPerSolv CHROMANORM® for HPLC	110, 193	2,5 l	23373.320
Diethyl ether stabilised HiPerSolv CHROMANORM® for HPLC	114, 193	2,5 l	83624.320
N,N-Dimethylacetamide HiPerSolv CHROMANORM® for HPLC	117, 193	4 l	83636.350
N,N-Dimethylformamide HiPerSolv CHROMANORM® for HPLC	119, 193	2,5 l	83634.320
Ethanol absolute HiPerSolv CHROMANORM® for HPLC	145, 193	1 l	153385E
Ethanol absolute HiPerSolv CHROMANORM® for HPLC	145, 193	2,5 l	153386F
Ethanol 95-97% (v/v) HiPerSolv CHROMANORM® for HPLC	147, 193	1 l	20825.290
Ethanol 95-97% (v/v) HiPerSolv CHROMANORM® for HPLC	147, 193	2,5 l	20825.324
Ethyl acetate HiPerSolv CHROMANORM® for HPLC	152, 193	1 l	83621.290
Ethyl acetate HiPerSolv CHROMANORM® for HPLC	152, 193	2,5 l	83621.320
n-Heptane HiPerSolv CHROMANORM® for HPLC	185, 193	1 l	24539.290
n-Heptane HiPerSolv CHROMANORM® for HPLC	185, 193	2,5 l	24539.320
n-Hexane ≥97% HiPerSolv CHROMANORM® for HPLC	187, 193	1 l	24575.290
n-Hexane ≥97% HiPerSolv CHROMANORM® for HPLC	187, 193	2,5 l	24575.320
n-Hexane ≥97% HiPerSolv CHROMANORM® for HPLC	187, 193	4 l	24575.400
Isohexane HiPerSolv CHROMANORM® for HPLC	193, 227	2,5 l	83622.320
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	1 l	20864.290
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	2,5 l	20864.320
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	2,5 l	20864.420
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	4 l	20864.400
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	5 l	20864.360
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	10 l	20864.910
Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC	193, 256	28 l	20864.928
Methanol HiPerSolv CHROMANORM®, isocratic grade for HPLC	193, 256	2,5 l	20837.320
Methanol HiPerSolv CHROMANORM®, isocratic grade for HPLC	193, 256	5 l	20837.360
Methanol HiPerSolv CHROMANORM® ACS, Reag. Ph.Eur., super gradient grade for HPLC, suitable for UPLC/UHPLC instruments	193, 256	1 l	85681.290
Methanol HiPerSolv CHROMANORM® ACS, Reag. Ph.Eur., super gradient grade for HPLC, suitable for UPLC/UHPLC instruments	193, 256	2,5 l	85681.320
Methanol HiPerSolv CHROMANORM® ACS, Reag. Ph.Eur., super gradient grade for HPLC, suitable for UPLC/UHPLC instruments	193, 256	4 l	85681.400
Methanol HiPerSolv CHROMANORM® ACS, Reag. Ph.Eur., super gradient grade for HPLC, suitable for UPLC/UHPLC instruments	193, 256	5 l	85681.360
Methyl ethyl ketone HiPerSolv CHROMANORM® for HPLC	193, 261	1 l	25643.294
Methyl ethyl ketone HiPerSolv CHROMANORM® for HPLC	193, 261	2,5 l	25643.328
n-Pentane ≥99% HiPerSolv CHROMANORM® for HPLC	193, 336	2,5 l	83632.320
1-Propanol HiPerSolv CHROMANORM® for HPLC	193, 376	2,5 l	83635.320
2-Propanol HiPerSolv CHROMANORM® for HPLC	193, 377	1 l	20880.290
2-Propanol HiPerSolv CHROMANORM® for HPLC	193, 377	2,5 l	20880.320
2-Propanol HiPerSolv CHROMANORM® for HPLC	193, 377	4 l	20880.400
Tetrahydrofuran unstabilised HiPerSolv CHROMANORM® for HPLC	193, 483	1 l	28559.290
Tetrahydrofuran unstabilised HiPerSolv CHROMANORM® for HPLC	193, 483	2,5 l	28559.320
Toluene HiPerSolv CHROMANORM® for HPLC	193, 491	1 l	83625.290

Description	Page	Pk	Cat. No.
Toluene HiPerSolv CHROMANORM® for HPLC	194, 491	2,5 l	83625.320
Triethylamine HiPerSolv CHROMANORM® for HPLC	194, 495	100 ml	28757.184
Triethylamine HiPerSolv CHROMANORM® for HPLC	194, 495	250 ml	28757.230
Water HiPerSolv CHROMANORM®, super gradient grade for HPLC, suitable for UPLC/UHPLC instruments	194, 512	2,5 l	83650.320
Water HiPerSolv CHROMANORM® for HPLC	194, 513	1 l	23595.294
Water HiPerSolv CHROMANORM® for HPLC	194, 513	2,5 l	23595.328

HPLC - High purity reagents for HPLC HiperSolv CHROMANORM®

Description	Page	Pk	Cat. No.
Acetic acid HiPerSolv CHROMANORM® for HPLC	2, 194	250 ml	20108.230
Acetic acid HiPerSolv CHROMANORM® for HPLC	2, 194	1 l	20108.292
Ammonia 32% HiPerSolv CHROMANORM® for HPLC	26, 194	100 ml	153312K
1-Heptanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	186, 194	25 g	152782J
1-Heptanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	186, 194	100 g	152783K
1-Hexanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	189, 194	25 g	152792L
1-Hexanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	189, 194	100 g	152793M
1-Octanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 322	25 g	152802T
1-Octanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 322	100 g	152803U
1-Pentanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 337	25 g	152812V
1-Pentanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 337	100 g	152813W
Potassium dihydrogen phosphate HiPerSolv CHROMANORM® for HPLC	194, 363	500 g	153184U
Sodium chloride HiPerSolv CHROMANORM® for HPLC	194, 411	500 g	153274V
Sodium perchlorate monohydrate HiPerSolv CHROMANORM® for HPLC	194, 431	250 g	153233M
Trifluoroacetic acid 100% HiPerSolv CHROMANORM® for HPLC	194, 496	100 ml	153112E

Mobile phase additives for HPLC, HiPerSolv CHROMANORM®

Additives are selective chemicals that are commonly added to the mobile phase or introduced post column prior to the interface to influence analyte ionisation. The objective is usually to improve the signal quality, but they can also be used to suppress unwanted signals or selectively enhance the signal of specific compounds in a mixture.

Additives are useful because many chromatography separations benefit, in terms of retention and/or peak shape, from acidic conditions since any silanol activity is suppressed.

Description	Page	Pk	Cat. No.
1-Heptanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	186, 194	25 g	152782J
1-Heptanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	186, 194	100 g	152783K
1-Hexanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	189, 194	25 g	152792L
1-Hexanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	189, 194	100 g	152793M
1-Octanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 322	25 g	152802T
1-Octanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 322	100 g	152803U
1-Pentanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 337	25 g	152812V
1-Pentanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC	194, 337	100 g	152813W
Acetic acid HiPerSolv CHROMANORM® for HPLC	2, 194	250 ml	20108.230
Acetic acid HiPerSolv CHROMANORM® for HPLC	2, 194	1 l	20108.292
Ammonia 32% HiPerSolv CHROMANORM® for HPLC	26, 194	100 ml	153312K
Potassium dihydrogen phosphate HiPerSolv CHROMANORM® for HPLC	194, 363	500 g	153184U
Sodium chloride HiPerSolv CHROMANORM® for HPLC	194, 411	500 g	153274V
Sodium perchlorate monohydrate HiPerSolv CHROMANORM® for HPLC	194, 431	250 g	153233M
Trifluoroacetic acid 100% HiPerSolv CHROMANORM® for HPLC	194, 496	100 ml	153112E

Solvents for LC-MS, HiPerSolv CHROMANORM®

This grade of solvents offers customers quality products, specifically manufactured to meet the needs of LC-MS instruments.

Designed to ensure minimal metal adduct formation through rigorous testing for the presence of alkaline impurities, the solvents combine high performance and stable baseline of HPLC solvents with the absence of extraneous peaks, as detected by GC-ECD.

- High UV transmission
- Gradient test at 210, 235 or 254 nm
- Low alkaline metal content of max. 0,1 ppm (below 50 ppb for acetonitrile and water)
- Filtered at 0,2 µm and bottled under nitrogen

LC-MS solvents are supplied in glass bottles whose surface has been treated to lower the risk of silica, potassium and sodium dissolving from the glass. This creates smoother baselines and increases sensitivity.

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Description	Page	Pk	Cat. No.
Acetonitrile HiPerSolv CHROMANORM® for LC-MS, suitable for UPLC/UHPLC instruments	10, 195	1 l	83640.290
Acetonitrile HiPerSolv CHROMANORM® for LC-MS, suitable for UPLC/UHPLC instruments	10, 195	2,5 l	83640.320
Acetonitrile HiPerSolv CHROMANORM® ULTRA for LC-MS, suitable for UPLC/UHPLC-MS instruments	10, 195	2,5 l	83642.320
Methanol HiPerSolv CHROMANORM® for LC-MS	195, 255	1 l	83638.290
Methanol HiPerSolv CHROMANORM® for LC-MS	195, 255	2,5 l	83638.320
Methanol HiPerSolv CHROMANORM®, ULTRA for LC-MS, suitable for UPLC/UHPLC-MS instruments	195, 255	1 l	85800.290
Methanol HiPerSolv CHROMANORM®, ULTRA for LC-MS, suitable for UPLC/UHPLC-MS instruments	195, 255	2,5 l	85800.320
2-Propanol HiPerSolv CHROMANORM® for LC-MS	195, 377	1 l	84881.290
2-Propanol HiPerSolv CHROMANORM® for LC-MS	195, 377	2,5 l	84881.320
Tetrahydrofuran unstabilised HiPerSolv CHROMANORM® for LC-MS	195, 482	1 l	84882.290
Tetrahydrofuran unstabilised HiPerSolv CHROMANORM® for LC-MS	195, 482	2,5 l	84882.320
Water HiPerSolv CHROMANORM® for LC-MS, suitable for UPLC/UHPLC instruments	195, 512	1 l	83645.290
Water HiPerSolv CHROMANORM® for LC-MS, suitable for UPLC/UHPLC instruments	195, 512	2,5 l	83645.320

Mobile phase additives for LC-MS

LC-MS additives

Most MS measurements are done in positive ion mode, which is accomplished by the addition of a proton to form the molecular ion. The low molecular weight organic acids additives exhibit the necessary acidity and volatility to provide an excess of cations for this purpose. Neutral volatile salts such as ammonium acetate or ammonium formate can influence the separation and ionisation of analytes like acids. They are useful for LC-MS separations in neutral conditions, when, for example, analytes are sensitive to acids or don't present optimal resolution at low pH.

Description	Page	Pk	Cat. No.
Acetic acid 99% HiPerSolv CHROMANORM® for LC-MS	2, 195	100 ml	84874.180
Acetic acid 99% HiPerSolv CHROMANORM® for LC-MS	2, 195	500 ml	84874.260
Acetic acid 99% HiPerSolv CHROMANORM® for LC-MS	2, 195	1 l	84874.290
Ammonium acetate HiPerSolv CHROMANORM® for LC-MS	29, 195	100 g	84885.180
Ammonium acetate HiPerSolv CHROMANORM® for LC-MS	29, 195	500 g	84885.260
Ammonium formate HiPerSolv CHROMANORM® for LC-MS	33, 195	100 g	84884.180
Ammonium formate HiPerSolv CHROMANORM® for LC-MS	33, 195	500 g	84884.260
Formic acid ≥99% HiPerSolv CHROMANORM® for LC-MS	165, 195	100 ml	84865.180
Formic acid ≥99% HiPerSolv CHROMANORM® for LC-MS	165, 195	500 ml	84865.260
Formic acid ≥99% HiPerSolv CHROMANORM® for LC-MS	165, 195	1 l	84865.290
Formic acid ≥99% HiPerSolv CHROMANORM® for LC-MS	165, 195	1 SET	85048.001
Triethylamine HiPerSolv CHROMANORM® for LC-MS	195, 495	100 ml	84883.180
Triethylamine HiPerSolv CHROMANORM® for LC-MS	195, 495	500 ml	84883.260
Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 496	100 ml	84868.180
Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 496	500 ml	84868.260
Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 496	1 l	84868.290
Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 495	1 SET	85049.001

LC-MS grade mixes for HPLC, HiPerSolv® CHROMANORM®

Pre-blended solutions of the most commonly used LC-MS mobile phases, prepared with precision and very high quality components to minimise baseline noise and analysis artefacts. Such precisely blended solvents eliminate time-consuming mobile phase preparation and reduce sample loss and instrument downtime caused by impure mobile phases. A special formulation ensures that no precipitation or decomposition of the additive occurs under normal laboratory conditions.

- Time saving
- Accurate composition
- Minimised baseline artifacts
- Assurance of high quality

Description	Page	Pk	Cat. No.
Acetonitrile with 0.1% Acetic acid HiPerSolv CHROMANORM® for LC-MS	10, 195	1 l	84872.290
Acetonitrile with 0.1% Acetic acid HiPerSolv CHROMANORM® for LC-MS	10, 195	2,5 l	84872.320
Acetonitrile with 0.1% Formic acid HiPerSolv CHROMANORM® for LC-MS	10, 195	1 l	84866.290
Acetonitrile with 0.1% Formic acid HiPerSolv CHROMANORM® for LC-MS	10, 195	2,5 l	84866.320
Acetonitrile with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	10, 195	1 l	84869.290
Acetonitrile with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	10, 195	2,5 l	84869.320
Methanol with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 258	1 l	84870.290
Methanol with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 258	2,5 l	84870.320
Water with 0.1% Acetic acid HiPerSolv CHROMANORM® for LC-MS	195, 514	1 l	84873.290
Water with 0.1% Acetic acid HiPerSolv CHROMANORM® for LC-MS	195, 514	2,5 l	84873.320
Water with 0.1% Formic acid HiPerSolv CHROMANORM® for LC-MS	195, 515	1 l	84867.290
Water with 0.1% Formic acid HiPerSolv CHROMANORM® for LC-MS	195, 515	2,5 l	84867.320
Water with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 515	1 l	84871.290
Water with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS	195, 515	2,5 l	84871.320

Hyamine® 1622

See Benzethonium chloride p.55

Hydrated aluminium silicate

See Bole white (Kaolin) p.60

Hydrazine standard solutions in water

Description	Concentration mg/l in H_2O	Pk	Cat. No.
Standard solution hydrazine	100	100 ml	87344.180
Standard solution hydrazine	1000	500 ml	87733.260

Hydrazine sulphate

See Hydrazinium sulphate p.196

Hydrazinium sulphate AnalaR NORMAPUR® analytical reagent

Danger

CAS 10034-93-2 **UN:** 3288

$NH_2NH_2 \cdot H_2SO_4$

M.W. 130.12 g/mol

Melting Pt: 254 °C **Density:** 1,37 g/cm³ (20 °C)

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue	Max. 0.05 %	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 50 ppm	Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
24696.186	100 g	Plastic bottle for solids

Hydriodic acid 57% stabilised analytical reagent

Stabilised with hypophosphorous acid 0.5 %

Danger

CAS 10034-85-2 **UN:** 1787

HI

Boiling Pt: 127 °C (1013 hPa) **Density:** 1,7 g/cm³ (20 °C)

Heavy metals (as Pb)	Max. 10 ppm
Non-volatile residue	Max. 0.5 %
Cl + Br (as Cl)	Max. 0.03 %
SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
20345.267	500 ml	Glass bottle

NEW Hydrobromic acid 47% Ultrapure NORMATOM® for trace metal analysis

Danger

CAS 10035-10-6 **UN:** 1788

HBr

M.W. 80.91 g/mol

Density: 1,47 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	44-49%	Ag (Silver)	100 ppt
Al (Aluminium)	100 ppt	Au (Gold)	100 ppt
B (Boron)	Information only	Ba (Barium)	100 ppt
Be (Beryllium)	100 ppt	Bi (Bismuth)	100 ppt
Ca (Calcium)	100 ppt	Cd (Cadmium)	100 ppt
Ce (Cerium)	10 ppt	Co (Cobalt)	100 ppt
Cr (Chromium)	100 ppt	Cs (Cesium)	10 ppt
Cu (Copper)	100 ppt	Dy (Dysprosium)	10 ppt
Er (Erbium)	10 ppt	Eu (Europium)	10 ppt
Fe (Iron)	100 ppt	Ga (Gallium)	100 ppt
Gd (Gadolinium)	10 ppt	Hf (Hafnium)	10 ppt
Ho (Holmium)	10 ppt	In (Indium)	10 ppt
K (Potassium)	100 ppt	La (Lanthanum)	10 ppt
Li (Lithium)	100 ppt	Lu (Lutetium)	10 ppt
Mg (Magnesium)	100 ppt	Mn (Manganese)	100 ppt
Mo (Molybdenum)	100 ppt	Na (Sodium)	100 ppt
Nb (Niobium)	10 ppt	Nd (Neodymium)	10 ppt
Ni (Nickel)	100 ppt	Pb (Lead)	1 ppt
Pd (Palladium)	100 ppt	Pr (Praseodymium)	10 ppt
Pt (Platinum)	100 ppt	Rb (Rubidium)	100 ppt
Re (Rhenium)	100 ppt	Rh (Rhodium)	100 ppt
Ru (Ruthenium)	100 ppt	Sb (Antimony)	Information only
Sc (Scandium)	100 ppt	Sm (Samarium)	10 ppt
Sn (Tin)	100 ppt	Sr (Strontium)	100 ppt
Ta (Tantalum)	Information only		

Cat. No.	Pk	Pack type
85032.270	500 ml	Plastic bottle

Hydrobromic acid 47% ARISTAR® for trace analysis

Danger

CAS 10035-10-6 **UN:** 1788

HBr

M.W. 80.91 g/mol

Density: 1,47 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (acidimetric)	Min. 47.0 %	I (Iodide)	Max. 10 ppm
Phosphate, Phosphite (as PO_4)	Max. 0.05 ppm	Sulfate and sulphite (as SO_4)	Max. 5 ppm
Ag (Silver)	Max. 0.002 ppm	Al (Aluminium)	Max. 0.010 ppm
As (Arsenic)	Max. 0.005 ppm	Au (Gold)	Max. 0.005 ppm
Ba (Barium)	Max. 0.005 ppm	Be (Beryllium)	Max. 0.001 ppm
Bi (Bismuth)	Max. 0.005 ppm	Ca (Calcium)	Max. 0.050 ppm
Cd (Cadmium)	Max. 0.002 ppm	Co (Cobalt)	Max. 0.001 ppm
Cr (Chromium)	Max. 0.001 ppm	Cu (Copper)	Max. 0.001 ppm
Fe (Iron)	Max. 0.010 ppm	Ga (Gallium)	Max. 0.005 ppm
Hg (Mercury)	Max. 0.005 ppm	In (Indium)	Max. 0.001 ppm
K (Potassium)	Max. 0.020 ppm	Li (Lithium)	Max. 0.001 ppm
Mg (Magnesium)	Max. 0.010 ppm	Mn (Manganese)	Max. 0.001 ppm
Mo (Molybdenum)	Max. 0.001 ppm	Ni (Nickel)	Max. 0.002 ppm
Pb (Lead)	Max. 0.005 ppm	Sn (Tin)	Max. 0.005 ppm
Sr (Strontium)	Max. 0.001 ppm	Ti (Titanium)	Max. 0.001 ppm
Tl (Thallium)	Max. 0.002 ppm	V (Vanadium)	Max. 0.001 ppm
Zn (Zinc)	Max. 0.005 ppm	Zr (Zirconium)	Max. 0.001 ppm
Evaporation residue	Max. 2 ppm		

Cat. No.	Pk	Pack type
450073U	500 ml	Glass bottle SAFEBREAK

Hydrobromic acid 47% AnalaR NORMAPUR® analytical reagent

Danger

CAS 10035-10-6 **UN:** 1788

HBr

M.W. 80.91 g/mol

Density: 1,47 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	47.0 - 49.0 %	Heavy metals (as Pb)	Max. 2 ppm
Ignition residue (SO_4)	Max. 50 ppm	Cl (Chloride)	Max. 0.02 %
I (Iodide)	Max. 30 ppm	PO_4 + PO_3 (as PO_4)	Max. 2 ppm
SO_4 + SO_3 (as SO_4)	Max. 30 ppm	As (Arsenic)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.5 ppm	Cu (Copper)	Max. 0.5 ppm
Fe (Iron)	Max. 1 ppm	Pb (Lead)	Max. 0.5 ppm
Zn (Zinc)	Max. 0.5 ppm		

Cat. No.	Pk	Pack type
20207.294	1 l	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Hydrobromic acid 47% TECHNICAL

Danger

CAS 10035-10-6 **UN:** 1788
HBr **M.W.** 80.91 g/mol
Density: 1,47 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 47 %

Cat. No.	Pk	Pack type
20208.297	1 l	Glass bottle

Hydrocarbon oil index

See Hydrocarbon oil index determination standards p.458, 459

Hydrochloric acid 37% ARISTAR® for trace analysis

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	37.0 - 38.0 %	Colour	Max. 10 APHA
Br (Bromide)	Max. 50 ppm	Free chlorine	Max. 0.5 ppm
PO_4 (Phosphate)	Max. 0.1 ppm	SO_4 (Sulphate)	Max. 0.5 ppm
SO_3 (Sulphite)	Max. 0.500 ppm	Ag (Silver)	Max. 0.010 ppm
Al (Aluminium)	Max. 0.050 ppm	As (Arsenic)	Max. 0.010 ppm
Au (Gold)	Max. 0.020 ppm	B (Boron)	Max. 0.010 ppm
Ba (Barium)	Max. 0.005 ppm	Be (Beryllium)	Max. 0.010 ppm
Bi (Bismuth)	Max. 0.020 ppm	Ca (Calcium)	Max. 0.100 ppm
Cd (Cadmium)	Max. 0.003 ppm	Co (Cobalt)	Max. 0.005 ppm
Cr (Chromium)	Max. 0.005 ppm	Cu (Copper)	Max. 0.002 ppm
Fe (Iron)	Max. 0.050 ppm	Ga (Gallium)	Max. 0.020 ppm
Hg (Mercury)	Max. 0.001 ppm	In (Indium)	Max. 0.010 ppm
K (Potassium)	Max. 0.010 ppm	Li (Lithium)	Max. 0.010 ppm
Mg (Magnesium)	Max. 0.020 ppm	Mn (Manganese)	Max. 0.005 ppm
Mo (Molybdenum)	Max. 0.005 ppm	NH_4 (Ammonium)	Max. 1 ppm
Na (Sodium)	Max. 0.050 ppm	Ni (Nickel)	Max. 0.010 ppm
Pb (Lead)	Max. 0.002 ppm	Pt (Platinum)	Max. 0.010 ppm
Sn (Tin)	Max. 0.010 ppm	Sr (Strontium)	Max. 0.005 ppm
Ti (Titanium)	Max. 0.010 ppm	Tl (Thallium)	Max. 0.010 ppm
V (Vanadium)	Max. 0.0050 ppm	Zn (Zinc)	Max. 0.010 ppm
Zr (Zirconium)	Max. 0.005 ppm	Ignition residue (SO_4)	Max. 2.0 ppm
Residue on evaporation	Max. 5 ppm		

Cat. No.	Pk	Pack type
450021Y	1 l	Glass bottle
450027X	2,5 l	Glass bottle

Hydrochloric acid 37% Spectrosol®

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Al (Aluminium)	Max. 0.05 ppm	Mg (Magnesium)	Max. 0.1 ppm
Ba (Barium)	Max. 0.02 ppm	Mn (Manganese)	Max. 0.01 ppm
Ca (Calcium)	Max. 0.5 ppm	Na (Sodium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.01 ppm	Ni (Nickel)	Max. 0.02 ppm
Co (Cobalt)	Max. 0.01 ppm	Pb (Lead)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Sr (Strontium)	Max. 0.01 ppm
Cu (Copper)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.05 ppm
Fe (Iron)	Max. 0.2 ppm		
Hg (Mercury)	Max. 0.005 ppm		
K (Potassium)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
141577U	2,5 l	Glass bottle SAFEBREAK

Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	35.0 - 38.0 %	Appearance	Clear colourless liquid
Appearance of solution	Passes test Ph.Eur.	Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.	Colouration	Max. 10 APHA
Density (20/4)	1.174 - 1.193	Evaporation residue	Max. 100 ppm
Free chlorine	Max. 1 ppm	Heavy metals (as Pb)	Max. 2 ppm
Ignition residue (SO_4)	Max. 5 ppm	Reducing substances (as O)	Max. 4 ppm
Br (Bromide)	Max. 5 ppm	NH_4 (Ammonium)	Max. 1 ppm
PO_4 (Phosphate)	Max. 0.5 ppm	SO_3 (Sulphite)	Max. 1 ppm
SO_4 (Sulphate)	Max. 1 ppm	Al (Aluminium)	Max. 0.2 ppm
As (Arsenic)	Max. 0.01 ppm	Ba (Barium)	Max. 0.02 ppm
Be (Beryllium)	Max. 0.01 ppm	Bi (Bismuth)	Max. 0.02 ppm
Ca (Calcium)	Max. 1 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.07 ppm
Cu (Copper)	Max. 0.1 ppm	Fe (Iron)	Max. 0.3 ppm
Ge (Germanium)	Max. 0.02 ppm	Hg (Mercury)	Max. 0.01 ppm
K (Potassium)	Max. 0.1 ppm	Li (Lithium)	Max. 0.01 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.01 ppm
Mo (Molybdenum)	Max. 0.02 ppm	Na (Sodium)	Max. 0.5 ppm
Ni (Nickel)	Max. 0.04 ppm	Pb (Lead)	Max. 0.02 ppm
Sr (Strontium)	Max. 0.01 ppm	Ti (Titanium)	Max. 0.02 ppm
Tl (Thallium)	Max. 0.02 ppm	V (Vanadium)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.5 ppm	Zr (Zirconium)	Max. 0.02 ppm
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20252.244	1 l	Glass bottle SAFEBREAK
20252.290	1 l	Glass bottle
20252.295	1 l	Plastic bottle
20252.324	2,5 l	Glass bottle SAFEBREAK
20252.335	2,5 l	Plastic bottle
20252.420	2,5 l	Glass bottle
20252.368	5 l	Plastic bottle
20252.448	20 l	Plastic drum

Hydrochloric acid 37 % Ph. Eur.

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	35.0 - 39.0 %
Appearance	Clear colourless liquid
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Appearance of solution	Passes test
Free chlorine	Max. 4 ppm
SO_4 (Sulphate)	Max. 20 ppm
Heavy metals (as Pb)	Max. 2 ppm
Residue on evaporation	Max. 0.01 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
20255.290	1 l	Glass bottle
20255.324	2,5 l	Glass bottle SAFEBREAK
20255.420	2,5 l	Glass bottle
20255.368	5 l	Plastic bottle
20255.440	20 l	Plastic drum

Hydrochloric acid 36% VLSI Selectipur® for the electronics industry

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Product from BASF

Cat. No.	Pk	Pack type
50489136.	2,5 l	Plastic bottle

Hydrochloric acid 36% SLSI Selectipur® for the electronics industry

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Product from BASF

Cat. No.	Pk	Pack type
57004879.	220 kg	Plastic drum

Hydrochloric acid 35% GPR RECTAPUR®

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay ..... 35 - 38 %
Appearance ..... Clear colourless liquid
Appearance of solution ..... Passes test
Free bromine or chlorine ..... Passes test
Evaporation residue ..... Max. 50 ppm
Free chlorine ..... Max. 1 ppm
Heavy metals (as Pb) ..... Max. 1 ppm
Ignition residue (SO_4) ..... Max. 80 ppm
Br (Bromide) ..... Max. 5 ppm
SO_3 (Sulphite) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 5 ppm
As (Arsenic) ..... Max. 1 ppm
Fe (Iron) ..... Max. 2 ppm

Cat. No.	Pk	Pack type
20248.290	1 l	Plastic bottle
20248.295	1 l	Glass bottle
20248.330	2,5 l	Plastic bottle
20248.364	5 l	Plastic bottle
20248.460	25 l	Plastic drum

Hydrochloric acid 35% TECHNICAL

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay ..... Min. 35 %

Cat. No.	Pk	Pack type
20246.298	1 l	Plastic bottle
20246.323	2,5 l	Plastic bottle
20246.367	5 l	Plastic bottle
20246.460	25 l	Plastic drum

Hydrochloric acid 34% NORMATOM® for trace metal analysis

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay ..... 34 - 37 %
Br (Bromide) ..... Max. 10 ppm
Total S (Sulphur) ..... Max. 0.30 ppm
Al (Aluminium) ..... Max. 1 ppb
Au (Gold) ..... Max. 0.5 ppb
Ba (Barium) ..... Max. 0.1 ppb
Bi (Bismuth) ..... Max. 0.1 ppb
Cd (Cadmium) ..... Max. 0.1 ppb
Co (Cobalt) ..... Max. 0.1 ppb
Cs (Cesium) ..... Max. 0.1 ppb
Dy (Dysprosium) ..... Max. 0.1 ppb
Eu (Europium) ..... Max. 0.1 ppb
Ga (Gallium) ..... Max. 0.1 ppb
Ge (Germanium) ..... Max. 0.1 ppb
Hg (Mercury) ..... Max. 0.1 ppb
In (Indium) ..... Max. 0.1 ppb
La (Lanthanum) ..... Max. 0.1 ppb
Lu (Lutetium) ..... Max. 0.1 ppb
Mn (Manganese) ..... Max. 0.1 ppb
Na (Sodium) ..... Max. 1 ppb
Nd (Neodymium) ..... Max. 0.1 ppb
Pb (Lead) ..... Max. 0.1 ppb
Rb (Rubidium) ..... Max. 0.1 ppb
Rh (Rhodium) ..... Max. 0.5 ppb
Sb (Antimony) ..... Max. 0.5 ppb
Se (Selenium) ..... Max. 1 ppb
Sn (Tin) ..... Max. 0.5 ppb
Tb (Terbium) ..... Max. 0.1 ppb
Th (Thorium) ..... Max. 0.1 ppb
Tl (Thallium) ..... Max. 0.1 ppb
U (Uranium) ..... Max. 0.1 ppb
W (Tungsten) ..... Max. 0.1 ppb
Yb (Ytterbium) ..... Max. 0.1 ppb
Colouration ..... Max. 10 APHA
Total P (Phosphorus) ..... Max. 0.01 ppm
Ag (Silver) ..... Max. 1 ppb
As (Arsenic) ..... Max. 0.5 ppb
B (Boron) ..... Max. 1 ppb
Be (Beryllium) ..... Max. 0.1 ppb
Ca (Calcium) ..... Max. 1 ppb
Ce (Cerium) ..... Max. 0.1 ppb
Cr (Chromium) ..... Max. 0.5 ppb
Cu (Copper) ..... Max. 0.5 ppb
Er (Erbium) ..... Max. 0.1 ppb
Fe (Iron) ..... Max. 1 ppb
Gd (Gadolinium) ..... Max. 0.1 ppb
Hf (Hafnium) ..... Max. 0.1 ppb
Ho (Holmium) ..... Max. 0.1 ppb
K (Potassium) ..... Max. 1 ppb
Li (Lithium) ..... Max. 0.1 ppb
Mg (Magnesium) ..... Max. 0.5 ppb
Mo (Molybdenum) ..... Max. 0.1 ppb
Nb (Niobium) ..... Max. 0.1 ppb
Ni (Nickel) ..... Max. 0.5 ppb
Pr (Praseodymium) ..... Max. 0.1 ppb
Re (Rhenium) ..... Max. 0.1 ppb
Ru (Ruthenium) ..... Max. 0.1 ppb
Sc (Scandium) ..... Max. 0.1 ppb
Sm (Samarium) ..... Max. 0.1 ppb
Sr (Strontium) ..... Max. 0.1 ppb
Te (Tellurium) ..... Max. 0.1 ppb
Ti (Titanium) ..... Max. 0.5 ppb
Tm (Thulium) ..... Max. 0.1 ppb
V (Vanadium) ..... Max. 0.5 ppb
Y (Yttrium) ..... Max. 0.1 ppb
Zn (Zinc) ..... Max. 1 ppb

Cat. No.	Pk	Pack type
83871.270	500 ml	Plastic bottle
83871.290	1 l	Plastic bottle
83871.330	2,5 l	Plastic bottle

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Hydrochloric acid 32% ULTRAPURE NORMATOM®, ultrapure for trace metal analysis

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	Min. 32 %	Ag (Silver)	Max. 10 ppt
Al (Aluminium)	Max. 20 ppt	As (Arsenic)	Max. 50 ppt
Au (Gold)	Max. 100 ppt	B (Boron)	Max. 100 ppt
Ba (Barium)	Max. 10 ppt	Be (Beryllium)	Max. 10 ppt
Bi (Bismuth)	Max. 10 ppt	Ca (Calcium)	Max. 20 ppt
Cd (Cadmium)	Max. 10 ppt	Ce (Cerium)	Max. 10 ppt
Co (Cobalt)	Max. 10 ppt	Cr (Chromium)	Max. 20 ppt
Cs (Cesium)	Max. 10 ppt	Cu (Copper)	Max. 20 ppt
Dy (Dysprosium)	Max. 1 ppt	Er (Erbium)	Max. 1 ppt
Eu (Europium)	Max. 1 ppt	Fe (Iron)	Max. 20 ppt
Ga (Gallium)	Max. 10 ppt	Gd (Gadolinium)	Max. 1 ppt
Hf (Hafnium)	Max. 10 ppt	Hg (Mercury)	Max. 100 ppt
Ho (Holmium)	Max. 1 ppt	In (Indium)	Max. 1 ppt
K (Potassium)	Max. 10 ppt	La (Lanthanum)	Max. 1 ppt
Li (Lithium)	Max. 10 ppt	Lu (Lutetium)	Max. 10 ppt
Mg (Magnesium)	Max. 10 ppt	Mn (Manganese)	Max. 10 ppt
Mo (Molybdenum)	Max. 10 ppt	Na (Sodium)	Max. 10 ppt
Nb (Niobium)	Max. 1 ppt	Nd (Neodymium)	Max. 1 ppt
Ni (Nickel)	Max. 50 ppt	Pb (Lead)	Max. 10 ppt
Pr (Praseodymium)	Max. 1 ppt	Rb (Rubidium)	Max. 10 ppt
Re (Rhenium)	Max. 10 ppt	Rh (Rhodium)	Max. 10 ppt
Ru (Ruthenium)	Max. 10 ppt	Sb (Antimony)	Max. 20 ppt
Sc (Scandium)	Max 10 ppt	Sm (Samarium)	Max. 1 ppt
Sn (Tin)	Max. 20 ppt	Sr (Strontium)	Max. 10 ppt
Tb (Terbium)	Max. 1 ppt	Te (Tellurium)	Max. 1 ppt
Th (Thorium)	Max. 1 ppt	Ti (Titanium)	Max. 20 ppt
Tl (Thallium)	Max. 10 ppt	Tm (Thulium)	Max. 1 ppt
U (Uranium)	Max. 1 ppt	V (Vanadium)	Max. 10 ppt
W (Tungsten)	Max. 10 ppt	Y (Yttrium)	Max. 1 ppt
Yb (Ytterbium)	Max. 1 ppt	Zn (Zinc)	Max. 20 ppt
Zr (Zirconium)	Max. 10 ppt		

Cat. No.	Pk	Pack type
83878.270	500 ml	Plastic bottle
83878.290	1 l	Plastic bottle
83878.300	2 l	Plastic bottle

Hydrochloric acid 32% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	31.5 - 33.0 %	Colouration	Max. 10 APHA
Density (20/4)	1.140 - 1.180	Free chlorine	Max. 0.5 ppm
Ignition residue (SO_4)	Max. 5 ppm	Br (Bromide)	Max. 50 ppm
NH_4 (Ammonium)	Max. 1 ppm	PO_4 (Phosphate)	Max. 0.5 ppm
SO_3 (Sulphite)	Max. 1 ppm	SO_4 (Sulphate)	Max. 1 ppm
Al (Aluminium)	Max. 0.05 ppm	As (Arsenic)	Max. 0.01 ppm
Ba (Barium)	Max. 0.02 ppm	Be (Beryllium)	Max. 0.02 ppm
Bi (Bismuth)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.04 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 0.2 ppm	Ge (Germanium)	Max. 0.05 ppm
Hg (Mercury)	Max. 0.01 ppm	K (Potassium)	Max. 0.1 ppm
Li (Lithium)	Max. 0.01 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.01 ppm	Mo (Molybdenum)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.04 ppm
Pb (Lead)	Max. 0.02 ppm	Sr (Strontium)	Max. 0.01 ppm
Ti (Titanium)	Max. 0.1 ppm	Tl (Thallium)	Max. 0.05 ppm
V (Vanadium)	Max. 0.01 ppm	Zn (Zinc)	Max. 0.05 ppm
Zr (Zirconium)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20254.296	1 l	Glass bottle
20254.310	1 l	Plastic bottle
20254.321	2,5 l	Glass bottle
20254.401	2,5 l	Plastic bottle
20254.360	5 l	Plastic bottle
20254.440	20 l	Plastic container

Hydrochloric acid 32% TECHNICAL

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay 31 - 33 %

Cat. No.	Pk	Pack type
20256.290	1 l	Plastic bottle
20256.362	5 l	Plastic bottle
20256.464	25 l	Plastic drum

NEW Hydrochloric acid 29-31% NORMATOM® for trace metal analysis

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	29 - 31 %	Colouration	max. 10 APHA
Br (Bromide)	max. 10 ppm	Cl2 (Free Chlorine)	max. 0.5 ppm
NH4 (Ammonium)	max. 0.5 ppm	P (Total Phosphorus)	max. 0.01 ppm
S (Total Sulphur)	max. 0.3 ppm	Ag (Silver)	max. 1 ppb
Al (Aluminium)	max. 1 ppb	As (Arsenic)	max. 0.5 ppb
Au (Gold)	max. 0.5 ppb	B (Boron)	max. 1 ppb
Ba (Barium)	max. 0.1 ppb	Be (Beryllium)	max. 0.1 ppb
Bi (Bismuth)	max. 0.1 ppb	Ca (Calcium)	max. 1 ppb
Cd (Cadmium)	max. 0.1 ppb	Ce (Cerium)	max. 0.1 ppb
Co (Cobalt)	max. 0.1 ppb	Cr (Chromium)	max. 0.5 ppb
Cs (Cesium)	max. 0.1 ppb	Cu (Copper)	max. 0.5 ppb
Dy (Dysprosium)	max. 0.1 ppb	Er (Erbium)	max. 0.1 ppb
Eu (Europium)	max. 0.1 ppb	Fe (Iron)	max. 1 ppb
Ga (Gallium)	max. 0.1 ppb	Gd (Gadolinium)	max. 0.1 ppb
Ge (Germanium)	max. 1 ppb	Hf (Hafnium)	max. 0.1 ppb
Hg (Mercury)	max. 0.1 ppb	Ho (Holmium)	max. 0.1 ppb
In (Indium)	max. 0.1 ppb	K (Potassium)	max. 1 ppb
La (Lanthanum)	max. 0.1 ppb	Li (Lithium)	max. 0.1 ppb
Lu (Lutetium)	max. 0.1 ppb	Mg (Magnesium)	max. 0.5 ppb
Mn (Manganese)	max. 0.1 ppb	Mo (Molybdenum)	max. 0.1 ppb
Na (Sodium)	max. 1 ppb	Nb (Niobium)	max. 0.1 ppb
Nd (Neodymium)	max. 0.1 ppb	Ni (Nickel)	max. 0.5 ppb
Pb (Lead)	max. 0.1 ppb	Pd (Palladium)	Information Only
Pr (Praseodymium)	max. 0.1 ppb	Pt (Platinum)	Information Only
Rb (Rubidium)	max. 0.1 ppb		

Cat. No.	Pk	Pack type
85493.290	1 l	Plastic bottle

Hydrochloric acid 30% TECHNICAL

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay 29 - 31 %

Cat. No.	Pk	Pack type
20251.365	5 l	Plastic bottle
20251.445	20 l	Plastic drum

Hydrochloric acid 25% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay	Min. 25.0 %	Colouration	Max. 10 APHA
Free chlorine	Max. 1 ppm	Ignition residue (SO_4)	Max. 5 ppm
Br (Bromide)	Max. 50 ppm	NH_4 (Ammonium)	Max. 1 ppm
SO_3 (Sulphite)	Max. 1 ppm	SO_4 (Sulphate)	Max. 2 ppm
Al (Aluminium)	Max. 0.2 ppm	As (Arsenic)	Max. 0.01 ppm
Ba (Barium)	Max. 0.05 ppm	Be (Beryllium)	Max. 0.02 ppm
Bi (Bismuth)	Max. 0.1 ppm	Ca (Calcium)	Max. 1 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.2 ppm	Ge (Germanium)	Max. 0.05 ppm
K (Potassium)	Max. 0.1 ppm	Li (Lithium)	Max. 0.01 ppm
Mg (Magnesium)	Max. 0.2 ppm	Mn (Manganese)	Max. 0.01 ppm
Mo (Molybdenum)	Max. 0.02 ppm	Na (Sodium)	Max. 0.5 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.02 ppm
Sr (Strontium)	Max. 0.01 ppm	Ti (Titanium)	Max. 0.1 ppm
Tl (Thallium)	Max. 0.05 ppm	V (Vanadium)	Max. 0.01 ppm
Zn (Zinc)	Max. 0.1 ppm	Zr (Zirconium)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
20257.296	1 l	Glass bottle
20257.310	1 l	Plastic bottle
20257.321	2,5 l	Glass bottle
20257.460	25 l	Plastic drum

Hydrochloric acid 25% Reag. Ph. Eur. 1043501

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87842.290	1 l	Plastic bottle

Hydrochloric acid 25% Reag. Ph. Eur.

Danger

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -30 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119484862-27

Assay ..... Min. 25.0 %

Cat. No.	Pk	Pack type
84514.360	5 l	Plastic bottle

Hydrochloric acid 20%

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient

Assay ..... Min. 20 %

Cat. No.	Pk	Pack type
5853.1000	1 l	Plastic bottle

Hydrochloric acid 10% Ph. Eur.

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient

Assay	9.5 - 10.5 %
Identification A	Passes test
Identification B	Passes test
Appearance test	Clear colourless liquid
Free chlorine	Max. 1 ppm
SO_4 (Sulphate)	Max. 5 ppm
Heavy metals (as Pb)	Max. 2 ppm
Residue on evaporation	Max. 0.01 %
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
5594.9010	10 l	Plastic drum
5594.9200	210 kg	Plastic drum

Hydrochloric acid 1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient

Titer (20°C) ..... 0.998 - 1.002 mol/l

Cat. No.	Pk	Pack type
32050.602	160 ml	Plastic ampoule

Hydrochloric acid 0.5 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.4998 - 0.5002 mol/l

Cat. No.	Pk	Pack type
84589.600	210 ml	Plastic ampoule

Hydrochloric acid 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C) ..... 0.0995 - 0.1005 mol/l

Cat. No.	Pk	Pack type
32051.605	60 ml	Plastic ampoule

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Hydrochloric acid 1% Reag. Ph. Eur.

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Boiling Pt: >100 °C (1013hPa) **Density:** 1,02-1,05 g/cm³ (20°C)

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
87684.290	1 l	Plastic bottle

Hydrochloric acid 6 mol/l (6 N) AVS TITRINORM® Reag. Ph. Eur. 3001500 volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,06 g/cm³ (20 °C)

Storage Temperature: Ambient

NIST traceable ..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 5.976 - 6.024 mol/l

Cat. No.	Pk	Pack type
2611.5000	5 l	Plastic container

NEW Hydrochloric acid 6 mol/l (6 N) for biopharmaceutical production

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,09 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer ..... 5.7 - 6.3 mol/l
Appearance ..... Passes test
Free bromine or chlorine ..... Passes test
Identification ..... Passes test
Colouration ..... Max. 10 APHA
Evaporation residue ..... Max. 100 ppm
Free chlorine ..... Max. 1 ppm
Heavy metals (as Pb) ..... Max. 1 ppm
Ignition residue (SO4) ..... Max. 80 ppm
SO3 (Sulphite) ..... Max. 10 ppm
SO4 (Sulphate) ..... Max. 5 ppm
As (Arsenic) ..... Max. 1.5 ppm
Residual metal catalysts ..... Unlikely to be present
Residual solvents (ICH Q3C) ..... Excl.by manufact. process
Endotoxin ..... Max. 0.5 EU/ml
Filtered at 0.2 µm ..... Confirmed

Cat. No.	Pk	Pack type
85401.320	2,5 l	Plastic bottle
85401.460	25 l	Plastic drum

Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,06 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 4.99 - 5.01 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30018.298	1 l	Plastic bottle
30018.320	2,5 l	Plastic bottle
30018.360	5 l	Plastic bottle
30018.447	20 l	Plastic drum

NEW Hydrochloric acid 5 mol/l (5 N) for biopharmaceutical production

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,08 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 4.9 - 5.1 mol/l
Conforms to BDH 19066 ..... Passes test

Cat. No.	Pk	Pack type
85400.320	2,5 l	Plastic bottle
85400.460	25 l	Plastic drum

Hydrochloric acid 4 mol/l (4 N) VOLUSOL® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,06 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer ..... 3.984 - 4.016 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
310701.1000	1 l	Plastic bottle
310701.5000	5 l	Plastic bottle

NEW Hydrochloric acid 3 mol/l (3 N) VOLUSOL® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol

Storage Temperature: Ambient

Titer ..... 2.95 - 3.05 mol/l

Cat. No.	Pk	Pack type
5050.5000	5 l	Plastic container

Hydrochloric acid 2 mol/l (2 N) Reag. Ph. Eur. 1043503

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,031 g/cm³ (20 °C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85848.290	1 l	Plastic bottle

Hydrochloric acid 2 mol/l (2 N) AVS TITRINORM® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,031 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 1.996 - 2.004 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30025.293	1 l	Plastic bottle
30025.320	2,5 l	Plastic bottle
30025.362	5 l	Plastic container
30025.373	5 l	Bag-in-box (Cubitainer)
30025.407	10 l	Bag-in-box (Cubitainer)

NEW Hydrochloric acid 2 mol/l (2 N) for biopharmaceutical production

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,031 g/cm³ (20 °C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Evaporation residue ..... Max. 100 ppm
Free chlorine ..... Max. 1 ppm
Heavy metals (as Pb) ..... Max. 1 ppm
Ignition residue (SO4) ..... Max. 80 ppm
SO3 (Sulphite) ..... Max. 10 ppm
SO4 (Sulphate) ..... Max. 5 ppm
As (Arsenic) ..... Max. 1.5 ppm
Residual metal catalysts ..... Unlikely to be present
Residual solvents (ICH Q3C) ..... Excl.by manufact. process
Endotoxin ..... Max. 0.25 EU/ml
Filtered at 0.2 µm ..... Confirmed
Titer ..... 1.8 - 2.2 mol/l
Appearance ..... Passes test
Free bromine or chlorine ..... Passes test
Identification ..... Passes test
Colouration ..... Max. 10 APHA

Cat. No.	Pk	Pack type
85399.320	2,5 l	Plastic bottle
85399.460	25 l	Plastic drum

Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,02 g/cm³

Storage Temperature: Ambient

Conforms to Reag. Ph.Eur. ..... Passes test
Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
Conforms to USP/NF ..... Passes test
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30024.290	1 l	Plastic bottle
30024.324	2,5 l	Plastic bottle
30024.370	5 l	Bag-in-box (Cubitainer)
30024.404	10 l	Bag-in-box (Cubitainer)
30024.415	10 l	Plastic drum
30024.448	20 l	Plastic drum

NEW Hydrochloric acid 1 mol/l (1 N) for biopharmaceutical production

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,014 g/cm³ (20 °C)

Storage Temperature: Ambient

Appearance ..... Passes test
Free bromine or chlorine ..... Passes test
Identification ..... Passes test
Colouration ..... Max. 10 APHA
Evaporation residue ..... Max. 100 ppm
Free chlorine ..... Max. 1 ppm
Heavy metals (as Pb) ..... Max. 0.5 ppm
Ignition residue (SO_4) ..... Max. 80 ppm
SO_3 (Sulphite) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 5 ppm
As (Arsenic) ..... Max. 0.1 ppm
Residual metal catalysts ..... Unlikely to be present
Residual solvents (ICH Q3C) ..... Excl.by manufact. process
Endotoxin ..... Max. 0.25 EU/ml
Filtered at 0,2 µm ..... Confirmed
Titer ..... 0.95 - 1.05 mol/l

Cat. No.	Pk	Pack type
85447.320	2,5 l	Plastic bottle
85447.460	25 l	Plastic drum

NEW Hydrochloric acid (0.100 N) USP test solution (TS) 34

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol

Storage Temperature: Ambient

Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85349.180	100 ml	Plastic bottle
85349.260	500 ml	Plastic bottle

NEW Hydrochloric acid 0.714 mol/l (N/1.4) AVS TITRINORM® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,000 g/cm³ (20 °C)

Storage Temperature: Ambient

'For sugar Industry testing.

Titer (20°C; real value 0.2 % accuracy) ..... 0,7126 - 0,7154 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
307904.400	10 l	Bag-in-box (Cubitainer)

Hydrochloric acid 0.5 mol/l (0.5 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,02 g/cm³

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31954.290	1 l	Plastic bottle
31954.368	5 l	Plastic container
31954.404	10 l	Bag-in-box (Cubitainer)

Hydrochloric acid 0.4 mol/l (0.4 N)

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,02 g/cm³

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
30021.290	1 l	Plastic bottle

Hydrochloric acid 0.357 mol/l (N/2.8) AVS TITRINORM® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,02 g/cm³

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.3563 - 0.3577 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30023.296	1 l	Plastic bottle

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Hydrochloric acid 0.2 mol/l (0.2 N) AVS TITRINORM® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,004 g/cm³ (25 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.1996 - 0.2004 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
31983.290	1 l	Plastic bottle
31983.370	5 l	Bag-in-box (Cubitainer)

Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,004 g/cm³ (25 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
Conforms to Reag. Ph.Eur. ..... Passes test
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
31955.293	1 l	Plastic bottle
31955.327	2,5 l	Plastic bottle
31955.373	5 l	Bag-in-box (Cubitainer)
31955.407	10 l	Bag-in-box (Cubitainer)
31955.442	20 l	Plastic drum

NEW

Hydrochloric acid 0.0714 mol/l (0.1N/1.4) AVS TITRINORM® volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,000 g/cm³ (20 °C)

Storage Temperature: Ambient
For sugar Industry testing.

Titer (20°C; real value 0.2 % accuracy) ..... 0,07126 - 0,07154 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
307902.400	10 l	Bag-in-box (Cubitainer)

Hydrochloric acid 0.04 mol/l (0.04 N) AVS TITRINORM® according to the NF T 90-036 standard, volumetric solution

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,004 g/cm³ (25 °C)

Storage Temperature: Ambient
Suitable for water testing.

NIST traceable..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 0.03992 - 0.04008 mol/l

Cat. No.	Pk	Pack type
30022.293	1 l	Plastic bottle

Hydrochloric acid dilute 0.03 mol/l (0.03 N) R2, 1043505 Reag. Ph. Eur.

Warning

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1,004 g/cm³ (25 °C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87843.290	1 l	Plastic bottle

Hydrochloric acid 0.02 mol/l (0.02 N) AVS TITRINORM® volumetric solution

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.01996 - 0.02004 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
98052.296	1 l	Plastic bottle

Hydrochloric acid 0.01 mol/l (0.01 N) Reag. Ph. Eur. 1043504

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1 g/cm³ (20 °C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85849.290	1 l	Plastic bottle

Hydrochloric acid 0.01 mol/l (0.01 N) VOLUSOL® volumetric solution

CAS 7647-01-0 **UN:** 1789
HCl **M.W.** 36.46 g/mol
Density: 1 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.00998 - 0.01002 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
311341.1000	1 l	Plastic bottle

Hydrochloric acid 0.25% in methanol Reag. Ph. Eur. 1053203

Danger

CAS 7647-01-0 **UN:** 1993
HCl **M.W.** 36.46 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87868.180	100 ml	Plastic bottle

Hydrochloric acid, brominated Reag. Ph. Eur. 1043507

Danger

UN: 1760

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87845.290	1 l	Plastic bottle

Hydrofluoric acid 50% VLSI Selectipur® for the electronics industry

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50488860.	2,5 l	Plastic bottle
50173923.	210 kg	Plastic drum

Hydrofluoric acid 48% ARISTAR® for trace analysis

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Assay (acidimetric)	Min. 48.0 %	Colour	Max. 10 APHA
Cl (Chloride)	Max. 0.2 ppm	SiF_6 (Hexafluorosilicate)	Max. 50 ppm
NO_3 (Nitrate)	Max. 5 ppm	PO_4 (Phosphate)	Max. 0.1 ppm
SO_4 (Sulphate)	Max. 0.5 ppm	SO_3 (Sulphite)	Max. 0.5 ppm
As + Sb (as As)	Max. 0.01 ppm	Ag (Silver)	Max. 10.0 ppb
Al (Aluminium)	Max. 20.0 ppb	Au (Gold)	Max. 20.00 ppb
B (Boron)	Max. 10 ppb	Ba (Barium)	Max. 10 ppb
Be (Beryllium)	Max. 10.00 PPB	Bi (Bismuth)	Max. 50.00 ppb
Ca (Calcium)	Max. 100 PPB	Cd (Cadmium)	Max. 10.0 ppb
Co (Cobalt)	Max. 10.00 ppb	Cr (Chromium)	Max. 10.0 ppb
Cu (Copper)	Max. 10.0 ppb	Fe (Iron)	Max. 100 ppb
Ga (Gallium)	Max. 10.00 ppb	Ge (Germanium)	Max. 50.00 ppb
In (Indium)	Max. 10 ppb	K (Potassium)	Max. 50.00 ppb
Li (Lithium)	Max. 10.00 ppb	Mg (Magnesium)	Max. 50.0 ppb
Mn (Manganese)	Max. 20.0 ppb	Mo (Molybdenum)	Max. 20.00 ppb
Na (Sodium)	Max. 50 ppb	Ni (Nickel)	Max. 10 ppb
Pb (Lead)	Max. 10.0 ppb	Pt (Platinum)	Max. 50.00 ppb
Sn (Tin)	Max. 50 ppb	Sr (Strontium)	Max. 20.00 ppb
Ti (Titanium)	Max. 50 ppb	Tl (Thallium)	Max. 50.00 ppb
V (Vanadium)	Max. 10.00 ppb	Zn (Zinc)	Max. 50.0 ppb
Zr (Zirconium)	Max. 50.00 ppb	Ignition residue (SO_4)	Max. 2 ppm

Cat. No.	Pk	Pack type
450094C	500 ml	Plastic bottle

Hydrofluoric acid 48% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Assay	Min. 48 %	Colouration	Max. 10 APHA
SiF_6 (Hexafluorosilicate)	Max. 100 ppm	PO_4 (Phosphate)	Max. 0.5 ppm
SO_4 + SO_3 (as SO_4)	Max. 5 ppm	Ag (Silver)	Max. 0.02 ppm
Al (Aluminium)	Max. 0.1 ppm	As (Arsenic)	Max. 0.05 ppm
Ba (Barium)	Max. 0.1 ppm	Bi (Bismuth)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Cl (Chloride)	Max. 5 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.3 ppm	K (Potassium)	Max. 0.1 ppm
Li (Lithium)	Max. 0.02 ppm	Mg (Magnesium)	Max. 0.2 ppm
Mn (Manganese)	Max. 0.05 ppm	Mo (Molybdenum)	Max. 0.05 ppm
Na (Sodium)	Max. 0.2 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.02 ppm
Ti (Titanium)	Max. 0.1 ppm	V (Vanadium)	Max. 0.05 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20319.291	1 l	Plastic bottle

NEW Hydrofluoric acid 47% Ultrapure NORMATOM® for trace metal analysis

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Assay	47-51%	Total S (Sulphur)	100 ppb
Ag (Silver)	10 ppt	Al (Aluminium)	20 ppt
As (Arsenic)	50 ppt	Au (Gold)	20 ppt
B (Boron)	100 ppt	Ba (Barium)	10 ppt
Be (Beryllium)	10 ppt	Bi (Bismuth)	10 ppt
Ca (Calcium)	10 ppt	Cd (Cadmium)	10 ppt
Ce (Cerium)	10 ppt	Co (Cobalt)	10 ppt
Cr (Chromium)	10 ppt	Cs (Cesium)	10 ppt
Cu (Copper)	10 ppt	Dy (Dysprosium)	1 ppt
Er (Erbium)	1 ppt	Eu (Europium)	1 ppt
Fe (Iron)	10 ppt	Ga (Gallium)	10 ppt
Gd (Gadolinium)	1 ppt	Ge (Germanium)	10 ppt
Hf (Hafnium)	10 ppt	Hg (Mercury)	50 ppt
Ho (Holmium)	1 ppt	In (Indium)	1 ppt
K (Potassium)	10 ppt	La (Lanthanum)	10 ppt
Li (Lithium)	10 ppt	Lu (Lutetium)	1 ppt
Mg (Magnesium)	10 ppt	Mn (Manganese)	10 ppt
Mo (Molybdenum)	10 ppt	Na (Sodium)	10 ppt
Nb (Niobium)	10 ppt	Nd (Neodymium)	1 ppt
Ni (Nickel)	20 ppt	Pb (Lead)	10 ppt
Pd (Palladium)	20 ppt	Pr (Praseodymium)	1 ppt
Pt (Platinum)	20 ppt	Rb (Rubidium)	20 ppt
Re (Rhenium)	10 ppt	Rh (Rhodium)	20 ppt
Ru (Ruthenium)	20 ppt	Sb (Antimony)	20 ppt
Sc (Scandium)	10 ppt		

Cat. No.	Pk	Pack type
85029.270	500 ml	Plastic bottle
85029.290	1 l	Plastic bottle

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Hydrofluoric acid 47% NORMATOM® for trace metal analysis

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Assay	47 - 51 %	Colouration	Max. 10 APHA
Cl (Chloride)	Max. 4 ppm	SiF_6 (Hexafluorosilicate)	Min. 20 ppm
Total P (Phosphorus)	Max. 0.05 ppm	Total S (Sulphur)	Max. 0.1 ppm
Ag (Silver)	Max. 0.5 ppb	Al (Aluminium)	Max. 1 ppb
As (Arsenic)	Max. 0.5 ppb	Au (Gold)	Max. 0.20 ppb
B (Boron)	Max. 1 ppb	Ba (Barium)	Max. 0.1 ppb
Be (Beryllium)	Max. 0.1 ppb	Bi (Bismuth)	Max. 0.1 ppb
Ca (Calcium)	Max. 1 ppb	Cd (Cadmium)	Max. 0.1 ppb
Ce (Cerium)	Max. 0.1 ppb	Co (Cobalt)	Max. 0.1 ppb
Cr (Chromium)	Max. 1 ppb	Cs (Cesium)	Max. 0.1 ppb
Cu (Copper)	Max. 0.5 ppb	Dy (Dysprosium)	Max. 0.1 ppb
Er (Erbium)	Max. 0.1 ppb	Eu (Europium)	Max. 0.1 ppb
Fe (Iron)	Max. 1 ppb	Ga (Gallium)	Max. 0.1 ppb
Gd (Gadolinium)	Max. 0.1 ppb	Ge (Germanium)	Max. 0.1 ppb
Hf (Hafnium)	Max. 0.1 ppb	Hg (Mercury)	Max. 1 ppb
Ho (Holmium)	Max. 0.1 ppb	In (Indium)	Max. 0.1 ppb
K (Potassium)	Max. 1 ppb	La (Lanthanum)	Max. 0.1 ppb
Li (Lithium)	Max. 0.1 ppb	Lu (Lutetium)	Max. 0.1 ppb
Mg (Magnesium)	Max. 1 ppb	Mn (Manganese)	Max. 0.1 ppb
Mo (Molybdenum)	Max. 0.1 ppb	Na (Sodium)	Max. 1 ppb
Nb (Niobium)	Max. 0.1 ppb	Nd (Neodymium)	Max. 0.1 ppb
Ni (Nickel)	Max. 0.5 ppb	Pb (Lead)	Max. 0.1 ppb
Pd (Palladium)	Max. 0.20 ppb	Pr (Praseodymium)	Max. 0.1 ppb
Pt (Platinum)	Max. 0.20 ppb	Rb (Rubidium)	Max. 0.1 ppb
Re (Rhenium)	Max. 0.1 ppb	Rh (Rhodium)	Max. 0.1 ppb
Ru (Ruthenium)	Max. 0.1 ppb	Sb (Antimony)	Min. 0.2 ppb
Sc (Scandium)	Max. 0.1 ppb	Se (Selenium)	Max. 1 ppb
Sm (Samarium)	Max. 0.1 ppb	Sn (Tin)	Max. 0.5 ppb
Sr (Strontium)	Max. 0.1 ppb	Tb (Terbium)	Max. 0.1 ppb
Te (Tellurium)	Max. 0.1 ppb	Th (Thorium)	Max. 0.1 ppb
Ti (Titanium)	Max. 1 ppb	Tl (Thallium)	Max. 0.1 ppb
Tm (Thulium)	Max. 0.1 ppb	U (Uranium)	Max. 0.1 ppb
V (Vanadium)	Max. 0.1 ppb	W (Tungsten)	Max. 0.5 ppb

Cat. No.	Pk	Pack type
83873.260	500 ml	Plastic bottle

Hydrofluoric acid 40% ARISTAR® for trace analysis

Danger

CAS 7664-39-3 **UN:** 1790
HF
Boiling Pt: 112 °C (1013 hPa) **Melting Pt:** -44 °C
Storage Temperature: Ambient

Assay (acidimetric)	Min. 40.0 %	Colour	Max. 10 APHA
Cl (Chloride)	Max. 0.5 ppm	SiF_6 (Hexafluorosilicate)	Max. 20 ppm
PO_4 (Phosphate)	Max. 0.1 ppm	SO_4 (Sulphate)	Max. 0.5 ppm
SO_3 (Sulphite)	Max. 2 ppm	Ag (Silver)	Max. 0.001 ppm
Al (Aluminium)	Max. 0.005 ppm	Au (Gold)	Max. 0.002 ppm
As (Arsenic)	Max. 0.02 ppm	Ba (Barium)	Max. 0.010 ppm
Be (Beryllium)	Max. 0.001 ppm	Bi (Bismuth)	Max. 0.001 ppm
Ca (Calcium)	Max. 0.010 ppm	Cd (Cadmium)	Max. 0.002 ppm
Co (Cobalt)	Max. 0.002 ppm	Cr (Chromium)	Max. 0.001 ppm
Cu (Copper)	Max. 0.001 ppm	Fe (Iron)	Max. 0.010 ppm
Ga (Gallium)	Max. 0.005 ppm	Ge (Germanium)	Max. 0.002 ppm
Hg (Mercury)	Max. 0.020 ppm	In (Indium)	Max. 0.002 ppm
K (Potassium)	Max. 0.010 ppm	Li (Lithium)	Max. 0.001 ppm
Mg (Magnesium)	Max. 0.005 ppm	Mn (Manganese)	Max. 0.002 ppm
Mo (Molybdenum)	Max. 0.001 ppm	Na (Sodium)	Max. 0.010 ppm
Ni (Nickel)	Max. 0.001 ppm	Pb (Lead)	Max. 0.002 ppm
Sn (Tin)	Max. 0.001 ppm	Sr (Strontium)	Max. 0.001 ppm
Ti (Titanium)	Max. 0.010 ppm	Tl (Thallium)	Max. 0.001 ppm
V (Vanadium)	Max. 0.001 ppm	Zn (Zinc)	Max. 0.005 ppm
Zr (Zirconium)	Max. 0.001 ppm	Ignition residue (SO_4)	Max. 2 ppm

Cat. No.	Pk	Pack type
450034N	500 ml	Plastic bottle

Hydrofluoric acid 40% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7664-39-3 **UN:** 1790
HF
Boiling Pt: 112 °C (1013 hPa) **Melting Pt:** -44 °C
Storage Temperature: Ambient

Assay	39.0 - 41.0 %	Heavy metals (as Pb)	Max. 0.5 ppm
SiF_6 (Hexafluorosilicate)	Max. 50 ppm	Cl (Chloride)	Max. 5 ppm
PO_4 (Phosphate)	Max. 1 ppm	$SO_4 + SO_3$ (as SO_4)	Max. 5 ppm
Ag (Silver)	Max. 0.02 ppm	Al (Aluminium)	Max. 0.05 ppm
As (Arsenic)	Max. 0.05 ppm	Ba (Barium)	Max. 0.1 ppm
Be (Beryllium)	Max. 0.02 ppm	Bi (Bismuth)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.2 ppm
Ge (Germanium)	Max. 0.05 ppm	Li (Lithium)	Max. 0.02 ppm
Mg (Magnesium)	Max. 0.2 ppm	Mn (Manganese)	Max. 0.05 ppm
Mo (Molybdenum)	Max. 0.05 ppm	K (Potassium)	Max. 0.1 ppm
Na (Sodium)	Max. 0.2 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.02 ppm
Ti (Titanium)	Max. 0.1 ppm	Tl (Thallium)	Max. 0.05 ppm
V (Vanadium)	Max. 0.05 ppm	Zn (Zinc)	Max. 0.05 ppm

Cat. No.	Pk	Pack type
20307.290	1 l	Plastic bottle

Hydrofluoric acid 40% GPR RECTAPUR®

Danger

CAS 7664-39-3 **UN:** 1790
HF
Boiling Pt: 112 °C (1013 hPa) **Melting Pt:** -44 °C
Storage Temperature: Ambient

Assay	40 - 42 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20306.296	1 l	Plastic bottle

Hydrofluoric acid 40% VLSI Selectipur® for the electronics industry

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50489103.	2,5 l	Plastic bottle

Hydrofluoric acid 5% VLSI Selectipur® for the electronics industry

Danger

CAS 7664-39-3 **UN:** 1790
HF
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50488881.	2,5 l	Plastic bottle

Hydrogen hexachloroplatinate(IV) hexahydrate

See Hexachloroplatinic (IV) acid hexahydrate p.186

NEW Hydrogenphthalate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84969.180	100 ml	Plastic bottle

NEW Hydrogen sulphite 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84970.180	100 ml	Plastic bottle

Hydrogen peroxide 50% stabilised GPR RECTAPUR®

Stabilised with sodium pyrophosphate 30 ppm

Danger

CAS 7722-84-1 **UN:** 2014
H_2O_2 **M.W.** 34.01 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** -40 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	48 - 51 %
Colouration	Max. 10 APHA
Evaporation residue	Max. 0.05 %
Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 20 ppm
Cl (Chloride)	Max. 5 ppm
Ca (Calcium)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm
Mg (Magnesium)	Max. 5 ppm

Cat. No.	Pk	Pack type
23620.292	1 l	Plastic bottle

Hydrogen peroxide 33% unstabilised TECHNICAL

Danger

CAS 7722-84-1 **UN:** 2014
H_2O_2 **M.W.** 34.01 g/mol
Boiling Pt: 107 °C (1013 hPa) **Melting Pt:** -26 °C **Density:** 1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	31 - 36 %

Cat. No.	Pk	Pack type
23613.297	1 l	Plastic bottle
23613.366	5 l	Plastic bottle
23613.446	20 l	Plastic drum

Hydrogen peroxide 31% unstabilised VLSI Selectipur® for the electronics industry

Danger

CAS 7722-84-1 **UN:** 2014
H_2O_2 **M.W.** 34.01 g/mol
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50489142.	2,5 l	Plastic bottle
55210671.	205 kg	Plastic drum

Hydrogen peroxide 31% unstabilised SLSI Selectipur® for the electronics industry

Danger

CAS 7722-84-1 **UN:** 2014
H_2O_2 **M.W.** 34.01 g/mol
Boiling Pt: ~107 °C (1013 hPa) **Melting Pt:** <0 °C **Density:** 1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
54661910.	203 kg	Plastic drum

NEW Hydrogen peroxide 30% unstabilised Ultrapure NORMATOM® for trace metal analysis

Danger

CAS 7722-84-1 **UN:** 2014
H_2O_2 **M.W.** 34.01 g/mol
Boiling Pt: ~107 °C (1013 hPa) **Melting Pt:** <0 °C **Density:** 1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	30-32%	Ag (Silver)	10 ppt
Al (Aluminium)	50 ppt	As (Arsenic)	100 ppt
Au (Gold)	10 ppt	B (Boron)	100 ppt
Ba (Barium)	10 ppt	Be (Beryllium)	10 ppt
Bi (Bismuth)	10 ppt	Ca (Calcium)	100 ppt
Cd (Cadmium)	10 ppt	Ce (Cerium)	1 ppt
Co (Cobalt)	10 ppt	Cr (Chromium)	10 ppt
Cs (Cesium)	1 ppt	Cu (Copper)	10 ppt
Dy (Dysprosium)	1 ppt	Er (Erbium)	1 ppt
Eu (Europium)	1 ppt	Fe (Iron)	20 ppt
Ga (Gallium)	10 ppt	Gd (Gadolinium)	1 ppt
Ge (Germanium)	10 ppt	Hf (Hafnium)	1 ppt
Hg (Mercury)	50 ppt	Ho (Holmium)	1 ppt
In (Indium)	1 ppt	K (Potassium)	20 ppt
La (Lanthanum)	1 ppt	Li (Lithium)	10 ppt
Lu (Lutetium)	1 ppt	Mg (Magnesium)	20 ppt
Mn (Manganese)	10 ppt	Mo (Molybdenum)	10 ppt
Na (Sodium)	50 ppt	Nb (Niobium)	10 ppt
Nd (Neodymium)	1 ppt	Ni (Nickel)	20 ppt
Pb (Lead)	10 ppt	Pd (Palladium)	10 ppt
Pr (Praseodymium)	1 ppt	Pt (Platinum)	10 ppt
Rb (Rubidium)	10 ppt	Re (Rhenium)	10 ppt
Rh (Rhodium)	10 ppt	Ru (Ruthenium)	10 ppt
Sb (Antimony)	10 ppt	Sc (Scandium)	10 ppt
Se (Selenium)	100 ppt		

Cat. No.	Pk	Pack type
85040.270	500 ml	Plastic bottle

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Hydrogen peroxide 30% unstabilised AnalaR NORMAPUR® for trace analysis

Danger

CAS 7722-84-1 **UN:** 2014

H_2O_2 **M.W.** 34.01 g/mol

Boiling Pt: ~107 °C (1013 hPa) **Melting Pt:** <0 °C **Density:** 1,11 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	30.0 - 31.0 %	Acidity	Max. 0.0002 meq/g
Colouration	Max. 10 APHA	Evaporation residue	Max. 10 ppm
Total N (Nitrogen)	Max. 3 ppm	Cl (Chloride)	Max. 0.5 ppm
PO_4 (Phosphate)	Max. 1 ppm	SO_4 (Sulphate)	Max. 1 ppm
As (Arsenic)	Max. 0.01 ppm	Cd (Cadmium)	Max. 0.01 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.03 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.03 ppm		

Cat. No.	Pk	Pack type
23615.261	500 ml	Plastic bottle
23615.248	1 l	Plastic bottle
23615.421	2,5 l	Glass bottle SAFEBREAK

Hydrogen peroxide 30% stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with sodium pyrophosphate 0.02 %

Danger

CAS 7722-84-1 **UN:** 2014

H_2O_2 **M.W.** 34.01 g/mol

Boiling Pt: ~107 °C (1013 hPa) **Melting Pt:** <0 °C **Density:** 1,11 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 30.0 %	Acidity	Max. 0.0002 meq/g
Colouration	Max. 10 APHA	Evaporation residue	Max. 30 ppm
Heavy metals (as Pb)	Max. 1 ppm	Total N (Nitrogen)	Max. 4 ppm
Cl (Chloride)	Max. 0.5 ppm	PO_4 (Phosphate)	Max. 2 ppm
SO_4 (Sulphate)	Max. 2 ppm	As (Arsenic)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
23619.264	500 ml	Plastic bottle
23619.297	1 l	Plastic bottle
23619.366	5 l	Plastic bottle

Hydrogen peroxide 30 % stabilised Ph. Eur.

Danger

CAS 7722-84-1 **UN:** 2014

H_2O_2 **M.W.** 34.01 g/mol

Boiling Pt: ~107 °C (1013 hPa) **Melting Pt:** <0 °C **Density:** 1,11 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	29.0 - 31.0 %
Appearance	Clear colourless liquid
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Acidity	Passes test
Organic stabilizers	Max. 500 ppm
Non-volatile residue	Max. 2 g/l
Residual solvents	Passes test

Cat. No.	Pk	Pack type
23622.260	500 ml	Plastic bottle
23622.298	1 l	Plastic bottle
23622.330	2,5 l	Plastic bottle
23622.367	5 l	Plastic container
23622.467	25 l	Plastic drum

Hydrogen peroxide 6% (w/v; 20 vol,) GPR RECTAPUR®

Warning

CAS 7722-84-1

H_2O_2 **M.W.** 34.01 g/mol

Density: 1,022 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (W/V)	Min. 6 %
Density (20/4)	About 1.020
Cl (Chloride)	Max. 20 ppm
Fe (Iron)	Max. 1 ppm

Cat. No.	Pk	Pack type
285175C	2 l	Plastic bottle

Hydrogen peroxide 3% stabilised GPR RECTAPUR®

Stabilised with Phosphoric acid 0.04 %

CAS 7722-84-1

H_2O_2 **M.W.** 34.01 g/mol

Boiling Pt: 100 °C (1013 hPa) **Density:** 1,01 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	2.5 - 3.5 %
Evaporation residue	Max. 0.05 %
Heavy metals (as Pb)	Max. 5 ppm
Cl (Chloride)	Max. 10 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
23614.291	1 l	Plastic bottle

Hydrogen tetrachloroaurate (III) trihydrate

See tetra-Chloroauric (III) acid trihydrate p.85

Hydroquinone GPR RECTAPUR®

Danger

CAS 123-31-9 **UN:** 3077

$C_6H_4(OH)_2$ **M.W.** 110.11 g/mol

Boiling Pt: 285 °C (1013 hPa) **Melting Pt:** 175 °C **Density:** 1,332 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Melting point	170 - 174 °C
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.1 %
Resorcinol	Max. 0.1 %

Cat. No.	Pk	Pack type
24704.298	1 kg	Plastic bottle for solids

4-Hydroxy-4-methyl-2-pentanone TECHNICAL

Warning

CAS 123-42-2 **UN:** 1148

$(CH_3)_2C(OH)CH_2COCH_3$ **M.W.** 116.16 g/mol

Boiling Pt: 166 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,94 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119473975-21

Assay	Min. 98 %

Cat. No.	Pk	Pack type
23424.294	1 l	Glass bottle

1-Hydroxy butane

See 1-Butanol p.70

(±)-2-Hydroxy butane

See (±)-2-Butanol p.71

Hydroxy ethane

See Ethanol absolute p.145

Hydroxy methane
See Methanol p.255

Hydroxy methane-D4
See Methanol-[D4] p.259

1-Hydroxy pentane
See 1-Pentanol p.338

1-Hydroxy propane
See 1-Propanol p.376

2-Hydroxy propane
See 2-Propanol p.377

4-Hydroxyaniline
See 4-Aminophenol p.26

Hydroxybenzene
See Phenol p.347

4-Hydroxybenzoic acid methyl ester
See Methyl 4-hydroxybenzoate p.262

2-Hydroxybenzoic acid
See Salicylic acid p.392

o-Hydroxybenzoic acid
See Salicylic acid p.392

Hydroxybrasilin monohydrate
See Haematoxylin monohydrate p.290

(±)-Hydroxy-1,4-butanedioic acid
See (±)-Malic acid p.249

Hydroxyethyl cellulose, high purity

Danger

CAS 9004-62-0
Storage Temperature: Ambient

pH (2%, Water) @25°C ..... 6 - 7

Cat. No.	Pk	Pack type
K391-100G	100 g	Glass bottle

2-Hydroxyethyl mercaptan
See 2-Mercaptoethanol p.251

4-(2-Hydroxyethyl)piperazine-1-ethanesulphonic acid
See HEPES 2-[4-(2-Hydroxyethyl)-1-piperazinyl]-ethanesulphonic acid p.184

4-Hydroxy-α-(4-hydroxynaphthyl)-α-phenylnaphthalene-1-methanol
See 1-Naphtholbenzeine p.313

Hydroxylamine solution, alcoholic Reag. Ph. Eur. 1044301

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87847.180	100 ml	Plastic bottle

Hydroxylamine solution, alkaline Reag. Ph. Eur. 1044302

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87848.290	1 l	Plastic bottle

Hydroxylamine solution, alkaline R1 Reag. Ph. Eur. 1044303

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87849.220	200 ml	Plastic bottle

Hydroxylammonium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 5470-11-1 **UN:** 2923
$NH_2OH·HCl$ **M.W.** 69.49 g/mol
Boiling Pt: 306 °C (1013 hPa) **Melting Pt:** 151 °C **Density:** 1,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Solubility in alcohol	Passes test
Free acidity	Max. 0.25 meq/g	pH (20°C; 5 %)	2.5 - 3.5
Heavy metals (as Pb)	Max. 5 ppm	Ignition residue (SO_4)	Max. 100 ppm
Insolubility in water	Max. 50 ppm	NH_4 (Ammonium)	Max. 0.1 %
SO_4 (Sulphate)	Max. 20 ppm	As (Arsenic)	Max. 1 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm		

Cat. No.	Pk	Pack type
24708.235	250 g	Plastic bottle for solids
24708.292	1 kg	Plastic bottle for solids

Hydroxylammonium chloride TECHNICAL

Warning

CAS 5470-11-1 **UN:** 2923
$NH_2OH·HCl$ **M.W.** 69.49 g/mol
Boiling Pt: 306 °C (1013 hPa) **Melting Pt:** 151 °C **Density:** 1,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24706.238	250 g	Plastic bottle for solids

Hydroxylamine HCl
See Hydroxylammonium chloride p.208

Hydroxylamine hydrochloride
See Hydroxylammonium chloride p.208

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Hydroxylamine hydrochloride solution R2 Reag. Ph. Eur. 1044304

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87850.180	100 ml	Plastic bottle

1-Hydroxy-3-methylbenzene

See m-Cresol p.100

4-(α-(4-Hydroxy-1-naphthyl)benzylidene)naphthalen-1(4H)-one

See 1-Naphtholbenzeine p.313

2-(6-hydroxy-3-oxo-(3H)-xanthen-9-yl)benzoic acid disodium salt

See Fluorescein disodium salt p.160

2-(6-Hydroxy-3-oxo-(3H)-xanthen-9-yl)benzoic acid

See Fluorescein p.160

β-Hydroxyphenetole

See 2-Phenoxyethanol p.350

ω-Hydroxyphenetole

See 2-Phenoxyethanol p.350

(±)-2-Hydroxypropanoic acid aluminium salt

See Aluminium trilactate p.24

(±)-2-Hydroxypropanoic acid magnesium salt dihydrate

See Magnesium dilactate dihydrate p.246

(±)-2-Hydroxypropanoic acid

See Lactic acid p.235

(±)-2-Hydroxypropionic acid aluminium salt

See Aluminium trilactate p.24

(±)-2-Hydroxypropionic acid magnesium salt dihydrate

See Magnesium dilactate dihydrate p.246

(±)-2-Hydroxypropionic acid

See Lactic acid p.235

8-Hydroxyquinoline

See 8-Quinolinol p.383

(±)-Hydroxysuccinic acid

See (±)-Malic acid p.249

3-Hydroxytoluene

See m-Cresol p.100

Hydroxytricarballylic acid

See Citric acid p.91

Hypophosphorous reagent Reag. Ph. Eur. 1045200

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87851.180	100 ml	Plastic bottle

VWR LIFE SCIENCE Lysis buffer, hypotonic

Detergent-free buffer for isolation of proteins from tissue culture cells. Cell lysis and the subsequent isolation of the crude cytoplasmic fraction completed in less than 30 minutes.

Cat. No.	Pk	Pack type
M334-100ML	100 ml	Plastic bottle

NEW Hypoxanthine disodium for biopharmaceutical production

$C_5H_2N_4Na_2O$ **M.W.** 180.079 g/mol

Assay (on dried substance)	Min. 98.0 %
Appearance	Crystalline powder
Colour	White to off white
Cell culture toxicity	Passes test
DNases	Not detected
Identification by IR	Conforms to structure
Proteases	Not detected
RNases	Not detected
Solubility (1 %)	Clear and complete
pH (25°C; 1 %)	10.5 - 12.4
Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 10 %
Endotoxin (1 %) (EU/mg)	Max. 0.04 EU/mg

Cat. No.	Pk	Pack type
31608.180	100 g	Plastic bottle for solids
31608.297	1 kg	Plastic bottle for solids
31608.366	5 kg	Plastic bottle for solids
31608.468	25 kg	Bucket (Plastic)

NEW Hypoxanthine monosodium for biopharmaceutical production

CAS 45738-97-4

$C_5H_4N_4ONa$ **M.W.** 159.105 g/mol

Assay	Min. 97.0 %
Appearance	Crystalline powder
Colour	White to off white
Cell culture toxicity	Passes test
DNases	Not detected
Identification by IR	Conforms to structure
Proteases	Not detected
RNases	Not detected
Solubility (0.5 %)	Clear and complete
pH (25°C; 0,5 %)	9.0 - 10.5
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (110°C)	Max. 3.0 %
Absorption max. (pH 11.0)	257 - 261 nm
Proportion A250/A260 (pH 11.0)	0.672 - 1.008
Proportion A280/A260 (pH 11.0)	0.096 - 0.144
Bioburden	Max. 100 CFU/g
Endotoxin (1 %) (EU/mg)	Max. 0.04 EU/mg

Cat. No.	Pk	Pack type
31752.297	1 kg	Plastic bottle for solids
31752.366	5 kg	Plastic bottle for solids
31752.468	25 kg	Bucket (Plastic)

Single element ICP standards

See ICP standards, ARISTAR® p.**450**, 451, 452

ICP Blank, Hydrochloric acid ARISTAR®

Danger

CAS 7647-01-0 **UN:** 1789
HCl
5% HCl in ASTM Type II Water

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456494P	500 ml	Plastic bottle

ICP Blank, nitric acid 5% ARISTAR®

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Storage Temperature: Ambient
5% HNO_3 in ASTM Type II Water

Calibration blank for ICP, tested in ISO Guide 34 /ISO17025 accredited laboratory.

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456484N	500 ml	Plastic bottle

ICP multi-element calibration standard 1 in dil. nitric acid ARISTAR®

In 5% nitric acid solution

19 Elements : 50 mg/l Ag, Ni; 100 mg/l Al; 5 mg/l B, Fe 15 mg/l, Ba, Mn; 1 mg/l Be, Sr; 200 mg/l Bi, In, Pb; 20 mg/l Cd, Co, Cu, Zn; 25 mg/l Cr; 150 mg/l Ga; 40 mg/l Tl

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456452F	100 ml	Plastic bottle

ICP multi-element calibration standard 2 in dil. nitric acid ARISTAR®

In 2% nitric acid solution

3 Elements: 250 mg/l Li; 1000 mg/l K,Na

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456462H	100 ml	Plastic bottle

ICP multi-element calibration standard 3 in dil. nitric acid ARISTAR®

In 2% nitric acid solution

4 Elements: 1000 mg/l Ba, Ca, Mg, Sr

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456472J	100 ml	Plastic bottle

ICP multi-element quality control standard 2 in dil. nitric acid with a trace of hydrofluoric acid ARISTAR®

In 5% nitric acid solution with trace of HF

7 Elements : 50 mg/l Ag; 100 mg/l Al, B, Ba, Na; 1000 mg/l K; 500 mg/l Si

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456432B	100 ml	Plastic bottle
456434D	500 ml	Plastic bottle

ICP multi-element quality control standard 3 in dil. nitric acid ARISTAR® for ICP

In 5% nitric acid solution

15 Elements 100 mg/l : Al, Ba, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, Na, Ti, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456442D	100 ml	Plastic bottle
456444F	500 ml	Plastic bottle

Multi-element quality control standard 100 mg/l, 9 elements in hydrochloric acid 10% ARISTAR® for ICP

9 Elements 100 mg/l: Au, Ir, Os, Pd, Pt, Rh, Ru, Sn, Te

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
84792.180	100 ml	Plastic bottle

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Multi-element quality control standard 1,000 mg/l, 21 elements in nitric acid 4% ARISTAR® for ICP

21 Elements 1000 mg/l: Ag, As, Al, B, Ba, Bi, Cd, Co, Cr, Cu, Fe, Ga, In, Li, Mn, Ni, Pb, Si, Sr, Tl, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
87629.180	100 ml	Plastic bottle

Multi-element quality control standard 100 mg/l, 28 elements in nitric acid 5% ARISTAR® for ICP

28 Elements 100 mg/l: Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
85006.186	100 ml	Plastic bottle

Multi-element quality control standard 100 mg/l, 21 elementsin nitric acid 5% ARISTAR® for ICP

21 Elements 100 mg/l: Al, As, B, Ca, Cd, Cr, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, P, Si, S, Ti, Zn,

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
89166.180	100 ml	Plastic bottle

Multi-element quality control standard, 100 mg/l for 32 elements in 5% nitric acid, ARISTAR® for ICP

32 Elements 100 mg/l: Ag, Al, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Ge, In, K, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Re, Sb, Si, Sn, Ta, Ti, V, W, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
89186.180	100 ml	Plastic bottle

Multi-element quality control standard 100 mg/l, 9 elements in nitric acid 5% ARISTAR® for ICP-MS

9 Elements 100 mg/l: Be, In, Bi, Li, Cr, Mg, Co, Pb, U

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
88175.230	250 ml	Plastic bottle

ICP multi-element quality control standard 10 mg/l, 22 elements in nitric acid 5% ARISTAR®

22 Elements 10 mg/l: As, Ba, Be, Cd, Co, Cr, Cu, Fe, Al, Mn, Mo, Ni, Pb, Sb, Se, Sn, Ti, Tl, V, U, Te, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
88724.150	50 ml	Plastic bottle

Multi-element quality control standard, 10 mg/l for 36 elements in 2% nitric acid , ARISTAR® for ICP-MS

36 Elements: 10 mg/l: Al, Ag, As, B, Ba, Ca, Cd, Ce, Co, Cr, Cu, Dy, Er, Eu, Fe, Gd, Ho, K, La, Li, Lu, Mg, Mn, Na, Nd, Ni, P, Pb, Rb, Se, Sm, Sr, Tl, Tm, V, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
84793.180	100 ml	Plastic bottle

Multi-element quality control standard 100 mg/l, 23 elements in nitric acid 5% ARISTAR® for ICP

23 Elements 100 mg/l: As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
84790.180	100 ml	Plastic bottle

VWR Handy Solution Guides

Multi-element quality control standard, 100 mg/l for 33 elements, ARISTAR® for ICP

33 Elements 100 mg/l: Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
84791.180	100 ml	Plastic bottle

Multi-element quality control standard 1 mg/l, 28 elements in nitric acid 5% ARISTAR® for ICP

28 Elements 1 mg/l: Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
05200.185	100 ml	Plastic bottle

QUALITY CONTROL STANDARD 1 FOR ICP,

23 Elements 5% nitric acid solution with trace of HF

23 Elements 100 mg/l : As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn

Supplied with certificate of analysis, tested in ISO Guide 34 /ISO17025 accredited laboratory.

Cat. No.	Pk	Pack type
456422W	100 ml	Plastic bottle
456424B	500 ml	Plastic bottle

Multi-element quality control standard 10 mg/l, 12 elements in nitric acid 2% / Hydrofluoric acid < 0.1% ARISTAR® for ICP-MS

12 Elements at 10 mg/l: Hf, Ge, Mo, Nb, Sb, Si, Sn, Ta, Te, Ti, W, Zr

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
84794.180	100 ml	Plastic bottle

Multi-element calibration standard 1 in dil. nitric acid ARISTAR® for ICP-MS

17 Elements in 5% nitric acid solution

17 Elements 10 mg/ml : Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456622F	100 ml	Plastic bottle

Multi-element calibration standard 2 in dil. nitric acid ARISTAR® for ICP-MS

29 Elements in 5% nitric acid solution

29 Elements 10 mg/l : Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456502V	100 ml	Plastic bottle

Multi-element calibration standard 3 in hydrochloric acid 10% ARISTAR® for ICP-MS

10 Elements in 10% Hydrochloric acid solution

10 Elements 10 mg/l : Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456512A	100 ml	Plastic bottle

Multi-element calibration standard 4 in water with a trace of hydrofluoric acid ARISTAR® for ICP-MS

(12 Elements H_2O tr. HF solution)

12 Elements 10 mg/l : B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456522C	100 ml	Plastic bottle

Multi-element quality control standard 1 in dil. nitric acid ARISTAR® for ICP-MS

9 Elements in 2% nitric acid solution)

9 Elements 10 mg/l : Be, Bi, Ce, Co, In, Pb, Mg, Ni, U

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456592Q	100 ml	Plastic bottle

Multi-element quality control standard 2 in dil. nitric acid ARISTAR® for ICP-MS

25 Elements in 5% nitric acid solution

25 Elements 10 mg/l : Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Th, Tl, U, V, Zn

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456602B	100 ml	Plastic bottle

NEW

Multi-element calibration standard in dil. nitric acid for ICP

23 Elements : 1000 mg/l Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn (HNO_3 5%)

Cat. No.	Pk	Pack type
85025.180	100 ml	Plastic bottle

NEW

Multi-element calibration standard in dil. nitric acid for ICP-MS

30 Elements : 100 mg/l As, B, Be, Fe, Se, Zn ; 10 mg/l de Ba, Bi, Cd, Co, Cr, Cu, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Rb, Sr, Te, Ti, U, V ; 1000 mg/l Ca (HNO_3 2%)

Cat. No.	Pk	Pack type
85026.180	100 ml	Plastic bottle

NEW

ICP multi element solution according USP232 Dietary supplements 4 elements in 7% nitric acid.

Cd 5 mg/L, Pb 10 mg/L, As 15 mg/L, Hg 15 mg/L in HNO_3 7%.

Cat. No.	Pk	Pack type
85035.180	100 ml	Plastic bottle

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NEW

ICP multi element solution according USP232 Oral dose 8 elements in 7% nitric acid

Cd 25 mg/l, Pb 5 mg/l, As 1.5 mg/l, Hg 15 mg/l, Mo 100 mg/l, Ni 500 mg/l, V 100 mg/l, Cu 1000 mg/l in HNO3 7%

Cat. No.	Pk	Pack type
85036.180	100 ml	Plastic bottle

NEW

ICP multi element solution diluted according USP232 Oral dose, 8 elements in 7% nitric acid

Cd 2.5 mg/l, Pb 5 mg/l, As 1.5 mg/l, Hg 1.5 mg/l, Mo 10 mg/l, Ni 50 mg/l, V 10 mg/l, Cu 100 mg/l in HNO3 7%

Cat. No.	Pk	Pack type
85037.180	100 ml	Plastic bottle

NEW

ICP multi element solution according USP232 Parental dose 6 elements 100 mg/l in 15% hydrochloric acid

6 elements: 100 mg/l each of Ir ; Pt ; Os ; Rh ; Pd ; Ru in HCl 15%

Cat. No.	Pk	Pack type
85038.180	100 ml	Plastic bottle

NEW

ICP multi element solution according USP232 Parental dose 6 elements 10 mg/ in 15% hydrochloric acid

6 elements: 10mg/l each of Ir ; Pt ; Os ; Rh ; Pd ; Ru in HCl 15%

Cat. No.	Pk	Pack type
85039.180	100 ml	Plastic bottle

Interference check A in dil. nitric acid ARISTAR® for ICP-MS

11 Elements in 2% nitric acid solution

11 Elements : 10 mg/l As, Cd, Se Zn; 20 mg/l Ag, C, Cr, Cu, Mn, Ni, V

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456562K	100 ml	Plastic bottle

Interference check A in nitric acid 1% ARISTAR® for ICP-MS

(12 Elements nitric acid 1% solution)

12 Elements:18000 mg/l Cl; 1000 mg/l Al, K, Mg, P, S; 2000 mg/l C; 3000 mg/l Ca; 2500 mg/l Fe, Na; 20 mg/l Mo, Ti

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456552Y	100 ml	Plastic bottle

Tuning solution 1 in dil. nitric acid ARISTAR® for ICP-MS

8 Components in 2% HNO_3

8 Elements 100 mg/l : Ba, Be, Cu, In, Li, Mg, Tl, U

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456532E	100 ml	Plastic bottle

Tuning solution 2 in dil. nitric acid ARISTAR® for ICP-MS

13 Components in 2% HNO_3

13 components 100 mg/l : Ba, Be, Bi, Ce, Cu, Ho, In, Li, Mg, Pb, Tl, U, Y

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456542G	100 ml	Plastic bottle

Idranal® VI

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N',N'-tetraacetic acid)… p.132

Imidazole GPR RECTAPUR®

Danger

CAS 288-32-4 **UN:** 2923

$C_3H_4N_2$ **M.W.** 68.08 g/mol

Boiling Pt: 255 °C (1013 hPa) **Melting Pt:** 89-90 °C **Density:** 1,18 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Melting point	88 - 91 °C
pH (20°C; 5 %)	9.5 - 10.5
Ignition residue (SO_4)	Max. 0.1 %
Water	Max. 0.5 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
24720.157	50 g	Plastic bottle for solids

Imidazole for biotechnology

Danger

CAS 288-32-4 **UN:** 2923
$C_3H_4N_2$ **M.W.** 68.08 g/mol
Boiling Pt: 255 °C (1013 hPa) **Melting Pt:** 89-90 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient

DNase ..... none detected
Insolubles ..... <= 0.1 %
Melting Point ..... 88 °C - 92 °C
pH (5%, Water) @25°C ..... 9.5 - 10.5
Protease ..... none
Purity ..... > 99 %
RNase ..... none detected
Solubility (20%, Water) ..... pass

Cat. No.	Pk	Pack type
0527-10G	10 g	Glass bottle
0527-50G	50 g	Glass bottle
0527-100G	100 g	Glass bottle
0527-1KG	1 kg	Plastic bottle for solids

Imidazole, proteomics grade

Danger

CAS 288-32-4 **UN:** 2923
$C_3H_4N_2$ **M.W.** 68.08 g/mol
Boiling Pt: 255 °C (1013 hPa) **Melting Pt:** 89-90 °C **Density:** 1,18 g/cm³ (20 °C)
Storage Temperature: Ambient

DNase ..... none detected
Appearance ..... White to slightly yellow solid
Insolubles ..... < = 0.1 %
Melting Point ..... 88°C - 92°C
pH (5%, Water) @25°C ..... 9.5 - 10.5
Protease ..... none detected
Purity ..... > = 99 %
RNase ..... none detected
Solubility (20%, Water) ..... Pass

Cat. No.	Pk	Pack type
M136-100G	100 g	Glass bottle

Standard solution imidazole 1000 mg/l in water

Cat. No.	Pk	Pack type
87345.180	100 ml	Plastic bottle
87345.290	1.000 ml	Plastic bottle

1H-Imidazole

See Imidazole p.213

L-3-Imidazol-4-ylalanine monohydrochloride monohydrate

See L(+)-Histidine monohydrochloride monohydrate p.190

L-3-Imidazol-4-ylalanine

See L(+)-Histidine p.190

Indanetrione hydrate

See Ninhydrin p.315

Indicator '4.5', pH 3.5-6.0 pH-indicator, for titration of first hydrogen of phosphoric acid

Danger

UN: 1993
Boiling Pt: 82,8 °C (1013 hPa)
Storage Temperature: Ambient
pH 3.5 - 6.0

pH 3.5 orange-red
pH 4.4 orange-grey
pH 4.5 pure grey
pH 4.6 bluish-grey
pH 6.0 deep blue
A mixed indicator for the titration of the first hydrogen of phosphoric acid.

Cat. No.	Pk	Pack type
210414M	500 ml	Glass bottle
210416X	2,5 l	Glass bottle

Universal indicator ethanol solution TECHNICAL

Cat. No.	Pk	Pack type
34352.290	1 l	Glass bottle

Mixed indicator methyl orange - bromocresol green in aqueous solution Reag. Ph. Eur. 1054801

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87870.180	100 ml	Plastic bottle

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pH indicator, 1 - 11, Tri, Rota®

These tri indicator papers show three different colours for each pH-value.

- High precision due to the 3 colour scale
- Easy to use
- Produced from high quality paper to give good colour matching of paper to printed calibration scale

Tri paper has a hydrophobic barrier between the different indicators which ensures a distinctive separation of the colour bands.

pH range	pH gradation	Pk	Cat. No.
1 - 11	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11	5	85409.600

pH indicator paper, 1 - 14, Rota®

Indicator paper for testing across the complete pH range

- Easy to use
- Produced from high quality paper to give good colour matching of paper to printed calibration scale

pH range	pH gradation	Pk	Cat. No.
1 - 14	1 · 2 · 3 · 5 · 6 · 7 · 8 · 9 · 10 · 12 · 14	5	85402.600

pH indicator papers, Duo, Rota®

These Duo indicator papers show two different colours for each pH-value.

- Easy to use for qualitatively accurate readings
- Produced from high quality paper to give good colour matching of paper to printed calibration scale
- Narrow range papers with graduation intervals of 0.3 pH units on the colour scale
- Wide range papers with graduation intervals up to 1 pH unit on the colour scale

pH range	pH gradation	Pk	Cat. No.
1,0 - 12,0	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12	5	85403.600
1,0 - 4,3	1,0 · 1,3 · 1,6 · 1,9 · 2,2 · 2,5 · 2,8 · 3,1 · 3,4 · 4,0 · 4,3	5	85404.600
3,5 - 6,8	3,5 · 3,8 · 4,1 · 4,4 · 4,7 · 5,0 · 5,3 · 5,6 · 5,9 · 6,2 · 6,5 · 6,8	5	85405.600
5,0 - 8,0	5,0 · 5,3 · 5,6 · 5,9 · 6,2 · 6,5 · 6,8 · 7,1 · 7,4 · 7,7 · 8,0	5	85406.600
7,0 - 10,0	7,0 · 7,3 · 7,6 · 7,9 · 8,2 · 8,5 · 8,8 · 9,1 · 9,4 · 9,7 · 10,0	5	85407.600
9,5 - 14,0	9,5 · 10,0 · 10,5 · 11,0 · 11,5 · 12,0 · 12,5 · 13,0 · 13,5 · 14,0	5	85408.600

pH indicator papers, Rota®

These rolls (5 m × 10 mm) have only 1 colour zone and are useful where high precision of measurement is not necessary.

Description	pH range	pH gradation	Pk	Cat. No.
Universal Indicator, Rota®	1-10,0	1	5	1.09526.0005
Universal Indicator, Rota®	1-10,0	1	50	1.09526.0050
Indicator Paper, Rota®	1-14	1	1 Roll	3610.

pH indicator test strips, non bleeding, Dosatest®

Dosatest® test strips provide precise and rapid pH determination due to the four different colour blocks for each pH-value

- Easier to work with due to the long handle
- Colour-fixed reactive pads
- Brilliant colour chart

pH-indicator is chemically bound to the cellulose fibre preventing bleeding. This effectively protects the sample against contamination and enables measurements even in weakly buffered or strongly alkaline solutions.

Better access to different types of containers and prevents that fingers get in contact with the sample

pH range	pH gradation	Pk	Cat. No.
0,0 - 14,0	0 · 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12 · 13 · 14	100	85410.601
0,0 - 6,0	0 · 0,5 · 1 · 1,5 · 2 · 2,5 · 3 · 3,5 · 4 · 4,5 · 5 · 5,5 · 6,0	100	85411.601
2,0 - 9,0	2,0 · 2,5 · 3,0 · 3,5 · 4,0 · 4,5 · 5,0 · 5,5 · 6,0 · 6,5 · 7,0 · 7,5 · 8,0 · 8,5 · 9,0	100	85412.601
4,5 - 10,0	4,5 · 5,0 · 5,5 · 6,0 · 6,5 · 7,0 · 7,5 · 8,0 · 8,5 · 9,0 · 9,5 · 10,0	100	85413.601
6,0 - 10,0	6,0 · 6,4 · 6,7 · 7,0 · 7,3 · 7,6 · 7,9 · 8,2 · 8,4 · 8,6 · 8,8 · 9,1 · 9,5 · 10,0	100	85414.601
7,0 - 14,0	7,0 · 7,5 · 8,0 · 8,5 · 9,0 · 9,5 · 10,0 · 10,5 · 11,0 · 11,5 · 12,0 · 12,5 · 13,0 · 13,5 · 14,0	100	85415.601
3,6 - 6,1	3,6 · 4,1 · 4,4 · 4,7 · 5,0 · 5,3 · 5,6 · 6,1	100	85416.601
5,1 - 7,2	5,1 · 5,4 · 5,7 · 6,0 · 6,3 · 6,6 · 6,9 · 7,2	100	85417.601
6,0 - 7,7	6,0 · 6,4 · 6,7 · 7,0 · 7,3 · 7,7	100	85418.601
7,5 - 9,5	7,5 · 7,9 · 8,2 · 8,4 · 8,6 · 8,8 · 9,1 · 9,5	100	85419.601
7,9 - 9,8	7,9 · 8,3 · 8,6 · 8,9 · 9,1 · 9,4 · 9,8	100	85420.601
0,3 - 2,3	0,3 · 0,7 · 1,0 · 1,3 · 1,6 · 1,9 · 2,3	100	85421.601
1,7 - 3,8	1,7 · 2,0 · 2,3 · 2,6 · 2,9 · 3,2 · 3,5 · 3,8	100	85422.601
4,0 - 7,0	4,0 · 4,4 · 4,7 · 5,0 · 5,3 · 5,5 · 5,8 · 6,1 · 6,5 · 7,0	100	85423.601

pH indicator test strips, IVD, Dosatest®

Dosatest® test strips with CE-mark for in-vitro-diagnostics (IVD) 98/79/EG or medical products 93/42/EWG.

- For pH determination of gastric juice
- Easier to work with due to the long handle
- Colour-fixed reactive pads
- Brilliant colour chart

pH-indicator is chemically bound to the cellulose fibre preventing bleeding. This effectively protects the sample against contamination and enables measurements even in weakly buffered or strongly alkaline solutions.

Better access to different types of containers and prevents that fingers get in contact with the sample

Description	pH range	pH gradation	Pk	Cat. No.
pH test strips (IVD), Dosatest	2,0 - 9,0	2,0 · 2,5 · 3,0 · 3,5 · 4,0 · 4,5 · 5,0 · 5,5 · 6,0 · 6,5 · 7,0 · 7,5 · 8,0 · 8,5 · 9,0	100	85444.601
pH test strips (IVD), Dosatest	4,5 - 10,0	4,5 · 5,0 · 5,5 · 6,0 · 6,5 · 7,0 · 7,5 · 8,0 · 8,5 · 9,0 · 9,5 · 10,0	100	85445.601

pH indicator strips for coloured samples, Dosatest®

These Dosatest® strips incorporate the colour scale and are ideal for determining pH values for coloured solutions

- Reliable even in coloured samples
- Versatile and economic
- Handle remains dry and clean whatever the sample

Due to the scale in the strip any sample colour will have the same effect in the reference colour as in the reactive strip and this ensures accurate readings even in coloured samples.

Invisible hydrophobic barrier above the top colour field of the strip prevents capillary action of the test solution and prevents contact with the user.

Packaging information: Box with 100 test strips 6 x 95 mm

pH range	pH gradation	Pk	Cat. No.
0 - 12	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12	200	85424.602
0 - 1,8	0 · 0,3 · 0,6 · 0,8 · 1,0 · 1,2 · 1,5 · 1,8	200	85425.602
1,8 - 3,8	1,8 · 2,1 · 2,4 · 2,7 · 3,0 · 3,2 · 3,5 · 3,8	200	85426.602
3,8 - 5,5	3,8 · 4,0 · 4,2 · 4,4 · 4,6 · 4,9 · 5,2 · 5,5	200	85427.602
5,2 - 6,8	5,2 · 5,5 · 5,7 · 5,9 · 6,1 · 6,3 · 6,5 · 6,8	200	85428.602
6,0 - 8,1	6,0 · 6,3 · 6,6 · 6,9 · 7,2 · 7,5 · 7,8 · 8,1	200	85429.602
8,0 - 9,7	8,0 · 8,2 · 8,4 · 8,6 · 8,8 · 9,1 · 9,4 · 9,7	200	85430.602
9,5 - 12,0	9,5 · 10,0 · 10,5 · 11,0 · 11,5 · 12,0	200	85431.602
12 - 14	12,0 · 12,5 · 13,0 · 13,5 · 14,0	200	85432.602

Test strips, chloride, Dosatest®

A ready to use kit that fits into your lab coat pocket.

- Rapid and convenient
- Easy to handle

Ideal to control your disinfection. Semi-quantitative results can be obtained between 10 and 120 seconds

The colour charts are adjusted and checked using certified standard solutions that are directly traceable to primary NIST standards.

Packaging information: Container with 100 test strips 6 x 95 mm

Description	Range	Pk	Cat. No.
Chloride test 0 - 3000 mg/l	0 · 500 · 1000 · 1500 · 2000 · ≥3000 mg/l	100	85441.601

Test strips, water hardness, Dosatest®

A ready to use kit that fits into your lab coat pocket.

- Rapid and convenient
- Easy to handle
- Choice of ranges for required precision

Ideal to monitor water hardness. Semi-quantitative results can be obtained between 10 and 120 seconds

The colour charts are adjusted and checked using certified standard solutions that are directly traceable to primary NIST standards.

Packaging information: Container with 100 test strips 6 x 95 mm

Description	Range	Pk	Cat. No.
Hardness 5 - 25 °d	<3 · > 5 · >10 · 15 ·20 · >25	100	85442.601
Hardness 4 - 21 °d	<3 · > 4 · >7 · 14 ·>21	100	85443.601

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Test strips, nitrate/nitrite, Dosatest®

A ready to use kit that fits into your lab coat pocket.

- Rapid and convenient
- Easy to handle

Semi-quantitative results can be obtained between 10 and 120 seconds

The colour charts are adjusted and checked using certified standard solutions that are directly traceable to primary NIST standards.

Packaging information: Container with 100 test strips 6 x 95 mm

Description	Range	Pk	Cat. No.
Nitrate test strips 0 - 500mg/l	0 · 10 · 25 · 50 · 100 · 250 · 500	100	85439.601
Nitrite test strips 0 - 80 mg/l	0 · 1 · 5 · 10 · 20 · 40 · 80		

Test strips, nitrite, Dosatest®

A ready to use kit that fits into your lab coat pocket.

- Rapid and convenient
- Easy to handle

Semi-quantitative results can be obtained between 10 and 120 seconds

The colour charts are adjusted and checked using certified standard solutions that are directly traceable to primary NIST standards.

Packaging information: Container with 100 test strips 6 x 95 mm

Description	Range	Pk	Cat. No.
Nitrite test strips 0 - 80 mg/l	0 · 1 · 5 · 10 · 20 · 40 · 80	100	85440.601

Test strips, peracetic acid, Dosatest®

A ready to use kit that fits into your lab coat pocket.

- Rapid and convenient
- Easy to handle
- Choice of ranges for required precision

Ideal to monitor your desinfection processes. Semi-quantitative results can be obtained between 10 and 120 seconds

The colour charts are adjusted and checked using certified standard solutions that are directly traceable to primary NIST standards.

Packaging information: Container with 100 test strips 6 x 95 mm

Description	Range	Pk	Cat. No.
Peracetic acid test strips 0 - 50 mg/l	0 · 5 · 10 · 20 · 30 · 50	100	85436.601
Peracetic acid test strips 0 - 500 mg/l	0 · 50 · 100 · 200 · 300 · 400 · 500	100	85437.601
Peracetic acid test strips 0 - 2000 mg/l	0 · 500 · 1000 · 1500 · 2000	100	85438.601

Test strips, peroxide, Dosatest®

A ready to use kit that fits into your lab coat pocket.

- Rapid and convenient
- Easy to handle
- Choice of ranges for required precision

Ideal to monitor your desinfection processes. Semi-quantitative results can be obtained between 10 and 120 seconds

The colour charts are adjusted and checked using certified standard solutions that are directly traceable to primary NIST standards.

Packaging information: Container with 100 test strips 6 x 95 mm

Description	Range	Pk	Cat. No.
Peroxide test strips 0 - 25 mg/l	0 · 0.5 · 2 · 5 · 10 · 25	100	85433.601
Peroxide test strips 0 - 100 mg/l	0 · 1 · 3 · 10 · 30 · 100	100	85434.601
Peroxide test strips 0 - 1000 mg/l	0 · 50 · 150 · 300 · 500 · 800 · 1000	100	85435.601

Indicator strips, non bleeding

Non bleeding special indicator dyes that are covalently bound to the reagent paper and then adhered to plastic strips.

Description	pH range	Pk	Cat. No.
Indicator strips, non bleeding	0 - 6,0	100	315052J
Indicator strips, non bleeding	0 - 14	100	315082P

Indicators

Description	Page	Pk	Cat. No.
Alizarin complexone TECHNICAL	22, 218	1 g	20118.081
Aniline blue water soluble TECHNICAL	47, 218	100 g	21999.183
ortho-Boric acid 40 g/l in aqueous solution with indicator for Kjeldahl determinations	62, 218	2,5 l	192316H
ortho-Boric acid 10 g/l in aqueous solution, light green VOLUSOL®	62, 218	5 l	5732.5000
Bromocresol green, powder pH-indicator	64, 218	25 g	200125B
Bromocresol green 0.04% in ethanol TECHNICAL	64, 218	250 ml	34301.237
Bromophenol blue 0.04% in ethanol TECHNICAL	65, 218	250 ml	34307.237
Bromothymol blue 0.04% in ethanol TECHNICAL	65, 218	250 ml	34303.234
Chromotropic acid disodium salt dihydrate analytical reagent	90, 218	25 g	20261.132
Clarifying reagent of biological media	92, 218	250 ml	27357.232
Congo Red 1% in aqueous solution	96, 218	1 l	31727.295
1,5-Diphenylcarbazide analytical reagent	124, 218	10 g	23550.120
Dithizone analytical reagent	126, 218	5 g	23570.106
Dragendorff's reagent for analysis of alkaloids	127, 218	250 ml	30989.236
Eriochrome Black T TECHNICAL	144, 218	100 g	26002.183
Fehling's reagent I (Copper (II) sulphate solution, concentrated solution) for qualitative determination of reducing sugars	157, 218	500 ml	31965.264
Fehling's reagent I (Copper (II) sulphate solution) for qualitative determination of reducing sugars	157, 218	1 l	31963.291
Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution, concentrated solution) for qualitative determination of reducing sugars	157, 218	500 ml	31966.267
Fehling's reagent II (L(+)-Potassium sodium tartrate in sodium hydroxide solution) for qualitative determination of reducing sugars	157, 218	1 l	31964.294
Fehling's reagent (kit, contains solution I and II) for qualitative determination of reducing sugars	157, 218	1 l	31701.296
Ferroin indicator (1,10-Phenanthroline-Iron (II) sulphate complex, 7 mg/ml $FeSO_4$) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	159, 218	100 ml	30890.188
Fluorescein disodium salt TECHNICAL	160, 218	100 g	260983T
Fluorescein disodium salt TECHNICAL	160, 218	5 kg	26098CF
Folin-Ciocalteu's reagent for analysis of phenols	161, 218	500 ml	31360.264
Folin-Denis' reagent for analysis of uric acid	161, 218	1 l	31351.296
Griess' reagent for analysis of nitrite	181, 218	1 l	31023.293
Hydroquinone GPR RECTAPUR®	207, 218	1 kg	24704.298
Indicator '4.5', pH 3.5-6.0 pH-indicator, for titration of first hydrogen of phosphoric acid	214, 218	500 ml	210414M
Indicator '4.5', pH 3.5-6.0 pH-indicator, for titration of first hydrogen of phosphoric acid	214, 218	2,5 l	210416X
Universal indicator ethanol solution TECHNICAL	214, 218	1 l	34352.290
Indigo carmine analytical reagent	218, 219	25 g	22537.138
Methyl orange 0.04% in aqueous solution TECHNICAL pH-indicator	218, 262	250 ml	31720.230
Methyl orange 0.04% in aqueous solution TECHNICAL pH-indicator	218, 262	1 l	31720.292
Methyl red 0.2 g/l in ethanol TECHNICAL	218, 264	250 ml	34302.231
Meyer'reagent for blood research	218, 264	500 ml	31072.268
Murexide analytical reagent	218, 312	10 g	25717.120
Nessler Reagent for determination of ammonia and ammonium salts	218, 314	500 ml	31074.265
Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 218, 315	5 g	25905.107
Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 218, 315	50 g	25905.153
Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 218, 315	100 g	25905.180
Ninhydrin 0.5% in 1-butanol, spray reagent for TLC	218, 316	240 ml	30960.226
Nuclear Fast Red TECHNICAL	218, 321	5 g	27416.101
Patton-Reeders reagent (Calconcarboxylic acid) analytical reagent	218, 329	25 g	20326.136
1,10-Phenanthroline monohydrate analytical reagent	218, 347	5 g	26227.101
1,10-Phenanthroline hydrochloride monohydrate analytical reagent	218, 347	5 g	26230.102
Phenolphthalein GPR RECTAPUR®	218, 349	250 g	26237.231
Phenolphthalein 1% in ethanol 50% pH-indicator	218, 350	250 ml	210893Q
Phenolphthalein 1% in ethanol 50% pH-indicator	218, 350	1 l	210894R
Phenolphthalein 0.2% in ethanol TECHNICAL	218, 350	1 l	31724.295
Phenolphthalein 1% in 2-propanol TECHNICAL	218, 350	1 l	8626.1000
Phenol red 0.4 g/l in ethanol TECHNICAL	218, 350	250 ml	34304.237
8-Quinolinol AnalaR NORMAPUR® analytical reagent	218, 383	250 g	26123.237
Saffron, powder TECHNICAL	218, 391	5 g	27481.105
Schiff's reagent (Feulgen stain) for analysis of aldehydes	218, 394	500 ml	30969.261
Soda lime with indicator AnalaR NORMAPUR® analytical reagent	218, 406	1 kg	22666.293
Soda lime with indicator AnalaR NORMAPUR® analytical reagent	218, 406	5 kg	22666.362
Soda lime with indicator AnalaR NORMAPUR® analytical reagent	218, 406	180 kg	22666.555
Sodium tetraphenylborate analytical reagent	218, 436	25 g	28187.138
Starch soluble Iotect® iodine indicator AnalaR NORMAPUR® analytical reagent	218, 464	100 g	28610.187
Starch soluble Iotect® iodine indicator AnalaR NORMAPUR® analytical reagent	218, 464	250 g	28610.234
Starch soluble Iotect® iodine indicator AnalaR NORMAPUR® analytical reagent	218, 464	1 kg	28610.291
5-Sulphosalicylic acid dihydrate AnalaR NORMAPUR® analytical reagent	218, 469	100 g	20678.187
Thymol blue 0.04% in ethanol TECHNICAL	218, 487	250 ml	34300.234
o-Tolidine 0.1 % (1.6 M) hydrochloric solution for chlorine determination in water according to the NF T 90-010 standard	218, 491	1 l	28672.294
Xylenol orange tetrasodium salt TECHNICAL	218, 522	5 g	26086.103

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Indigo carmine analytical reagent

Warning

CAS 860-22-0
$C_{16}H_8N_2Na_2O_8S_2$ **M.W.** 466.36 g/mol
Melting Pt: > 300 °C
Storage Temperature: Ambient
Identification ..... Passes test

Cat. No.	Pk	Pack type
22537.138	25 g	Plastic bottle for solids

Indigo carmine 0.4% in dil. sulphuric acid (~2%) Reag. Ph. Eur. 1045602

CAS 860-22-0
$C_{16}H_8N_2Na_2O_8S_2$ **M.W.** 466.36 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87853.290	1 l	Plastic bottle

Indigo carmine 0,4% in mixture of sulphuric acid 20% and hydrochloric acid 1% Reag. Ph. Eur.

CAS 860-22-0
$C_{16}H_8N_2Na_2O_8S_2$ **M.W.** 466.36 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87852.290	1 l	Plastic bottle

NEW Indium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Indium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85572.180
Indium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456752X

Indium standard solution, 10,000 mg/l In in dil. nitric acid (from In) ARISTAR® standard for ICP

In in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455492J	100 ml	Plastic bottle

Indium standard solution, 1,000 mg/l In in dil. nitric acid (from In) ARISTAR® standard for ICP

In in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455482H	100 ml	Plastic bottle
455484J	500 ml	Plastic bottle

Indium standard solution, 1,000 mg/l In in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86684.180	100 ml	Plastic bottle
86684.260	500 ml	Plastic bottle

Indium (III) oxide NORMATOM®

CAS 1312-43-2
In_2O_3 **M.W.** 277.64 g/mol
Melting Pt: 715,05 °C **Density:** 7,18 g/cm³ (20 °C)

Assay ..... Min. 99.5 %
Bi (Bismuth) ..... Max. 5 ppm
Ca (Calcium) ..... Max. 10 ppm
Cr (Chromium) ..... Max. 5 ppm
Cu (Copper) ..... Max. 5 ppm
Fe (Iron) ..... Max. 10 ppm
Ni (Nickel) ..... Max. 5 ppm
Pb (Lead) ..... Max. 5 ppm
Si (Silicium) ..... Max. 15 ppm
Sn (Tin) ..... Max. 5 ppm
Tl (Thallium) ..... Max. 5 ppm
Zn (Zinc) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
84846.130	25 g	Plastic bottle for solids
84846.180	100 g	Plastic bottle for solids

VWR LIFE SCIENCE (3-Indoxyl) β-D-glucopyranoside, high purity

CAS 487-60-5
$C_{14}H_{17}NO_6$
Storage Temperature: Freezer
Purity (HPLC) ..... > 97%

Cat. No.	Pk	Pack type

Industial methylated spirits

See Ethanol 98% denatured with methanol (industrial methylated spirit). p.150

Q Path® Ink

See Microscopical diagnostics p.293

Inosine, high purity

CAS 58-63-9
$C_{10}H_{12}N_4O_5$
Storage Temperature: Ambient

Ash	0.2 %
Heavy Metals (as Pb)	<10 ppm
Loss on Drying	1.0 %
Purity	98.0 %
Thin Layer Chromatography (TLC)	ONE SPOT

Cat. No.	Pk	Pack type
0451-25G	25 g	Plastic bottle for solids

myo-Inositol, high purity

CAS 87-89-8
$C_6H_{12}O_6$ **M.W.** 180.16 g/mol
Boiling Pt: 291 °C (1013 hPa) **Melting Pt:** 210 °C **Density:** 1,752 g/cm³ (20 °C)
Storage Temperature: Ambient

Melting Range	224 °C - 227 °C
Purity	>= 99 %

Cat. No.	Pk	Pack type
0444-100G	100 g	Plastic bottle for solids

NEW Iodate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84971.180	100 ml	Plastic bottle

NEW Iodide 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84972.180	100 ml	Plastic bottle
84972.260	500 ml	Plastic bottle

Iodine AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent, resublimed

Danger

CAS 7553-56-2 **UN:** 3495
I_2 **M.W.** 253.81 g/mol
Boiling Pt: 184,3 °C (1013 hPa) **Melting Pt:** 114 °C **Density:** 4,9 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119485285-30

Assay	99.5 - 100.5 %	Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.	Insoluble substances	Passes test
Solution S	Passes test	Non-volatile residue	Max. 0.02 %
Cl + Br (as Cl)	Max. 30 ppm	SO_4 (Sulphate)	Max. 50 ppm
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
24757.187	100 g	Glass bottle
24757.234	250 g	Glass bottle
24757.291	1 kg	Glass bottle for solids

Iodine Ph. Eur.

Danger

CAS 7553-56-2 **UN:** 3495
I_2 **M.W.** 253.81 g/mol
Boiling Pt: 184,3 °C (1013 hPa) **Melting Pt:** 114 °C **Density:** 4,9 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119485285-30

Assay	99.5 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Bromides and chlorides	Max. 250 ppm
Non-volatile residue	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
24762.265	500 g	Glass bottle

Iodine GPR RECTAPUR®, resublimed

Danger

CAS 7553-56-2 **UN:** 3495
I_2 **M.W.** 253.81 g/mol
Boiling Pt: 184,3 °C (1013 hPa) **Melting Pt:** 114 °C **Density:** 4,9 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119485285-30

Assay	Min. 99 %
Non-volatile residue	Max. 0.05 %
Cl + Br (as Cl)	Max. 0.025 %

Cat. No.	Pk	Pack type
24755.181	100 g	Glass bottle
24755.294	1 kg	Glass bottle for solids
24755.460	25 kg	Bucket (Plastic)

Iodine 0.05 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

CAS 7553-56-2
I_2
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.04998 - 0.05002 mol/l

Cat. No.	Pk	Pack type
84591.600	30 ml	Glass ampoule

Iodine 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7553-56-2 **UN:** 3264
I_2
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.499 - 0.501 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
30914.238	250 ml	Glass bottle
30914.295	1 l	Glass bottle

Iodine 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7553-56-2 **UN:** 3264
I_2 **Density:** 1,032 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.0499 - 0.0501 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
30917.295	1 l	Glass bottle
30917.320	2,5 l	Glass bottle

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Iodine solution R4 Reag. Ph. Eur. 1045806

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87856.290	1 l	Plastic bottle

Iodine 5 g/l in chloroform Reag. Ph. Eur. 1045805

CAS 7553-56-2
I_2
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87855.290	1 l	Plastic bottle

Iodine monobromide 20 g/l in acetic acid 99% Reag. Ph. Eur. 1045901

Danger

CAS 7789-33-5 **UN:** 2789
IBr
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87714.180	100 ml	Plastic bottle

Wijs'reagent for determination of iodine value

Danger

UN: 3085
Melting Pt: 63 °C **Density:** 1,23 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
2812.0500	500 ml	Glass bottle
2812.1000	1 l	Glass bottle

Iodoacetamide, proteomics grade

Warning

CAS 144-48-9 **UN:** 2811
ICH_2CONH_2 **M.W.** 184.96 g/mol
Boiling Pt: 266 °C (1013 hPa) **Melting Pt:** 91-94 °C
Storage Temperature: Refrigerator

Loss on Drying ..... < 1%
Melting Point ..... 90°C - 95°C
Protease ..... none detected
Purity ..... > 98 %

Cat. No.	Pk	Pack type
M216-30G	30 g	Glass bottle

Iodomethane GPR RECTAPUR®

Danger

CAS 74-88-4 **UN:** 2644
CH_3I **M.W.** 141.94 g/mol
Boiling Pt: 42,4 °C (1013 hPa) **Melting Pt:** -66 °C **Density:** 2,279 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay ..... Min. 99 %
IR Spectrum ..... Passes test
Density (20/4) ..... 2.260 - 2.290

Cat. No.	Pk	Pack type
25596.154	50 ml	Glass bottle

2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-phenyltetrazolium chloride, high purity

Warning

CAS 146-68-9
$C_{19}H_{13}ClIN_5O_2$ **M.W.** 505.7 g/mol
Melting Pt: 227-229 °C
Storage Temperature: Refrigerator

Em (250 nm, Water) ..... >= 34000
Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0294-1G	1 g	Glass bottle

Iodoplatinate reagent Reag. Ph. Eur. 1046300

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87857.290	1 l	Plastic bottle

Iotect® iodine indicator

See Starch, soluble p.464

IPA

See 2-Propanol p.377

IPTG (Isopropyl-β-D-thiogalactopyranoside) (not of animal origin), high purity

CAS 367-93-1
$C_9H_{18}O_5S$ **M.W.** 238.31 g/mol
Boiling Pt: 402 °C (1013 hPa) **Melting Pt:** 109,5-110,5 °C
Storage Temperature: Freezer
Free of all animal products. Dioxane free.

Abs.@300nm (5%, Water) ..... < 0.15
Abs.@400nm (5%, Water) ..... < 0.06
Dioxane Test ..... Pass
Appearance ..... White crystalline powder
Melting Point ..... 110°C - 114°C
Moisture (KF) ..... < 1 %
pH (5%, Water)@25°C ..... 5 - 7
Purity ..... > 98 %
Specific Rotation ..... -34.5° - -28.5°

Cat. No.	Pk	Pack type
N679-10G	10 g	Glass bottle

IPTG (Isopropyl-β-D-thiogalactopyranoside), ultrapure

CAS 367-93-1
$C_9H_{18}O_5S$ **M.W.** 238.31 g/mol
Boiling Pt: 402 °C (1013 hPa) **Melting Pt:** 109,5-110,5 °C
Storage Temperature: Freezer
Commonly used inducer for β-Galactosidase activity in many bacterial gene sequences controlled by the *lac* operon. IPTG and X-Gal are often used together to identify bacterial colonies containing recombinant plasmid DNA. Dioxane-free.

Abs.@300 nm (5 %, Water)	0.13
Abs.@400 nm (5 %, Water)	0.06
Dioxane	NONE
Identification (IR)	PASS
Melting Point	110 - 114 °C
Moisture (KF)	1.0 %
pH (5 %, Water) @25 °C	5 - 7
Purity	99.0 %
Solubility (5 %, Water)	PASS
Specific Rotation (1 %, Water)	-34.0 to -29.0 °

Cat. No.	Pk	Pack type
0487-1G	1 g	Glass bottle
0487-10G	10 g	Glass bottle
0487-100G	100 g	Glass bottle

IPTG (Isopropyl-β-D-thiogalactopyranoside)

CAS 367-93-1
$C_9H_{18}O_5S$ **M.W.** 238.31 g/mol
Boiling Pt: 402 °C (1013 hPa) **Melting Pt:** 109,5-110,5 °C
Storage Temperature: Freezer
A chemical analogue of galactose which cannot be hydrolysed by the enzyme ß-galactosidase. IPTG is an inducer for activity of the *E.Coli* lac operon which acts by binding and inhibiting the lac repressor. Genes controlled by the lac promoter/operator sequence are expressed to high levels in the presence of IPTG. Essentially dioxane free.

Assay	Min. 98 %
Appearance	White crystalline powder
IR Spectrum	Passes test
Specific optical rotation (1 %; water)	-33 to -31 °
Dioxane	Max. 1 ppm
Water	Max. 1 %

Cat. No.	Pk	Pack type
437145X	10 g	Glass bottle for solids
437144N	25 g	Glass bottle for solids
43714BD	1 kg	Glass bottle

NEW IPTG (Isopropyl-β-D-thiogalactopyranoside)

CAS 367-93-1
$C_9H_{18}O_5S$ **M.W.** 238.31 g/mol
Boiling Pt: 402 °C (1013 hPa) **Melting Pt:** 109,5-110,5 °C
Storage Temperature: Freezer

Cat. No.	Pk	Pack type
AC121	5 g	Glass bottle for solids

IPTG (Isopropyl-β-D-thiogalactopyranoside), 20 mg/ml, ultrapure

Warning

CAS 367-93-1
$C_9H_{18}O_5S$ **M.W.** 238.31 g/mol
Commonly used inducer for β-Galactosidase activity in many bacterial gene sequences controlled by the *lac* operon. IPTG and X-Gal are often used together to identify bacterial colonies containing recombinant plasmid DNA.

Cat. No.	Pk	Pack type
E708-1ML	1 ml	Plastic tube

NEW Iridium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Iridium	10 ppm	10% HCl	Plastic bottle	100 ml	85573.180
Iridium	1000 ppm	10% HCl	Plastic bottle	100 ml	457314D

Iridium standard solution, 1,000 mg/l Ir in 10% hydrochloric acid (from $IrCl_3$) ARISTAR® standard for ICP

$IrCl_3.3H_2O$ in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455502R	100 ml	Plastic bottle
455504T	500 ml	Plastic bottle

Iridium standard solution, 1,000 mg/l Ir in 10% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86685.180	100 ml	Plastic bottle
86685.260	500 ml	Plastic bottle

Iron (reagents for the analysis of)

1,10-Phenanthroline monohydrate analytical reagent p.347
5-Sulphosalicylic acid dihydrate AnalaR NORMAPUR® analytical reagent . p.469

Iron, powder AnalaR NORMAPUR® analytical reagent, reduced by hydrogen

Warning

CAS 7439-89-6 **UN:** 3089
Fe **M.W.** 55.85 g/mol
Boiling Pt: 3000 °C (1013 hPa) **Melting Pt:** 1536 °C **Density:** 7,86 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Insolubility in sulphuric acid	Max. 0.1 %
Cl (Chloride)	Max. 20 ppm	S (Sulphur)	Max. 20 ppm
As (Arsenic)	Max. 2 ppm	Cu (Copper)	Max. 20 ppm
Mn (Manganese)	Max. 20 ppm	Pb (Lead)	Max. 20 ppm
Zn (Zinc)	Max. 20 ppm		

Cat. No.	Pk	Pack type
24088.232	250 g	Plastic bottle for solids

Iron ≥98%, powder TECHNICAL

Warning

CAS 7439-89-6 **UN:** 3089
Fe **M.W.** 55.85 g/mol
Boiling Pt: 3000 °C (1013 hPa) **Melting Pt:** 1536 °C **Density:** 7,86 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
24086.292	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Iron standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Iron	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85565.180
Iron	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456762Q
Iron	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457072B

Iron standard solution, 10,000 mg/l Fe in dil. nitric acid (from Fe) ARISTAR® standard for ICP

Fe in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455532A	100 ml	Plastic bottle
455534C	500 ml	Plastic bottle

Iron standard solution, 1,000 mg/l Fe in dil. nitric acid (from Fe) ARISTAR® standard for ICP

Fe in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455522V	100 ml	Plastic bottle
455524A	500 ml	Plastic bottle

Iron standard solution, 1,000 mg/l Fe in 2% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86677.180	100 ml	Plastic bottle
86677.260	500 ml	Plastic bottle

Standard solution (200 ppm Fe) for the preparation of iron standard solution (20 ppm Fe) Reag. Ph. Eur.; 5001600

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88086.180	100 ml	Plastic bottle

Iron dichloride tetrahydrate

See Iron (II) chloride tetrahydrate p.223

Iron (II) chloride tetrahydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 13478-10-9 **UN:** 3260

$FeCl_2 \cdot 4H_2O$ **M.W.** 198.81 g/mol

Melting Pt: 677 °C **Density:** 1,926 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	98.0 - 102.0 %	Not precipitated by NH_4OH (as SO_4)	Max. 0.1 %
Total N (Nitrogen)	Max. 10 ppm	SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 5 ppm	Fe (III) (Iron)	Max. 0.2 %
Pb (Lead)	Max. 10 ppm	Zn (Zinc)	Max. 100 ppm

Cat. No.	Pk	Pack type
24127.237	250 g	Plastic bottle for solids

Iron (II) chloride tetrahydrate, purified

Danger

CAS 13478-10-9 **UN:** 3260

$FeCl_2 \cdot 4H_2O$ **M.W.** 198.81 g/mol

Melting Pt: 677 °C **Density:** 1,926 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
24128.297	1 kg	Plastic bottle for solids

Iron (III) chloride, anhydrous TECHNICAL

Danger

CAS 7705-08-0 **UN:** 1773

$FeCl_3$ **M.W.** 162.21 g/mol

Boiling Pt: 315 °C (1013 hPa) **Melting Pt:** 260 °C **Density:** 2,8 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24216.268	500 g	Plastic bottle for solids
24216.361	5 kg	Bucket (Plastic)

Iron (III) chloride hexahydrate

Iron (III) chloride hexahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 10025-77-1 **UN:** 3260
$FeCl_3 \cdot 6H_2O$ **M.W.** 270.3 g/mol
Boiling Pt: 280-285 °C (1013 hPa) **Melting Pt:** 37 °C **Density:** 1,82 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 102.0 %	Free chlorine	Passes test
Heavy metals (as Pb)	Max. 50 ppm	Insoluble substances	Max. 100 ppm
Total N (Nitrogen)	Max. 10 ppm	Total P (Phosphorus) (as PO_4)	Max. 100 ppm
NO_3 (Nitrate)	Max. 100 ppm	SO_4 (Sulphate)	Max. 100 ppm
Ca (Calcium)	Max. 100 ppm	Cu (Copper)	Max. 30 ppm
Fe (II) (Iron)	Max. 20 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 50 ppm	Na (Sodium)	Max. 0.05 %
Zn (Zinc)	Max. 30 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
24208.237	250 g	Plastic bottle for solids
24208.260	500 g	Plastic bottle for solids

Iron (III) chloride 41% in aqueous solution TECHNICAL

Danger

CAS 7705-08-0 **UN:** 2582
$FeCl_3$

Assay 38 - 42 %

Cat. No.	Pk	Pack type
24212.298	1 l	Glass bottle
24212.367	5 l	Plastic bottle
24212.447	20 l	Plastic drum

Iron (III) chloride 27.5% in aqueous solution AnalaR NORMAPUR® analytical reagent

Danger

CAS 7705-08-0 **UN:** 2582
$FeCl_3$

Assay	27.5 - 29.0 %	Acidity	Max. 0.08 meq/g
Density (20/4)	1.260 - 1.280	Free chlorine	Max. 10 ppm
Heavy metals (as Pb)	Max. 30 ppm	Not precipitated by NH_4OH (as SO_4)	Max. 0.05 %
NH_4 (Ammonium)	Max. 20 ppm	NO_3 (Nitrate)	Max. 20 ppm
PO_4 (Phosphate)	Max. 20 ppm	SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 5 ppm	Fe (II) (Iron)	Max. 30 ppm
Zn (Zinc)	Max. 20 ppm		

Cat. No.	Pk	Pack type
24207.291	1 l	Glass bottle

Iron (III) chloride 27% in aqueous solution GPR RECTAPUR®

Danger

CAS 7705-08-0 **UN:** 2582
$FeCl_3$

Assay 27 - 29 %
Density (20/4) 1.260 - 1.280
Heavy metals (as Pb) Max. 100 ppm
Not precipitated by NH_4OH (as SO_4) Max. 0.5 %
SO_4 (Sulphate) Max. 0.02 %

Cat. No.	Pk	Pack type
24206.297	1 l	Glass bottle

Iron (III) chloride 27% in aqueous solution TECHNICAL

Danger

CAS 7705-08-0 **UN:** 2582
$FeCl_3$

Density: 1,26 g/cm³ (20 °C)

Assay 27 - 29 %

Cat. No.	Pk	Pack type
24205.294	1 l	Glass bottle
24205.363	5 l	Plastic bottle

Iron (III) citrate trihydrate

CAS 17217-76-4
$C_6H_5FeO_7 \cdot 3H_2O$ **M.W.** 298.99 g/mol
Storage Temperature: Ambient

Assay (calculated as Fe) 18 - 21 %
Cl (Chloride) Max. 0.05 %
NH_4 (Ammonium) Max. 0.5 %
As (Arsenic) Max. 5 ppm

Cat. No.	Pk	Pack type
283814C	500 g	Plastic bottle for solids

Iron (III) citrate tribasic trihydrate

See Iron (III) citrate trihydrate p.224

Iron (II) ethanedioate dihydrate

See Iron (II) oxalate dihydrate p.225

Iron (III) monosodium ethylenediaminetetraacetate

See EDTA ferric monosodium salt p.131

Iron (III) nitrate nonahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 7782-61-8 **UN:** 1466
$Fe(NO_3)_3 \cdot 9H_2O$ **M.W.** 404 g/mol
Boiling Pt: 125 °C (1013 hPa) **Melting Pt:** 47 °C **Density:** 1,68 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 101.0 %	Free acid	Max. 0.05 meq/g
Insolubility in water	Max. 0.02 %	Not precipitated by NH_4OH (as SO_4)	Max. 0.1 %
Cl (Chloride)	Max. 5 ppm	PO_4 (Phosphate)	Max. 50 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 50 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 10 ppm	Mn (Manganese)	Max. 0.02 %
Na (Sodium)	Max. 50 ppm	Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 10 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
24175.233	250 g	Plastic bottle for solids
24175.260	500 g	Plastic bottle for solids
24175.290	1 kg	Plastic bottle for solids

Iron (III) nitrate nonahydrate TECHNICAL

Warning

CAS 7782-61-8 **UN:** 1466
$Fe(NO_3)_3 \cdot 9H_2O$ **M.W.** 404 g/mol
Boiling Pt: 125 °C (1013 hPa) **Melting Pt:** 47 °C **Density:** 1,68 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay Min. 98 %

Cat. No.	Pk	Pack type
24174.296	1 kg	Plastic bottle for solids
24174.365	5 kg	Bucket (Plastic)

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Iron (II) oxalate dihydrate, purified

Warning

CAS 6047-25-2 **UN:** 3288

$Fe(C_2O_4)\cdot 2H_2O$ **M.W.** 179.9 g/mol

Melting Pt: 190 °C **Density:** 2,28 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
24179.293	1 kg	Plastic bottle for solids

Iron (II,III) oxide, black TECHNICAL

Warning

CAS 1317-61-9

Fe_3O_4 **M.W.** 231.54 g/mol

Melting Pt: 1560 °C **Density:** 5,18 g/cm³ (20 °C)

Identification	Passes test

Cat. No.	Pk	Pack type
24187.460	25 kg	Metal drum

Iron (III) oxide, anhydrous GPR RECTAPUR®

Warning

CAS 1309-37-1

Fe_2O_3 **M.W.** 159.69 g/mol

Melting Pt: 1538 °C **Density:** 5,24 g/cm³ (20 °C)

Assay	Min. 97 %
Cl (Chloride)	Max. 0.1 %
Mg (Magnesium)	Max. 0.03 %
Mn (Manganese)	Max. 0.3 %
Pb (Lead)	Max. 50 ppm

Cat. No.	Pk	Pack type
24193.292	1 kg	Plastic bottle for solids

NEW Iron (III) oxide, anhydrous TECHNICAL

Warning

CAS 1309-37-1

Fe_2O_3 **M.W.** 159.69 g/mol

Melting Pt: 1538 °C **Density:** 5,24 g/cm³ (20 °C)

Assay	Min. 97 %

Cat. No.	Pk	Pack type
24189.468	25 kg	Bucket (Plastic)

Iron salicylate solution Reag. Ph. Eur. 1046700

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87858.260	500 ml	Plastic bottle

Iron (III) sodium ethylenediaminetetraacetate

See EDTA ferric monosodium salt p.131

VWR LIFE SCIENCE Iron (II) sulphate USP

Warning

CAS 7720-78-7

FeO_4S **M.W.** 151.91 g/mol

Density: 2,841 g/cm³ (20 °C)

Storage Temperature: Ambient

Arsenic	< 0.0003%
Insolubles	<= 0.05%
Lead	<= 0.001%
Mercury	<= 3ug/g
Purity (Anhydrous)	86% - 89%

Cat. No.	Pk	Pack type
E990-500G	500 g	Glass bottle for solids

Iron (II) sulphate hydrate GPR RECTAPUR®

Warning

CAS 13463-43-9

$FeSO_4\cdot H_2O$ **M.W.** 169.93 g/mol

Melting Pt: ~ 300 °C **Density:** 2,97 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 84 %
Heavy metals (as Pb)	Max. 50 ppm
Insolubility in water	Max. 0.05 %
As (Arsenic)	Max. 2 ppm
Fe (III) (Iron)	Max. 0.4 %
Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
24242.292	1 kg	Plastic bottle for solids

Iron (II) sulphate heptahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 7782-63-0

$FeSO_4\cdot 7H_2O$ **M.W.** 278.02 g/mol

Melting Pt: 64 °C **Density:** 1,9 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	99.5 - 105.0 %	Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.	Solution S	Passes test Ph.Eur.
pH (20°C; 5 %)	3.0 - 4.0	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 10 ppm	PO_4 (Phosphate)	Max. 10 ppm
As (Arsenic)	Max. 2 ppm	Cr (Chromium)	Max. 50 ppm
Cu (Copper)	Max. 10 ppm	Fe (III) (Iron)	Max. 0.02 %
Mn (Manganese)	Max. 0.05 %	Ni (Nickel)	Max. 50 ppm
Pb (Lead)	Max. 5 ppm	Zn (Zinc)	Max. 50 ppm
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
24244.232	250 g	Plastic bottle for solids
24244.298	1 kg	Plastic bottle for solids

Iron (II) sulphate heptahydrate Ph. Eur.

Warning

CAS 7782-63-0

$FeSO_4\cdot 7H_2O$ **M.W.** 278.02 g/mol

Melting Pt: 64 °C **Density:** 1,9 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	98.0 - 105.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
pH (5 %)	3.0 - 4.0
Cl (Chloride)	Max. 200 ppm
Cr (Chromium)	Max. 50 ppm
Cu (Copper)	Max. 50 ppm
Ferric ions	Max. 0.3 %
Mn (Manganese)	Max. 0.1 %
Ni (Nickel)	Max. 50 ppm
Zn (Zinc)	Max. 50 ppm
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
24246.295	1 kg	Plastic bottle for solids

Iron (II) sulphate heptahydrate

Iron (II) sulphate heptahydrate GPR RECTAPUR®

Warning

CAS 7782-63-0
$FeSO_4 \cdot 7H_2O$
M.W. 278.02 g/mol
Melting Pt: 64 °C **Density:** 1,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Not precipitated by NH_4OH (as SO_4) ..... Max. 0.5 %
Cl (Chloride) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
24240.295	1 kg	Plastic bottle for solids
24240.364	5 kg	Plastic bottle for solids

Iron (II) sulphate heptahydrate TECHNICAL

Warning

CAS 7782-63-0
$FeSO_4 \cdot 7H_2O$
M.W. 278.02 g/mol
Melting Pt: 64 °C **Density:** 1,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
24237.294	1 kg	Plastic bottle for solids
24237.363	5 kg	Bucket (Plastic)

Iron (III) sulphate hydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 15244-10-7
$Fe_2(SO_4)_3 \cdot H_2O$
M.W. 417.9 g/mol
Density: 3,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as Fe(III)) ..... 21.0 - 23.0 %
Cl (Chloride) ..... Max. 50 ppm
PO_4 (Phosphate) ..... Max. 30 ppm
Cu (Copper) ..... Max. 20 ppm
Zn (Zinc) ..... Max. 50 ppm
Mn (Manganese) ..... Max. 0.1 %
Insolubility in diluted HCl ..... Max. 100 ppm
NO_3 (Nitrate) ..... Max. 0.02 %
As (Arsenic) ..... Max. 5 ppm
Fe (II) (Iron) ..... Max. 0.02 %
Ba (Barium) ..... Max. 2 ppm
Pb (Lead) ..... Max. 6 ppm

Cat. No.	Pk	Pack type
24252.296	1 kg	Plastic bottle for solids

Iron (III) sulphate hydrate GPR RECTAPUR®

Danger

CAS 15244-10-7
$Fe_2(SO_4)_3 \cdot H_2O$
M.W. 417.9 g/mol
Density: 3,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as Fe(III)) ..... Min. 21 %
Cl (Chloride) ..... Max. 100 ppm
Fe (II) (Iron) ..... Max. 0.05 %
Zn (Zinc) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
24248.292	1 kg	Plastic bottle for solids

Iron trichloride

See Iron (III) chloride p.223

Iron trichloride hexahydrate

See Iron (III) chloride hexahydrate p.224

Iron trinitrate nonahydrate

See Iron (III) nitrate nonahydrate p.224

Isoamyl alcohol AnalaR NORMAPUR® analytical reagent

Warning

CAS 123-51-3 **UN:** 1105
$(CH_3)_2CHCH_2CH_2OH$
M.W. 88.15 g/mol
Boiling Pt: 130 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0,812 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as mixture of isomers) Min. 99.0 %
Alkalinity ..... Max. 0.0008 meq/g
Colouration ..... Max. 10 APHA
Acidity and esters (as $C_7H_{14}O_2$) ..... Max. 0.12 %
Furfuraldehyde ..... Max. 1 ppm
Peroxides (as H_2O_2) ..... Max. 10 ppm
Al (Aluminium) ..... Max. 0.5 ppm
Ba (Barium) ..... Max. 0.1 ppm
Cd (Cadmium) ..... Max. 0.05 ppm
Cr (Chromium) ..... Max. 0.02 ppm
Fe (Iron) ..... Max. 0.1 ppm
Mn (Manganese) ..... Max. 0.02 ppm
Pb (Lead) ..... Max. 0.1 ppm
Zn (Zinc) ..... Max. 0.1 ppm
Acidity ..... Max. 0.008 meq/g
Boiling point ..... 131 - 132.5 °C
Density (20/4) ..... 0.808 - 0.812
Evaporation residue ..... Max. 10 ppm
Pentan-1-ol ..... Max. 0.5 %
Water ..... Max. 0.2 %
B (Boron) ..... Max. 0.02 ppm
Ca (Calcium) ..... Max. 0.5 ppm
Co (Cobalt) ..... Max. 0.02 ppm
Cu (Copper) ..... Max. 0.02 ppm
Mg (Magnesium) ..... Max. 0.1 ppm
Ni (Nickel) ..... Max. 0.02 ppm
Sn (Tin) ..... Max. 0.1 ppm

Cat. No.	Pk	Pack type
20798.295	1 l	Glass bottle

Isoamyl alcohol for milk analysis according to the NF V 04-210 standard

Warning

CAS 123-51-3 **UN:** 1105
$(CH_3)_2CHCH_2CH_2OH$
M.W. 88.15 g/mol
Boiling Pt: 130 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0,812 g/cm³ (20 °C)
Storage Temperature: Ambient

Density (20/4) ..... 0.808 - 0.818
Assay (calculated as mixture of isomers) ..... Min. 98 %
Fats ..... Passes test
Furfuraldehyde ..... Passes test
Organic impurities ..... Passes test
Distillation range ..... 128 - 132 °C
Evaporation residue ..... Max. 50 ppm
2-Methyl-1-butanol ..... 8 - 10 %
3-Methyl-1-butanol ..... 90 - 92 %
Water ..... Max. 0.5 %

Cat. No.	Pk	Pack type
20799.298	1 l	Glass bottle

Isoamyl alcohol, dehydrated (max. 0.05% H_2O) GPR RECTAPUR® for synthesis

Warning

CAS 123-51-3 **UN:** 1105
$(CH_3)_2CHCH_2CH_2OH$
M.W. 88.15 g/mol
Boiling Pt: 130 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0,812 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as mixture of isomers) ..... Min. 98 %
Density (20/4) ..... 0.808 - 0.812
Water ..... Max. 0.05 %

Cat. No.	Pk	Pack type
20796.298	1 l	Glass bottle

Isoamyl alcohol TECHNICAL

Warning

CAS 123-51-3 **UN:** 1105
$(CH_3)_2CHCH_2CH_2OH$
M.W. 88.15 g/mol
Boiling Pt: 130 °C (1013 hPa) **Melting Pt:** -117 °C **Density:** 0,812 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
20797.292	1 l	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Isobutanol ≥99.0% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 78-83-1 **UN:** 1212
$(CH_3)_2CHCH_2OH$ **M.W.** 74.12 g/mol
Boiling Pt: 107,9 °C (1013 hPa) **Melting Pt:** -108 °C **Density:** 0,802 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Acidity	Max. 0.0006 meq/g
Boiling point	107 - 109 °C	Colouration	Max. 10 APHA
Density (20/4)	0.799 - 0.803	Density (20/20)	0.800 - 0.804
n 15/D	1.397 - 1.399	n 20/D	1.395 - 1.396
Evaporation residue	Max. 50 ppm	Water	Max. 0.5 %
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20833.297	1 l	Glass bottle

Isobutanol ≥98% GPR RECTAPUR®

Danger

CAS 78-83-1 **UN:** 1212
$(CH_3)_2CHCH_2OH$ **M.W.** 74.12 g/mol
Boiling Pt: 107,9 °C (1013 hPa) **Melting Pt:** -108 °C **Density:** 0,802 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Boiling point	107 - 109 °C
Density (20/4)	0.799 - 0.803
Evaporation residue	Max. 0.02 %
n 20/D	1.395 - 1.396

Cat. No.	Pk	Pack type
20836.297	1 l	Glass bottle

Isobutanol ≥97% TECHNICAL

Danger

CAS 78-83-1 **UN:** 1212
$(CH_3)_2CHCH_2OH$ **M.W.** 74.12 g/mol
Boiling Pt: 107,9 °C (1013 hPa) **Melting Pt:** -108 °C **Density:** 0,802 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
n 20/D	1.395 - 1.396

Cat. No.	Pk	Pack type
20835.294	1 l	Glass bottle

Isohexane HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 107-83-5 **UN:** 1208
C_6H_{14} **M.W.** 86.18 g/mol
Boiling Pt: 60 °C (1013 hPa) **Melting Pt:** -154 °C **Density:** 0,653 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119484651-34

Assay (GC)	Min. 97.00 %
Water	Max. 0.0100 %
Evaporation residue	Max. 0.0005 %
n-Hexane	Max. 3.0 %
Transmittance (205 nm)	Min. 98.0 %
Transmittance (220 nm)	Min. 80.0 %
Transmittance (230 nm)	Min. 95.0 %
Transmittance (280 nm)	Min. 98.0 %

Cat. No.	Pk	Pack type
83622.320	2,5 l	Glass bottle

Isohexane (mixture of isomers) GPR RECTAPUR®

Danger

CAS 92112-69-1 **UN:** 1208
C_6H_{14} **M.W.** 86.18 g/mol
Boiling Pt: 60 °C (1013 hPa) **Melting Pt:** -154 °C **Density:** 0,653 g/cm³ (25 °C)
Storage Temperature: Ambient **REACh:** 01-2119484651-34

n-Hexane	Max. 5 %
Evaporation residue	Max. 50 ppm
Total S (Sulphur)	Max. 50 ppm

Cat. No.	Pk	Pack type
287206A	2,5 l	Glass bottle

Isomount 2000 Q Path®

Mounting media based on isopropyl alcohol. Compatible with most solvent replacing agents. Suitable for manual and automatic mounting of slides. PET bottle of 500 ml.

- Less toxic mounting
- Approved quality
- Drying time: 20 minutes

Description	Pk	Cat. No.
Isomount 2000 Q Path®, 470 mPaS	500 ml	05547535.
Isomount 2000 Q Path®, 470 mPaS	1 l	05547536.

Isooctane

See 2,2,4-Trimethylpentane p.497

Isopentyl alcohol

See Isoamyl alcohol p.226

Isopropanol

See 2-Propanol p.377

4-Isopropyl-3-hydroxytoluene

See Thymol p.487

Isopropyl alcohol

See 2-Propanol p.377

6-Isopropyl-m-cresol

See Thymol p.487

2-Isopropyl-5-methylphenol

See Thymol p.487

IPTG

See IPTG (Isopropyl-β-D-thiogalactopyranoside) p.221

Reagents for water determination by the Karl Fischer method

- Ready to use solutions, reagents and standards for volumetric and coulometric analyses
- Fast, stable and accurate endpoints
- Buffered systems for controlled pH
- Long-term stability and shelf life
- Every batch verified

Volumetric reagents for water determination by the Karl Fischer method

These reagents are especially suitable for water determination in aldehydes and ketones.

- Fast and stable endpoints for accurate results time and time again
- Low toxicity and pyridine-free
- Provide consistent results

Description	Pk	Cat. No.
Volumetric one-component titrating reagents		
CombiNORM 1, 1 mg H_2O/ml, used with methanol	1 l	85450.290
CombiNORM 2, 2 mg H_2O/ml, used with methanol	1 l	85451.290
CombiNORM 5, 5 mg H_2O/ml, used with methanol	1 l	85452.290
Combi solvent E (ethanol-based working medium)	1 l	85454.290
Lipo solvent CM, non polar reagent (working medium), for non polar substances, oils and fats	1 l	85455.290
Lipo solvent HM, non polar reagent (working medium), for non polar substances, oils and fats	1 l	85456.290
Methanol quick (working medium), for accelerating one-component KF titration, used with CombiNORM	1 l	85457.290
Keto solvent, working medium, for one-component KF titrations in aldehydes and ketones	1 l	85459.290
CombiNORM 5K, for one-component KF titrations in aldehydes and ketones, 5 mg H_2O/ml, used with Solvent K	1 l	85463.290
Solvent K (working medium), for one-component KF titrations in aldehydes and ketones, used with CombiNORM 5K	1 l	85464.290
Volumetric two-component titrating reagents		
Solvent (working medium), for used with all TitrANTs	1 l	85453.290
Solvent (crude), working medium, for titration in oils	1 l	85458.290
Solvent E, ethanol based working medium	1 l	85460.290
Solvent CM (working medium), for titration in oils	1 l	85461.290
Solvent OIL (working medium), for titration in oils	1 l	85462.290
TitrANT 1, 1 mg H_2O/ml, used with Solvent	1 l	85465.290
TitrANT 2, 2 mg H_2O/ml, used with Solvent	1 l	85466.290
TitrANT 2E, ethanol based, 2 mg H_2O/ml, used with Solvent E	1 l	85467.290
TitrANT 5, 5 mg H_2O/ml, used with Solvent	1 l	85468.290
TitrANT 5E, ethanol based, 5 mg H_2O/ml, used with Solvent E	1 l	85469.290

Coulometric reagents for water determination by the Karl Fischer method

Both anolyte and catholyte solutions are with improved formulation to increase the speed and accuracy of titration when determining water content at the microgram level.

- Reach the endpoint quickly and consistently
- Long shelf life
- With stable end point

Description	Pk	Cat. No.
Anolyte solutions		
Coulometric reagent AG, for cells with and without diaphragm	1 l	85470.290
Coulometric reagent A, for cells with diaphragm	500 ml	85472.260
Coulometric reagent E, ethanol based, for cells with and without diaphragm	500 ml	85473.260
Coulometric reagent AD, for cells without diaphragm	500 ml	85474.260
Coulometric reagent AG-H, for applications with long-chained hydrocarbons, for cells with and without diaphragm	500 ml	85475.260
Coulometric reagent A OVEN, for use with oven, for cells with and without diaphragm	500 ml	85476.260
Coulometric reagent OIL, for applications with oils, for cells with diaphragm	500 ml	85477.260
Coulometric reagent K, for applications with ketones, for cells with diaphragm	500 ml	85478.260
Catholyte solutions		
Coluometric reagent CG	50 ml	85471.130
Coluometric reagent CG-K, for applications with ketones	50 ml	85479.130

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Standards for water determination by the Karl Fischer method

These standards are ideal for coulometric Karl Fischer titrations for water in liquid petroleum.

Conforms to ASTM D1744, E1064, D4377

Packaging information: When the product code ends with
005 then the pack size is 10 × 5 ml
002 then the pack size is 10 × 2 ml
020 then the pack size is 5 × 20 ml

Description	Concentration	Pk	Cat. No.
KF coulometric standards			
Coulometric standard 1% water	10000 µg/g	10 Ampoul	85487.004
KF volumetric standards			
Volumetric standard 0,5% water	5000 µg/ml	250 ml	85488.230
Volumetric standard 1,0% water	10000 µg/ml	500 ml	85489.260
KF water standards in liquid petroleum			
Water standard	60 µg/g	1 KIT	85482.005
Water standard	100 µg/g	1 KIT	85483.002
Water standard	100 µg/g	1 KIT	85483.005
Water standard	100 µg/g	1 KIT	85483.020
Water standard	1000 µg/g	1 KIT	85484.002
Water standard	1000 µg/g	1 KIT	85484.005
Water standard	1000 µg/g	1 KIT	85484.020
Water standard	5000 µg/g	1 KIT	85485.002
Water standard	5000 µg/g	1 KIT	85485.005
Water standard	5000 µg/g	1 KIT	85485.020

VWR BDH CHEMICALS

FIRST FOR TRACE ANALYSIS

From the most exacting sample preparation with NORMATOM® high purity acids to ARISTAR® ICP/ICP-MS and AVS® TITRINORM® AAS standards, VWR are able to offer a comprehensive trace analysis package.

All backed by our extensive Certificates of Analysis for specific batch results – not typical analyses.

If you don't see what you want then we also have a customised standard production service available in many countries too. Contact your local VWR sales office or distibutor for details and to request our trace analysis brochure.

Kanamycin sulphate, ultrapure

Danger

CAS 25389-94-0
$C_{18}H_{38}N_4O_{15}S$
Storage Temperature: Ambient
Binds to the 70S subunit of bacterial ribosome. Recommended working concentration: 30 µg/ml.

Chromatographic Purity	PASS
Crystallinity	PASS
Expiration Date	REPORT
Identification	PASS
Loss on Drying	4.0 %
pH (1%, Water) @25°C	6.5 - 8.5
Potency (Anhydrous)	750 mcg/mg
Potency (As is)	REPORT
Residue on Ignition	1.0 %

Cat. No.	Pk	Pack type
0408-EU-10G	10 g	Plastic bottle for solids
0408-EU-25G	25 g	Plastic bottle for solids

Kanamycin sulphate solution, 25 mg/ml, ultrapure

Kanamycin is an aminoglycoside antibiotic that inhibits protein synthesis in gram-negative and gram-positive bacteria and in mycoplasma. Recommended working concentration: 30 µg/ml.

Cat. No.	Pk	Pack type
E713-20ML	20 ml	Vial

Kestranal® 2S dihydrate

See EDTA disodium salt dihydrate p.130

Kestranal® 4S

See EDTA tetrasodium salt..... p.132

Kestranal® A

See EDTA (Ethylenediamine tetraacetic acid)..... p.129

Kestranal® FE PA

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N′,N′-tetraacetic acid)... p.132

α-Ketoglutaric acid disodium salt, anhydrous, reagent grade

CAS 305-72-6
$NaOOCCH_2CH_2COCOONa·2H_2O$ **M.W.** 190.06 g/mol
Storage Temperature: Refrigerator

Identification	PASS
Moisture	3 %
Purity	97.0 %

Cat. No.	Pk	Pack type
0345-25G	25 g	Plastic bottle for solids

2-Ketopropionic acid sodium salt

See Sodium pyruvate..... p.433

α-Ketopropionic acid sodium salt

See Sodium pyruvate..... p.433

Drum and bottle keys

A selection of tools to assist in opening IBCs, 200 litre drums plus bottles and other containers with DIN 32, 45, 54 and 80 caps.

Description	Pk	Cat. No.
Drum keys, plastic, for tightening/opening caps for 10 L (DIN 51) plastic drums	1	29548.064
Drum key to open DIN 32/45/54/80 caps	1	84544.001
Drum keys, plastic, for tightening/opening caps for 20 or 25 L (DIN 61) plastic drums	1	29548.053
Drum keys, plastic, for tightening/opening caps for 10 L (DIN 51) plastic drums	1	29548.064

Key for metal drums

Description	Pk	Cat. No.
Key for metal drums with 2" and 3/4" openings	1	18100010

Keys for IBC containers

Description	Pk	Cat. No.
Key for IBC container, 1000 l capacity, with opening NW 150	1	18100150

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Kjeldahl tablets

Kjeldahl tablets are catalysts that promote the digestion step of the Kjeldahl method for nitrogen determination.

- Wide range of catalysts available
- Different sizes of tablet avaialble, 5 g and 3.5 g
- Tablet format is easy to use

The Kjeldahl method is used in a wide range of analyses including analysis of proteins, nitrogenated organic materials and also, after reduction, for analysis of nitrates and nitrites. Therefore the method is used widely in applications from food and beverage testing to agricultural and environmental analysis.

Total Kjeldahl Nitrogen (TKN) is often used as a parameter in wastewater and soil analysis.

A wide range of catalysts have been developed over the 130 year history of this method to provide ever more rapid and safe digestion methods for particular sets of digestion conditions. VWR offers a comprehensive range of 'ready to use' tablets to meet the optimal requirements for the sulphuric acid decomposition phase.

Description	Contents	Pk	Cat. No.
Kjeldahl Catalyst free of mercury and selenium, 3,5 g	K_2SO_4, 23,10%; Na_2SO_4, 69,30%; $CuSO_4$, 1,80%; TiO_2, 2,80%	100 Tab.	85539.0100
Kjeldahl Catalyst free of mercury and selenium, 3,5 g	K_2SO_4, 23,10%; Na_2SO_4, 69,30%; $CuSO_4$, 1,80%; TiO_2, 2,80%	1.000 Tab.	85539.1000
Kjeldahl Catalyst free of mercury and selenium, 5,0 g	K_2SO_4, 23,10%; Na_2SO_4, 69,30%; $CuSO_4$, 1,80%; TiO_2, 2,80%	100 Tab.	85540.0100
Kjeldahl Catalyst free of mercury and selenium, 5,0 g	K_2SO_4, 23,10%; Na_2SO_4, 69,30%; $CuSO_4$, 1,80%; TiO_2, 2,80%	1.000 Tab.	85540.1000
Kjeldahl Catalyst Missouri, 5,0 g	K_2SO_4, 48,40%; Na_2SO_4, 48,30%; $CuSO_4$, 0,30%	100 Tab.	85541.0100
Kjeldahl Catalyst Missouri, 5,0 g	K_2SO_4, 48,40%; Na_2SO_4, 48,30%; $CuSO_4$, 0,30%	1.000 Tab.	85541.1000
Kjeldahl Catalyst Wieninger, 3,5 g	Na_2SO_4, 96,25%; $CuSO_4$, 1,50%; Se, 1,50%	100 Tab.	85542.0100
Kjeldahl Catalyst Wieninger, 3,5 g	Na_2SO_4, 96,25%; $CuSO_4$, 1,50%; Se, 1,50%	1.000 Tab.	85542.1000
Kjeldahl Catalyst Wieninger, 5,0 g	Na_2SO_4, 96,25%; $CuSO_4$, 1,50%; Se, 1,50%	100 Tab.	85543.0100
Kjeldahl Catalyst Wieninger, 5,0 g	Na_2SO_4, 96,25%; $CuSO_4$, 1,50%; Se, 1,50%	1.000 Tab.	85543.1000
Kjeldahl Catalyst PS, 5,0 g	K_2SO_4	100 Tab.	85544.0100
Kjeldahl Catalyst PS, 5,0 g	K_2SO_4	1.000 Tab.	85544.1000
Kjeldahl Catalyst CX, 5,5 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,5 g	100 Tab.	85525.0100
Kjeldahl Catalyst CX, 5,5 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,5 g	1.000 Tab.	85525.1000
Kjeldahl Catalyst CT, 5,3 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,15 g TiO_2, 0,15 g	100 Tab.	85526.0100
Kjeldahl Catalyst CT, 5,3 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,15 g TiO_2, 0,15 g	1.000 Tab.	85526.1000
Kjeldahl Catalyst C, 5,1 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,1 g	100 Tab.	85527.0100
Kjeldahl Catalyst C, 5,1 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,1 g	1.000 Tab.	85527.1000
Kjeldahl Catalyst TCT, 3,71 g	K_2SO_4, 3,5 g; $CuSO_4$-$5H_2O$, 0,105 g; TiO_2, 0,105 g	100 Tab.	85528.0100
Kjeldahl Catalyst TCT, 3,71 g	K_2SO_4, 3,5 g; $CuSO_4$-$5H_2O$, 0,105 g; TiO_2, 0,105 g	1.000 Tab.	85528.1000
Kjeldahl Catalyst CK, 3,9 g	K_2SO_4, 3,5 g; $CuSO_4$-$5H_2O$, 0,4 g	100 Tab.	85529.0100
Kjeldahl Catalyst CK, 3,9 g	K_2SO_4, 3,5 g; $CuSO_4$-$5H_2O$, 0,4 g	1.000 Tab.	85529.1000
Kjeldahl Catalyst ST, 3,5 g	K_2SO_4, 3,5 g; Se, 0,0035 g	100 Tab.	85530.0100
Kjeldahl Catalyst ST, 3,5 g	K_2SO_4, 3,5 g; Se, 0,0035 g	1.000 Tab.	85530.1000
Kjeldahl Catalyst CTQ, 1,59 g	K_2SO_4, 1,5 g; $CuSO_4$-$5H_2O$, 0,045 g; TiO_2, 0,045 g	100 Tab.	85531.0100
Kjeldahl Catalyst CTQ, 1,59 g	K_2SO_4, 1,5 g; $CuSO_4$-$5H_2O$, 0,045 g; TiO_2, 0,045 g	1.000 Tab.	85531.1000
Kjeldahl Catalyst Antifoam, 1,0 g	Na_2SO_4, 0,97 g; silicon-antifoam, 0,03 g	100 Tab.	85532.0100
Kjeldahl Catalyst Antifoam, 1,0 g	Na_2SO_4, 0,97 g; silicon-antifoam, 0,03 g	1.000 Tab.	85532.1000
Kjeldahl Catalyst NAS, 1,05 g	Na_2SO_4, 1 g; Se, 0,05 g	100 Tab.	85533.0100
Kjeldahl Catalyst NAS, 1,05 g	Na_2SO_4, 1 g; Se, 0,05 g	1.000 Tab.	85533.1000
Kjeldahl Catalyst S, 5,005 g	K_2SO_4, 5 g; Se, 0,005 g	100 Tab.	85534.0100
Kjeldahl Catalyst S, 5,005 g	K_2SO_4, 5 g; Se, 0,005 g	1.000 Tab.	85534.1000
Kjeldahl Catalyst KS, 5,05 g	K_2SO_4, 4,9505 g; Se, 0,0495 g	100 Tab.	85535.0100
Kjeldahl Catalyst KS, 5,05 g	K_2SO_4, 4,9505 g; Se, 0,0495 g	1.000 Tab.	85535.1000
Kjeldahl Catalyst W K150, 5,0 g	K_2SO_4, 4,875 g; $CuSO_4$-$5H_2O$, 0,075 g; Se, 0,050 g	100 Tab.	85536.0100
Kjeldahl Catalyst W K150, 5,0 g	K_2SO_4, 4,875 g; $CuSO_4$-$5H_2O$, 0,075 g; Se, 0,050 g	1.000 Tab.	85536.1000
Kjeldahl Catalyst IB61, 5,0 g	K_2SO_4, 4,673 g; $CuSO_4$-$5H_2O$, 0,281 g; Se, 0,046 g	100 Tab.	85537.0100
Kjeldahl Catalyst IB61, 5,0 g	K_2SO_4, 4,673 g; $CuSO_4$-$5H_2O$, 0,281 g; Se, 0,046 g	1.000 Tab.	85537.1000
Kjeldahl Catalyst AB04, 5,025 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,025 g	100 Tab.	85538.0100
Kjeldahl Catalyst AB04, 5,025 g	K_2SO_4, 5 g; $CuSO_4$-$5H_2O$, 0,025 g	1.000 Tab.	85538.1000

Q Path® Labofix, vapouriser

Q Path® Labofix is a spray cytology fixative able to fix and store the cellular elements from gynaecological and non gynaecological smears after spreading them out on a glass slide. The principle is based on a dehydration reaction followed by protection of the cell elements.

- Easy and quick use: Vapourise twice over the smear and leave to dry for 3 minutes, then the specimens can be taken to the laboratory and stained
- Immediate action: State of the sample is preserved immediately after it is taken, making sure that the elements of the cells are maintained during transport, thus resulting in the best possible diagnosis

Description	Pk	Cat. No.
Q Path® Labofix, spray of 200 ml	12	00556760.
Q Path® Labofix, vapouriser	100 ml	13356770.

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Detergents and cleaning agents, LABWASH® Premium

- Residue-free laboratory glassware cleaning
- Excellent cleaning power at low dosage levels
- NTA-free (no Nitrilotriacetic acid)
- Protects the environment, active ingredients are biodegradable
- Acid rinse concentrates available to neutralise alkaline cleaners

Application	Manual Cleaning					Machine cleaning							
	LABWASH® Premium Extra	LABWASH® Premium Neutral	LABWASH® Premium Extra PF	LABWASH® Premium Classic	Sodium Hydroxide solution	LABWASH® Premium Powder	LABWASH® Premium Powder PF	LABWASH® Premium Alkamatic	LABWASH® Premium Alkamatic PF	LABWASH® Premium Acidrinse P	LABWASH® Premium Acidrinse C	LABWASH® Premium EasyRinse	LABWASH® Premium Pure
Aldehyde resins	x		x	x			x						x
Aluminium		x											
Amines										x	x		x
Analytical laboratories	x	x	x	x		x		x				x	x
Balsam resins	x		x	x			x		x				x
Bitumen	x		x										
Blood	x		x	x			x						x
Brass		x											x
Breweries	x	x	x	x	x	x	x		x				x
Bronze		x					x						
Calcareous deposits										x	x	x	
Carbonates										x		x	
Cells		x		x								x	x
Chemical glassware	x	x	x	x		x		x				x	x
Culture media				x			x		x				
Dairies	x	x	x	x	x	x	x		x				
Distillation residues	x		x	x			x		x			x	
Enzymes	x	x	x	x		x	x	x	x	x	x		x
Fat residues	x		x	x			x						x
Felt-tip pen	x	x	x			x	x	x	x				
Foam													
Food industries	x	x	x	x	x	x	x		x			x	x
Food waste	x	x		x		x	x	x	x				x
Glass and porcelain equipment	x	x		x			x		x			x	
Grease for joints	x			x			x		x				x
Heavy oils	x		x	x			x		x				x
Hydroxides										x	x		
Lab. floors	x		x		x								
Metal equipment		x				x		x					
Mucus				x									
Neutralisation										x			
Nickel	x	x	x			x					x		
Oil	x		x	x			x		x				
Petri dishes	x	x	x	x		x	x	x	x	x	x		
Phosphate analysis equip.			x										
Pipettes		x		x		x		x					
Plaster residues	x	x	x		x	x							
Plastic equipment						x		x				x	
Precision equipment		x		x									
Protein residues	x		x	x			x		x				
Proteins	x		x	x			x		x				

Quartz equipment		x											
Rubber		x				x		x					
Saliva	x		x	x									
Silicones	x		x				x		x		x		
Spectacle lenses		x											
Stainless steel	x	x	x		x	x	x	x	x				
Thin film plates	x		x		x	x		x					
Tiled surfaces	x		x		x				x				
Tough residues				x			x						
Ultrasound	x	x	x										
Wax	x		x	x									
Zinc		x											

Description	pH value	Temp. range	Pk	Cat. No.
Detergents and cleaning agents, LABWASH® Premium				
LABWASH® Premium Classic, mildly alkaline concentrate for manual cleaning of laboratory glassware	12,2	20...85 °C	2,5 l	84545.320
			5 l	84545.360
			10 l	84545.410
LABWASH® Premium Extra, concentrate for the manual cleaning of laboratory glassware and precision components	11,8	10...40 °C	2,5 l	84546.320
			5 l	84546.360
			10 l	84546.410
LABWASH® Premium Extra PF, phosphate-free concentrate for manual cleaning of laboratory glassware	12,7	10...70 °C	2,5 l	84554.320
			5 l	84554.360
			10 l	84554.410
LABWASH® Premium Neutral, pH-neutral concentrate for the cleaning of laboratory glassware and precision components	7,4	10...60 °C	2,5 l	84547.320
			5 l	84547.360
			10 l	84547.410
LABWASH® Premium Powder, mildly alkaline cleaning powder for laboratory washing machines	12,1		1 kg	84548.290
			10 kg	84548.410
LABWASH® Premium Powder PF, phosphate-free, alkaline powder cleaner for laboratory washing machines	13		1 kg	84557.290
			10 kg	84557.410
LABWASH® Premium Pure, concentrate for soak and spray cleaning of laboratory glassware	11,8	0...95 °C	2,5 l	84555.320
			5 l	84555.360
			10 l	84555.410
LABWASH® Premium Alkamatic, mildly alkaline, liquid cleaning concentrate for washing machines	12	20...95 °C	2,5 l	84549.320
			5 l	84549.360
			10 l	84549.410
LABWASH® Premium Alkamatic LA, highly alkaline, intensive cleaner for laboratory washing machines	12,5		2,5 l	84556.320
			5 l	84556.360
			10 l	84556.410
LABWASH® Premium Alkamatic PF, alkaline, phosphate-free, chlorine-free, liquid cleaning concentrate for washing machines for heavy contamination	11,6	10...95 °C	2,5 l	84550.320
			5 l	84550.360
			10 l	84550.410
			20 l	84550.440
LABWASH® Premium Acidrinse P, neutraliser and pre-cleaner for washing machines	2,1	40...85 °C	2,5 l	84552.320
			5 l	84552.360
			10 l	84552.410
LABWASH® Premium Acidrinse C, phosphate-free neutraliser for washing machines	2,7		2,5 l	84551.320
			5 l	84551.360
			10 l	84551.410
			20 l	84551.440
LABWASH® Premium Easyrinse, acidic, ecological rinsing concentrate with shiny effect	2,2	0...60 °C	2,5 l	84553.320
			5 l	84553.360
			10 l	84553.410

pH value at 1% concentration

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NEW Lactate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84973.180	100 ml	Plastic bottle

(±)-Lactic acid

See Lactic acid p.235

Lactic acid AnalaR NORMAPUR® analytical reagent

Danger

CAS 50-21-5
$H_3CCH(OH)COOH$
Storage Temperature: Ambient

Assay	88.0 - 92.0 %	IR Spectrum	Passes test
Reducing substances	Passes test	Volatile fatty acids	Passes test
Colouration	Max. 20 APHA	Relative density	1.200 - 1.210
Ignition residue (SO_4)	Max. 100 ppm	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	As (Arsenic)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.02 %	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 3 ppm	Pb (Lead)	Max. 1 ppm
Zn (Zinc)	Max. 10 ppm		

Cat. No.	Pk	Pack type
101384Q	500 ml	Glass bottle

Lactic acid 90 % Ph. Eur.

Danger

CAS 50-21-5
$H_3CCH(OH)COOH$
Boiling Pt: 122 °C (20 hPa) **Melting Pt:** 53 °C **Density:** 1,11-1,21 g/cm³ (20°C)

Storage Temperature: Ambient

Not for parenteral use

Assay	88.0 - 92.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance test	Passes test
Ether-insoluble substances	Passes test
Sugars and other reducing substances	Passes test
Citric, oxalic and phosphoric acids	Passes test
Relative density	1.200 - 1.210
SO_4 (Sulphate)	Max. 200 ppm
Ca (Calcium)	Max. 200 ppm
Heavy metals (as Pb)	Max. 10 ppm
Sulphated ash	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
20370.297	1 l	Plastic bottle
20370.366	5 l	Plastic container

Lactic acid 90% in aqueous solution GPR RECTAPUR®, pure

Danger

CAS 50-21-5
$H_3CCH(OH)COOH$
Boiling Pt: 122 °C (20 hPa) **Melting Pt:** 53 °C **Density:** 1,11-1,21 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	Min. 90 %
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20356.298	1 l	Glass bottle
20356.323	2,5 l	Glass bottle

Lactic acid 90% in aqueous solution TECHNICAL

Danger

CAS 50-21-5
$H_3CCH(OH)COOH$
Boiling Pt: 122 °C (20 hPa) **Melting Pt:** 53 °C **Density:** 1,11-1,21 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	Min. 90 %

Cat. No.	Pk	Pack type
20366.293	1 l	Glass bottle
20366.464	25 l	Plastic drum

NEW Lactic acid 50% in aqueous solution TECHNICAL

Danger

CAS 50-21-5
$H_3CCH(OH)COOH$
Boiling Pt: 122 °C (20 hPa) **Melting Pt:** 53 °C **Density:** 1,11-1,21 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	48 - 52 %

Cat. No.	Pk	Pack type
20355.444	20 l	Plastic bottle

DL-Lactic acid aluminium salt

See Aluminium trilactate p.24

(±)-Lactic acid aluminium salt

See Aluminium trilactate p.24

DL-Lactic acid magnesium salt dihydrate

See Magnesium dilactate dihydrate p.246

(±)-Lactic acid magnesium salt dihydrate

See Magnesium dilactate dihydrate p.246

Lactoflavin

See Riboflavine (Vitamin B2) p.389

Lactose monohydrate AnalaR NORMAPUR® analytical reagent

CAS 10039-26-6
$C_{12}H_{22}O_{11}.1H_2O$ **M.W.** 360.32 g/mol

Melting Pt: 223 °C

Storage Temperature: Ambient

Specific optical rotation (10 %; water).	52.0 - 52.8 °	Acidity	Max. 0.005 meq/g
Ignition residue (SO_4)	Max. 0.1 %	Insolubility in water	Max. 50 ppm
Water	4.8 - 5.4 %	As (Arsenic)	Max. 1 ppm
Cu (Copper)	Max. 0.5 ppm	Fe (Iron)	Max. 1 ppm
Pb (Lead)	Max. 0.5 ppm		

Cat. No.	Pk	Pack type
101394S	500 g	Plastic bottle for solids

Lactose monohydrate GPR RECTAPUR®

CAS 10039-26-6
$C_{12}H_{22}O_{11}\cdot 1H_2O$ **M.W.** 360.32 g/mol
Melting Pt: 223 °C
Storage Temperature: Ambient

Spec. opt. rotation (calc. on anhydrous) ..... 54.4 - 55.9 °
Ignition residue (SO_4) ..... Max. 0.1 %
Loss on drying (120°C) ..... 4.0 - 5.5 %
Cl (Chloride) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
24945.291	1 kg	Plastic bottle for solids
24945.360	5 kg	Bucket (Plastic)

Lanolin TECHNICAL

CAS 8006-54-0
Melting Pt: 38-44 °C **Density:** 0,932-0,945g/cm³ (15 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
24485.291	1 kg	Plastic bottle

NEW Lanthanum standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Lanthanum	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457325E
Lanthanum	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85575.180

Lanthanum standard solution, 50,000 mg/l La in water Reag. Ph. Eur. 1114001

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87968.290	1 l	Plastic bottle

Lanthanum standard solution, 10,000 mg/l La in dil. nitric acid (from La_2O_3) ARISTAR® standard for ICP

La_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455554G	500 ml	Plastic bottle

Lanthanum standard solution, 1,000 mg/l La in dil. nitric acid (from La_2O_3) ARISTAR® standard for ICP

La_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455542C	100 ml	Plastic bottle
455544E	500 ml	Plastic bottle

Lanthanum standard solution, 1,000 mg/l La in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86687.180	100 ml	Plastic bottle
86687.260	500 ml	Plastic bottle

Lanthanum (III) chloride heptahydrate AnalaR NORMAPUR® analytical reagent

CAS 10025-84-0
$LaCl_3\cdot 7H_2O$ **M.W.** 371.37 g/mol
Boiling Pt: < 860 °C (1013 hPa) **Melting Pt:** 96 °C
Storage Temperature: Ambient

Assay ..... Min. 98 %
Insolubility in water ..... Max. 0.1 %
Cu (Copper) ..... Max. 1 ppm
Mg (Magnesium) ..... Max. 1 ppm
Zn (Zinc) ..... Max. 1 ppm
Identification ..... Passes test
Ca (Calcium) ..... Max. 10 ppm
Fe (Iron) ..... Max. 5 ppm
Pb (Lead) ..... Max. 1 ppm

Cat. No.	Pk	Pack type
103433Q	100 g	Plastic bottle for solids

Lanthanum (III) chloride heptahydrate GPR RECTAPUR®

CAS 10025-84-0
$LaCl_3\cdot 7H_2O$ **M.W.** 371.37 g/mol
Boiling Pt: < 860 °C (1013 hPa) **Melting Pt:** 96 °C
Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
24957.188	100 g	Plastic bottle for solids
24957.268	500 g	Plastic bottle for solids

Lanthanum (III) nitrate hexahydrate GPR RECTAPUR®

Warning

CAS 10277-43-7 **UN:** 1477
$La(NO_3)_3\cdot 6H_2O$ **M.W.** 433.01 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** 65-67 °C **Density:** 2,347 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as La_2O_3) ..... Min. 99 %

Cat. No.	Pk	Pack type
24958.238	250 g	Plastic bottle for solids

Lanthanum nitrate solution Reag. Ph. Eur. 1048001

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87859.290	1 l	Plastic bottle

Lanthanum (III) oxide GPR RECTAPUR®

CAS 1312-81-8
La_2O_3 **M.W.** 325.81 g/mol
Boiling Pt: 4200 °C (1013 hPa) **Melting Pt:** 2315 °C **Density:** 6,51 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.5 %

Cat. No.	Pk	Pack type
24960.260	500 g	Plastic bottle for solids

Lauryl sulphate sodium salt

See Sodium dodecyl sulphate (SDS) p.416

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

LB Agar (Lennox), Tissue Culture Grade

Used for the propagation and maintenance of *E. coli*. Widely used for the preparation of plasmid DNA and recombinant proteins. Each pack prepares 10 × 1 l of media.

Cat. No.	Pk	Pack type
K497-10PK	10	Kit packaging

Premixed LB media

Individual ReadyPack™ pouches prepare 1 l of media.

Description	Pk	Cat. No.
LB agar, Miller formulation in Ready-Pack™ pouch, tissue culture grade	10	J104-10PK
LB agar, Miller formulation, tissue culture grade	1 kg	J104-1KG
LB broth, Miller formulation in Ready-Pack™ pouch, tissue culture grade	10	J106-10PK
LB broth, Miller formulation, tissue culture grade	1 kg	J106-1KG
LB broth, Miller formulation, tissue culture grade	2 kg	J106-2KG
LB broth, Miller formulation, tissue culture grade	500 g	J106-500G

Lead, granules TECHNICAL 2,5 mm

Danger

CAS 7439-92-1

Pb

Boiling Pt: 1740 °C (1013 hPa) **Melting Pt:** 327 °C **M.W.** 207.2 g/mol **Density:** 11,3437 g/cm³ (20 °C)

Storage Temperature: Ambient

small shot ø 2,5 mm

Identification ..... Passes test

Cat. No.	Pk	Pack type
26472.290	1 kg	Plastic bottle for solids

NEW Lead standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Lead	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456772S
Lead	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85586.180

Lead standard solution, 10,000 mg/l Pb in dil. nitric acid (from $Pb(NO_3)_2$) ARISTAR® standard for ICP

$Pb(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455572Y	100 ml	Plastic bottle
455574K	500 ml	Plastic bottle

Lead standard solution, 1,000 mg/l Pb in dil. nitric acid (from $Pb(NO_3)_2$) ARISTAR® standard for ICP

$Pb(NO_3)_2$ in 2% HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455562G	100 ml	Plastic bottle
455564Y	500 ml	Plastic bottle

Lead standard solution, 1,000 mg/l Pb in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86699.180	100 ml	Plastic bottle
86699.260	500 ml	Plastic bottle

Lead standard solution (0.1% Pb) Reag. Ph. Eur. 5001700

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88087.180	100 ml	Plastic bottle

Lead (II) acetate trihydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 6080-56-4 **UN:** 1616
$(H_3CCOO)_2Pb·3H_2O$ **M.W.** 379.34 g/mol
Boiling Pt: 280 °C (1013 hPa) **Melting Pt:** 75 °C **Density:** 2,55 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.5 - 103.0 %	pH (20°C; 10 %)	5.0 - 7.5
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 5 ppm
$NO_3 + NO_2$ (as NO_3)	Max. 100 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 50 ppm
Conforms to Reag. Ph.Eur.	Passes test	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
26483.231	250 g	Plastic bottle for solids
26483.297	1 kg	Plastic bottle for solids

Lead (II) acetate trihydrate TECHNICAL

Danger

CAS 6080-56-4 **UN:** 1616
$(H_3CCOO)_2Pb·3H_2O$ **M.W.** 379.34 g/mol
Boiling Pt: 280 °C (1013 hPa) **Melting Pt:** 75 °C **Density:** 2,55 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
26478.290	1 kg	Plastic bottle for solids

Lead acetate solution Reag. Ph. Eur. 1048103

Danger

UN: 3082

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87860.290	1 l	Plastic bottle

NEW Lead (II) acetate USP test solutions (TS)

CAS 301-04-2 **UN:** 1616
$(H_3CCOO)_2Pb$ **M.W.** 325.29 g/mol
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85351.180	100 ml	Plastic bottle
85351.260	500 ml	Plastic bottle

Lead acetate cotton Reag. Ph. Eur. 1048101

$(H_3CCOO)_2Pb$ **M.W.** 325.29 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85868.130	10 g	Plastic bottle

Lead (II) acetate paper Reag. Ph. Eur. 1048102 for detection of hydrogen sulphide and sulphide

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Description	Pk	Cat. No.
Lead (II) acetate paper, strips	50	85869.150

Lead (II) acetate basic, powder TECHNICAL

Danger

CAS 1335-32-6 **UN:** 1616
$(CH_3COO)_2Pb·2Pb(OH)_2$ **M.W.** 807.72 g/mol
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
26488.363	5 kg	Bucket (Plastic)

Lead (II) acetate basic d = 1.21 g/cm³ in aqueous solution TECHNICAL

Danger

CAS 1335-32-6 **UN:** 3082
$(CH_3COO)_2Pb·2Pb(OH)_2$
Density: 1,21 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as Pb) ..... 15 - 17 %

Cat. No.	Pk	Pack type
26489.297	1 l	Glass bottle

Lead (II) carbonate basic, powder TECHNICAL

Danger

CAS 1319-46-6 **UN:** 3077
$(PbCO_3)_2·Pb(OH)_2$ **M.W.** 775.63 g/mol
Melting Pt: 400 °C **Density:** 6,06 g/cm³ (20 °C)

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
26505.294	1 kg	Plastic bottle for solids

Lead (II) carbonate hydroxide

See Lead (II) carbonate basic p.238

Lead diacetate trihydrate

See Lead (II) acetate trihydrate p.238

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Lead dinitrate

See Lead (II) nitrate p.239

Lead (II) hydroxide carbonate

See Lead (II) carbonate basic p.238

Lead monoxide

See Lead (II) oxide p.239

Lead (II) nitrate AnalaR NORMAPUR® Reag. Ph. Eur., ACS

Danger

CAS 10099-74-8 **UN:** 1469

$Pb(NO_3)_2$ **M.W.** 331.21 g/mol

Melting Pt: 450-470 °C **Density:** 4,53 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Insoluble matter	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 20 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 0.02 %
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
84847.180	100 g	Plastic bottle for solids
84847.290	1 kg	Plastic bottle for solids

Lead (II) nitrate GPR RECTAPUR®

Danger

CAS 10099-74-8 **UN:** 1469

$Pb(NO_3)_2$ **M.W.** 331.21 g/mol

Melting Pt: 450-470 °C **Density:** 4,53 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98.5 %
Substances not precipitated by H_2SO_4	Max. 0.5 %
Cl (Chloride)	Max. 50 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
26554.260	500 g	Plastic bottle for solids

Lead nitrate solution Reag. Ph. Eur. 1048301

Danger

UN: 3082

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87861.290	1 l	Plastic bottle

Lead (II) oxide, yellow TECHNICAL

Danger

CAS 1317-36-8 **UN:** 3077

PbO **M.W.** 223.2 g/mol

Boiling Pt: 1470 °C (1013 hPa) **Melting Pt:** 888 °C **Density:** 9,5 g/cm³ (20 °C)

REACh: 01-2119531110-62

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
26566.294	1 kg	Plastic bottle for solids

Lead (II,IV) oxide, red TECHNICAL

Danger

CAS 1314-41-6 **UN:** 1479

Pb_3O_4 **M.W.** 685.6 g/mol

Boiling Pt: 2682 °C (1013 hPa) **Melting Pt:** 830 °C **Density:** 9,1 g/cm³ (20 °C)

Assay (calculated as PbO2) ..... Min. 30 %

Cat. No.	Pk	Pack type
26572.295	1 kg	Plastic bottle for solids

Lead subacetate

See Lead (II) acetate basic p.238

LEB broth

See Microbiology

Lecithin from egg yolk GPR RECTAPUR®

CAS 93685-90-6

Loss on drying (100°C)	Max. 6 %
N (Nitrogen)	1.4 - 1.9 %
P (Phosphorus) (on dry substance)	Min. 3 %
Solubility in ethanol 96 %	Min. 90 %

Cat. No.	Pk	Pack type
24966.180	100 g	Plastic bottle for solids

Lecithin from soybean, powder GPR RECTAPUR®

CAS 8030-76-0

Insolubility in acetone	Min. 62 %
Peroxide value	Max. 5

Cat. No.	Pk	Pack type
24967.183	100 g	Plastic bottle for solids

Lecithin from soybean

CAS 8030-76-0

Assay of nitrogen ..... 0.6 - 1.2 %
Assay (Phosphorus) ..... 2.0 - 3.3 %
Sulfated ash (800°C) ..... Max. 10 %
Microbiological test ..... Passes test
Salmonella species (absent in 10 g) ..... Passes test
Escherischia coli (absent in 1 g) ..... Passes test
Enterobacteriaceae (in 1 g) ..... Absent

Cat. No.	Pk	Pack type
298632A	100 g	Plastic bottle

LEGIONELLA Agar

See Microbiology

Letheen broth

See Microbiology

VWR LIFE SCIENCE Leupeptin hemisulphate (Ac-Leu-Leu-Arg-al hemisulphate) monohydrate, ultrapure

A reversible inhibitor of cysteine proteases and serine proteases resembling trypsin. Inhibits trypsin, plasmin, papain, kallikrein, thrombin, and cathepsin A and B.

Cat. No.	Pk	Pack type
J580-5MG	5 mg	Glass bottle
J580-25MG	25 mg	Glass bottle

VWR LIFE SCIENCE Leupeptin hemisulphate (Ac-Leu-Leu-Arg-al hemisulphate) monohydrate, proteomics grade

A reversible inhibitor of cysteine proteases and serine proteases resembling trypsin. Inhibits trypsin, plasmin, papain, kallikrein, thrombin, and cathepsin A and B.

Cat. No.	Pk	Pack type
M180-5MG	5 mg	Glass bottle
M180-25MG	25 mg	Glass bottle

Levoglutamide

See L(+)-Glutamine p.174

D(-)-Levulose

See D(-)-Fructose p.167

Light distillate suitable for use in the testing of petroleum products by IP and ASTM methods

Danger

CAS 64742-47-8

Boiling Pt: 192-256 °C (760mm Hg)
Density: 0,805 g/cm³ (15 °C)
REACh: 01-2119484819-18

Aromatics (W/V) ..... Max. 1.00 %
Distillation range (98 %) ..... 185 - 280°C

Cat. No.	Pk	Pack type
286735Q	2,5 l	Glass bottle
28673LJ	25 l	Plastic drum

Light liquid paraffin

See Paraffin, liquid p.328

VWR LIFE SCIENCE Linoleic acid, ultrapure

CAS 60-33-3

$C_{18}H_{32}O_2$
M.W. 280.45 g/mol
Boiling Pt: 360 °C (1013 hPa)
Melting Pt: -5 °C
Density: 0,9 g/cm³ (20 °C)
Storage Temperature: Ambient

Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0660-10G	10 g	Plastic bottle

Liquid for manometer with sloping tube

Danger

UN: 1170
Storage Temperature: Ambient
for manometer

Identification ..... Passes test

Cat. No.	Pk	Pack type
24989.202	125 ml	Glass bottle

NEW Lithium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Lithium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456782U
Lithium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85576.180

Lithium standard solution, 10,000 mg/l Li in dil. nitric acid (from Li_2CO_3) ARISTAR® standard for ICP

Li_2CO_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455594X	500 ml	Plastic bottle

Lithium standard solution, 1,000 mg/l Li in dil. nitric acid (from Li_2CO_3) ARISTAR® standard for ICP

Li_2CO_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455582K	100 ml	Plastic bottle
455584M	500 ml	Plastic bottle

Lithium standard solution, 1,000 mg/l Li in dil. nitric acid (from Li) ARISTAR® standard for ion chromatography

Li in H_2O tr.HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458242F	100 ml	Plastic bottle

Lithium standard solution, 1,000 mg/l Li in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86688.180	100 ml	Plastic bottle
86688.260	500 ml	Plastic bottle

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NEW Lithium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84974.180	100 ml	Plastic bottle

Lithium standard solution, 200 mg/l Li in dil. nitric acid (from Li) ARISTAR® standard for ion chromatography

Li in H_2O tr.HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458322E	100 ml	Plastic bottle

Lithium bromide GPR RECTAPUR®

Warning

CAS 7550-35-8

LiBr **M.W.** 86.84 g/mol

Boiling Pt: 1265 °C (1013 hPa) **Melting Pt:** 550 °C **Density:** 3,46 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
SO_4 (Sulphate)	Max. 0.04 %
Fe (Iron)	Max. 50 ppm
Cl (Chloride)	Max. 0.1 %
Ba (Barium)	Max. 0.02 %
Ca (Calcium)	Max. 100 ppm
K (Potassium)	Max. 0.02 %
Mg (Magnesium)	Max. 10 ppm
Na (Sodium)	Max. 0.2 %
Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
25002.266	500 g	Plastic bottle for solids

Lithium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 554-13-2

Li_2CO_3 **M.W.** 73.89 g/mol

Melting Pt: 720 °C **Density:** 2,11 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 10 ppm
Insolubility in hydrochloric acid	Max. 100 ppm	Cl (Chloride)	Max. 20 ppm
NH_4 (Ammonium)	Max. 5 ppm	NO_3 (Nitrate)	Max. 5 ppm
SO_4 (Sulphate)	Max. 0.02 %	Ca (Calcium)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 10 ppm	Na (Sodium)	Max. 50 ppm
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
25007.230	250 g	Plastic bottle for solids

Lithium carbonate GPR RECTAPUR®

Warning

CAS 554-13-2

Li_2CO_3 **M.W.** 73.89 g/mol

Melting Pt: 720 °C **Density:** 2,11 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
Ca + Mg (as Ca)	Max. 0.04 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
25006.236	250 g	Plastic bottle for solids
25006.293	1 kg	Plastic bottle for solids

Lithium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 7447-41-8

LiCl **M.W.** 42.39 g/mol

Boiling Pt: 1382 °C (1013 hPa) **Melting Pt:** 614 °C **Density:** 2,07 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (20°C; 5 %)	5.0 - 9.0
Heavy metals (as Pb)	Max. 5 ppm	Total N (Nitrogen)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ba (Barium)	Max. 20 ppm
Ca (Calcium)	Max. 50 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 0.05 %	Mg (Magnesium)	Max. 50 ppm
Na (Sodium)	Max. 0.05 %	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
25012.237	250 g	Plastic bottle for solids
25012.260	500 g	Plastic bottle for solids
25012.363	5 kg	Plastic bottle for solids

Lithium chloride Electran® Molecular biology grade

Warning

CAS 7447-41-8

LiCl **M.W.** 42.39 g/mol

Boiling Pt: 1382 °C (1013 hPa) **Melting Pt:** 614 °C **Density:** 2,07 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %
Appearance	White crystalline powder
DNases	Not detected
RNases	Not detected
Proteases	Not detected
pH (5 %)	5.00 - 7.00
Insoluble substances	Passes test
Loss on drying	Max. 1 %
SO_4 (Sulphate)	Max. 0.01 %
Heavy metals (as Pb)	Max. 0.0005 %
As (Arsenic)	Max. 0.005 %
Ca (Calcium)	Max. 0.01 %
Fe (Iron)	Max. 0.0005 %
Na (Sodium)	Max. 0.2 %
Mg (Magnesium)	Max. 0.005 %

Cat. No.	Pk	Pack type
437032G	50 g	Plastic bottle for solids

Lithium chloride for biotechnology

Warning

CAS 7447-41-8
LiCl **M.W.** 42.39 g/mol
Boiling Pt: 1382 °C (1013 hPa) **Melting Pt:** 614 °C **Density:** 2,07 g/cm³ (20 °C)
Storage Temperature: Ambient

Insolubles	< = 0.01 %
Iron	<= 10 ppm
Purity	> 99 %

Cat. No.	Pk	Pack type
0416-100G	100 g	Plastic bottle for solids
0416-500G	500 g	Plastic bottle for solids

Lithium chloride TECHNICAL, purified

Warning

CAS 7447-41-8
LiCl **M.W.** 42.39 g/mol
Boiling Pt: 1382 °C (1013 hPa) **Melting Pt:** 614 °C **Density:** 2,07 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
25009.236	250 g	Plastic bottle for solids
25009.293	1 kg	Plastic bottle for solids
25009.362	5 kg	Drum (Plastic)
25009.464	25 kg	Drum (Plastic)

Lithium chloride 8 mol/l in aqueous solution for biotechnology

Warning

CAS 7447-41-8
LiCl
Storage Temperature: Ambient
A convenient, ready-to-use solution that helps to remove inhibitors of cDNA synthesis and translation.

DNase	none detected
Protease	none detected
RNase	none detected
Titration	7.7 Molar - 8.2 Molar
Appearance	Clear, colorless liquid.

Cat. No.	Pk	Pack type
K445-100ML	100 ml	Plastic bottle

Lithium dodecyl sulphate, high purity

Warning

CAS 2044-56-6
$C_{12}H_{25}LiO_4S$ **M.W.** 272.34 g/mol
Storage Temperature: Ambient

Abs.@260nm (5%, Water)	< = 0.1
Abs.@280nm (5%, Water)	<= 0.1
Loss on Drying	<= 3 %
Purity	>= 99 %

Cat. No.	Pk	Pack type
0782-25G	25 g	Plastic bottle for solids

Lithium hydroxide monohydrate GPR RECTAPUR®

Danger

CAS 1310-66-3 **UN:** 2680
$LiOH \cdot 1H_2O$ **M.W.** 41.96 g/mol
Boiling Pt: 920 °C (1013 hPa) **Melting Pt:** 462 °C **Density:** 1,51 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119560576-31

Assay	Min. 95 %
Lithium carbonate	Max. 3 %
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
K (Potassium)	Max. 0.05 %
Na (Sodium)	Max. 0.2 %

Cat. No.	Pk	Pack type
24994.368	5 kg	Bucket (Plastic)

Lithium nitrate, purified

Warning

CAS 7790-69-4 **UN:** 2722
$LiNO_3$ **M.W.** 68.95 g/mol
Melting Pt: 255 °C **Density:** 2,38 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.02 %

Cat. No.	Pk	Pack type
25029.268	500 g	Plastic bottle for solids

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NEW di-Lithium tetraborate AnalaR NORMAPUR® ACS for X-Ray analysis

CAS 12007-60-2

$Li_2B_4O_7$ **M.W.** 169.12 g/mol

Melting Pt: 918 °C **Density:** 1,4 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Bulk density (g/ml)	Min. 0.25
Heavy metals (as Pb)	Max. 10 ppm	Insoluble matter	Max. 100 ppm
Loss on fusion (950°C)	Max. 1.0 %	Phosphorus compounds (as PO_4)	Max. 40 ppm
Cl (Chloride)	Max. 50 ppm	SO_4 (Sulphate)	Max. 100 ppm
Al (Aluminium)	Max. 10 ppm	Ca (Calcium)	Max. 30 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 30 ppm
Mg (Magnesium)	Max. 5 ppm	Na (Sodium)	Max. 50 ppm
Si (Silicium)	Max. 80 ppm	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
85023.290	1 kg	Plastic bottle
85023.360	5 kg	Bucket (Plastic)

di-Lithium tetraborate for X-Ray analysis

CAS 12007-60-2

$Li_2B_4O_7$ **M.W.** 169.12 g/mol

Melting Pt: 918 °C **Density:** 1,4 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %
Suited for analysis by fluorescence X	Passes test
Apparent volume weight (g/100 ml)	Min. 40
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 50 ppm
Al (Aluminium)	Max. 5 ppm
Ca (Calcium)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 50 ppm
Na (Sodium)	Max. 0.1 %
Pb (Lead)	Max. 2 ppm

Cat. No.	Pk	Pack type
25040.234	250 g	Plastic bottle for solids
25040.291	1 kg	Plastic bottle for solids

Litmus 2 % aqueous solution TECHNICAL pH-indicator

CAS 1393-92-6

Identification ..... Passes test

Cat. No.	Pk	Pack type
31725.265	500 ml	Glass bottle

Losolin® IV Selectipur® for the electronics industry

Danger

CAS 85536-14-7 **UN:** 2586

Product from BASF

Cat. No.	Pk	Pack type
51153203.	2,5 l	Glass bottle
52139479.	200 kg	Metal drum lined

Luff-Schoorl's reagent for quantitative determination of reducing sugars

Danger

Assay	Passes test
Density (20/4)	1.14 - 1.16
pH (20°C)	9.7 - 10.3

Cat. No.	Pk	Pack type
5058.1000	1 l	Plastic bottle
5058.5000	5 l	Plastic container

Lugol solution stabilised

Cat. No.	Pk	Pack type
911520ZA	1 l	Plastic bottle

NEW Lugol's iodine solution USP test solutions (TS)

Boiling Pt: 100 °C
Storage Temperature: Ambient
Ready to use solutions.

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85350.180	100 ml	Glass bottle
85350.260	500 ml	Glass bottle

NEW Lugol's iodine solution

Density: 1,01 g/cm³ (20 °C)

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
49931900	50 ml	Glass bottle

NEW Lutetium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Lutetium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457336F
Lutetium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85577.180

NEW Lutetium standard solution, 10,000 mg/l Lu in dil. nitric acid (from Lu_2O_3) ARISTAR® standard for ICP

Lu_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455612W	100 ml	Plastic bottle
455614B	500 ml	Plastic bottle

Lutetium standard solution, 1,000 mg/l Lu in dil. nitric acid (from Lu_2O_3) ARISTAR® standard for ICP

Lu_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455602U	100 ml	Plastic bottle
455604W	500 ml	Plastic bottle

2,4-Lutidine TECHNICAL

Danger

CAS 108-47-4 **UN:** 1992

C_7H_9N **M.W.** 107.16 g/mol

Boiling Pt: 159 °C (1013 hPa) **Melting Pt:** -60 °C **Density:** 0,93 g/cm³ (20 °C)

Storage Temperature: Ambient

n 20/D ..... 1.498 - 1.500

Cat. No.	Pk	Pack type
25044.261	500 ml	Glass bottle

NEW L-Lysine, anhydrous for biopharmaceutical production

CAS 56-87-1

$C_6H_{14}N_2O_2$ **M.W.** 146.19 g/mol

Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 196 °C

Assay (on dried substance) ..... 98.0 - 101.5 %
Appearance ..... Crystalline powder
Colour ..... White to off white
Cell culture toxicity ..... Passes test
DNases ..... Not detected
Identification by IR ..... Conforms to structure
Proteases ..... Not detected
RNases ..... Not detected
Solubility (10 %) ..... Clear.complete.yellowish
Spec. opt. rot.(25°C; 8 %; HCl 6N;dried) ..... 25.5 - 26.7 °
Heavy metals (as Pb) ..... Max. 15 ppm
Ignition residue ..... Max. 0.1 %
Water ..... Max. 2.0 %
SO_4 (Sulphate) ..... Max. 0.03 %
Fe (Iron) ..... Max. 30 ppm
Bioburden ..... Max. 100 CFU/g
Endotoxin (1 %) (EU/mg) ..... Max. 0.1 EU/mg

Cat. No.	Pk	Pack type
42307.180	100 g	Plastic bottle for solids
42307.297	1 kg	Plastic bottle for solids
42307.366	5 kg	Bucket (Plastic)
42307.468	25 kg	Bucket (Plastic)

L(+)-Lysine monohydrochloride for biochemistry

CAS 657-27-2

$H_2N(CH_2)_4CH(NH_2)CO_2H{\cdot}HCl$ **M.W.** 182.65 g/mol

Melting Pt: 263-264 °C

Storage Temperature: Ambient

Assay (calculated on dried substance) ..... Min. 99 %
Specific optical rotation (5 %; HCl 1 N) ..... 20 - 21 °
Heavy metals (as Pb) ..... Max. 10 ppm
Ninhydrin-positive substances (glycine) ..... Max. 0.1 %
NH_4 (Ammonium) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
25051.185	100 g	Plastic bottle for solids

(S)-(+)-Lysine monohydrochloride

See L(+)-Lysine monohydrochloride p.244

VWR LIFE SCIENCE Lysozyme (Muramidase), from Hen Egg White

A hydrolytic enzyme specific for proteins found in the lipid bilayer of bacteria. It is useful for lysing gram positive and gram negative bacteria for subsequent nucleic acid extraction.

Cat. No.	Pk	Pack type
0663-5G	5 g	Glass bottle
0663-10G	10 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Magnesium (reagents for the analysis of)

1,5-Diphenylcarbazide analytical reagent..... p.124
Eriochrome Black T TECHNICAL..... p.144

Magnesium ≥99.5%, ribbon TECHNICAL

Danger

CAS 7439-95-4 **UN:** 1869
Mg
Storage Temperature: Ambient
Length : 24 m - width : 3 mm - thickness : 0,2 mm

Identification..... Passes test

Cat. No.	Pk	Pack type
25072.132	25 g	Plastic bag

Magnesium ≥99.8% stabilised, turnings TECHNICAL

Danger

CAS 7439-95-4 **UN:** 1869
Mg
Storage Temperature: Ambient

Identification..... Passes test

Cat. No.	Pk	Pack type
25073.237	250 g	Plastic bottle for solids

NEW Magnesium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Magnesium	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457082D
Magnesium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456792W
Magnesium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85578.180

Magnesium standard solution, 10,000 mg/l Mg in dil. nitric acid (from MgO) ARISTAR® standard for ICP

MgO in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455632D	100 ml	Plastic bottle
455634F	500 ml	Plastic bottle

Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid (from MgO) ARISTAR® standard for ICP

MgO in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455622B	100 ml	Plastic bottle
455624D	500 ml	Plastic bottle

Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid (from Mg) ARISTAR® standard for ion chromatography

Mg in H_2O tr.HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458212W	100 ml	Plastic bottle

Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86690.180	100 ml	Plastic bottle
86690.260	500 ml	Plastic bottle

NEW Magnesium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84975.180	100 ml	Plastic bottle
84975.260	500 ml	Plastic bottle

Magnesium acetate tetrahydrate AnalaR NORMAPUR®

CAS 16674-78-5
$(H_3CCOO)_2Mg{\cdot}4H_2O$ **M.W.** 214.46 g/mol
Melting Pt: 80 °C **Density:** 1,454 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	98.0 - 102.0 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ba (Barium)	Max. 10 ppm
Ca (Calcium)	Max. 100 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 50 ppm	Mn (Manganese)	Max. 10 ppm
Na (Sodium)	Max. 50 ppm	Sr (Strontium)	Max. 50 ppm

Cat. No.	Pk	Pack type
84849.230	250 g	Plastic bottle for solids
84849.290	1 kg	Plastic bottle for solids

Magnesium chloride, anhydrous TECHNICAL

CAS 7786-30-3
$MgCl_2$ **M.W.** 95.21 g/mol
Boiling Pt: 1412 °C (1013 hPa) **Melting Pt:** 715 °C **Density:** 2,32 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
26123DC	25 kg	Bucket (Plastic)

Magnesium chloride 4,5-hydrate, powder GPR RECTAPUR®

$MgCl_2 \cdot 4,5H_2O$ **M.W.** 176.28 g/mol
Boiling Pt: 1412 °C (1013 hPa) **Density:** 1,57 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Alkaline metals (as SO_4)	Max. 2.5 %
Heavy metals (as Pb)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.02 %
Ca (Calcium)	Max. 0.1 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
25106.298	1 kg	Plastic bottle for solids

Magnesium chloride hexahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7791-18-6
$MgCl_2 \cdot 6H_2O$ **M.W.** 203.3 g/mol
Boiling Pt: 1412 °C (1013 hPa) **Melting Pt:** 117 °C **Density:** 1,57 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	99.0 - 101.0 %	Acidity or alkalinity	Passes test Ph.Eur.
Appearance of solution (20 %; water)	Passes test	Identification B	Passes test Ph.Eur.
Identification C	Passes test Ph.Eur.	Solution S	Passes test
pH (20°C; 5 %)	5.0 - 6.5	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Total N (Nitrogen)	Max. 20 ppm
Water	51.0 - 55.0 %	Br (Bromide)	Max. 0.05 %
NH_4 (Ammonium)	Max. 20 ppm	NO_3 (Nitrate)	Max. 10 ppm
PO_4 (Phosphate)	Max. 5 ppm	SO_4 (Sulphate)	Max. 20 ppm
As (Arsenic)	Max. 2 ppm	Ba (Barium)	Max. 20 ppm
Ca (Calcium)	Max. 30 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 10 ppm
Mn (Manganese)	Max. 5 ppm	Na (Sodium)	Max. 10 ppm
Pb (Lead)	Max. 5 ppm	Sr (Strontium)	Max. 50 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
25108.260	500 g	Plastic bottle for solids
25108.295	1 kg	Plastic bottle for solids

Magnesium chloride hexahydrate Ph. Eur., BP, USP

CAS 7791-18-6
$MgCl_2 \cdot 6H_2O$ **M.W.** 203.3 g/mol
Boiling Pt: 1412 °C (1013 hPa) **Melting Pt:** 117 °C **Density:** 1,57 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	98.0 - 101.0 %
Appearance	Colourless crystals
Identification (Mg)	Passes test
Identification (Cl)	Passes test
Solution S	Passes test Ph.Eur./BP
Appearance of solution	Passes test Ph.Eur./BP
Acidity or alkalinity	Passes test Ph.Eur./BP
pH (25°C; 5 %)	4.5 - 7.0
Insoluble matter	Max. 0.005 %
Br (Bromide)	Max. 500 ppm
SO_4 (Sulphate)	Max. 0.005 %
As (Arsenic)	Max. 2 ppm
Ba (Barium)	Passes test USP
Ca (Calcium)	Max. 0.01 %
K (Potassium)	Passes test USP
Heavy metals (as Pb)	Max. 0.001 %
Fe (Iron)	Max. 10 ppm
Water	51.0 - 55.0 %
Residues of metal catalysts or reagents	Unlikely by manuf.process
Residual solvents	Unlikely by manuf.process
Conforms to Ph.Eur.	Passes test
Conforms to USP	Passes test
Conforms to BP	Passes test

Cat. No.	Pk	Pack type
87060.290	1 kg	Plastic bottle for solids
87060.360	5 kg	Bucket (Plastic)
87060.460	25 kg	Bucket (Plastic)

Magnesium chloride hexahydrate GPR RECTAPUR®

CAS 7791-18-6
$MgCl_2 \cdot 6H_2O$ **M.W.** 203.3 g/mol
Boiling Pt: 1412 °C (1013 hPa) **Melting Pt:** 117 °C **Density:** 1,57 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Alkaline metals (as SO_4)	Max. 2.5 %
Heavy metals (as Pb)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.02 %
Ca (Calcium)	Max. 0.1 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
25107.292	1 kg	Plastic bottle for solids
25107.361	5 kg	Bucket (Plastic)

Magnesium chloride hexahydrate Electran® Molecular biology grade

CAS 7791-18-6
$MgCl_2 \cdot 6H_2O$ **M.W.** 203.3 g/mol
Boiling Pt: 1412 °C (1013 hPa) **Melting Pt:** 117 °C **Density:** 1,57 g/cm³ (25 °C)
Storage Temperature: Ambient

Appearance (colour)	almost white
Appearance (description)	fine-crystalline powder
Assay (complexometric)	99.0 - 102.0 %
pH-value (5 %; water)	5.0 - 6.5
Heavy metals (as Pb)	Max. 0.0005 %
Fe (Iron)	Max. 0.0005 %
DNases (Exo- and endonucleases)	non detectable
RNases	non detectable
Proteases	non detectable

Cat. No.	Pk	Pack type
436992S	100 g	Glass bottle for solids
436994U	500 g	Glass bottle for solids

Magnesium chloride 1 mol/l (2 N) in aqueous solution for determining phosphatase in serum

CAS 7786-30-3
$MgCl_2$ **M.W.** 95.21 g/mol
Storage Temperature: Ambient

Magnesium chloride	0.999 - 1.001 mol

Cat. No.	Pk	Pack type
220933M	250 ml	Glass bottle

Magnesium chloride 1 mol/l (2 N) in aqueous solution for biotechnology, sterile

CAS 7786-30-3
$MgCl_2$ **M.W.** 95.21 g/mol
Storage Temperature: Ambient
A sterile reagent for the preparation of competent cells for transformation.

Conductivity (1:100) @25°C	2000 - 2400 µmhos
Identification	PASS
Insolubles	0.005 %
Nuclease	NONE
Sterility	PASS

Cat. No.	Pk	Pack type
E525-100ML	100 ml	Plastic bottle
E525-500ML	500 ml	Plastic bottle

Magnesium di(acetate) tetrahydrate

See Magnesium acetate tetrahydrate p.245

Magnesium dilactate dihydrate TECHNICAL

CAS 26867-84-5
$(H_3CCH(OH)COO)_2Mg \cdot 2H_2O$ **M.W.** 238.48 g/mol
Storage Temperature: Ambient

Assay	97 - 102 %

Cat. No.	Pk	Pack type
25131.262	500 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Magnesium hydroxide Ph. Eur.

CAS 1309-42-8
$Mg(OH)_2$ **M.W.** 58.32 g/mol
Density: 2,3261-2,3631g/cm³ (20 °C)

Assay	95 - 100.5 %	Appearance	Conforms (see CoA/CoS)
Identification A	Passes test	Solution S	Passes test
Appearance of solution	Passes test	Soluble substances	Max. 2 %
Substances insoluble in CH_3COOH	Max. 0.1 %	Cl (Chloride)	Max. 0.1 %
SO_4 (Sulphate)	Max. 1 %	As (Arsenic)	Max. 4 ppm
Ca (Calcium)	Max. 1.5 %	Fe (Iron)	Max. 0.07 %
Heavy metals (as Pb)	Max. 30 ppm	Loss on ignition (900°C)	29.0 - 32.5 %
Residual solvents	Passes test		

Cat. No.	Pk	Pack type
25059.295	1 kg	Plastic bottle for solids
25059.466	25 kg	Bucket (Plastic)

Magnesium nitrate hexahydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 13446-18-9 **UN:** 1474
$Mg(NO_3)_2 \cdot 6H_2O$ **M.W.** 256.41 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 89 °C **Density:** 1,63 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	98.0 - 102.0 %	pH (25°C; 5 %)	5.0 - 7.0
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	NH_4 (Ammonium)	Max. 30 ppm
PO_4 (Phosphate)	Max. 5 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ba (Barium)	Max. 50 ppm	Ca (Calcium)	Max. 100 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 5 ppm
Mn (Manganese)	Max. 5 ppm	Na (Sodium)	Max. 50 ppm
Sr (Strontium)	Max. 50 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
25135.298	1 kg	Plastic bottle for solids

Magnesium nitrate solution Reag. Ph. Eur. 1049801

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87862.290	1 l	Plastic bottle

Magnesium oxide heavy Ph. Eur.

CAS 1309-48-4
MgO **M.W.** 40.3 g/mol
Boiling Pt: 3600 °C (1013 hPa) **Melting Pt:** 2800 °C **Density:** 3,58 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on ignited substance)	98.0 - 100.5 %	Appearance	Conforms (see CoA/CoS)
Bulk density (g/ml)	Min. 0.25	Identification B	Passes test
Solution S	Passes test	Appearance of solution	Passes test
Soluble substances	Max. 2.0 %	Substances insoluble in CH_3COOH	Max. 0.1 %
Cl (Chloride)	Max. 0.1 %	SO_4 (Sulphate)	Max. 1 %
As (Arsenic)	Max. 4 ppm	Ca (Calcium)	Max. 1.5 %
Fe (Iron)	Max. 0.07 %	Heavy metals (as Pb)	Max. 30 ppm
Loss on ignition (900°C)	Max. 8 %	Residual solvents	Passes test

Cat. No.	Pk	Pack type
83540.290	1 kg	Plastic bottle for solids

Magnesium oxide heavy TECHNICAL

CAS 1309-48-4
MgO **M.W.** 40.3 g/mol
Boiling Pt: 3600 °C (1013 hPa) **Melting Pt:** 2800 °C **Density:** 3,58 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	85 - 92 %
Loss on ignition (800°C)	2 - 6 %
Silica	3 - 6 %

Cat. No.	Pk	Pack type
25056.460	25 kg	Bucket (Plastic)

Magnesium oxide light AnalaR NORMAPUR® analytical reagent

CAS 1309-48-4
MgO **M.W.** 40.3 g/mol
Boiling Pt: 3600 °C (1013 hPa) **Melting Pt:** 2800 °C **Density:** 3,58 g/cm³ (25 °C)

Assay (MgO)(calc. on ignited basis)	98.0 - 100.5 %	Insolubility in hydrochloric acid	Max. 0.02 %
Loss on ignition (1000°C)	Max. 4 %	Solubility in water	Max. 0.7 %
Total N (Nitrogen)	Max. 20 ppm	Cl (Chloride)	Max. 0.05 %
CO_3 (as CO_2)	Max. 1.5 %	SO_4 (Sulphate)	Max. 0.1 %
Ba + Sr (as Ba)	Max. 50 ppm	Ca (Calcium)	Max. 1.1 %
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 0.05 %
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 3 %
Pb (Lead)	Max. 10 ppm	Zn (Zinc)	Max. 5 ppm

Cat. No.	Pk	Pack type
25061.156	50 g	Plastic bottle for solids
25061.236	250 g	Plastic bottle for solids

Magnesium oxide light TECHNICAL

CAS 1309-48-4
MgO **M.W.** 40.3 g/mol
Boiling Pt: 3600 °C (1013 hPa) **Melting Pt:** 2800 °C **Density:** 3,58 g/cm³ (25 °C)

Assay (on calcinated product)	Min. 97 %
Loss on ignition	Max. 8 %
Silica	Max. 1.5 %

Cat. No.	Pk	Pack type
25054.298	1 kg	Bucket (Plastic)
25054.367	5 kg	Bucket (Plastic)

Magnesium silicate monohydrate

See Talc p.477

Magnesium sulphate AnalaR NORMAPUR® analytical reagent

CAS 7487-88-9
$MgSO_4$ **M.W.** 120.37 g/mol
Melting Pt: 1127 °C **Density:** 2,65 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.0 %	Heavy metals (as Pb)	Max. 10 ppm
Loss on ignition (600°C)	Max. 2 %	Total N (Nitrogen)	Max. 40 ppm
Cl (Chloride)	Max. 10 ppm	As (Arsenic)	Max. 1 ppm
Ca (Calcium)	Max. 0.04 %	Fe (Iron)	Max. 10 ppm
Mn (Manganese)	Max. 20 ppm		

Cat. No.	Pk	Pack type
25164.265	500 g	Plastic bottle for solids

Magnesium sulphate, dried USP

CAS 7487-88-9
$MgSO_4$ **M.W.** 120.37 g/mol
Melting Pt: 1127 °C **Density:** 2,65 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	99 - 100.5 %
Identification (Mg)	Passes test
Identification (SO_4)	Passes test
pH (25°C; 5 %)	5.0 - 9.2
Loss on ignition (450 ± 25°C)	22 - 28 %
Cl (Chloride)	Max. 0.014 %
Fe (Iron)	Max. 20 ppm
Se (Selenium)	Max. 30 ppm
Residues of metal catalysts or reagents	Unlikely by manuf.process
Residual solvents	Unlikely by manuf.process
Conforms to USP	Passes test

Cat. No.	Pk	Pack type
7154.1000	1 kg	Plastic bottle for solids

Magnesium sulphate, dried GPR RECTAPUR®

CAS 7487-88-9
$MgSO_4$
M.W. 120.37 g/mol
Melting Pt: 1127 °C **Density:** 2,65 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.05 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
291184P	500 g	Plastic bottle for solids
291186R	2,5 kg	Plastic bottle for solids
29118BW	25 kg	Bucket (Plastic)

Magnesium sulphate TECHNICAL

CAS 7487-88-9
$MgSO_4$
M.W. 120.37 g/mol
Melting Pt: 1127 °C **Density:** 2,65 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 95 %

Cat. No.	Pk	Pack type
25162.361	5 kg	Bucket (Plastic)
25162.465	25 kg	Bucket (Plastic)

Magnesium sulphate hydrate GPR RECTAPUR®

CAS 22189-08-8
$MgSO_4 \cdot nH_2O$
M.W. 138.38 g/mol
Density: 2,45 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	99.0 - 101.0 %
Heavy metals (as Pb)	Max. 10 ppm
Loss on ignition (450 ± 25°C)	22.0 - 28.0 %
Cl (Chloride)	Max. 0.02 %
As (Arsenic)	Max. 5 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
25169.295	1 kg	Plastic bottle for solids

Magnesium sulphate heptahydrate AnalaR NORMAPUR® analytical reagent

CAS 10034-99-8
$MgSO_4 \cdot 7H_2O$
M.W. 246.48 g/mol
Melting Pt: 1124 °C **Density:** 2,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Solution in water	Passes test
Acidity or alkalinity	Max. 0.001 meq/g	pH (25°C; 5 %)	5.0 - 8.0
Alkaline metals (as SO_4)	Max. 0.05 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Total N (Nitrogen)	Max. 20 ppm
Cl (Chloride)	Max. 5 ppm	NH_4 (Ammonium)	Max. 20 ppm
NO_3 (Nitrate)	Max. 10 ppm	PO_4 (Phosphate)	Max. 10 ppm
As (Arsenic)	Max. 2 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 1 ppm
K (Potassium)	Max. 10 ppm	Mn (Manganese)	Max. 5 ppm
Na (Sodium)	Max. 10 ppm	Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
25165.260	500 g	Plastic bottle for solids
25165.292	1 kg	Plastic bottle for solids
25165.361	5 kg	Plastic bottle for solids

Magnesium sulphate heptahydrate Ph. Eur.

CAS 10034-99-8
$MgSO_4 \cdot 7H_2O$
M.W. 246.48 g/mol
Melting Pt: 1124 °C **Density:** 2,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Cl (Chloride)	Max. 300 ppm
As (Arsenic)	Max. 2 ppm
Fe (Iron)	Max. 20 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (110-120°C)	48.0 - 52.0 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
25167.298	1 kg	Plastic bottle for solids
25167.367	5 kg	Plastic bottle for solids
25167.460	25 kg	Bucket (Plastic)

Magnesium sulphate heptahydrate, purified

CAS 10034-99-8
$MgSO_4 \cdot 7H_2O$
M.W. 246.48 g/mol
Melting Pt: 1124 °C **Density:** 2,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Insoluble matter	Max. 0.05 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
25163.290	1 kg	Plastic bottle for solids
25163.364	5 kg	Bucket (Plastic)

Magnesium sulphate heptahydrate Electran® Molecular biology grade

CAS 10034-99-8
$MgSO_4 \cdot 7H_2O$
M.W. 246.48 g/mol
Melting Pt: 1124 °C **Density:** 2,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
437042Y	100 g	Plastic bottle
437044K	500 g	Plastic bottle

Malachite green solution Reag. Ph. Eur. 1050501

Danger

UN: 1715

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87863.290	1 l	Plastic bottle

Malachite green oxalate for microscopy

Danger

CAS 2437-29-8
UN: 2811
$C_{52}H_{54}N_4O_{12}$
M.W. 927.02 g/mol
Melting Pt: ~ 159 °C
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
3076.0025	25 g	Glass bottle

VWR LIFE SCIENCE Malate dehydrogenase (MDH), ultrapure

Cat. No.	Pk	Pack type
0373-25000U	25 KU	Glass bottle

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Malathion, pesticide reference standard (1,2-Bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate), 100 µg/ml in methanol

Cat. No.	Pk	Pack type
124312W	1 ml	Glass ampoule

NEW Maleate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84976.180	100 ml	Plastic bottle

Maleic anhydride TECHNICAL

Danger

CAS 108-31-6 **UN:** 2215

$C_4H_2O_3$ **M.W.** 98.06 g/mol

Boiling Pt: 200 °C (1013 hPa) **Melting Pt:** 51-53 °C **Density:** 1,48 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
21409.298	1 kg	Plastic bottle for solids

(±)-Malic acid TECHNICAL

Danger

CAS 617-48-1

$HOOCCH(OH)CH_2COOH$ **M.W.** 134.09 g/mol

Boiling Pt: 306 °C (1013 hPa) **Melting Pt:** 131-132 °C **Density:** 1,601 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay..... Min. 99 %

Cat. No.	Pk	Pack type
20365.290	1 kg	Plastic bottle for solids

Malt Extract Agar

See Microbiology

D(+)-Maltose monohydrate GPR RECTAPUR®

CAS 6363-53-7

$C_{12}H_{22}O_{11}·1H_2O$ **M.W.** 360.32 g/mol

Melting Pt: 160-165 °C

Storage Temperature: Ambient

pH (20°C; 5 %) ..... 4.5 - 6.0
Spec.opt.rot.(10 %;water)(on anhydrous) ..... 135 - 139 °
Heavy metals (as Pb) ..... Max. 20 ppm
Ignition residue (SO_4) ..... Max. 0.1 %
Water ..... 4 - 7 %

Cat. No.	Pk	Pack type
25188.187	100 g	Plastic bottle for solids
25188.291	1 kg	Plastic bottle for solids
25188.360	5 kg	Bucket (Plastic)

VWR LIFE SCIENCE D(+)-Maltose monohydrate, reagent grade

CAS 6363-53-7

$C_{12}H_{22}O_{11}·1H_2O$ **M.W.** 360.32 g/mol

Melting Pt: 160-165 °C

Storage Temperature: Ambient

Common media additive, particularly for the cultivation of lambda phage.

Loss on Drying..... < 7%
Purity..... > 85 %
Residue after Ignition ..... < 0.1 %

Cat. No.	Pk	Pack type
1B1184-100G	100 g	Plastic bottle for solids
1B1184-500G	500 g	Plastic bottle for solids

Manganese (reagents for the analysis of)

o-Acetylsalicylic acid GPR RECTAPUR® p.13

NEW Manganese standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Manganese	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456802H
Manganese	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85579.180

Manganese standard solution, 10,000 mg/l Mn in dil. nitric acid (from $Mn(OAc)_2$) ARISTAR® standard for ICP

$Mn(C_2H_3O_2)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455652H	100 ml	Plastic bottle
455654J	500 ml	Plastic bottle

Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid (from $Mn(OAc)_2$) ARISTAR® standard for ICP

$Mn(C_2H_3O_2)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455642F	100 ml	Plastic bottle
455644H	500 ml	Plastic bottle

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Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86691.180	100 ml	Plastic bottle
86691.260	500 ml	Plastic bottle

Manganese (II) chloride tetrahydrate AnalaR NORMAPUR® ACS analytical reagent

Warning

CAS 13446-34-9 **UN:** 3077
$MnCl_2 \cdot 4H_2O$ **M.W.** 197.9 g/mol
Boiling Pt: 1190 °C (1013 hPa) **Melting Pt:** 58-59 °C **Density:** 2,01 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 101.0 %	pH (25°C; 5 %)	3.5 - 6.0
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Not precipitated by $(NH_4)_2S$ (as SO_4)	Max. 0.4 %	Reducing substances (as O)	Max. 5 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ca (Calcium)	Max. 50 ppm
Co (Cobalt)	Max. 10 ppm	Cu (Copper)	Max. 5 ppm
K (Potassium)	Max. 100 ppm	Fe (Iron)	Max. 5 ppm
Mg (Magnesium)	Max. 50 ppm	Na (Sodium)	Max. 0.05 %
Pb (Lead)	Max. 5 ppm	Zn (Zinc)	Max. 50 ppm
Conforms to ACS	Passes test		

Cat. No.	Pk	Pack type
25222.233	250 g	Plastic bottle for solids
25222.290	1 kg	Plastic bottle for solids

Manganese (II) sulphate monohydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 10034-96-5 **UN:** 3077
$MnSO_4 \cdot 1H_2O$ **M.W.** 169.02 g/mol
Melting Pt: 700 °C **Density:** 2,95 g/cm³ (25 °C)
Storage Temperature: Refrigerator

Assay	99.0 - 101.0 %	Insolubility in water	Max. 100 ppm
Loss on ignition (500°C)	10.0 - 12.0 %	Substances reducing $KMnO_4$	Passes test
Cl (Chloride)	Max. 10 ppm	Ca (Calcium)	Max. 50 ppm
Heavy metals (as Pb)	Max. 10 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 50 ppm	Na (Sodium)	Max. 50 ppm
Ni (Nickel)	Max. 0.02 %	Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 50 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
25303.233	250 g	Plastic bottle for solids
25303.290	1 kg	Plastic bottle for solids

Manganese (II) sulphate monohydrate GPR RECTAPUR®

Warning

CAS 10034-96-5 **UN:** 3077
$MnSO_4 \cdot 1H_2O$ **M.W.** 169.02 g/mol
Melting Pt: 700 °C **Density:** 2,95 g/cm³ (25 °C)
Storage Temperature: Refrigerator

Heavy metals (as Pb)	Max. 50 ppm
Assay	Min. 98 %
Not precipitated by $(NH_4)_2S$ (as SO_4)	Max. 0.5 %
Cl (Chloride)	Max. 50 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
25300.290	1 kg	Plastic bottle for solids
25300.368	5 kg	Bucket (Plastic)

Manganous chloride tetrahydrate

See Manganese (II) chloride tetrahydrate p.250

Manganous sulphate monohydrate

See Manganese (II) sulphate monohydrate p.250

D(-)-Mannitol analytical reagent

CAS 69-65-8
$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 290-295 °C (4 hPa) **Melting Pt:** 164-169 °C **Density:** 1,49 g/cm³ (20 °C)
Storage Temperature: Ambient

Reducing sugars	Passes test
Acidity or alkalinity	Passes test
Melting point	164 - 169 °C
Specific optical rotation (8 %; borate)	23 - 24 °
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.05 %
Loss on drying (100°C)	Max. 0.3 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 2 ppm

Cat. No.	Pk	Pack type
25314.264	500 g	Plastic bottle for solids

D(-)-Mannitol Ph. Eur., USP

CAS 69-65-8
$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 290-295 °C (4 hPa) **Melting Pt:** 164-169 °C **Density:** 1,49 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried basis)	97.0 - 102.0 %
Appearance	Conforms (see CoA/CoS)
Identification (IR)	Passes test
Appearance of solution	Passes test
Conductivity (20°C; 20 %)	Max. 20 µS/cm
Conductivity (25°C; 20 %)	Max. 20 µS/cm
Melting point	165 - 170 °C
Reducing sugars (calculated as $C_6H_{12}O_6$)	Max. 0.1 %
Resolution	Min. 2
D-Sorbitol	Max. 2 %
D-Maltitol and isomalt	Max. 2 %
Unspecified impurities (for each)	Max. 0.1 %
Total impurities	Max. 2 %
Disregard limit	Max. 0.05 %
Ni (Nickel)	Max. 1 ppm
Heavy metals (as Pb)	Max. 5 ppm
Loss on drying (105°C; 4 h)	Max. 0.5 %
Escherichia coli	Absent
TAMC	Max. 1000 CFU/g
Total combined yeasts and moulds	Max. 100 CFU/g
Residues of metal catalysts or reagents	Unlikely by manuf.process
Residual solvents	Unlikely by manuf.process
Conforms to Ph.Eur.	Passes test
Conforms to USP	Passes test

Cat. No.	Pk	Pack type
25311.297	1 kg	Plastic bottle for solids
25311.366	5 kg	Bucket (Plastic)
25311.468	25 kg	Bucket (Plastic)

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

D(-)-Mannitol USP

CAS 69-65-8
$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 290-295 °C (4 hPa) **Melting Pt:** 164-169 °C **Density:** 1,49 g/cm³ (20 °C)
Storage Temperature: Ambient
Product is Tested to USP Specifications

Conductivity @25°C	<= 20 uS/cm
Escherichia Coli	none detected
Loss on Drying <731>	<= 0.5%
Melting Range	165°C - 170°C
Nickel	<= 1 ug/g
Purity (Anhydrous Basis)	97% - 102%
Reducing Sugars (as glucose)	<= 0.1%
Related Substances (Disregard Limit)	<= 0.05%
Related Substances (Sorbitol)	<= 2%
Related Substances (Sum of Isomalt and Maltitol)	<= 2
Related Substances (Total Impurities)	<= 2%
Related Substances (Unspecified Impurities)	<= 0.1%
Total Aerobic Microbial Count	<= 1000 CFU/g
Total Combined Molds and Yeasts Count	<= 100 CFU/g

Cat. No.	Pk	Pack type
0122-500G	500 g	Plastic bottle for solids
0122-1KG	1 kg	Plastic bottle for solids

D(-)-Mannitol GPR RECTAPUR®

CAS 69-65-8
$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 290-295 °C (4 hPa) **Melting Pt:** 164-169 °C **Density:** 1,49 g/cm³ (20 °C)
Storage Temperature: Ambient

Melting point	164 - 169 °C
Specific optical rotation (8 %; borate)	23 - 24.5 °
Ignition residue (SO_4)	Max. 0.2 %
Loss on drying (100°C)	Max. 0.5 %
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %

Cat. No.	Pk	Pack type
25313.294	1 kg	Plastic bottle for solids
25313.363	5 kg	Bucket (Plastic)

Mannitol Salt Agar

See Microbiology

D(+)-Mannose, high purity

CAS 3458-28-4
$C_6H_{12}O_6$ **M.W.** 180.16 g/mol
Boiling Pt: 376 °C (1013 hPa) **Melting Pt:** 133 °C **Density:** 1,539 g/cm³ (20 °C)
Storage Temperature: Ambient

Loss on Drying	< 1%
Melting Point	125°C - 131°C
Purity (HPLC)	> 99.5 %
Solubility (5%, Water)	Pass
Specific Rotation	14° - 15°

Cat. No.	Pk	Pack type
J443-25G	25 g	Plastic bottle for solids
J443-100G	100 g	Plastic bottle for solids
J443-500G	500 g	Plastic bottle for solids

Marble

See Calcium carbonate p.74

Marquis drug test kit

See Drug test kit p.128

MasterMixes

See Molecular biology

May Grunwald Eosin methylene blue Q Path®

Danger IVD

UN: 1170
Storage Temperature: Ambient
Ready to use May & Grunwald for cytological staining in safe and easy to use pouch.

Appearance	Clear liquid
Colour of solution	Dark blue
Density (20/4)	0,79 - 0,81
pH (20°C)	7 - 8,5
Absorbance (0.1 %)	655 - 664 nm

Cat. No.	Pk	Pack type
10047018.	450 ml	Pouch
10047118.	2,5 l	Plastic bottle

Media Fill Test (Microbiology)

See Microbiology

MEK

See Methyl ethyl ketone p.261

Mercaptoacetic acid (Thioglycolic acid) GPR RECTAPUR®

Danger

CAS 68-11-1 **UN:** 1940
$HSCH_2COOH$ **M.W.** 92.12 g/mol
Boiling Pt: 96 °C (1013 hPa) **Melting Pt:** -16,5 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Refrigerator

WARNING : The indicated concentration refers to the product leaving the factory. A continuous loss of strength, specific to the product, is predictable.

Assay	Min. 98 %
Ignition residue (SO_4)	Max. 0.1 %
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
20495.265	500 ml	Glass bottle

2-Mercaptoethanol Electran® Molecular biology grade

Danger

CAS 60-24-2 **UN:** 2966
$HSCH_2CH_2OH$ **M.W.** 78.14 g/mol
Boiling Pt: 157 °C (1013 hPa) **Melting Pt:** -100 °C **Density:** 1,12 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
Identity (IR)	Passes test
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Density (20/4)	1.114 - 1.116
Heavy metals (as Pb)	Max. 0.0001 %
Water	Max. 0.5 %
Absorptivity (0.5 mol/l; 1 cm; 260 nm)	Max. 1.50
Absorptivity (0.5 mol/l; 1 cm; 280 nm)	Max. 0.31

Cat. No.	Pk	Pack type
436022A	50 ml	Glass bottle
436024C	250 ml	Glass bottle

2-Mercaptoethanol for biotechnology

Danger

CAS 60-24-2 **UN:** 2966
HSCH$_2$CH$_2$OH **M.W.** 78.14 g/mol
Boiling Pt: 157 °C (1013 hPa) **Melting Pt:** -100 °C **Density:** 1,12 g/cm^3 (20 °C)
Storage Temperature: Ambient

DNase ..... none detected
Protease ..... none
Purity ..... > 99 %
RNase ..... none detected
Water ..... <= 0.5 %

Cat. No.	Pk	Pack type
0482-100ML	100 ml	Glass bottle
0482-250ML	250 ml	Glass bottle

2-Mercaptoethanol, proteomics grade

Danger

CAS 60-24-2 **UN:** 2966
HSCH$_2$CH$_2$OH **M.W.** 78.14 g/mol
Boiling Pt: 157 °C (1013 hPa) **Melting Pt:** -100 °C **Density:** 1,12 g/cm^3 (20 °C)
Storage Temperature: Ambient

DNase ..... none detected
Protease ..... none detected
Purity ..... > = 99 %
RNase ..... none detected
Water ..... < = 0.5 %

Cat. No.	Pk	Pack type
M131-100ML	100 ml	Glass bottle
M131-250ML	250 ml	Glass bottle

2-Mercaptoethanol

Danger

CAS 60-24-2 **UN:** 2966
HSCH$_2$CH$_2$OH **M.W.** 78.14 g/mol
Boiling Pt: 157 °C (1013 hPa) **Melting Pt:** -100 °C **Density:** 1,12 g/cm^3 (20 °C)
Storage Temperature: Ambient

Assay (GC, area%) ..... 98.0 min.
Density (20/4) ..... 1.115 - 1.116
Identity (IR) ..... Passes test

Cat. No.	Pk	Pack type
441435C	500 ml	Glass bottle

(±)-3-Mercapto-1,2-propanediol

Warning

CAS 96-27-5
C$_3$H$_8$O$_2$S **M.W.** 108.16 g/mol
Boiling Pt: 118 °C (1013 hPa) **Density:** 1,247 g/cm^3 (20 °C)
Storage Temperature: Ambient

Heavy Metals ..... < 0.002%
pH (1:10, Water) @25°C ..... 3.5 - 7
Purity ..... 97 % - 101 %
Refractive Index ..... 1.521 - 1.526
Residue on Ignition ..... < 0.1 %
Selenium ..... < 0.003 %
Specific Gravity ..... 1.241 - 1.25
Water ..... < 5 %

Cat. No.	Pk	Pack type
K561-500ML	500 ml	Glass bottle

β-Mercaptoethanol

See 2-Mercaptoethanol p.251

Mercuric acetate

See Mercury (II) acetate p.253

Mercuric acetate solution Reag. Ph. Eur. 1052001

Danger

UN: 2789

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87864.180	100 ml	Plastic bottle

Mercuric bromide paper Reag. Ph. Eur. 1052101 for the determination of arsenic

Danger

UN: 2025

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85875.150	50	Plastic bottle

Mercuric chloride solution Reag. Ph. Eur. 1052201

Danger

UN: 1624

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87865.290	1 l	Plastic bottle

NEW Mercury (II) chloride in aqueous solution USP test solutions (TS)

CAS 7487-94-7 **UN:** 2922
Cl$_2$Hg
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85352.180	100 ml	Plastic bottle
85352.260	500 ml	Plastic bottle

Mercuric chloride

See Mercury (II) chloride p.253

Mercuric iodide

See Mercury (II) iodide p.253

Mercuric sulphate

See Mercury (II) sulphate p.254

Mercury (reagents for the analysis of)

Chromotropic acid disodium salt dihydrate analytical reagent p.90
1,5-Diphenylcarbazide analytical reagent p.124
Dithizone analytical reagent p.126

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Mercury standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Mercury	1000 ppm	10% HNO_3	Plastic bottle	100 ml	456812J
Mercury	10 ppm	5% HNO_3	Plastic bottle	100 ml	85570.180

Mercury standard solution, 10,000 mg/l Hg in dil. nitric acid (from Hg) ARISTAR® standard for ICP

Hg in HNO_3 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455672L	100 ml	Plastic bottle
455674N	500 ml	Plastic bottle

Mercury standard solution, 1,000 mg/l Hg in dil. nitric acid (from Hg) ARISTAR® standard for ICP

Hg in HNO_3 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455662J	100 ml	Plastic bottle
455664L	500 ml	Plastic bottle

Mercury standard solution, 1,000 mg/l Hg in 10% nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86682.180	100 ml	Plastic bottle
86682.260	500 ml	Plastic bottle

Mercury (II) acetate AnalaR NORMAPUR® analytical reagent

Danger

CAS 1600-27-7 **UN:** 1629

$(H_3CCOO)_2Hg$ **M.W.** 318.68 g/mol

Melting Pt: 178-180 °C **Density:** 3,27 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98.5 %	Substances not reducing by formic acid	Max. 0.1 %
Cl (Chloride)	Max. 50 ppm	SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm	Hg (I) (Mercury)	Max. 0.3 %

Cat. No.	Pk	Pack type
25364.186	100 g	Plastic bottle for solids

Mercury (II) chloride AnalaR NORMAPUR® analytical reagent

Danger

CAS 7487-94-7 **UN:** 1624

$HgCl_2$ **M.W.** 271.5 g/mol

Boiling Pt: 302 °C (1013 hPa) **Melting Pt:** 273 °C **Density:** 5,44 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Mercury (I) chloride	Passes test
Solubility in ether	Passes test	Ignition residue (SO_4)	Max. 0.02 %
Total N (Nitrogen)	Max. 20 ppm	SO_4 (Sulphate)	Max. 20 ppm
Fe (Iron)	Max. 20 ppm	Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
25384.185	100 g	Plastic bottle for solids
25384.232	250 g	Plastic bottle for solids
25384.298	1 kg	Plastic bottle for solids

Mercury diacetate

See Mercury (II) acetate p.253

Mercury dichloride

See Mercury (II) chloride p.253

Mercury diiodide

See Mercury (II) iodide p.253

Mercury dinitrate monohydrate

See Mercury (II) nitrate monohydrate p.253

Mercury (II) iodide analytical reagent

Danger

CAS 7774-29-0 **UN:** 1638

HgI_2 **M.W.** 454.4 g/mol

Boiling Pt: 354 °C (1013 hPa) **Melting Pt:** 259 °C **Density:** 6,36 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %
Hg (I) (Mercury)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
25401.232	250 g	Plastic bottle for solids

Mercury (II) iodide TECHNICAL

Danger

CAS 7774-29-0 **UN:** 1638

HgI_2 **M.W.** 454.4 g/mol

Boiling Pt: 354 °C (1013 hPa) **Melting Pt:** 259 °C **Density:** 6,36 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
25402.235	250 g	Plastic bottle for solids

Mercury (II) nitrate monohydrate GPR RECTAPUR®

Danger

CAS 7783-34-8 **UN:** 1625

$Hg(NO_3)_2 \cdot 1H_2O$ **M.W.** 342.62 g/mol

Melting Pt: 79 °C **Density:** 4,3 g/cm³ (20 °C)

Assay	Min. 98 %
Ignition residue (SO_4)	Max. 0.02 %
Cl (Chloride)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
25419.233	250 g	Plastic bottle for solids

Mercury (II) nitrate 70% in aqueous solution Reag. Ph. Eur. 1052801

Danger

CAS 10045-94-0 **UN:** 3287
$Hg(NO_3)_2$ **M.W.** 324.6 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87867.180	100 ml	Plastic bottle

Mercury (II) nitrate 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 10045-94-0 **UN:** 3287
$Hg(NO_3)_2$ **M.W.** 324.6 g/mol
Density: 1,020 g/cm³ (20 °C)

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31530.295	1 l	Plastic bottle

Mercury (II) sulphate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7783-35-9 **UN:** 1645
$HgSO_4$ **M.W.** 296.65 g/mol
Melting Pt: 850 °C **Density:** 6,47 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay ..... Min. 98.0 %
Residue after reduction ..... Max. 0.1 %
NO_3 (Nitrate) ..... Max. 50 ppm
Hg (I) (Mercury) ..... Max. 0.15 %
Chemical oxygen demand (COD) ..... Passes test
Cl (Chloride) ..... Max. 30 ppm
Fe (Iron) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
83565.180	100 g	Plastic bottle for solids
83565.230	250 g	Plastic bottle for solids

Mercury (II) sulphate, purified

Danger

CAS 7783-35-9 **UN:** 1645
$HgSO_4$ **M.W.** 296.65 g/mol
Melting Pt: 850 °C **Density:** 6,47 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
25445.233	250 g	Plastic bottle for solids

Mercury (II) sulphate 50 g/l in sulphuric acid 24% Reag. Ph. Eur. 1052600

Danger

CAS 7783-35-9 **UN:** 2922
$HgSO_4$ **M.W.** 296.65 g/mol
Boiling Pt: 295 °C

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87866.180	100 ml	Plastic bottle

MES (β-(N-Morpholino)ethanesulphonic acid)

CAS 4432-31-9
$C_6H_{13}NO_4S$ **M.W.** 195.24 g/mol
Melting Pt: 316 °C
Storage Temperature: Ambient

Assay ..... Min. 99.5 %
pH (25°C; 0.5 mol/l) ..... 2.5 - 4.0
Heavy metals (as Pb) ..... Max. 0.001 %
Water ..... Max. 0.5 %
Cl (Chloride) ..... Max. 0.01 %
SO_4 (Sulphate) ..... Max. 0.05 %
Absorbance (260 nm) (0.1 mol/l) ..... Max. 0.05
Absorbance (280 nm) (0.1 mol/l) ..... Max. 0.02

Cat. No.	Pk	Pack type
441316T	100 g	Plastic bottle

MES (β-(N-Morpholino)ethanesulphonic acid), high purity

CAS 4432-31-9
$C_6H_{13}NO_4S$ **M.W.** 195.24 g/mol
Melting Pt: 316 °C
Storage Temperature: Ambient

Abs.@290nm (20%, Water) (w/w) ..... < 0.05
Heavy Metals ..... <= 10 ppm
pKa (20°C) ..... 5.9 - 6.3
Purity ..... >= 99%
Solubility (10%, Water) ..... Pass
Water (KF) ..... <= 1%

Cat. No.	Pk	Pack type
E183-100G	100 g	Plastic bottle for solids
E183-250G	250 g	Plastic bottle for solids

MES (β-(N-Morpholino)ethanesulphonic acid) monohydrate, ultrapure

CAS 145224-94-8
$C_6H_{13}NO_4S \cdot 1H_2O$ **M.W.** 213.25 g/mol
Melting Pt: > 300 °C
Storage Temperature: Ambient

Abs.@260nm (1M, Water) ..... < 0.02
Abs.@280nm (1M, Water) ..... < 0.02
DNase ..... none detected
Appearance ..... White crystalline powder
Moisture (KF) ..... < 10 %
pKa @25°C ..... 5.9 - 6.3
Protease ..... none detected
Purity (Dry Basis,Titration) ..... > 99 %
RNase ..... none detected
Solubility (1M, Water) ..... Pass

Cat. No.	Pk	Pack type
E169-100G	100 g	Plastic bottle for solids
E169-250G	250 g	Plastic bottle for solids
E169-500G	500 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Buffer, MES-SDS, 20X, ultrapure

Useful for high resolution of proteins on neutral pH SDS-PAGE gels.

Cat. No.	Pk	Pack type
K856-500ML	500 ml	Plastic bottle

Metaphosphoric acid

See meta-Phosphoric acid p.352

NEW Methanesulphonate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84977.180	100 ml	Plastic bottle

Methanesulphonic acid TECHNICAL

Danger

CAS 75-75-2 **UN:** 2586
CH_3SO_3H
Boiling Pt: 217 °C (1013 hPa) **Melting Pt:** 20 °C **M.W.** 96.11 g/mol **Density:** 1,48 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay	Min. 98 %

Cat. No.	Pk	Pack type
20376.184	100 ml	Glass bottle

Methanoic acid 100%

See Formic acid p.166

Methanol ARISTAR® for trace analysis

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (GC)	Min. 99.9 %	Identity (IR)	Conforms
Resistivity (MOhm-cm)	Min. 1	Water	Max. 0.05 %
Evaporation residue	Max. 1 ppm	Free acid	Max. 10 ppm
Free alkali	Max. 1 ppm	Cl (Chloride)	0.5 ppm
SO_4 (Sulphate)	Max. 1 ppm	Ag (Silver)	Max. 0.01 ppm
Al (Aluminium)	Max. 0.05 ppm	As (Arsenic)	Max. 0.01 ppm
Au (Gold)	Max. 0.02 ppm	B (Boron)	Max. 0.2 ppm
Ba (Barium)	Max. 0.02 ppm	Be (Beryllium)	Max. 0.01 ppm
Bi (Bismuth)	Max. 0.02 ppm	Ca (Calcium)	Max. 0.05 ppm
Cd (Cadmium)	Max. 0.005 ppm	Co (Cobalt)	Max. 0.005 ppm
Cr (Chromium)	Max. 0.01 ppm	Cu (Copper)	Max. 0.005 ppm
Fe (Iron)	Max. 0.05 ppm	Ga (Gallium)	Max. 0.01 ppm
In (Indium)	Max. 0.01 ppm	Li (Lithium)	Max. 0.01 ppm
K (Potassium)	Max. 0.02 ppm	Mg (Magnesium)	Max. 0.01 ppm
Mn (Manganese)	Max. 0.005 ppm	Mo (Molybdenum)	Max. 0.01 ppm
Na (Sodium)	Max. 0.1 ppm	Ni (Nickel)	Max. 0.005 ppm
Pb (Lead)	Max. 0.005 ppm	Pt (Platinum)	Max. 0.05 ppm
Sb (Antimony)	Max. 0.01 ppm	Sn (Tin)	Max. 0.02 ppm
Sr (Strontium)	Max. 0.01 ppm	Ti (Titanium)	Max. 0.02 ppm
Tl (Thallium)	Max. 0.0100 ppm	V (Vanadium)	Max. 0.01 ppm
Zn (Zinc)	Max. 0.02 ppm	Zr (Zirconium)	Max. 0.02 ppm
Carbonyl compounds (as CO)	Max. 10 ppm	Organic impurities	Conforms
Substances reducing $KMnO_4$ (as O)	Max. 2.50 ppm		

Cat. No.	Pk	Pack type
451027S	2,5 l	Glass bottle SAFEBREAK

NEW Methanol HiPerSolv CHROMANORM®, ULTRA for LC-MS, suitable for UPLC/UHPLC-MS instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (GC)	Min. 99.9 %	Acidity	Max. 0.0002 meq/g
Alkalinity	Max. 0.0002 meq/g	Boiling point	64 - 65 °C
Colouration	Max. 10 APHA	Density (20/20)	0.791 - 0.793
Evaporation residue	Max. 1 ppm	Water	Max. 0.02 %
Al (Aluminium)	Max. 20 ppb	Ag (Silver)	Max. 100 ppb
Ba (Barium)	Max. 100 ppb	Ca (Calcium)	Max. 200 ppb
Cd (Cadmium)	Max. 20 ppb	Co (Cobalt)	Max. 20 ppb
Cu (Copper)	Max. 10 ppb	Fe (Iron)	Max. 50 ppb
K (Potassium)	Max. 50 ppb	Mg (Magnesium)	Max. 50 ppb
Mn (Manganese)	Max. 100 ppb	Mo (Molybdenum)	Max. 20 ppb
Na (Sodium)	Max. 200 ppb	Ni (Nickel)	Max. 100 ppb
Pb (Lead)	Max. 20 ppb	Zn (Zinc)	Max. 100 ppb
Gradient (220 nm)	Max. 3 mAU	Gradient (235 nm)	Max. 2 mAU
Gradient (254 nm)	Max. 1 mAU	Transmittance (210 nm)	Min. 45 %
Transmittance (220 nm)	Min. 65 %	Transmittance (230 nm)	Min. 85 %
Transmittance (235 nm)	Min. 90 %	Transmittance (240 nm)	Min. 95 %
Transmittance (250 nm)	Min. 95 %	Transmittance (260 nm)	Min. 98 %
Transmittance (280-400 nm)	Min. 98 %	Absorbance (210 nm)	Max. 0.347
Absorbance (220 nm)	Max. 0.188	Absorbance (225 nm)	Max. 0.155
Absorbance (230 nm)	Max. 0.071	Absorbance (240 nm)	Max. 0.023
Absorbance (250 nm)	Max. 0.023	Absorbance (260 nm)	Max. 0.009
Absorbance (280-400 nm)	Max. 0.009	Fluorescence (as quinine; 254 nm)	Max. 1 ppb
Fluorescence (as quinine) (365 nm)	Max. 0.5 ppb	MS-ESI+ (as Reserpine)	Max. 2 ppb
MS-APCI+ (as Reserpine)	Max. 2 ppb	MS-ESI- (as 4-Nitrophenol)	Max. 20 ppb
MS-APCI- (as 4-Nitrophenol)	Max. 20 ppb		

Cat. No.	Pk	Pack type
85800.290	1 l	Glass bottle
85800.320	2,5 l	Glass bottle

Methanol HiPerSolv CHROMANORM® for LC-MS

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue (100°C)	Max. 0.0005 %
Water	Max. 0.05 %
Ca (Calcium)	Max. 0.1 ppm
K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm
Na (Sodium)	0.1 ppm
Transmittance (210 nm)	Min. 65 %
Transmittance (220 nm)	Min. 75 %
Transmittance (230 nm)	Min. 90 %
Transmittance (240 nm)	Min. 98 %
Transmittance (250 nm)	Min. 99 %
Gradient (235 nm)	Max. 2 mAU
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83638.290	1 l	Glass bottle
83638.320	2,5 l	Glass bottle

NEW Methanol HiPerSolv CHROMANORM® ACS, Reag. Ph.Eur., super gradient grade for HPLC, suitable for UPLC/UHPLC instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (GC)	Min. 99.9 %	Carbonyl compounds	Passes test
Identification	Passes test	Solubility in water	Passes test
Substances darkened by sulphuric acid	Passes test	Substances reducing permanganate	Passes test
Acidity	Max. 0.0002 meq/g	Alkalinity	Max. 0.0002 meq/g
Boiling point	64 - 65 °C	Colouration	Max. 10 APHA
Density (20/20)	0.791 - 0.793	Evaporation residue	Max. 1 ppm
Water	Max. 0.02 %	Gradient (235 nm)	Max. 2 mAU
Gradient (254 nm)	Max. 1 mAU	Transmittance (210 nm)	Min. 45 %
Transmittance (220 nm)	Min. 65 %	Transmittance (225 nm)	Min. 70 %
Transmittance (230 nm)	Min. 83 %	Transmittance (235 nm)	Min. 85 %
Transmittance (240 nm)	Min. 90 %	Transmittance (250 nm)	Min. 95 %
Transmittance (260 nm)	Min. 98 %	Transmittance (280-400 nm)	Min. 98 %
Absorbance (210 nm)	Max. 0.347	Absorbance (220 nm)	Max. 0.188
Absorbance (225 nm)	Max. 0.155	Absorbance (230 nm)	Max. 0.081
Absorbance (235 nm)	Max. 0.071	Absorbance (240 nm)	Max. 0.046
Absorbance (250 nm)	Max. 0.023	Absorbance (260 nm)	Max. 0.009
Absorbance (280-400 nm)	Max. 0.009	Fluorescence (as quinine; 254 nm)	Max. 1 ppb
Fluorescence (as quinine) (365 nm)	Max. 0.5 ppb	Conforms Ph.Eur. R1 1053201	Passes test
Conforms Ph.Eur. R2 1053202	Passes test	Conforms to ACS	Passes test
Filtered at 02 µm	Confirmed		

Cat. No.	Pk	Pack type
85681.290	1 l	Glass bottle
85681.320	2,5 l	Glass bottle
85681.400	4 l	Glass bottle
85681.360	5 l	Aluminium bottle

Methanol HiPerSolv CHROMANORM® Reag. Ph. Eur., gradient grade for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,79 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0003 meq/g
Alkalinity	Max. 0.0002 meq/g
Boiling point	64 - 65 °C
Density (20/20)	0.791 - 0.793
Evaporation residue	Max. 5 ppm
Water	Max. 0.03 %
Absorbance (210 nm)	Max. 0.7
Absorbance (220 nm)	Max. 0.3
Absorbance (230 nm)	Max. 0.15
Absorbance (235 nm)	Max. 0.1
Absorbance (250 nm)	Max. 0.02
Absorbance (260 nm)	Max. 0.01
Transmittance (210 nm)	Min. 20 %
Transmittance (220 nm)	Min. 50 %
Transmittance (225 nm)	Min. 68 %
Transmittance (230 nm)	Min. 74 %
Transmittance (235 nm)	Min. 80 %
Transmittance (250 nm)	Min. 95 %
Transmittance (260 nm)	Min. 98 %
Transmittance (260-420 nm)	Min. 98 %
Fluorescence (as quinine; 254 nm)	Max. 1 ppb
Conforms Ph.Eur. R 1053200	Passes test
Conforms Ph.Eur. R1 1053201	Passes test
Conforms Ph.Eur. R2 1053202	Passes test

Cat. No.	Pk	Pack type
20864.290	1 l	Glass bottle
20864.320	2,5 l	Glass bottle
20864.420	2,5 l	Glass bottle SAFEBREAK
20864.400	4 l	Glass bottle
20864.360	5 l	Aluminium bottle
20864.910	10 l	Aluminium bottle
20864.928	28 l	Aluminium bottle

Methanol HiPerSolv CHROMANORM®, isocratic grade for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0003 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.05 %
Absorbance (220 nm)	Max. 0.4
Absorbance (240 nm)	Max. 0.15
Absorbance (260 nm)	Max. 0.02
Transmittance (220 nm)	Min. 45 %
Transmittance (240 nm)	Min. 75 %
Transmittance (260 nm)	Min. 96 %

Cat. No.	Pk	Pack type
20837.320	2,5 l	Glass bottle
20837.360	5 l	Plastic container

Methanol HiPerSolv CHROMANORM® for preparative HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (calculated on anhydrous)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.05 %

Cat. No.	Pk	Pack type
84529.460	25 l	Metal drum
84529.550	200 l	Metal drum

Methanol SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **M.W.** 32.04 g/mol **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (GC)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.05 %
Transmittance (210 nm)	Min. 30 %
Transmittance (220 nm)	Min. 55 %
Transmittance (230 nm)	Min. 75 %
Transmittance (240 nm)	Min. 90 %
Transmittance (250 nm)	Min. 95 %
Transmittance (260 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84705.320	2,5 l	Glass bottle

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Methanol, anhydrous (max. 0.002% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay ..... Min. 99.9 %
Acidity ..... Max. 0.00050 meq/g
Residue on evaporation ..... Max. 0.0003 %
Water (K.F.) ..... Max. 0.0020 %

Cat. No.	Pk	Pack type
83679.230	250 ml	Glass bottle with septum cap
83679.260	500 ml	Glass bottle
83679.290	1 l	Glass bottle

VWR LIFE SCIENCE Methanol, anhydrous, ultrapure

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Moisture (KF) ..... < = 0.1 %
Purity ..... >= 99.8 %
Specific Gravity ..... 0.783 - 0.791

Cat. No.	Pk	Pack type
0323-4L	4 l	Plastic bottle

NEW Methanol, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85670.180	100 ml	Glass bottle

NEW Methanol PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Appearance ..... Clear colourless liquid
Identity (IR) ..... Conforms
Assay (calculated on anhydrous) ..... Min. 99.9 %
Residue after evaporation ..... Max. 0.0003 %(m)
Water ..... Max. 0.1 M%
Colour ..... Max. 10 APHA
GC/ECD dioxins, furans and PCB's ..... Max. 5 ng/l
GC/ECD any pesticide (as Lindane) ..... Max. 5 ng/l
GC/NPD any pesticide (as Parathion) ..... Max. 10 ng/l
GC/ECD 1,2,4-TCB to deca-PCB(as Lindane) ..... Max. 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM) ..... Max. 2.0 ng/ml
GC/FID C_{10} to C_{40} (as n-Decane) ..... Max. 5 ng/ml
GC/MSD C_{10} to C_{40} (as Decane; 30-600amu) ..... Max. 5 ng/ml

Cat. No.	Pk	Pack type
85394.320	2,5 l	Glass bottle

Methanol PESTINORM® for capillary GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (on anhydrous substance) ..... Min. 99.9 %
Acidity ..... Max. 0.0005 meq/g
Water ..... Max. 0.1 %
Evaporation residue (100°C) ..... Max. 0.0005 %
Organic residue (as Octanol) (GC/FID) ..... Max. 10 ng/l
Halogenated residue (as Lindane)(GC/ECD) ..... Max. 5 ng/l

Cat. No.	Pk	Pack type
83966.320	2,5 l	Glass bottle

Methanol PESTINORM® for purge and trap GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (on anhydrous substance) ..... Min. 99.9 %
Acidity ..... Max. 0.0005 meq/g
Water ..... Max. 0.1 %
Evaporation residue (100°C) ..... Max. 0.0005 %
2-Butanone (GC/MS) ..... Max. 0.5 ppm
Volatile impurities (GC/MS) ..... Passes test

Cat. No.	Pk	Pack type
83967.290	1 l	Glass bottle
83967.320	2,5 l	Glass bottle

Methanol PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (on anhydrous substance) ..... Min. 99.70 %
Evaporation residue ..... Max. 5 ppm
Water ..... Max. 0.100 %
Pesticide analysis (Ethylparathion/PND) ..... Max. 10 ng/l
Pesticide analysis (Lindane/ECD) ..... Max. 5 ng/l
Pesticide analysis (Lindane/ECD) ..... Max. 5 ng/l

Cat. No.	Pk	Pack type
83662.290	1 l	Glass bottle
83662.320	2,5 l	Glass bottle

NEW Methanol with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Storage Temperature: Ambient

Nominal concentration (V/V)	0.095 - 0.105 %
Evaporation residue	Max. 0.0001 %
Water	Max. 0.02 %
Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm
Transmittance (225 nm)	Min. 20 %
Transmittance (240 nm)	Min. 50 %
Transmittance (250 nm)	Min. 80 %
Transmittance (260 nm)	Min. 95 %
Transmittance (270 nm)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84870.290	1 l	Glass bottle
84870.320	2,5 l	Glass bottle

Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Appearance	Clear colourless liquid	Assay (on anhydrous substance)	Min. 99.8 %
IR Spectrum	Passes test	Solubility in water	Passes test ACS
Acidity	Max. 0.0002 meq/g	Alkalinity	Max. 0.00006 meq/g
Boiling point	64 - 65 °C	Colouration	Max. 10 APHA
Density (20/4)	0.791 - 0.792	Density (20/20)	0.791 - 0.793
Substances coloured by H_2SO_4	Max. 10 APHA	Acetone + aldehydes (as CH_3COCH_3)	Max. 10 ppm
Ethanol	Max. 0.1 %	Evaporation residue	Max. 10 ppm
Formaldehyde	Max. 1 ppm	Substances reducing $KMnO_4$ (as O)	Max. 2 ppm
Water	Max. 0.05 %	Cl (Chloride)	Max. 0.5 ppm
Al (Aluminium)	Max. 0.1 ppm	B (Boron)	Max. 0.05 ppm
Ba (Barium)	Max. 0.05 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.01 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.01 ppm
Na (Sodium)	Max. 0.7 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.01 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.2 ppm
Absorbance (225 nm)	Max. 0.17	Transmittance (210 nm)	Min. 20 %
Transmittance (220 nm)	Min. 50 %	Transmittance (225 nm)	Min. 68 %
Transmittance (250 nm)	Min. 95 %	Conforms to ACS	Passes test
Conforms Ph.Eur. R 1053200	Passes test	Conforms Ph.Eur. R1 1053201	Passes test
Conforms Ph.Eur. R2 1053202	Passes test		

Cat. No.	Pk	Pack type
20847.240	1 l	Glass bottle SAFEBREAK
20847.295	1 l	Glass bottle
20847.318	1 l	Plastic bottle
20847.307	2,5 l	Plastic bottle
20847.320	2,5 l	Glass bottle
20847.422	2,5 l	Glass bottle SAFEBREAK
20847.360	5 l	Plastic bottle
20847.466	25 l	Metal drum
20847.557	200 l	Metal drum with liner

Methanol, anhydrous (max. 0.005% H_2O) for synthesis

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Appearance	Clear colourless liquid	Colour value	Max. 10 APHA
Assay (calculated on anhydrous)	Min. 99.8 %	Acidity (as HCOOH)	Max. 0.0010 %
Alkalinity (as NH_3)	Max. 0.00010 %	Acetone + aldehydes (as CH_3COCH_3)	Max. 0.0010 %
Formaldehyde	Max. 0.0001 %	Residue on evaporation	0.0010 %
Reducing substances	Max. 0.0002 %	Water (K.F.)	Max. 0.0050 %
Substances discoloured by H_2SO_4	Max. 20 APHA	Ethanol	Max. 0.100 %
Cl (Chloride)	Max. 0.5 ppm	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.5 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.01 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
20856.296	1 l	Glass bottle

Methanol GPR RECTAPUR®

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay	Min. 99.5 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test
Acidity	Max. 0.0002 meq/g
Boiling point	64 - 65 °C
Colouration	Max. 10 APHA
Acetone	Max. 10 ppm
Evaporation residue	Max. 50 ppm
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
20846.292	1 l	Plastic bottle
20846.326	2,5 l	Plastic bottle
20846.361	5 l	Plastic bottle
20846.463	25 l	Metal drum
20846.554	200 l	Metal drum

Methanol TECHNICAL

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay	Min. 98.5 %
Evaporation residue	Max. 0.015 %

Cat. No.	Pk	Pack type
20903.290	1 l	Plastic bottle
20903.368	5 l	Plastic bottle
20903.415	10 l	Plastic drum
20903.461	25 l	Plastic drum
20903.550	200 l	Metal drum

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Methanol, special quality for use in preparing solutions of Leishman's, Jenner's, Giemsa's and other stains

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Assay (GC)	Min. 99.5 %
Identity (IR)	Conforms
n 20/D	1.328 - 1.330
Water	Max. 0.1 %
Evaporation residue	Max. 0.001 %
Acidity or alkalinity	Conforms
Reducing substances	Conforms

Cat. No.	Pk	Pack type
360486N	2,5 l	Glass bottle

NEW Methanol VLSI

Danger

CAS 67-56-1 **UN:** 1230
CH_3OH **M.W.** 32.04 g/mol
Boiling Pt: 64,6 °C (1013 hPa) **Melting Pt:** -98 °C **Density:** 0,7918 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119433307-44

Cat. No.	Pk	Pack type
85650.320	2,5 l	Plastic bottle
85650.360	5 l	Plastic bottle

Methanol-[D4] (99.80% D) for NMR spectroscopy

Danger

CAS 811-98-3 **UN:** 1230
D_3COD **M.W.** 36.01 g/mol
Boiling Pt: 65,3 °C (1013 hPa) **Melting Pt:** -99 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.80 %
Water (HDO+D_2O)	Max. 0.03 %

Cat. No.	Pk	Pk Info	Pack type
87157.0010	10 ml	-	Glass bottle
87157.0011	10 ml	-	Glass bottle with septum cap
87157.0025	25 ml	-	Glass bottle
87157.0100	100 ml	-	Glass bottle
87157.0006	1 Pack	10 x 0,6 ml	Glass ampoules

Methanol-[D4] (99.8% D) contains 0.03% TMS for NMR spectroscopy

Danger

CAS 811-98-3 **UN:** 1230
D_3COD **M.W.** 36.01 g/mol
Boiling Pt: 65,3 °C (1013 hPa) **Melting Pt:** -99 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.80 %
Water (HDO+D_2O)	Max. 0.03 %

Cat. No.	Pk	Pack type
84116.0010	10 ml	Glass bottle

Methenamine AnalaR NORMAPUR® analytical reagent

Warning

CAS 100-97-0 **UN:** 1328
$C_6H_{12}N_4$ **M.W.** 140.19 g/mol
Melting Pt: 280 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 0.05 %	Water	Max. 1 %
Cl (Chloride)	Max. 20 ppm	SO_4 (Sulphate)	Max. 50 ppm

Cat. No.	Pk	Pack type
24560.260	500 g	Plastic bottle for solids
24560.291	1 kg	Plastic bottle for solids

Methenamine GPR RECTAPUR®

Warning

CAS 100-97-0 **UN:** 1328
$C_6H_{12}N_4$ **M.W.** 140.19 g/mol
Melting Pt: 280 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 50 ppm
Ignition residue (SO_4)	Max. 0.2 %
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.02 %

Cat. No.	Pk	Pack type
24558.293	1 kg	Plastic bottle for solids

NEW DL-Methionine Ph. Eur., USP, JP for biopharmaceutical production

CAS 59-51-8
$C_5H_{11}NO_2S$ **M.W.** 149.21 g/mol
Melting Pt: ~ 136 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 101.0 %
Identification (IR)	Passes test
Identification (Optical rotation)	-0.05 - 0.05 deg
Appearance of solution S	Passes test
pH of solution S	5.4 - 6.1
Related substances (TLC)	Max. 0.2 %
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 200 ppm
Heavy metals (as Pb)	Max. 5 ppm
NH_4 (Ammonium)	Max. 200 ppm
Fe (Iron)	Max. 10 ppm
Loss on drying (105°C; 3 h)	Max. 0.5 %
Sulphated ash	Max. 0.1 %
Transmittance (430 nm) (10 %; HCl 2 N)	Min. 98 %
Residues of metal catalysts or reagents	Unlikely by manuf.process
Residual solvents (Ph.Eur./ICH)	Unlikely by manuf.process

Cat. No.	Pk	Pack type
16236.297	1 kg	Plastic bottle for solids
16236.366	5 kg	Bucket (Plastic)

Methocel® 90 HG

See Methyl cellulose Methocel® A4C p.261

Methocel® A4C

See Methyl cellulose Methocel® A4C p.261

Methotrexate USP

Danger

CAS 59-05-2 **UN:** 1544
$C_{20}H_{22}N_8O_5$
Storage Temperature: Freezer

Product is tested to USP specifications

Enantiomeric Purity	< = 3 %
Identification A: IR	pass
Identification B: UV	pass
Purity	98 % - 102 %
Related Compounds: Any Unspecified Impurity	<= 0.1 %
Related Compounds: Impurity B	< 0.3 %
Related Compounds: Impurity C	< 0.5 %
Related Compounds: Impurity E	< 0.3 %
Related Compounds: Impurity H	< 0.2 %
Related Compounds: Impurity I	< 0.2 %
Related Compounds: Total Impurities	< 1 %
Residue after Ignition	< 0.1 %
Water Determination (by Karl Fischer)	< 12%

Cat. No.	Pk	Pack type
0954-100MG	100 mg	Glass bottle

(±)-1-Methoxy-2-propanol GPR RECTAPUR®

Warning

CAS 107-98-2 **UN:** 3092
$CH_3CH(OH)CH_2OCH_3$ **M.W.** 90.12 g/mol
Boiling Pt: 119,6 °C (1013 hPa) **Melting Pt:** -97 °C **Density:** 0,92 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Acidity	Max. 0.0003 meq/g
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
23829.293	1 l	Glass bottle
23829.320	2,5 l	Glass bottle

2-Methoxy-2-methylpropane

See tert-Butyl methyl ether p.72

NEW 3-Methoxypropylamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84978.180	100 ml	Plastic bottle

Methylal

See Formaldehyde dimethyl acetal p.164

Methyl alcohol

See Methanol p.255

Methyl-D3 alcohol-D

See Methanol-[D4] p.259

Methyl alcohol-D4

See Methanol-[D4] p.259

NEW Monomethylamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84980.180	100 ml	Plastic bottle

Methylated spirit

See Ethanol 99% denatured with methanol (industrial methylated spirit) . p.149

Methylbenzene

See Toluene p.491

Methylbenzene-D8

See Toluene-[D8] p.492

2-Methylbutane AnalaR NORMAPUR® analytical reagent

Danger

CAS 78-78-4 **UN:** 1265
$CH_3CH_2CH(CH_3)_2$ **M.W.** 72.15 g/mol
Boiling Pt: 28 °C (1013 hPa) **Melting Pt:** -160 °C **Density:** 0,62 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	IR Spectrum	Passes test
Readily carbonisable substances	Passes test	Acidity	Max. 0.0002 meq/g
Alkalinity	Max. 0.0002 meq/g	Bromine value	Max. 0.5
Colouration	Max. 10 APHA	Evaporation residue	Max. 50 ppm
n-Pentane	Max. 1.0 %	Sulphur compounds (as S)	Max. 50 ppm
Water	Max. 0.03 %	Al (Aluminium)	Max. 0.1 ppm
Ba (Barium)	Max. 0.02 ppm	Ca (Calcium)	Max. 0.1 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.2 ppm	K (Potassium)	Max. 0.05 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
103614T	500 ml	Glass bottle
103616V	2,5 l	Glass bottle

2-Methylbutane GPR RECTAPUR®

Danger

CAS 78-78-4 **UN:** 1265
$CH_3CH_2CH(CH_3)_2$ **M.W.** 72.15 g/mol
Boiling Pt: 28 °C (1013 hPa) **Melting Pt:** -160 °C **Density:** 0,62 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Boiling point	27.0 - 28.5 °C
Density (20/4)	0.600 - 0.640
n 20/D	1.353 - 1.355
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
24872.260	500 ml	Glass bottle
24872.298	1 l	Glass bottle
24872.323	2,5 l	Glass bottle

3-Methyl-1-butanol

See Isoamyl alcohol p.226

Methyl carbinol

See Ethanol absolute p.145

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Methyl cellulose Methocel® A4C

CAS 9004-67-5
Storage Temperature: Ambient

Viscosity ..... 300 - 560 mPa.s
pH (1 %) ..... 5.0 - 8.0
Heavy metals (as Pb) ..... Max. 0.001 %
Loss on drying ..... Max. 5.0 %

Cat. No.	Pk	Pack type
298944N	500 g	Plastic bottle

Methyl cyanide

See Acetonitrile p.10

Methyl cyanide-D3

See Acetonitrile-[D3] p.13

Methylcyclohexane TECHNICAL

Danger

CAS 108-87-2 **UN:** 2296
$C_6H_{11}CH_3$ **M.W.** 98.19 g/mol
Boiling Pt: 101 °C (1013 hPa) **Melting Pt:** -126 °C **Density:** 0,7693 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Identification ..... Passes test
Water ..... Max. 50 ppm

Cat. No.	Pk	Pack type
25505.366	5 l	Metal can
25505.468	25 l	Metal drum

Methylene blue, tablets for milk analysis

Warning

CAS 61-73-4
$C_{16}H_{18}ClN_3S$ **M.W.** 319.86 g/mol
Melting Pt: 180 °C **Density:** 1,757 g/cm³ (22 °C)
Storage Temperature: Ambient

Methylene blue tablets are used for preparing methylene blue solution for the bacteriological examination of graded milks.
These VWR Methylene Blue Milk-Testing tablets are guaranteed to possess the essential qualities of complete solubility and uniformity

Cat. No.	Pk	Pack type
330733R	50 Tab.	Aluminium tube

Methylene blue for microscopy

See Dyes and Stains p.290

Methylene blue NZ TECHNICAL, extra

Warning

CAS 6372-69-6
$C_{32}H_{36}Cl_4N_6S_2Zn$ **M.W.** 776.01 g/mol

Identification ..... Passes test

Cat. No.	Pk	Pack type
34560.265	500 g	Glass bottle for solids

Methylene blue zinc chloride double salt

See Methylene blue NZ p.261

Methylene chloride-D2

See Dichloromethane-[D2] p.112

N,N'-Methylenediacrylamide

See Bisacrylamide p.58

Methylene iodide

See Diiodomethane p.117

(±)-Methyl ethyl carbinol

See (±)-2-Butanol p.71

Methyl ethyl ketone HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 78-93-3 **UN:** 1193
$C_2H_5COCH_3$ **M.W.** 72.11 g/mol
Boiling Pt: 79,6 °C (1013 hPa) **Melting Pt:** -86 °C **Density:** 0,8054 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119457290-43

Assay (on anhydrous substance) ..... Min. 99.7 %
Acidity (at filling) ..... Max. 0.0005 meq/g
Evaporation residue ..... Max. 5 ppm
Water ..... Max. 0.1 %
Transmittance (335 nm) ..... Min. 40 %
Transmittance (340 nm) ..... Min. 80 %
Transmittance (350 nm) ..... Min. 98 %

Cat. No.	Pk	Pack type
25643.294	1 l	Glass bottle
25643.328	2,5 l	Glass bottle

NEW Methyl ethyl ketone (butanone), secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85672.180	100 ml	Glass bottle

Methyl ethyl ketone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 78-93-3 **UN:** 1193
$C_2H_5COCH_3$ **M.W.** 72.11 g/mol
Boiling Pt: 79,6 °C (1013 hPa) **Melting Pt:** -86 °C **Density:** 0,8054 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119457290-43

Assay ..... Min. 99.5 %
Acidity (at filling) ..... Max. 0.0005 meq/g
Colouration ..... Max. 10 APHA
Density (20/20) ..... 0.805 - 0.808
Butan-2-ol ..... Max. 0.07 %
2-Methylpropan-2-ol ..... Max. 0.1 %
Substances reducing $KMnO_4$ (as O) ..... Max. 3 ppm
Al (Aluminium) ..... Max. 0.2 ppm
Ba (Barium) ..... Max. 0.1 ppm
Cd (Cadmium) ..... Max. 0.05 ppm
Cr (Chromium) ..... Max. 0.02 ppm
Fe (Iron) ..... Max. 0.1 ppm
Mg (Magnesium) ..... Max. 0.05 ppm
Na (Sodium) ..... Max. 0.5 ppm
Pb (Lead) ..... Max. 0.1 ppm
Sr (Strontium) ..... Max. 0.02 ppm
Conforms to ACS ..... Passes test
IR Spectrum ..... Passes test
Boiling point ..... 79 - 80 °C
Density (20/4) ..... 0.804 - 0.807
Acetone ..... Max. 0.05 %
Methanol ..... Max. 0.05 %
Non-volatile residue ..... Max. 10 ppm
Water ..... Max. 0.1 %
B (Boron) ..... Max. 0.02 ppm
Ca (Calcium) ..... Max. 0.5 ppm
Co (Cobalt) ..... Max. 0.02 ppm
Cu (Copper) ..... Max. 0.02 ppm
K (Potassium) ..... Max. 0.1 ppm
Mn (Manganese) ..... Max. 0.02 ppm
Ni (Nickel) ..... Max. 0.02 ppm
Sn (Tin) ..... Max. 0.1 ppm
Zn (Zinc) ..... Max. 0.1 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
25642.291	1 l	Glass bottle
25642.325	2,5 l	Glass bottle

Methyl ethyl ketone GPR RECTAPUR®

Danger

CAS 78-93-3 **UN:** 1193
$C_2H_5COCH_3$ **M.W.** 72.11 g/mol
Boiling Pt: 79,6 °C (1013 hPa) **Melting Pt:** -86 °C **Density:** 0,8054 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457290-43

Assay	Min. 99 %
IR Spectrum	Passes test
Boiling point	79 - 80 °C
Acidity (at filling)	Max. 0.0005 meq/g
Density (20/4)	0.804 - 0.807
Evaporation residue	Max. 20 ppm
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
25641.297	1 l	Plastic bottle
25641.322	2,5 l	Plastic bottle
25641.366	5 l	Plastic bottle
25641.468	25 l	Metal drum
25641.550	200 l	Metal drum

Methyl ethyl ketone TECHNICAL

Danger

CAS 78-93-3 **UN:** 1193
$C_2H_5COCH_3$ **M.W.** 72.11 g/mol
Boiling Pt: 79,6 °C (1013 hPa) **Melting Pt:** -86 °C **Density:** 0,8054 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457290-43

Assay	Min. 99 %
Boiling point	79 - 80 °C
Density (20/4)	0.804 - 0.807

Cat. No.	Pk	Pack type
25654.292	1 l	Plastic bottle
25654.361	5 l	Plastic bottle

Methyl 2-hydroxybenzoate

See Methyl salicylate p.264

Methyl 4-hydroxybenzoate Ph. Eur.

Warning

CAS 99-76-3
$HOC_6H_4CO_2CH_3$ **M.W.** 152.15 g/mol
Boiling Pt: 270-280 °C (1013 hPa) **Melting Pt:** 125-128 °C **Density:** 1,1208 g/cm³ (137 °C)
Storage Temperature: Ambient

Assay	98.0 - 102.0 %
Appearance	Conforms (see CoA/CoS)
Melting point	125 - 128 °C
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity	Passes test
Related substances	Passes test
Sulphated ash	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
25604.290	1 kg	Plastic bottle for solids

Methyl 4-hydroxybenzoate TECHNICAL

Warning

CAS 99-76-3
$HOC_6H_4CO_2CH_3$ **M.W.** 152.15 g/mol
Boiling Pt: 270-280 °C (1013 hPa) **Melting Pt:** 125-128 °C **Density:** 1,1208 g/cm³ (137 °C)
Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
25605.293	1 kg	Plastic bottle for solids

Methyl iodide

See Iodomethane p.221

Methyl methacrylate (monomer) stabilised TECHNICAL

Stabilised with hydroquinone monomethyl ether (4-methoxyphenol, MEHQ)

Danger

CAS 80-62-6 **UN:** 1247
$CH_2=C(CH_3)COOCH_3$ **M.W.** 100.12 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** -48 °C **Density:** 0,93 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119452498-28

Assay	Min. 99.5 %

Cat. No.	Pk	Pack type
25600.296	1 l	Glass bottle

Methyl 2-methylprop-2-enoate

See Methyl methacrylate (monomer) p.262

Microorganism test

See Coagulase test p.93

Methyl 2-methylpropenoate

See Methyl methacrylate (monomer) p.262

Methyl orange 0.04% in aqueous solution TECHNICAL pH-indicator

CAS 547-58-0
$C_{14}H_{14}N_3NaO_3S$
Storage Temperature: Ambient

Transition range: pH 3,1-4,4

Identification	Passes test

Cat. No.	Pk	Pack type
31720.230	250 ml	Glass bottle
31720.292	1 l	Glass bottle

(±)-Methyloxirane

See Propylene oxide p.380

Methylparaben

See Methyl 4-hydroxybenzoate p.262

Methyl Parahydroxybenzoate

See Methyl 4-hydroxybenzoate p.262

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4-Methyl-2-pentanone AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 108-10-1 **UN:** 1245
$(CH_3)_2CHCH_2COCH_3$ **M.W.** 100.16 g/mol
Boiling Pt: 117,4 °C (1013 hPa) **Melting Pt:** -84 °C **Density:** 0,801 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	IR Spectrum	Passes test
Acidity	Max. 0.002 meq/g	Boiling point	115 - 117 °C
Colouration	Max. 10 APHA	Density (20/4)	0.799 - 0.803
Density (20/20)	0.800 - 0.804	Non-volatile residue	Max. 10 ppm
Substances reducing $KMnO_4$ (as O)	Max. 3 ppm	Water	Max. 0.1 %
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
25652.295	1 l	Glass bottle
25652.320	2,5 l	Glass bottle

4-Methyl-2-pentanone GPR RECTAPUR®

Danger

CAS 108-10-1 **UN:** 1245
$(CH_3)_2CHCH_2COCH_3$ **M.W.** 100.16 g/mol
Boiling Pt: 117,4 °C (1013 hPa) **Melting Pt:** -84 °C **Density:** 0,801 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
IR Spectrum	Passes test
Boiling point	115 - 117 °C
Density (20/4)	0.790 - 0.810
Evaporation residue	Max. 0.02 %

Cat. No.	Pk	Pack type
25656.298	1 l	Glass bottle
25656.323	2,5 l	Glass bottle
25656.367	5 l	Plastic bottle

4-Methyl-2-pentanone TECHNICAL

Danger

CAS 108-10-1 **UN:** 1245
$(CH_3)_2CHCH_2COCH_3$ **M.W.** 100.16 g/mol
Boiling Pt: 117,4 °C (1013 hPa) **Melting Pt:** -84 °C **Density:** 0,801 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %

Cat. No.	Pk	Pack type
25655.295	1 l	Glass bottle
25655.364	5 l	Plastic bottle
25655.466	25 l	Metal drum

3-Methylphenol

See m-Cresol p.100

2-Methyl-1-propanol

See Isobutanol p.227

2-Methyl-2-propanol

See tert-Butanol p.71

NEW N-Methyl-2-pyrrolidone (NMP) PESTINORM® for headspace gas chromatography

Danger

CAS 872-50-4
C_5H_9NO **M.W.** 99.13 g/mol
Boiling Pt: 202 °C (1013 hPa) **Melting Pt:** -24 °C **Density:** 1,033 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119472430-46

Appearance	Clear colourless liquid
Assay (calculated on anhydrous)	99.9 - 100.0 %
Refractive index	1.469 - 1.471
Water	Max. 0.05 %(m)
UV Cutoff	190 - 269 nm
Transmittance (285 nm)	Min. 60 %
Transmittance (300 nm)	Min. 85 %
Transmittance (320 nm)	Min. 90 %
Transmittance (from 350 nm)	98 - 100 %
Headspace test for O.V.I's	Passes test

Cat. No.	Pk	Pack type
85398.290	1 l	Glass bottle

N-Methyl-2-pyrrolidone (NMP) for peptide synthesis

Danger

CAS 872-50-4
C_5H_9NO **M.W.** 99.13 g/mol
Boiling Pt: 202 °C (1013 hPa) **Melting Pt:** -24 °C **Density:** 1,033 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119472430-46

Assay (calculated on anhydrous)	Min. 99.5 %
Appearance	Clear colourless liquid
Colour value	Max. 10 APHA
Free amines	Max. 0.001 %
Residue on evaporation	Max. 0.002 %
Water	Max. 0.02 %
Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm
Pb (Lead)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
84572.320	2,5 l	Glass bottle

N-Methyl-2-pyrrolidone (NMP) GPR RECTAPUR®

Danger

CAS 872-50-4
C_5H_9NO **M.W.** 99.13 g/mol
Boiling Pt: 202 °C (1013 hPa) **Melting Pt:** -24 °C **Density:** 1,033 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119472430-46

Assay	Min. 99.5 %
Acidity	Max. 0.0002 meq/g
Alkalinity	Max. 0.003 meq/g
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
26211.298	1 l	Glass bottle
26211.425	2,5 l	Glass bottle SAFEBREAK

N-Methyl-2-pyrrolidone (NMP) TECHNICAL

Danger

CAS 872-50-4
C_5H_9NO **M.W.** 99.13 g/mol
Boiling Pt: 202 °C (1013 hPa) **Melting Pt:** -24 °C **Density:** 1,033 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119472430-46

Assay	Min. 99 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test

Cat. No.	Pk	Pack type
25675.294	1 l	Glass bottle
25675.465	25 l	Metal drum

N-Methyl-2-pyrrolidone (NMP) VLSI Selectipur® for the electronics industry

Danger

CAS 872-50-4
C_5H_9NO **M.W.** 99.13 g/mol
Boiling Pt: 202 °C (1013 hPa) **Melting Pt:** -24 °C **Density:** 1,033 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50489118.	2,5 l	Glass bottle

N-Methyl-2-pyrrolidone (NMP) for the electronics industry

Danger

CAS 872-50-4
C_5H_9NO **M.W.** 99.13 g/mol
Boiling Pt: 202 °C (1013 hPa) **Melting Pt:** -24 °C **Density:** 1.033 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
52010265.	210 kg	Plastic bottle

Methyl red 0.2 g/l in ethanol TECHNICAL

Danger

CAS 493-52-7 **UN:** 1170
$C_{15}H_{15}N_3O_2$
Storage Temperature: Ambient

Transition range: pH 4,4 - 6,2

Identification ..... Passes test

Cat. No.	Pk	Pack type
34302.231	250 ml	Glass bottle

Methyl salicylate GPR RECTAPUR®

Warning

CAS 119-36-8
2-(HO)$C_6H_4CO_2CH_3$ **M.W.** 152.15 g/mol
Boiling Pt: 432 °C (1013 hPa) **Melting Pt:** 100-101 °C **Density:** 1,184 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
Density (20/4) ..... 1.180 - 1.190

Cat. No.	Pk	Pack type
25616.291	1 l	Glass bottle

(±)-2-Methyltetrahydrofuran stabilised GPR RECTAPUR® for synthesis

Stabilised with BHT (Ionol) 150-400 ppm

Danger

CAS 96-47-9 **UN:** 2536
$C_5H_{10}O$ **M.W.** 86.13 g/mol
Boiling Pt: 79 °C (1013 hPa) **Melting Pt:** -136 °C **Density:** 0,86 g/cm³ (20 °C)

Appearance ..... Clear colourless liquid
Assay ..... Min. 99.0 %
IR Spectrum ..... Passes test
Water ..... Max. 0.03 %

Cat. No.	Pk	Pack type
87132.290	1 l	Glass bottle
87132.320	2,5 l	Glass bottle
87132.460	25 l	Metal drum
87132.550	188 l	Metal drum

7-Methyltheobromine

See Caffeine p.73

Methylthioninium chloride zinc chloride double salt

See Methylene blue NZ p.261

Methylthioninium chloride

See Methylene blue p.261

Meyer'reagent for blood research

Warning

UN: 1760
Boiling Pt: >100 °C (1013hPa) **Density:** 1,1 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
31072.268	500 ml	Glass bottle

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Ready to use media plates (90 mm), irradiated

Available as 90 mm plates acc. to standards. TLHTh (Tween, lecithin, histidine, thiosulphate) are used as disinfectant neutralisers. Bags are available double or triple wrapped. One pack per bag displays the irradiation indicator.

- The triple wrapping ensures that the package itself doesn't contaminate the environment as the first wrapper is removed just before entering the clean area
- Available with certificate of irradiation/dosimetry
- VHP resistance studies available for all triple wrapped plates
- Storage: at 15-25 °C for the plates art. 280882TI, 280882ZI, 281112TI and 281112ZI; at 2-14 °C for all the other plates

Packaging: The plates are packed 10 each in a plastic shrink-wrap bag. The box supplied contains 2 bags with a total of 20 or 6×20 plates.

Description	Filling	Standard	Pk	Cat. No.
Letheen modified agar double wrapped	22 ml	FDA	20	112750ZI
Letheen modified agar double wrapped	22 ml	FDA	120	112750ZIMP
PCA double wrapped	22 ml	ISO 4833, 8552 and 17410 and IFU No. 6	20	110774ZI
PCA double wrapped	22 ml	EPA, ISO 4833	120	110774ZIMP
R2A double wrapped	22 ml	-	120	110802ZIMP
R2A triple wrapped	22 ml	EPA	20	130802ZI
R2A triple wrapped	22 ml	-	120	130802ZIMP
Rose Bengal chloramphenicol penase double wrapped	20 ml	-	20	110070PY
Rose Bengal chloramphenicol penase double wrapped	20 ml	-	120	110070PYMP
Saboraud 4% dextrose agar (SDA) TLHTh triple wrapped	22 ml	HP, BAM, COMPF, ISO, EP, USP	60	280882TI
Saboraud 4% dextrose agar (SDA) triple wrapped	22 ml	HP, BAM, COMPF, ISO, EP, USP	60	280882ZI
Sabouraud-4% Chloramphenicol agar double wrapped	22 ml	-	20	110884CY
Sabouraud-4% Chloramphenicol agar double wrapped	22 ml	-	120	110884CYMP
Sabouraud 4% dextrose agar (SDA) with disinfectant neutraliser double wrapped	22 ml	-	20	110884TI
Sabouraud 4% dextrose agar (SDA) with disinfectant neutraliser triple wrapped	22 ml	-	120	110884TIMP
Sabouraud 4% dextrose agar double wrapped	22 ml	EP, USP	20	110884ZI
Sabouraud-4% dextrose agar double wrapped	22 ml	-	120	110884ZIMP
Sabouraud 4% dextrose agar triple wrapped	22 ml	EP, USP	20	130884ZI
Sabouraud 4% dextrose chloram agar triple wrapped	22 ml	EP, USP	20	130884CY
TSA penase triple wrapped	22 ml	-	20	131114PY
TSA penase triple wrapped	22 ml	-	120	131114PYMP
TSA penase with neutralisers TLHTh double wrapped	22 ml	-	20	111114RY
TSA penase with neutralisers TLHTh double wrapped	22 ml	-	120	111114RYMP
TSA penase with neutralisers TLHTh triple wrapped	22 ml	-	20	131114RY
TSA penase with neutralisers TLHTh triple wrapped	22 ml	-	120	131114RYMP
TSA TLHTh double wrapped	22 ml	Harm Ph	20	111114TI
TSA TLHTh double wrapped	22 ml	-	120	111114TIMP
TSA TLHTh triple wrapped	22 ml	Harm Ph	20	131114TI
TSA TLHTh triple wrapped	22 ml	-	120	131114TIMP
TSA TLHTh triple wrapped, settle plate	22 ml	HP, BAM, COMPF, ISO, EP, USP	60	281112TI
TSA triple wrapped	22 ml	EP, USP, ISO	20	131114ZI
TSA triple wrapped, settle plate	22 ml	HP, BAM, COMPF, ISO, EP, USP	60	281112ZI
TSA tryptic soy agar, double wrapped	22 ml	-	120	111114ZIMP
TSA tryptic soy agar, triple wrapped	22 ml	-	120	131114ZIMP
TSA with natamycine double wrapped	22 ml	-	120	111114NFMP
Wort agar double wrapped	22 ml	-	120	112321TAMP
YGC agar double wrapped	22 ml	-	120	112230CAMP

Contact plates for surface and air control, irradiated

Contact plates are ideal for monitoring the microbiological contamination of surface and air (using an air sampler) inside cleanrooms, isolators, RABS (Restricted Access Barrier), food industries and hospitals. The triple wrapping ensures that the package itself does not contaminate the environment as the first wrapper is removed just before entering the clean area. The packaging of plates containing PCA is not irradiated.

- The plates are packed with a special triple wrapped packaging with irradiation indicator
- Possibility of using the PET transparent reusable container to transport the plates to the laboratory after the sampling
- Special packaging for good protection of the product during transport and storage
- Available with TLHTh (Tween, lecithin, histidine, thiosulphate) disinfectant neutralisers
- Available with certificate of irradiation/dosimetry
- VHP resistance studies available for all triple wrapped plates

Packaging: Contains 8×10 triple wrapped packs with a total of 80 plates. 8 PET transparent reusable containers are included.

Description	Filling	Standard	Pk	Cat. No.
PCA contact TLHTh triple wrapped	13 ml	-	80	140774TI
PCA contact triple wrapped	13 ml	EPA, ISO 4833	80	140774ZI
Rose bengal chloramphenicol agar contact triple wrapped	13 ml	-	80	140070ZI
Sabouraud 4% dextrose agar contact TLHTh triple wrapped	13 ml	Ph. Eur., USP, JP	80	140884TI
Sabouraud 4% dextrose agar contact triple wrapped	13 ml	Ph. Eur., USP, JP	80	140884ZI
Sabouraud Chloramphenicol triple wrapped	13 ml	-	80	140884CY
TSA contact penase TLHTh triple wrapped	13 ml	-	80	141114RY
TSA contact penase triple wrapped	13 ml	-	80	141114PY
TSA contact TLHTh triple wrapped	13 ml	-	80	141114TI
TSA contact triple wrapped	13 ml	Ph. Eur., USP, JP	80	141114ZI
VRBG agar contact triple wrapped	13 ml	Ph. Eur., USP, JP	80	151203ZA

Contact plates, blister packed, irradiated

Available in two pack sizes - triple wrapped (24 plate pack) and double wrapped (30 plate pack). Plates are packed in a pack with 6 blisters. Each blister contains 1 plate so every time you open a compartment you use only 1 plate. Available with TLHTh disinfectant neutraliser (Tween, lecithin, histidine, thiosulphate).

- The triple wrapping ensures that the package itself doesn't contaminate the environment as the first wrapper is removed just before entering the clean area
- Available with certificate of irradiation/dosimetry
- VHP resistance studies available for all triple wrapped plates
- Storage at room temperature

Packaging: 30 or 4×30 plate packs consist of 5 blister packs with an additional cellophane bag. 24 plate packs comprise of 4 blister packs with two additional cellophane bags. The irradiation indicator is featured on each blister.

Description	Filling	Standard	Pk	Cat. No.
Baird Parker agar blister double wrapped	12 ml	-	30	250063UA
Baird Parker agar blister double wrapped	12 ml	-	120	250063UAMP
Cetrimide agar blister double wrapped	12 ml	-	30	250793ZI
MacConkey agar blister double wrapped	12 ml	-	30	250641ZA
Malt extract agar blister double wrapped	12 ml	-	30	250544ZI
Malt extract agar with chloramphenicol blister double wrapped	12 ml	-	30	250542CA
Mannitol salt agar blister double wrapped	12 ml	-	30	250560ZA
PCA blister triple wrapped	12 ml	EPA, ISO 4833	24	270774ZI
PCA contact blister double wrapped	13 ml	EPA, ISO 4833	30	250774ZI
PCA TLHTh blister double wrapped	12 ml	-	30	250774TI
PCA TLHTh blister triple wrapped	12 ml	-	24	270774TI
RBC agar blister double wrapped	12 ml	-	120	250070ZIMP
Rose Bengal chloramphenicol agar contact blister double wrapped	13 ml	-	30	250070ZI
Sabouraud 4% dextrose agar contact blister double wrapped	13 ml	EP, USP	30	250884ZI
Sabouraud 4% dextrose agar contact blister TLHTh double wrapped	13 ml	-	30	250884TI
Sabouraud 4% dextrose agar contact blister TLHTh triple wrapped	13 ml	-	24	270884TI
Sabouraud 4% dextrose agar contact blister triple wrapped	13 ml	EP, USP	24	270884ZI
Sabouraud glucose 4% Chloramphenicol agar blister double wrapped	12 ml	-	30	250884CY
Sabouraud glucose 4% Chloramphenicolagar blister double wrapped	12 ml	-	120	250884CYMP
TSA blister double wrapped	12 ml	-	120	251114ZIMP
TSA contact blister double wrapped	13 ml	EP, USP, ISO	30	251114ZI
TSA contact blister penase double wrapped	13 ml	-	30	251114PY
TSA contact blister penase with neutralisers TLHTh double wrapped	13 ml	-	30	251114RY
TSA contact blister penase TLHTh triple wrapped	13 ml	-	24	271114RY
TSA contact blister with neutralisers TLHTh double wrapped	13 ml	-	30	251114TI
TSA contact blister TLHTh triple wrapped	13 ml	-	24	271114TI
TSA contact blister triple wrapped	13 ml	EP, USP, ISO	24	271114ZI
TSA penase blister double wrapped	12 ml	-	120	251114PYMP
TSA penase TLHTh blister double wrapped	12 ml	-	120	251114RYMP
TSA with neutralisers TLHTh blister double wrapped	12 ml	-	120	251114TIMP
TSA with cycloheximide blister double wrapped	12 ml	-	30	251114AF
TSA with cycloheximide blister double wrapped	12 ml	-	120	251114AFMP
TSA with neutralisers TLHTh blister double wrapped	12 ml	-	30	251114SI
TSA with neutralisers TLHTh blister double wrapped	12 ml	-	120	251114SIMP
VRB agar blister double wrapped	12 ml	-	30	251183ZA
VRB agar blister double wrapped	12 ml	-	120	251183ZAMP

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Description	Filling	Standard	Pk	Cat. No.
VRBG agar contact blister double wrapped	13 ml	ISO 5552	30	251203ZA
VRBG-TLHTM blister double wrapped	12 ml	-	30	251203TA
VRBG-TLHTM blister double wrapped	12 ml	-	120	251203TAMP

Contact plates, blister

The range is manufactured from high quality raw materials. All the culture media are manufactured using selected dehydrated bases, and comply with the requirements of ISO 11133 (food microbiology). Manufactured under GMP, the media is produced using the latest technology and is subject to strict quality controls carried out by qualified microbiologists.

- Packed under cleanroom conditions to avoid contamination
- Storage at 2 to 8 °C
- Manufactured under GMP with formulations that follow specifications of the various Pharmacopoeias and ISO regulations

Description	Filling	Pk	Cat. No.
Total colony count with neutralisers	16,5 ml	40	AX061105
VRB agar	16,5 ml	40	AX061104
Yeast and moulds	16,5 ml	40	AX061102

Dehydrated culture media

A range of culture media in compliance with ISO standards and the International Harmonised Pharmacopoeia. All our media are, as you would expect, produced using high quality raw materials and are subject to strict quality controls, in a production environment following Good Manufacturing Practice guidelines. Raw materials are selected in compliance with the required standards. Dehydrated culture media should be stored at 10 to 30 °C unless otherwise stated, in their closed containers in a dry environment. Standard pack size is 500 g.

- Compliant with international standards, such as ISO and Pharmacopoeia
- Media growth promotion testing performed in compliance with Pharmacopoeias and ISO 11133
- Available in standard formulations and animal-free
- Custom products available

Description	Required Supplements	Food	Water	Pharma/Cosmetics	Clinical	Standard	Pk	Cat. No.
Antibiotic medium E						-	500 g	85056.0500
Baird Parker agar (base)	351430XF	+		+		ISO 5944, 6888-1 and 22718 Standards	500 g	84664.0500
Blood agar (base)		+			+	ISO 11133-2	500 g	84619.0500
Blood agar No.2 (base)		+			+	ISO 11133-2	500 g	84647.0500
Brain heart infusion broth		+	+		+	ISO 11133-2, DIN 10163, ISO 6888-1, ISO 6888-2, ISO 6888-3	500 g	84626.0500
Brilliant green agar		+		+	+	ISO 11133-2	500 g	84631.0500
Brilliant green agar modified (Brilliant green phenol red lactose agar)		+	+			ISO 11133-2, ISO 6340, DIN 10160, DIN 10181	500 g	84634.0500
Brilliant green bile broth		+	+			ISO 11133-2, APHA, ISO 4831, ISO 4832	500 g	84682.0500
Buffered peptone water		+	+	+		ISO 6579, 11290-2, 6887-1	500 g	84600.0500
Buffered peptone water		+		+		ISO 6579, 11290-2, 6887-1	25 kg	84600.25000
Buffered peptone water		+		+		ISO 6579, 11290-2, 6887-1	5 kg	85053.5000
Buffered sodium chloride peptone broth				+		Ph. Eur., USP, JP	500 g	84605.0500
Campylobacter blood-free medium base Bolton (mCCDA)	84742.0001	+			+	ISO 10272	500 g	84695.0500
Campylobacter Bolton broth base (modified CCDA)	84744.0001				+	ISO 10272	500 g	84697.0500
Campylobacter Karmali medium agar base	84743.0001	+				ISO 11133-2, AOAC	500 g	84696.0500
Casein peptone lecithin polysorbate broth				+		USP	500 g	84901.0500

Description	Required Supplements	Food	Water	Pharma/Cosmetics	Clinical	Standard	Pk	Cat. No.
Chromogenic Coliform agar	928390NL	+	+			ISO 9308-1	500 g	84903.0500
CLED agar					+	ISO 11133-2	500 g	84668.0500
Columbia agar base		+		+	+	Ph. Eur., USP, JP	500 g	84621.0500
Columbia agar base		+		+		EP, USP, JP	5 kg	84621.5000
Dichloran Glycerol (DG18) agar base	84729.0001	+				ISO 21527-2	500 g	84632.0500
Dichloran rose bengal chloramphenicol (DRBC) agar		+				ISO 21527-1	500 g	84670.0500
EC broth		+				ISO 7251, 9308-2	500 g	84627.0500
Endo LES agar		+	+			ISO 11133-2, APHA, Standard Methods for the Examination of Water and Wastewater	500 g	84645.0500
Enterobacteriaceae enrichment broth (Mossel)				+		ISO 11133-2	5 kg	84689.5000
Enterobacteriaceae enrichment broth Mossel		+				ISO 11133-2, APHA, ISO 21528	500 g	84678.0500
Enterobacteriaceae enrichment broth mossel				+		Ph. Eur, USP, JP	500 g	84689.0500
Fecal coliforms agar (m-FC agar)	355070ZF	+	+			ISO 11133-2	500 g	84644.0500
Fluid thioglycolate medium				+	+	ISO 11133-2, Ph. Eur., USP, JP	500 g	84681.0500
Fluid thioglycolate medium				+		ISO 11133-2	5 kg	84681.5000
Fraser broth base	84720.0001 and 84721.0001	+				ISO 11290	500 g	84611.0500
Fraser broth base	84720.0001 and 84721.0001	+				ISO 11290	5 kg	84611.5000
Hektoen enteric agar		+				ISO 11133-2, ISO, AOAC, APHA	500 g	84691.0500
KF Streptococcus agar	84731.0001	+	+			ISO 11133-2, APHA	500 g	84633.0500
Lactose TTC tergitol® 7 agar (Chapman TTC agar)	301950ZK		+			Ph. Eur.	500 g	84657.0500
Lauryl sulphate broth		+				ISO 7251, ISO 4831	500 g	84639.0500
LB agar acc. Miller				+		ISO 11133-2	500 g	84684.0500
LB agar acc. Miller				+		ISO 11133-2	5 kg	84684.5000
LB broth acc. Miller				+		ISO 11133-2	500 g	84649.0500
LB broth acc. Miller				+		ISO 11133-2	5 kg	84649.5000
Legionella CYE agar base	84725.0001	+	+			ISO 11731	500 g	84629.0500
Legionella CYE agar base	84725.0001	+	+			ISO 11731	5 kg	84629.5000
Letheen broth modified		+		+		ISO 21149, 22717 and 22718 Standards	500 g	84673.0500
Linde Grain Medium						-	5 kg	84954.5000
Linden grain broth		+				-	5 kg	84951.5000
Listeria buffered enrichment broth base		+		+		ISO 11133-2, FDA-BAM, FIL-IDF	500 g	84652.0500
Listeria enrichment broth		+		+		ISO 11133-2, FIL-IDF, FDA	500 g	84606.0500
Listeria selective agar supplement according to Ottaviani & Agosti						ISO 6579	500 g	84748.0500
Lysine agar		+				-	500 g	85050.0500
MacConkey agar		+	+	+	+	Ph. Eur., USP, JP	500 g	84614.0500
MacConkey broth		+	+			ISO 11133-2, ISO 9208-2	500 g	84680.0500
Malt extract agar no. 2		+				ISO 11133-2	500 g	84665.0500
Malt extract broth						ISO 11133-2	500 g	84666.0500
Mannitol egg yolk polymyxin agar base – MYP agar acc. to Mossel	84732.0001	+				ISO 7932, ISO 21871	500 g	84635.0500
Mannitol salt phenol-red agar		+		+	+	Ph. Eur., USP, JP	500 g	84622.0500
Maximum recovery diluent		+				ISO 6887	500 g	84617.0500
M-broth		+				ISO 11133-2, APHA	500 g	84690.0500
Membrane lactose glucuronide agar			+			-	500 g	84909.0500
Milk plate count agar		+				DIN/IDF	500 g	84643.0500
MRS agar		+				ISO 15214	500 g	84607.0500
MRS broth		+				ISO 11133-2	500 g	84613.0500
Mueller-Hinton agar					+	ISO 11133-2	500 g	84686.0500
Mueller-Hinton broth				+	+	CLSI(NCCLS)/CMPH	500 g	84648.0500
Muller-Kauffmann tetrathionate-novobiocin broth (MKTTN)	84639.0500	+				ISO 6785	500 g	84624.0500
Nutrient agar (Isotonic)		+				-	25 kg	84953.25000
Nutrient agar DEV		+	+			ISO 6222, TWV 2001	500 g	84749.0500
Nutrient agar n°1		+			+	ISO 11133-2, DIN	500 g	84654.0500
Nutrient broth		+				APHA and ISO 6340, 6569, 6785, 8523, 10273 and 16266	500 g	84662.0500
Orange serum agar		+				IFU Methods	500 g	84646.0500
Oxford agar base	84728.0001	+				ISO 11290	500 g	84630.0500
Oxytetracycline-glucose-yeast extract agar base (OGYE agar)	968190NL	+				ISO 13681	500 g	84659.0500
Palcam agar base	84724.0001	+				ISO 11290	500 g	84625.0500
Plate count agar-PCA (Standard methods agar)		+	+	+		ISO 4832	500 g	84608.0500

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Description	Required Supplements	Food	Water	Pharma/Cosmetics	Clinical	Standard	Pk	Cat. No.
Plate count agar-PCA (Standard methods agar)		+		+		ISO 4832	5 kg	84608.5000
Potato dextrose agar		+		+		Ph. Eur.	500 g	84651.0500
Potato dextrose broth		+				-	500 g	84957.0500
Pseudomonas agar base	84730.0001	+	+			ISO 13720, ISO 16266, ISO 11059	500 g	84650.0500
Pseudomonas selective (Cetrimide) agar	84730.0001			+		Ph. Eur., USP, JP	500 g	84638.0500
R2A agar		+	+	+		Ph. Eur.	500 g	84671.0500
Raka Kay agar		+				-	500 g	85051.0500
Rappaport Vassiliadis (RSV) broth		+				ISO 6579 and FIL-IDF Standards	500 g	84656.0500
Rappaport Vassiliadis Salmonella enrichment broth		+		+		ISO 6340	500 g	84658.0500
Reinforced clostridial medium		+				ISO 11133-2, Ph. Eur., USP, JP	500 g	84699.0500
Rose bengal chloramphenicol agar		+	+	+		ISO 11133-2, APHA	500 g	84669.0500
Sabouraud-2% dextrose broth		+		+		ISO 11133-2, Ph.Eur., USP, JP ISO	500 g	84685.0500
Sabouraud dextrose agar		+		+		ISO 13681	500 g	84663.0500
SDA with chloramphenicol		+		+		-	500 g	84902.0500
Selenite cystine broth		+		+	+	ISO 11133-2, ISO 6785, USP APHA	500 g	84655.0500
Slanetz and Bartley agar			+			-	500 g	84900.0500
Slanetz Bartley agar	301950ZK		+			-	500 g	84907.0500
SPS agar		+				-	500 g	84950.0500
TCBS agar		+				ISO 8914	500 g	84641.0500
Tetrathionate crystalviolet broth		+				ISO 11133-2	500 g	84694.0500
Triple sugar iron agar		+				ISO 6579	500 g	84698.0500
Tryptic soy agar (Caso)		+	+	+		Ph. Eur., USP, JP	500 g	84602.0500
Tryptic soy agar + lecithin+Tween 80		+		+		ISO 11133-2, Ph. Eur., USP, JP, ISO, FDA	500 g	84642.0500
Tryptic soy broth (Caso)		+		+		ISO 11133-2, Ph. Eur.,USP, JP	500 g	84675.0500
Tryptic soy broth irridiated		+		+		ISO 11133-2, Ph. Eur., USP, JP	500 g	84677.0500
Tryptic soy broth irridiated		+		+		ISO 11133-2, Ph. Eur., USP, JP	5 kg	84677.5000
Tryptic soy broth non animal origin		+		+		ISO 11133-2, Ph. Eur., USP, JP	500 g	84679.0500
Tryptic soy broth non animal origin		+		+		ISO 11133-2, Ph. Eur., USP, JP	5 kg	84679.5000
Tryptic soy broth non animal origin		+		+		-	500 g	85055.0500
Tryptic soy broth non animal origin, irradiated		+		+		ISO 11133-2, Ph. Eur., USP, JP	5 kg	84674.5000
Tryptic soy broth non animal origin, irradiated, triple wrapped		+		+		ISO 11133-2, Ph. Eur., USP, JP	500 g	84855.0500
Tryptic soy broth non animal origin, irradiated, triple wrapped		+		+		ISO 11133-2, Ph. Eur., USP, JP	5 kg	84855.5000
Tryptic soy broth non animal origin irradiated		+		+		ISO 11133-2, Ph. Eur., USP, JP	500 g	84674.0500
Tryptone bile x-glucuronide agar (TBX)		+				ISO 16649	500 g	84637.0500
Tryptose cycloserine agar (TCA), base			+			-	500 g	85054.0500
Tryptose sulphite cycloserine (TSC) agar	84734.0001	+				ISO 7937, ISO 15213	500 g	84636.0500
Trytone soya broth (TSB)		+		+		USP	5 kg	84675.5000
Trytone yeast extract agar			+			-	500 g	84906.0500
TSC Trytose sulfite cycloserine agar	928330NL and 351430ZF	+	+			-	500 g	84905.0500
Urea agar base	992830ZF	+				ISO/DIN	500 g	84653.0500
Violet red bile glucose (VRBG) agar		+				ISO 21528	500 g	84603.0500
Violet red bile lactose (VRB) agar		+				ISO 4832	500 g	84612.0500
Violet red bile lactose (VRB) MUG agar		+				-	500 g	84956.0500
Wort agar		+				ISO 11133-2	500 g	84661.0500
Wort broth		+				ISO 11133-2	500 g	84660.0500
XLD (Xylose lysine deoxycholate) modified agar		+		+		ISO 6579 and 21567	500 g	84667.0500
Yeast and mould agar		+				-	500 g	85052.0500
Yeast extract agar modified			+			ISO 6222	500 g	84683.0500
Yeast extract dextrose chloramphenicol (YGC) agar		+				ISO 11133-2, ISO 7964, FIL-IDF, DIN 10186	500 g	84604.0500

Dehydrated culture media in containers

For the preliminary, non selective enrichment of bacteria, particularly pathogenic enterobacteriaceae, from foodstuffs.

- Convenient, just add water
- Delivered in jars

Description	For	Pk	Cat. No.
Buffered peptone water, irradiated 2 l jar	900 ml	9	6001.00900
Buffered peptone water, irradiated 2 l jar	1125 ml	9	6001.01125
BPW, canister	5000 ml	2	6012.05000

Yeast extract

The water soluble portion of autolysed yeast containing a source of Vitamin B complex.

Description	Pk	Cat. No.
Yeast extract	1 kg	J850-1KG
Yeast extract	5 kg	J850-5KG

Base materials for dehydrated media

The ingredients used to prepare culture media are very important because ultimately the results depend on the quality of these compounds. Raw materials should be stored at 10-30 °C unless otherwise stated, in their closed containers in a dry environment.

- Ingredients are specifically selected to ensure consistent and reproducible results
- Manufactured under the strictest cGMP standards

Description	Pk	Cat. No.
Bacteriological agar	500 g	84609.0500
Casein hydrolysate (acid)	500 g	84623.0500
Malt extract	500 g	84618.0500
Meat extract dry	500 g	84688.0500
Meat extract dry	5 kg	84688.5000
Peptone, meat	500 g	84687.0500
Peptone, meat (enzymatic digest of animal tissue)	500 g	84620.0500
Peptone, meat (enzymatic digest of animal tissue)	5 kg	84620.5000
Skimmed milk powder	500 g	84615.0500
Soya peptone (enzymatic digest of soybean meal)	500 g	84616.0500
Tryptone (Peptone from casein)	500 g	84610.0500
Tryptone (Peptone from casein)	5 kg	84610.5000
Yeast extract	500 g	84601.0500
Yeast extract	5 kg	84601.5000

Base materials

AMRESCO is a manufacturer and supplier of high quality biochemicals and reagents for Molecular Biology, Life Sciences, Proteomics, Clinical and Histology areas of research.

- Regulated by the U.S. FDA for *in vitro* diagnostics manufacturing

Description	Pk	Cat. No.
Tryptone peptone from casein	25 kg	J859-25KG
Yeast nitrogen base without amino acids	100 g	J386-100G
Yeast nitrogen base without amino acids	500 g	J386-500G
Yeast nitrogen base without Amino+Ammoniumsulfate	100 g	J630-100G
Yeast nitrogen base without amino acids and ammonium sulphate	500 g	J630-500G
Peptone, bacteriological grade	100 g	J636-100G
Peptone, bacteriological grade	1 kg	J636-1KG
Peptone, bacteriological grade	500 g	J636-500G
Peptone 140, bacteriological grade	1 kg	J849-1KG
Peptone 140, bacteriological grade	500 g	J849-500G
Casamino acids, bacteriological grade	100 g	J851-100G
Casamino acids, bacteriological grade	1 kg	J851-1KG
Casamino acids, bacteriological grade	500 g	J851-500G
Tryptone, bacteriological grade	100 g	J859-100G
Tryptone, bacteriological grade	1 kg	J859-1KG
Tryptone, bacteriological grade	500 g	J859-500G
Peptone from soy, GMO-free animal free, bacteriological grade	100 g	N454-100G
Peptone from soy, GMO-free animal free, bacteriological grade	500 g	N454-500G

Base materials for microbiology media

Description	Pk	Cat. No.
Peptone (pancreatic digest), indol free for bacteriology	1 kg	26208.297
Yeast extract	5 kg	4993320O
Bacteriological agar	5 kg	84609.5000

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Media supplements for dehydrated culture media

The isolation of microorganisms often requires the use of selective media. The use of freeze-dried supplements ensures an optimal and standardised media preparation and optimised performance.

- Freeze-dried
- No aerosols of toxic agents released upon opening
- Standard volumes make preparation easier
- User friendly screw caps
- Can be stored at room temperature

Description	Pk	Cat. No.
Ampicillin selective supplement	10	928010NL
Campylobacter Bolton	10	928250NL
Campylobacter growth supplement	10	928030NL
Campylobacter Preston selective supplement with Amphotericin B antifungal	10	928080NL
Campylobacter Preston selective supplement with Cyclohexamide	10	928050OL
Chloramphenicol 25 selective supplement	10	928260NL
Coliform CV selective supplement	10	928390NL
Cycloheximide selective supplement	10	928370NL
D-Cycloserine selective supplement	10	928330NL
Egg yolk sterile emulsion	100 ml	351430ZF
Egg yolk tellurite sterile emulsion	50 ml	361430XF
Egg yolk tellurite sterile emulsion for 2 l media in total	100 ml	351430XF
Ferric ammonium citrate supplement (250 mg)	10	928300NL
Ferric ammonium citrate supplement (312 mg)	10	928340NL
GPS growth promotion supplement	5	968290NL
Haemophilus supplement	10	928240NL
Legionella BCYE growth supplement	5	968130NL
Legionella GVPC selective supplement	10	928140NL
Listeria enrichment supplement	10	335032ZF
Listeria FDA FIL/IDF selective supplement	10	928380NL
Listeria Fraser/UVM II sel supplement	10	928110OL
Listeria half Fraser selective supplement	10	928280NL
Listeria Oxford selective supplement	10	928170OL
Listeria Palcam selective supplement	10	928200NL
Listeria selective supplement	10	928460NL
Listeria UVM I selective supplement	10	928150NL
M-CP selective supplement	10	928320NL
MUG fluorescent supplement	10	928360NL
Nalidixate selective supplement	10	928090NL
Novobiocin selective supplement	10	928180NL
Oxytetracycline selective supplement	10	928190NL
Polymixin selective supplement	10	928020NL
Polysorbate 80 (Tween 80)	100 ml	303570ZK
Rosolic acid solution 0,1% supplement for 12 l media in total	100 ml	355070ZF
RPF supplement for 1 l media	10	602730ZL
Sodium bisulphite selective supplement	10	928350NL
VCNT selective supplement	10	928230NL
Yersinia selective supplement	10	928240OL

Media supplements for dehydrated culture media

Supplements are available in vials, each one sufficient to supplement 500 ml of medium unless otherwise stated.

- Freeze-dried

Description	Pk	Cat. No.
Bacillus cereus supplement	10 Vial	84732.0001
BCYE α-growth supplement	4 Vial	84726.0001
BCYE α-growth supplement w/o cysteine	4 Vial	84727.0001
Bolton broth selective supplement	10 Vial	84744.0001
CCD selective supplement	10 Vial	84742.0001
CFC selective supplement	10 Vial	84746.0001
Chloramphenicol	10 Vial	84729.0001
CN selective supplement	10 Vial	84745.0001
d-Cycloserine supplement	10 Vial	84734.0001
Egg yolk emulsion	50 ml	84733.0001
Fraser half selective supplement	10 Vial	84721.0001
Fraser selective supplement	10 Vial	84720.0001
Glycerol for Pseudomonas agar base for 10 l media in total	100 ml	84730.0001
GVPC supplement	4 Vial	84725.0001
Iodine iodide solution for 2,5 l media in total	50 ml	84723.0001
Karmali selective supplement	10 Vial	84743.0001
Novobiocin MKTT supplement	10 Vial	84722.0001
Oxford supplement	10 Vial	84728.0001
Palcam supplement	10 Vial	84724.0001
PP selective supplement	10 Vial	84747.0001
TTC 1% solution for 3 l media in total	30 ml	84731.0001

Culture media, ready to use, in bottles

Ready to use culture media for microbiological test requirements in the food industry, water, environmental control and in the pharmaceutical industry. The range is manufactured from high quality raw materials. All the culture media are manufactured using selected dehydrated bases, and comply with various standards. All media are produced using the latest technology and are subject to strict quality controls carried out by qualified microbiologists.

- Storage at room temperature for selected media
- Supplied in glass bottles with different screw caps (10, 2×10, 4×10)
- Certificate of Analysis, which guarantees product conformity

Chromocult® is a registered trademark of Merck KGaA, Darmstadt, Germany. This ready to use medium is made using only Chromocult® dehydrated media produced by Merck KGaA and Agar.

Description	Filling	Standard	Size	Cap	Pk	Cat. No.
Antibiotic agar 10	200 ml	-	250 ml	Non injectable cap	10	454810ZA
Antibiotic agar 10	500 ml	-	750 ml	Non injectable cap	20	564812ZAMP
Antibiotic agar A	200 ml	-	250 ml	Non injectable cap	10	455462ZA
Antibiotic agar control pH 6.0	100 ml	-	150 ml	Aluminium	10	AX021189
Antibiotic agar control pH 8.0	100 ml	-	150 ml	Aluminium	10	AX021197
Antibiotic medium A	200 ml	EP	250 ml	Aluminium	6	AX021205
Antibiotic medium B	200 ml	EP	250 ml	Aluminium	6	AX021206
Baird Parker agar base	90 ml	-	125 ml	Aluminium	10	312950ZA
Baird Parker agar base	180 ml	-	250 ml	Aluminium	10	430063ZA
Beerens dilution	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	302240ZA
Beerens dilution	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	302240ZAMP
Beerens dilution	90 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	312240ZT
Beerens dilution	90 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	312240ZTMP
BHI broth mod.	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	303415ZA
BHI broth mod.	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	303415ZAMP
Bile esculin azide agar	200 ml	ISO 7899-2	250 ml	Aluminium	6	AX022293

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Description	Filling	Standard	Size	Cap	Pk	Cat. No.
Bolton broth (base)	200 ml	-	250 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	563390ZF
Bolton broth (base)	200 ml	-	250 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	30	563390ZFMP
Buffered peptone water	100 ml	ISO 6579, ISO 8523 and ISO 6785	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	300173ZA
Buffered peptone water	90 ml	ISO 6579, ISO 8523 and ISO 6785	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	310173ZA
Buffered peptone water	225 ml	ISO 6579, ISO 8523 and ISO 6785	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400173ZA
Buffered peptone water	225 ml	ISO 6579, ISO 8523, ISO 6785	500 ml	Aluminium screw outer cap + elastomer inner septum	10	410173ZA
Buffered peptone water	200 ml	ISO 6579, ISO 8523, ISO 6785	250 ml	Aluminium screw outer cap + elastomer inner septum	10	450173ZA
Buffered peptone water	800 ml	-	1000 ml	Plastic screw iner cap + elastomer septum + protective outer cap	9	510173ZA
Buffered peptone water	500 ml	-	500 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	530172AF
Buffered peptone water	300 ml	Harm Ph	500 ml	Non injectable cap	10	531312ZA
Buffered peptone water		ISO 579 8523, 11290	150 ml	Alu/Septum	10	AX021162
Buffered peptone water	900 ml	ISO 579 8523, 11290	1000 ml	Aluminium	9	AX021291
Buffered peptone water	225 ml	ISO 579 8523, 11290	250 ml	Alu/Septum	6	AX022232
Buffered peptone water + Acriflavin	800 ml	-	1000 ml	Plastic screw iner cap + elastomer septum + protective outer cap	9	521173ZU
Buffered peptone water 0,1%	100 ml	Harm Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	301314ZA
Buffered peptone water 0,1%	100 ml	Harm Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	40	301314ZAMP
Buffered peptone water 0,1%	300 ml	Harm Ph	500 ml	Aluminium screw outer cap + elastomer inner septum	10	531314ZA
Buffered peptone water 0,1%	450 ml	-	500 ml	Aluminium screw outer cap + elastomer inner septum	10	561314ZA
Buffered peptone water 0,1%	50 ml	-	100 ml	-	8	881314ZA
Buffered peptone water 0,1%	50 ml	-	100 ml	-	32	881314ZAMP
Buffered peptone water 0,1% with lecithin	90 ml	-	150 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	40	311312LAMP
Buffered Peptone water 0.1%				-	9	511312ZA
Buffered peptone water 10% Tween	100 ml	Harm Ph	125 ml	Aluminium screw outer cap + elastomer inner septum	10	303480TA
Buffer Phosphate Ph7.2	125 ml	-	150 ml	Non injectable cap	10	305660ZF
Butterfield buffer	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	303610ZA
Butterfield buffer	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	303610ZAMP
Casein peptone lecithin Tween® 20 broth	90 ml	-	150 ml	Alu/Septum	10	AX021178
Cetrimide agar	100 ml	EP, USP	150 ml	Aluminium	10	AX021182
Cetrimide agar	200 ml	EP, USP	250 ml	Aluminium	6	AX022222
Chromocult Coliform agar	100 ml	-	125 ml	Non injectable cap	10	301274ZA
Chromocult Coliform agar	100 ml	-	125 ml	Non injectable cap	40	301274ZAMP
Chromocult Coliform agar	200 ml	-	250 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	401274ZH
Count agar	200 ml	-	250 ml	Aluminium	6	AX021301
Czapek Dox metal agar	450 ml	-	500 ml	-	10	530274XA
DEV lactose peptone broth	50 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	373564ZA
DEV lactose peptone broth	50 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	373564ZAMP
DEV nutrient agar	200 ml	-	250 ml	Pouring ring	10	011642ZA

Description	Filling	Standard	Size	Cap	Pk	Cat. No.
DEV nutrient agar	100 ml	-	200 ml	Non injectable cap	40	300692ZAMP
DEV nutrient agar	100 ml	-	200 ml	Non injectable cap	10	300692ZA
DEV nutrient agar	200 ml	German Drinking Water Regulations	250 ml	Non injectable cap	10	453554ZA
DEV nutrient agar	450 ml	-	500 ml	Metal cap w/o septum	10	531642ZA
Dextrose Tryptone agar (DTA)	100 ml	-	125 ml	Non injectable cap	10	303525ZA
Diluent P.E. + neutraliser	190 ml	-	250 ml	Alu/Septum	6	AX021361
Diluent Pharm + 5% TweenL	900 ml	-	1000 ml	-	9	AX021417
Diluent pharma + neutraliser	900 ml	-	1000 ml	Twist off	9	AX021360
EE broth, Mossel	100 ml	EP	150 ml	Alu/Septum	10	AX021109
EE broth acc. Mossel	100 ml	EP	150 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	300304ZA
EE broth acc. Mossel	90 ml	Harm Ph	125 ml	Aluminium screw outer cap + elastomer inner septum	10	310304ZA
EE broth acc. Mossel	90 ml	Harm Ph	125 ml	Aluminium screw outer cap + elastomer inner septum	40	310304ZAMP
EE broth acc. Mossel	90 ml	EP, USP, JP	150 ml	Aluminium screw outer cap + elastomer inner septum	10	AX021380
EE broth acc. Mossel	90 ml	EP	150 ml	Aluminium screw outer cap + elastomer inner septum	10	AX029148
Fluid A	850 ml	USP	1000 ml	-	10	513560ZA
Fluid D	850 ml	USP	1000 ml	-	10	513200OA
Fluid D	400 ml	Harm Ph	500 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	563200OA
Fluid D	400 ml	Harm Ph	500 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	20	563200OAMP
Fraser broth	200 ml	ISO 11290-1:	200 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	400343ZF
Fraser broth	200 ml	ISO 11290-1:	200 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	30	400343ZFMP
Fraser broth 1/2	225 ml	-	250 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	400343VF
Fraser broth 1/2	225 ml	-	250 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	20	400343VFMP
FTM + resazurin (acc USP)	100 ml	USP	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	301051ZA
FTM + Resazurine	100 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	40	301051ZAMP
Haemophilus Test Medium (HTM) broth	100 ml	-	150 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	300382ZF
Henkel standard	90 ml	-	250 ml	Non injectable cap	10	313040TH
Henkel standard	90 ml	-	200 ml	Non injectable cap	10	473040TH
Henkel standard	90 ml	-	200 ml	Non injectable cap	30	473040THMP
Inactivator solution	1000 ml	-	1000 ml	-	9	AX021378
Kanamycin aesculin azide agar	200 ml	acc. To Mossel	250 ml	Non injectable cap	10	451830ZA
Lactose broth	100 ml	EP, USP, EPA	250 ml	Aluminium screw outer cap + elastomer inner septum	10	300440ZA
Lactose broth	90 ml	EP, USP, EPA	150 ml	Aluminium screw outer cap + elastomer inner septum	10	310440ZA
Lactose broth w. neutralising agents	100 ml	-	150 ml	Alu/Septum	10	AX021243
LB broth acc. to Miller	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	302510ZA
LB broth acc. to Miller	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	302510ZAMP
LB broth acc. to Miller	100 ml	EP, USP, ISO 9308-1	250 ml	Alu/Septum	6	AX021330
Letheen agar	200 ml	-	250 ml	Non injectable cap	10	401570ZA

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Description	Filling	Standard	Size	Cap	Pk	Cat. No.
Letheen broth	100 ml	FDA	125 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	301580ZA
Letheen broth	90 ml	-	150 ml	Aluminium	10	AX021102
Letheen broth, modified	90 ml	-	125 ml	Non injectable cap	10	302754OA
Letheen broth, modified	90 ml	-	125 ml	Non injectable cap	40	302754OAMP
Letheen broth, modified	90 ml	FDA	125 ml	Aluminium screw outer cap + elastomer inner septum	10	312760ZA
Letheen broth, modified	90 ml	FDA	125 ml	Aluminium screw outer cap + elastomer inner septum	40	312760ZAMP
Letheen Tween® FeCl3 broth	100 ml	-	150 ml	Alu/Septum	6	AX021323
Liquid A 0,1 %	100 ml	Harm Ph	125 ml	Aluminium screw outer cap + elastomer inner septum	10	301314XA
Liquid A 0,1 %	300 ml	-	450 ml	-	10	551314XA
Liquid A 0,1 %	450 ml	Harm Ph	500 ml	Aluminium screw outer cap + elastomer inner septum	10	561314XA
Listeria enrichment broth (LEB)	225 ml	-	250 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	400472XA
Listeria enrichment broth (LEB)	450 ml	-	500 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	560472ZA
Liver meat agar	200 ml	-	250 ml	Aluminium	6	AX022292
M17 agar	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	303532ZA
M17 agar	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	303532ZAMP
MacConkey agar	100 ml	EP, USP	125 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	300641ZA
MacConkey agar	100 ml	EP, USP	150 ml	Aluminium	10	AX021111
MacConkey broth	100 ml	EP, USP	125 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	300674ZA
MacConkey broth	100 ml	EP, USP	150 ml	Aluminium	10	AX021116
Malt extract agar	200 ml	-	250 ml	Non injectable cap	10	450544ZA
Malt extract agar	200 ml	-	250 ml	-	20	450544ZAMP
Maximum recovery diluent	100 ml	ISO 6887-1	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	313120ZA
Maximum recovery diluent with Tween	200 ml	Ph	250 ml	Metal cap w/o septum	8	881314TA
Milk plate count agar	200 ml	-	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400774XA
Milk plate count agar	450 ml	-	500 ml	-	10	530774XA
Milk plate count agar	450 ml	-	500 ml	-	20	530774XAMP
MRS agar	200 ml	DIN 13721, ISO 10109	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400582ZA
MRS agar	200 ml	ISO	250 ml	Non injectable cap	10	400587ZA
MYP agar base	90 ml	ISO 7932:2005	250 ml	Aluminium screw outer cap + elastomer inner septum	40	310053ZAMP
MYP agar base	90 ml	ISO 7932:2004	250 ml	Aluminium screw outer cap + elastomer inner septum	10	310053ZA
NaCl peptone broth	90 ml	ISO 6887-1	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	40	313155ZAMP
NaCl peptone broth	90 ml	ISO 6887-1	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	313155ZA
NaCl peptone broth+1% Tween	100 ml	ISO 6887-1	125 ml	Plastic screw inner cap + elastomer septum + protective outer, cap + shrink wrapped plastic sleeve	40	303151OAMP
OGY agar	100 ml	ISO 13721	150 ml	Aluminium	10	AX021118
OGYE agar	200 ml	ISO 13681:1995.	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400720ZA
Orange serum agar	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	300733IA
Orange serum agar	50 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	370731ZAMP
Orange serum agar	50 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	370731ZA
Orange serum agar	200 ml	-	250 ml	Non injectable cap	10	450731ZA

Description	Filling	Standard	Size	Cap	Pk	Cat. No.
PBPS + 4% Tween + 0,5% Lecithin	90 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	10	471314TH
PBPS 4% Tween 0,5% Lecithin	90 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	30	471314THMP
PBTL 3% Tween 0.3% Lecithin	90 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	20	471314TAMP
PBTL 3% Tween 0.3% Lecithin	90 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	10	471314TA
PCA, skim milk agar	200 ml	-	250 ml	Aluminium	6	AX021255
PCA agar	150 ml	ISO 4833	150 ml	Aluminium	10	AX021117
PCA agar	200 ml	ISO 4833	250 ml	Aluminium	6	AX022229
PCA Plate count agar	100 ml	-	125 ml	Non injectable cap	10	300774ZA
PCA Plate count agar	200 ml	-	250 ml	Aluminium screw outer cap + elastomer inner septum	10	450774ZA
PCA without glucose	100 ml		150 ml	Aluminium	10	AX021264
PCA without Glucose	200 ml	-	250 ml	Aluminium	6	AX022206
Peptone water 0,1%	100 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	302252ZA
Peptone water 0,1% with Tween	100 ml	Harm Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap	10	301314TA
Pharmacopoe diluent (NaCl peptone broth pH 7)	400 ml	EP	500 ml	Alu/Septum	12	AX029128
Pharmacopoeia diluent, sodium thiosulphate 5g/l	600 ml	-	1000 ml	PE/Septum	9	AX021305
Pharmacopoeia diluent (NaCl peptone broth pH 7)	100 ml	EP	150 ml	Aluminium	10	AX021103
Pharmacopoeia diluent (NaCl peptone broth pH 7)	300 ml	EP	500 ml	Alu/Septum	12	AX021169
Pharmacopoeia diluent (NaCl peptone broth pH 7)	990 ml	EP	1000 ml	Aluminium	9	AX021314
Pharmacopoeia diluent (NaCl peptone broth pH 7)	200 ml	EP	250 ml	Alu/Septum	6	AX022281
Pharmacopoeia diluent (NaCl peptone broth pH 7)	90 ml	EP	150 ml	Alu/Septum	10	AX029124
Pharmacopoeia diluent (NaCl peptone broth pH 7) Tween® 80 1%	90 ml	-	150 ml	Aluminium	10	AX021320
Pharmacopoeia diluent w. neutralising agent (DNP)	200 ml	EP	250 ml	Alu/Septum	6	AX022255
Pharmacopoeia diluent w. neutralising agent (DNP), large neck	90 ml	-	150 ml	Alu/Septum	10	AX021191
Pharmacopoeia diluent with neutralising agent (DNP)	90 ml	-	150 ml	Aluminium screw outer cap + elastomer inner septum	10	AX021146
Polyvalent univ. neutraliser	45 ml	-	100 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	332760TA
Potato dextrose agar	200 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400782ZA
Preston broth without blood	225 ml	-	500 ml	Aluminium screw outer cap + elastomer inner septum	10	401640ZA
R2A agar	100 ml	EP, EPA	125 ml	Aluminium screw outer cap + elastomer inner septum	10	300802ZA
R2A agar	200 ml	EPA	250 ml	Aluminium	6	AX021250
Raka-Ray agar	125 ml	-	200 ml	-	10	305592ZA
Rappaport Vassiliadis broth	90 ml	Harm Ph	125 ml	Aluminium screw outer cap + elastomer inner septum	40	313552ZAMP
Rappaport Vassiliadis broth	90 ml	Harm Ph	125 ml	Aluminium screw outer cap + elastomer inner septum	10	313552ZA
Rappaport Vassiliadis broth	100 ml	-	150 ml	Aluminium screw outer cap + elastomer inner septum	10	AX021263
Rappaport Vassiliadis broth	100 ml	Harm Ph	150 ml	Aluminium screw outer cap + elastomer inner septum	10	AX021383
RCM agar	200 ml	EPA	250 ml	Aluminium	6	AX021329
Reinforced Clostridium medium	100 ml	-	125 ml	Non injectable cap	10	300842ZA
Sabouraud 2% glucose agar	200 ml	-	250 ml	Aluminium	6	AX022245
Sabouraud 2% glucose broth	100 ml	-	150 ml	Aluminium	10	AX021154
Sabouraud 2% glucose chloramphenicol agar	100 ml	-	150 ml	Aluminium	10	AX021106
Sabouraud 4% dextrose agar	400 ml	EP, USP	500 ml	Aluminium screw outer cap + elastomer inner septum	10	550884ZA
Sabouraud 4% dextrose agar	475 ml	-	500 ml	Non injectable cap	10	560885ZH
Sabouraud 4% glucose agar	200 ml	-	250 ml	Aluminium	6	AX022279
Sabouraud 4% glucose chloramphenicol agar	200 ml	-	250 ml	Aluminium	6	AX022284
Sabouraud agar	200 ml	EU, USP	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400884ZA

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Description	Filling	Standard	Size	Cap	Pk	Cat. No.
Sabouraud chloramphenicol agar	100 ml	-	125 ml	Non injectable cap	40	300884CAMP
Sabouraud chloramphenicol agar	100 ml	-	125 ml	Non injectable cap	10	300884CA
Sabouraud chloramphenicol agar	200 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	10	400884CA
Sabouraud chloramphenicol agar	400 ml	EP, USP 31	500 ml	Aluminium screw outer cap + elastomer inner septum	10	550884CA
Sabouraud dextrose agar	100 ml	Harm Ph	125 ml	Aluminium	10	300884ZA
Sabouraud dextrose broth	100 ml	Harm Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	300894ZA
Selenite cystine broth	100 ml	ISO 6579, USP	125 ml	Aluminium screw outer cap + elastomer inner septum	10	300954ZA
Slanetz & Bartley agar	200 ml	ISO 7899-2	250 ml	Aluminium	6	AX021261
SPS agar	200 ml	-	250 ml	Aluminium screw outer cap + elastomer inner septum	10	401320ZA
TAT broth base w/o Tween	90 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer, cap + shrink wrapped plastic sleeve	10	311114YZ
TBG broth	100 ml	EP	150 ml	Aluminium screw outer cap + elastomer inner septum	10	AX021112
TBX agar	100 ml	ISO 16649-1	150 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	301004ZA
TBX agar, made with Chromocult®	200 ml	ISO 16649-1	250 ml	Aluminium	6	AX021346
Tetrathionate broth acc. Müller Kaufmann	100 ml	ISO 6579:2002	125 ml	Aluminium screw outer cap + elastomer inner septum	10	301030ZA
Thioglycolate resazurin broth	100 ml	EP, USP	150 ml	Alu/Septum	10	AX021126
Thioglycolate resazurin broth	90 ml	EP, USP	150 ml	Alu/Septum	10	AX029179
Thioglycollate broth	100 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	301041ZA
Thioglycollate Penase broth	100 ml	Harm Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	40	301051PFMP
Thioglycollate Penase broth	100 ml	Harm Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	301051PF
TOS agar	450 ml	-	500 ml	Non injectable cap	10	534744ZF
Tributyrin agar	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	40	301353ZAMP
Tributyrin agar	100 ml	-	125 ml	Aluminium screw outer cap + elastomer inner septum	10	301353ZA
Tryptone salt broth (maximum recovery diluent)	90 ml	ISO 6887	150 ml	Alu/Septum	10	AX021133
Tryptone salt broth (maximum recovery diluent)	225 ml	ISO 6886	250 ml	Alu/Septum	6	AX022258
Tryptone yeast extract agar	100 ml	ISO 6222:1999	125 ml	Non injectable cap	10	301250ZA
Tryptone yeast extract agar	200 ml	ISO 6222:1999	250 ml	Non injectable cap	10	451254ZA
Tryptone yeast extract agar	450 ml	-	500 ml	-	10	561251ZA
Tryptone yeast extract agar	250 ml	ISO 6222:1999	500 ml	Non injectable cap	10	561252ZA
TSA Tryptic soy agar	200 ml	Harm Ph	250 ml	Aluminium screw outer cap + elastomer inner septum	10	401114ZA
TSA Tryptic soy agar	450 ml	Harm Ph, ISO 9308-1	500 ml	Aluminium screw outer cap + elastomer inner septum	10	531114ZH
TSA Tryptic soy agar	400 ml	Harm Ph, ISO 9308-1	500 ml	Aluminium screw outer cap + elastomer inner septum	10	551114ZA
TSA Tryptic soy agar	450 ml	-	500 ml	-	10	561114ZA
TSA tryptic soy agar	200 ml	EP, USP, ISO 9308-1	250 ml	Aluminium	6	AX022205
TSA tryptic soy agar	300 ml	EP, USP, ISO 9308-1	500 ml	Aluminium	12	AX029129
TSA Tryptic soy agar LTHTh	100 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	301121TA
TSB Penase	100 ml	USP, FDA and Eu Ph	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	40	301121PFMP
TSB Tryptic soy broth	100 ml	Harm Ph, ISO9308-1	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap	10	301121ZA
TSB Tryptic soy broth	100 ml	EP, ISO 9301-1, FDA, USP	125 ml	Metal cap w/o septum	40	301121ZQMP
TSB Tryptic soy broth	100 ml	EP, ISO 9301-1, FDA, USP	125 ml	Metal cap w/o septum	10	301121ZQ

Description	Filling	Standard	Size	Cap	Pk	Cat. No.
TSB Tryptic soy broth	90 ml	EP, ISO 9301-1, FDA, USP	150 ml	Aluminium screw outer cap + elastomer inner septum	10	311121ZA
TSB Tryptic soy broth	55 ml	EP, ISO 9301-1, FDA, USP	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	371121ZA
TSB Tryptic soy broth	200 ml	EP, ISO 9301-1, FDA, USP	250 ml	Aluminium screw outer cap + elastomer inner septum	10	451121ZA
TSB Tryptic soy broth	450 ml	-	500 ml	Non injectable cap	20	561121ZAMP
TSB Tryptic soy broth	450 ml	-	500 ml	Non injectable cap	10	561121ZA
TSB Tryptic soy broth	100 ml	EP, USP, ISO 9308-1	150 ml	Alu/Septum	10	AX021135
TSB Tryptic soy broth	1000 ml	-	1000 ml	-	5	AX021404
TSB Tryptic soy broth	90 ml	EP, USP, ISO 9308-1	150 ml	Alu/Septum	10	AX029178
TSB Tryptic soy broth w. pharmacop. neutralisers	100 ml	-	150 ml	Alu/Septum	10	AX021230
TSB with 0,07% lecithine and 0,5% Tween	100 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	301122SA
TSB with 0,07% lecithine and 0,5% Tween	450 ml	-	500 ml	-	10	561122SA
TSB with 0,1% Tween	90 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	311122OA
TSB with 4% Tween 20 and 0,5 % Lecitin	90 ml	-	125 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	471120TA
TSB with neutralizer	800 ml	USP, EP	1000 ml	-	9	511120TA
TSC agar	100 ml	ISO 7937, 5552	150 ml	Aluminium	10	AX021131
TSC agar	200 ml	ISO 7937, 5552	250 ml	Alu/Septum	6	AX021315
TSC agar base	100 ml	UNE 13401 and UNE EN 26461-2	125 ml	Aluminium screw outer cap + elastomer inner septum + shrink wrapped plastic sleeve	10	301141ZA
VRB agar	200 ml	Harm Ph ISO 5552	250 ml	Aluminium screw outer cap + elastomer inner septum	10	401183ZA
VRBD agar	200 ml	Harm Ph ISO 5552	250 ml	Aluminium screw outer cap + elastomer inner septum	10	401203ZA
VRBD agar	450 ml	-	500 ml	Metal cap w/o septum	20	531203ZAMP
VRBD agar	450 ml	-	500 ml	Metal cap w/o septum	10	531203ZA
VRBL agar	100 ml	ISO 4832	150 ml	Aluminium	10	AX021130
VRBLD agar	100 ml	-	150 ml	Aluminium	10	AX021187
WL nutrient agar, modified	125 ml	-	200 ml	-	10	301212AA
Wort agar	125 ml	-	200 ml	-	10	302322ZA
Yeast broth acc. cocacola	450 ml	-	500 ml	-	10	555570ZA
Yeast extract agar	200 ml	-	250 ml	Non injectable cap	10	451251ZA
YGC agar	200 ml	-	250 ml	Non injectable cap	10	402232ZA
YGC agar	450 ml	ISO 7954:1987	500 ml	Plastic screw inner cap + elastomer septum + protective outer cap + shrink wrapped plastic sleeve	10	532230CA
YGC agar	100 ml	ISO/DIS 6611	150 ml	Aluminium	10	AX021128
YGC agar	200 ml	ISO/DIS 6611	250 ml	Aluminium	6	AX021259

Culture media in bottles

Description	Filling	Pk	Cat. No.
LB agar	100 ml	100 ml	L011
LB broth	100 ml	100 ml	L021-C
Tryptic soybean broth (TSB) with pH indicator	100 ml	100	NAMSGMBTB-100
LB broth, modified	1000 ml	1 l	LB.BROTH

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Culture media, ready to use, in tubes

For various microbiological uses.

- Storage at room temperature for selected media
- Compact packaging, tubes are fitted with aluminium screw caps
- Media, batch number and expiry date ink printed on every single tube

Packaging: 1×20, 6×20

Description	Volume	Standard	Pk	Cat. No.
Azide broth (Rothe)	10 ml	-	20	690042ZA
Azide broth (Rothe)	10 ml	-	120	690042ZAMP
Brain heart infusion (BCC)	10 ml	ISO 6881-1	50	AX011103
Brain heart infusion broth	10 ml	-	20	600113ZA
BRILA, durham	10 ml	ISO 4832	50	AX011108
Brillant green 2% bile broth	5 ml	ISO 4831:2006	20	650144ZA
Brillant green 2% bile broth	10 ml	APHA, AWWA	20	730144WA
Brillant green 2% bile broth	10 ml	APHA, AWWA	120	730144WAMP
Brillant green bile broth	9 ml	APHA, AWWA	20	690144ZA
Brillant green bile broth	9 ml	APHA, AWWA	120	690144ZAMP
Brucella+Vitk+Hem broth	9 ml	-	20	622370XA
Buffered peptone water	9 ml	ISO 6579, ISO 8523, ISO 6785	20	610173ZA
Buffered peptone water	9 ml	-	50	AX011112
Buffered peptone water 0,1%	10 ml	-	20	601314ZA
Buffered peptone water 0,1%	10 ml	-	120	601314ZAMP
Buffered peptone water 0,1%	9 ml	Harm Ph	20	611314ZA
DEV nutrient agar	15 ml	-	20	733552ZA
Diluted Sabouraud	15 ml	-	20	745470ZF
E.C.broth, Durham tube 16×112 mm	9 ml	-	20	601450ZA
EE Mossel broth	9 ml	Harm Ph	20	600304ZA
EE Mossel broth	9 ml	Harm Ph	120	600304ZAMP
Eugon LT 100	9 ml	-	20	613420SA
Fluorocult ® LMX broth modified	2 ml	-	20	602524ZF
Fraser broth	10 ml	-	20	600343ZF
Fraser broth	10 ml	-	120	600343ZFMP
Giolitti Cantoni broth, double conc.	9 ml	-	20	610360ZF
Giolitti Cantoni broth, double conc.	9 ml	-	120	610360ZFMP
Giolitti Cantoni broth, simple conc.	19 ml	-	20	710360ZF
Giolitti Cantoni broth, simple conc.	19 ml	-	120	710360ZFMP
Giolitti Cantoni broth, simple conc.	10 ml	-	20	790360WF
Giolitti Cantoni broth, simple conc.	10 ml	-	120	790360WFMP
Glucose agar	7 ml	-	20	603572ZA
Indole ornithine motility medium	9 ml	-	20	651820ZA
Indole ornithine motility medium	9 ml	-	120	651820ZAMP
Kanamycin Aesculin broth	9 ml	-	20	611830ZA
Kligler agar, slope	7,5 ml	-	20	640431ZA
Kligler agar, slope	7,5 ml	-	120	640431ZAMP
Lactose broth	9 ml	EP, USP, EPA	20	690440ZA
Lactose sulphite broth	10 ml	-	50	AX011180
Lauryl sulphate broth	9 ml	-	20	690450ZA
Lauryl sulphate broth	9 ml	-	120	690450ZAMP
Lauryl sulphate broth	10 ml	ISO 5541-2, 4841	120	890450WAMP
Lauryl sulphate broth, double conc.	10 ml	ISO 5541-2, 4841	20	890450WA
Lauryl sulphate broth, Durham tubes 16x112 mm	5 ml	ISO 4831:2006	20	650450ZA
Lauryl sulphate broth MUG, Durham	9 ml	-	20	690450XA
Lauryl sulphate broth MUG, Durham	9 ml	-	120	690450XAMP
Letheen broth	10 ml	FDA	20	601580ZA
Letheen broth	9 ml	-	20	611585ZA
Letheen broth	9 ml	-	120	611585ZAMP
Löwenstein-Jensen medium	6,4 ml	-	20	640504ZA
Löwenstein-Jensen medium	6,4 ml	-	120	640504ZAMP
Löwenstein-Jensen pyruvate medium	6,5 ml	-	16	640504XA
Lysine iron agar, slope	7,5 ml	-	20	640511ZA
Lysine iron agar, slope	7,5 ml	-	120	640511ZAMP
MacConkey broth	9 ml	Harm Ph	20	690674ZA
MacConkey broth	9 ml	Harm Ph	120	690674ZAMP
MacConkey broth	10 ml	-	50	AX019103
Mannitol Motility	9 ml	-	20	601850ZA
Maximum recovery diluent	9 ml	ISO 6887-1	20	613120ZA
M broth	9 ml	-	20	613270ZA
MKTTn broth acc. to ISO 6579	10 ml	ISO 6579	50	AX011184
MRS agar	20 ml	ISO 9332, ISO 15214, IFU Methods 5,7,9	120	720582ZAMP
MRS agar	20 ml	ISO 9332, ISO 15214, IFU Methods 5,7,9	20	720582ZA
MRS broth	10 ml	-	20	600592ZA

Description	Volume	Standard	Pk	Cat. No.
MRS broth, Durham tube	9 ml	-	20	690592ZA
MRS broth w. Durham tube	10 ml	DIN 13721, ISO 10109	50	AX011159
Mueller-Kauffmann Tetrathionate broth	10 ml	ISO 6579:2002	20	601030ZA
Müller Hinton broth + supplement	10 ml	-	120	600621ZAMP
O/F glucose medium	10 ml	-	20	651810ZA
Orange serum agar	20 ml	-	120	730731ZAMP
Orange serum agar	20 ml	-	20	730731ZA
Orange serum agar acid	9 ml	-	120	730733IAMP
Orange serum agar acid	9 ml	-	20	730733IA
Palcam broth	10 ml	-	20	601410ZF
PCA	20 ml	-	20	720774ZA
PCA	15 ml	ISO 4833	120	730774ZAMP
PCA	15 ml	ISO 4833	20	730774ZA
Peptone water	9 ml	ISO 7251	20	610753ZA
Peptone water 0.1 %	9 ml	-	50	AX011186
Pharmacopoeia diluent (NaCl peptone broth pH 7)	9 ml	EP	50	AX011144
Pharmacopoeia diluent with neutralising agent (DNP)	9 ml	-	50	AX011158
R2 broth	2,5 ml	-	50	825502ZA
Rappaport Vassiliadis broth	10 ml	ISO 6579:2002	120	600834ZAMP
Rappaport Vassiliadis broth	10 ml	ISO 6579:2002	20	600834ZA
Rappaport Vassiliadis broth	10 ml	ISO 6579	50	AX011124
Ringer solution	10 ml	-	20	601770ZA
Ringer solution	9 ml	-	20	611770ZA
Ringer solution	9 ml	-	50	AX011139
RVS broth	10 ml	EP, USP, JP, Harm Ph	120	603552ZAMP
RVS broth	10 ml	EP, USP, JP, Harm Ph	20	603552ZA
Saboraud cloramphenicol agar	7 ml	-	20	640884CA
Saboraud cloramphenicol agar	20 ml	-	120	730884CAMP
Saboraud cloramphenicol agar	15 ml	-	20	730884CA
Saboraud with Cycloheximide and Chloramphenicole	6,2 ml	-	120	640884DAMP
Saboraud with Cycloheximide and Chloramphenicole	6,2 ml	-	20	640884DA
Sabouraud 4% Dextrose agar	18 ml	-	50	AX011198
Sabouraud 4% glucose chloramphenicol agar	15 ml	-	50	AX011120
Sabouraud broth	9 ml	Harm Ph	20	600894ZA
Saline + 0.1% peptone broth	9 ml	ISO 6887-1	120	613155ZAMP
Saline + 0.1% peptone broth	9 ml	ISO 6887-1	20	613155ZA
Saline + Polysorbate	9 ml	-	20	602600OA
Selenite broth	10 ml	-	20	600944ZA
Selenite cystine broth	10 ml	ISO 6579	120	600954ZAMP
Selenite cystine broth	10 ml	ISO 6579	20	600954ZA
Simmons citrate agar	6 ml	-	20	640971ZA
SPS agar (Perfringens selective agar)	10 ml	-	20	601320ZA
SPS agar DC	10 ml	-	120	761320WAMP
SPS agar DC	10 ml	-	20	761320WA
SPS agar with paraffin (Perfringens selective agar)	10 ml	-	120	601320XAMP
SPS agar with paraffin (Perfringens selective agar)	10 ml	-	20	601320XA
ß-Glucuronidase	2 ml	-	120	632100ZFMP
TAT broth + Tween 20	9 ml	USP	50	AX011155
Thioglycollate medium	9 ml	Harm Ph	20	621051ZA
Todd Hewitt broth	10 ml	-	20	601060ZA
Todd Hewitt with antibiotic	10 ml	-	120	601060AAMP
Todd Hewitt with antibiotic	10 ml	-	20	601060AA
Tryptone salt broth (maximum recovery diluent)	9 ml	ISO 6887	50	AX011130
Tryptone water	9 ml	ISO 7251	20	601083ZA
Tryptone yeast extract agar	15 ml	ISO 6222:1999	120	731250ZAMP
Tryptone yeast extract agar	15 ml	ISO 6222:1999	20	731250ZA
TSA tryptic soy agar	15 ml	-	20	731114ZA
TSA tryptic soy agar	15 ml	EP, USP, ISO 9308-1	50	AX011101
TSA tryptic soy agar, slope	6,5 ml	Harm Ph	20	641114ZA
TSA tryptic soy agar slants	9 ml	EP, USP, ISO 9308-4	50	AX011114
TSB tryptic soy broth	10 ml	USP, FDA and Eu Ph	20	601121ZA
TSB tryptic soy broth	9 ml	USP, FDA, Eu Ph	20	611121ZA
TSB tryptic soy broth	15 ml	USP, FDA and Eu Ph	120	751121ZAMP
TSB tryptic soy broth	15 ml	USP, FDA and Eu Ph	20	751121ZA
TSB Tryptic soy broth	10 ml	EP, USP, ISO 9308-2	50	AX011113
TSB tryptic soy broth	9 ml	EP, USP, ISO 9308-3	50	AX011176
TSB tryptic soy broth with neutralisers TLHTh	10 ml	-	120	721115TAMP
TSB tryptic soy broth with neutralisers TLHTh	10 ml	-	20	721115TA
TSB with 0.1% Tween	9 ml	-	20	611122OA
TSB with Tween 80 1% 20X7ML	7 ml	USP, FDA, Eu Ph	20	601121OA
TSC agar	20 ml	ISO 737	50	AX011129
TSI agar	7,5 ml	ISO 6579:2002	20	641071ZA
TSI agar slants	10 ml	-	50	AX011122
TSN agar	9 ml	-	120	601370ZAMP
TSN agar	9 ml	-	20	601370ZA
TSN agar	20 ml	ISO3560	50	AX011141
Urea Indole broth	2 ml	-	120	661161XFMP
Urea Indole broth	2 ml	-	20	661161XF
Violet red bile agar (VRB)	15 ml	-	20	731183ZA
Violet red bile glucose agar (VRBG)	15 ml	Harm Ph	20	731203ZA

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Description	Volume	Standard	Pk	Cat. No.
VP-RM broth	10 ml	-	120	600531ZAMP
VP-RM broth	10 ml	-	20	600531ZA
Yeast starch glucose agar (YSGA)	20 ml	IFU Method No 12	120	723650YFMP
Yeast starch glucose agar (YSGA)	20 ml	IFU Method No 12	20	723650YF
YSG broth	2,5 ml	IFU Method No 12	120	663650YFMP
YSG broth	2,5 ml	IFU Method No 12	20	663650YF

Culture media, ready to use, in plates

For various microbiological applications. The special packaging of the 55 mm plates has several advantages: good protection of the plates during transport and storage, can be reused to transport the plates after use and is recyclable (PET). The plates can be stored from 2 up to 14 °C.

- Packed under cleanroom conditions to avoid contamination
- Manufactured with formulations that follow specifications of the various Pharmacopoeias and ISO regulations
- Special packaging for 55 mm plates

Chromocult® is a registered trademark of Merck KGaA, Darmstadt, Germany. This ready to use medium is made using only Chromocult® dehydrated media produced by Merck KGaA and Agar.

Packaging: The cellophane bag packaging have a special boxes of 30 plates (55 mm plates). They are delivered 1×30 or 3×30. 90 mm plates are delivered 1×20 or 6×20.

Description	Filling	Standard	Pk	Cat. No.
Plates 55 mm				
Bile Aesculin azide agar	12 ml	ISO 7899-2 and clinical samples	30	170082UA
Chromocult® Coliformen agar	12 ml	-	90	171274ZAMP
Chromocult® Coliformen agar with Cefsulodin and Vancomycin	12 ml	-	30	171274ZA
Chromocult® Enterococci	12 ml	-	30	175584ZA
Chromogenic selective agar E. coli with Cefsulodin and Vancomycin	12 ml	-	30	173580ZA
Chromogenic selective agar E. coli with Cefsulodin and Vancomycin	12 ml	-	90	173580ZAMP
Coliform Chromogen agar (CCA)	12 ml	ISO 9308-1	30	175452ZA
DEV agar	12 ml	acc. to the German Standard Methods	30	173554ZA
DEV agar	12 ml	acc. to the German Standard Methods	90	173554ZAMP
Endo-LES agar	12 ml	-	30	173241ZA
MacConkey agar	12 ml	ISO 21150:2006	30	170641ZA
Malt extract agar, acidified	12 ml	-	30	170542YA
Mannitol agar	12 ml	Harm Ph	30	170560ZA
Mannitol agar	12 ml	Harm Ph	90	170560ZAMP
M-CP agar	12 ml	European Directive 12767/97	30	171400ZA
M-CP agar	12 ml	-	90	171400ZAMP
M-FC agar	12 ml	-	30	171380ZA
M-Green agar	12 ml	ISO 10718:2002	30	171300ZA
M-Green agar	12 ml	-	90	171300ZAMP
Nutrient agar	12 ml	-	90	170692ZAMP
Nutrient agar	12 ml	16266:2006 and EN 12780:2002	30	170692ZA
Orange serum agar	12 ml	-	30	170731ZA
PCA Plate count agar	10 ml	ISO 4833, 8552 and 17410 s and IFU No. 6	30	170774ZA
Pseudomonas agar (Cetrimide)	12 ml	EN 12780-2002 and ISO 16266	30	170793NA
Pseudomonas agar (Cetrimide)	12 ml	EP, USP	30	170793ZA
Pseudomonas agar (Cetrimide)	12 ml	EP, USP	90	170793ZAMP
R2A agar	10 ml	EP	30	170802ZI
Sabouraud 4% chloramphenicol agar	10 ml	Harm Ph	30	170884CF
Sabouraud 4% dextrose agar	12 ml	Harm Ph	30	170884ZA
Slanetz & Bartley agar	10 ml	ISO 7899-2:2000.	30	170980ZA
Slanetz and Bartley agar w/o TTC	12 ml	-	90	175160ZAMP
Slanetz and Bartley agar w/o TTC	12 ml	-	30	175160ZA
SPS agar	12 ml	-	90	171320ZAMP
SPS agar	12 ml	-	30	171320ZA
Tergitol-7 agar	12 ml	ISO 9308-1:2000	30	171023ZA
TGE agar	12 ml	-	30	175350ZA
Tryptone yeast agar	12 ml	ISO 6222:1999.	30	171250ZA
TSA tryptic soy agar	12 ml	Harm Ph	30	171114ZA
TSC agar	12 ml	-	30	171141AA
Wort agar	12 ml	-	30	172321ZA
Plates 90 mm				
Baird Parker agar	20 ml	ISO 6888-1:1999	20	100063UA
Baird Parker agar	20 ml	ISO 6888-1:1999	120	100063UAMP
Baird Parker agar	19 ml	EP, USP, ISO	20	AX051103
Baird-Parker RPF agar	20 ml	ISO 6888-2	20	102950IM
Baird-Parker RPF agar	20 ml	ISO 6888-3	120	102950IMMP
Bile Aesculin azide agar	20 ml	ISO 7899-2:2001	20	100082XA
Bile Aesculin azide agar	20 ml	ISO 7899-2:2001	120	100082XAMP
Bismuth sulphite agar	22 ml	-	120	102770ZAMP
Bismuth sulphite agar	22 ml	-	20	102770ZA
BPLS agar acc. to Kristensen (brilliant green, phenol red, lactose, sucrose)	20 ml	acc. potable water, Spanish legislation	20	100121ZA

Description	Filling	Standard	Pk	Cat. No.
BPLS agar acc. to Kristensen (brilliant green, phenol red, lactose, sucrose)	20 ml	acc. potable water, Spanish legislation	120	100121ZAMP
Brain heart infusion	20 ml	-	20	100101ZA
Brucella agar with Hemine and Vitamin K	20 ml	-	20	100158JF
Campylobacter blood-free CCDA agar	20 ml	ISO 10272:2006	20	100191ZF
Campylobacter blood-free CCDA agar	20 ml	ISO 10272:2006	120	100191ZFMP
CCA Coliform Chormogenic agar	20 ml	-	120	125452ZA
Chocolate agar with supplement (VITOX)	20 ml	-	20	101591ZF
Chocolate agar with supplement (VITOX)	20 ml	-	120	101591ZFMP
Chromocult® Coliformen agar	20 ml	-	20	101274ZA
Chromocult® Coliformen agar	20 ml	-	120	101274ZAMP
CLED agar	20 ml	-	20	100222ZA
CLED agar	20 ml	-	120	100222ZAMP
Coliform Chromogen agar (CCA)	20 ml	ISO 9308-1	20	105452ZA
Colorex Clostridium difficile	20 ml	-	20	105406ZF
Colorex S. Rambach agar	20 ml	-	120	121294ZA
Colorex Salmonella plus, chromogenic media	20 ml	ISO 6579:2002	20	102918ZA
Colorex Salmonella plus, chromogenic media	20 ml	ISO 6579:2003	120	102918ZAMP
Columbia sheep blood + ANC	20 ml	Harm Ph	20	100253NF
Columbia sheep blood + ANC	20 ml	Harm Ph	120	100253NFMP
Columbia sheep blood agar	20 ml	Harm Ph	20	100253ZF
Columbia sheep blood agar	20 ml	Harm Ph	120	100253ZFMP
CT-SMAC (*E.coli* 0:157) agar	20 ml	-	120	100683AAMP
Dermatophytes agar	20 ml	-	20	101345ZA
Dermatophytes agar	20 ml	-	120	101345ZAMP
DEV nutrient agar	20 ml	German Drinking Water Methods	20	103554ZA
DEV nutrient agar	20 ml	German Drinking Water Methods	120	103554ZAMP
DG 18 metal agar	20 ml	-	20	102310XF
DG 18 metal agar	20 ml	-	120	102310XFMP
Dichlor. Rose Bengal chloramp. agar	20 ml	-	20	103660XF
Dichlor. Rose Bengal chloramp. agar	20 ml	-	120	103660XFMP
DNase agar methyl green	20 ml	-	20	105025ZA
EMB agar	20 ml	ISO 21150:2006	20	100331ZA
EMB agar	20 ml	ISO 21150:2006	120	100331ZAMP
Enterobacter sakazakii agar	20 ml	-	120	103400ZFMP
Enterobacter sakazakii agar	20 ml	-	20	103400ZF
Eugon Lt 100 agar	20 ml	ISO 21149	20	104862ZF
Fraser enrichment broth w/o iron	10 ml	-	20	600343GF
Gauze agar	20 ml	-	20	104852AF
Gauze agar	20 ml	-	120	104852AFMP
GBS agar (Granada)	20 ml	-	20	102470ZF
GBS agar (Granada)	20 ml	-	120	102470ZFMP
GMB agar (glucose Mueller blue)	20 ml	-	20	100613DA
Hektoen enteric agar	20 ml	ISO 21567	20	100371ZA
Hektoen enteric agar	20 ml	-	120	100371ZAMP
Lactose TTC agar Tergitol-7	20 ml	ISO 9308-1:2000	20	101023ZA
Lactose TTC agar Tergitol-7	20 ml	ISO 9308-2	120	101023ZAMP
LB agar (Miller)	20 ml	-	20	102502ZA
Lecithin polysorbate Triton X agar	20 ml	-	20	101114SA
Legionella BCYE	20 ml	ISO 11731:1998 and 11731-2:2004	20	100460ZF
Legionella BCYE without L-Cysteine	20 ml	ISO 11731:1998	20	100460XF
Legionella GVPC	20 ml	ISO 11731:1998 and 11731-2:2004	20	100460GF
Legionella GVPC agar	20 ml	ISO 11731:1998 and 11731-2:2004	120	120460GF
Legionella w/o cysteine	20 ml	-	120	100460XFMP
Letheen modified agar	20 ml	-	20	102754OA
Listeria selective agar acc. Ottaviani and Agosti	20 ml	ISO 11290-1+2	20	102898KA
Listeria selective agar ALOA	20 ml	ISO 11290-1+3	120	102898KAMP
MacConkey agar	20 ml	Harm Ph	20	100641ZA
MacConkey agar	20 ml	Harm Ph	120	100641ZAMP
Malt extract + chloramphenicol agar	20 ml	-	20	100542CA
Malt extract agar	20 ml	-	20	100544ZA
Malt extract agar	20 ml	-	120	100544ZAMP
Malt extract metal agar	20 ml	-	20	100544XA
Malt extract metal agar	20 ml	-	120	100544XAMP
Mannitol salt agar	20 ml	Harm Ph	20	100560ZA
Mannitol salt agar	20 ml	Harm Ph	120	100560ZAMP
MRS +sorbic acid agar	20 ml	-	120	100582XAMP
MRS +sorbic acid agar	20 ml	-	20	100582XA
MRS agar	20 ml	-	120	100582ZAMP
MRS agar	20 ml	ISO 9332 and 15214 and IFU Methods 5, 7 and 9	20	100582ZA
MRS Cyclohexemide agar	20 ml	-	20	100581AA
MRS Cystein agar 2	20 ml	-	20	100581JA
MRS cysteine agar	20 ml	-	120	100582JAMP
MRS cysteine agar	20 ml	-	20	100582JA
MRS cysteine agar 3	20 ml	-	120	100581JAMP
Mueller Hinton, mod.	20 ml	-	120	100613DAMP
Mueller Hinton 2% NaCl agar	20 ml	-	120	100611ZAMP
Mueller Hinton 2% NaCl agar	20 ml	-	20	100611ZA
Mueller Hinton blood agar	20 ml	-	120	100613IFMP
Mueller Hinton blood agar	20 ml	-	20	100613IF
MYP agar with polymyxin B, egg yolk	20 ml	-	120	100053UAMP
MYP agar with polymyxin B, egg yolk	20 ml	-	20	100053UA
Nutrient agar	20 ml	-	120	100692PAMP
Nutrient agar with Bromthymol Blue and TTC	20 ml	-	20	100692PA
OGYE agar	20 ml	ISO 13681:1996	120	100720ZAMP
OGYE agar	20 ml	ISO 13681:1995	20	100720ZA

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Description	Filling	Standard	Pk	Cat. No.
Orange serum agar	20 ml	-	120	100731ZAMP
Orange serum agar	20 ml	-	20	100731ZA
Palcam agar	20 ml	EN ISO 11290-1,11290-3	120	100742ZAMP
Palcam agar	20 ml	EN ISO 11290-1,11290-2	20	100742ZA
PCA Plate count agar	20 ml	UNE-EN ISO 4833:2004	120	100774ZAMP
PCA Plate count agar	20 ml	ISO 4833, 8552 and 17410 s and IFU No. 6	20	100774ZA
PCA without glucose	20 ml	-	20	AX051165
Potato dextrose	20 ml	-	20	100782XA
Potato dextrose agar	20 ml	Harm Ph	120	100782ZAMP
Potato dextrose agar	20 ml	Harm Ph	20	100782ZA
Potato dextrose agar	20 ml	-	20	AX051132
Pseudomonas agar (Cetrimide)	20 ml	Harm Ph	20	100793ZA
Pseudomonas agar (Cetrimide)	20 ml	Harm Ph	120	100793ZAMP
Pseudomonas CFC agar	20 ml	ISO 13721	120	101611ZAMP
Pseudomonas CFC agar	20 ml	ISO 13720	20	101611ZA
Rambach® agar	20 ml	-	120	101294ZAMP
Rambach® agar	20 ml	-	20	101294ZA
Rose bengal agar	20 ml	-	120	100070ZAMP
Rose bengal agar	20 ml	-	20	100070ZA
RPMI agar (mops glucose)	20 ml	-	20	101938ZF
S.P.S. agar	20 ml	-	20	101320ZA
Sabourand 4% maltose agar	20 ml	USP, EuPh	120	104744ZAMP
Sabourand 4% maltose agar	20 ml	USP, EuPh	20	104744ZA
Sabouraud 2% dextrose agar	20 ml	-	20	100882ZA
Sabouraud 2% dextrose chloramphenicol cycloheximide agar	20 ml	Harm Ph	120	100884DAMP
Sabouraud 2% dextrose chloramphenicol cycloheximide agar	20 ml	Harm Ph	20	100884DA
Sabouraud 4% dextrose agar	20 ml	-	120	120884ZA
Sabouraud 4% dextrose Chloramphenicol agar	20 ml	Harm Ph	120	100884CFMP
Sabouraud 4% dextrose Chloramphenicol agar	20 ml	Harm Ph	20	100884CF
Sabouraud 4% glucose agar	20 ml	EP, USP	120	100884ZAMP
Sabouraud 4% glucose agar	20 ml	EP, USP	20	100884ZA
Sheep blood polymyxin agar	20 ml	-	120	100250DFMP
Sheep blood polymyxin agar	20 ml	-	20	100250DF
Skirrow Campylobacter agar	20 ml	-	120	102993AFMP
Skirrow selective medium	20 ml	-	20	102993AF
Slanetz & Bartley Enterococci agar	20 ml	ISO 7899-2:2001	120	100980ZAMP
Slanetz & Bartley Enterococci agar	20 ml	ISO 7899-2:2000	20	100980ZA
SS Salmonella Shigella agar	20 ml	-	120	100911ZAMP
SS Salmonella Shigella agar	20 ml	-	20	100911ZA
Standard I nutrient agar	20 ml	-	120	100692ZAMP
Standard I nutrient agar	20 ml	ISO 16266:2006 and 12780:2002	20	100692ZA
TBX agar	20 ml	-	120	101004ZAMP
TBX agar	20 ml	ISO16649-1:2001	20	101004ZA
TCBS cholera agar	20 ml	-	120	101011ZAMP
TCBS cholera agar	20 ml	-	20	101011ZA
Thayer Martin agar	20 ml	-	120	100353OFMP
Thayer Martin agar	20 ml	-	20	100353OF
TSA tryptic soy agar	20 ml	Harm Ph	120	101114ZAMP
TSA tryptic soy agar	20 ml	Harm Ph	20	101114ZA
TSA tryptic soy agar +5% sheep blood	20 ml	Harm Ph	120	101114IFMP
TSA tryptic soy agar with 5% sheep blood	20 ml	Harm Ph	20	101114IF
TSA with Cycloheximide	20 ml	-	120	101114AFMP
TSA with Cycloheximide	20 ml	-	20	101114AF
TSA with natamycin 0,1 g/l agar	20 ml	-	20	111114NF
TSC agar	20 ml	UNE EN 13401 and UNE EN 26461-3	120	101141AAMP
TSC agar	20 ml	UNE EN 13401 and UNE EN 26461-2	20	101141AA
TSN agar	20 ml	-	120	101370ZAMP
TSN agar	20 ml	-	20	101370ZA
VRB (Violet red bile) agar	20 ml	EP	120	101183ZAMP
VRB (Violet red bile) agar	20 ml	EP	20	101183ZA
VRBD (Violet red bile dextrose) agar	20 ml	Harm Ph	120	101203ZAMP
VRBD (Violet red bile dextrose) agar	20 ml	Harm Ph	20	101203ZA
Wl nutrient agar	20 ml	-	20	101212ZA
Wl nutrient agar	20 ml	-	30	171212ZA
Wort agar	20 ml	-	20	112321TA
XLD agar	20 ml	Harm EP, USP, JP	120	101241ZFMP
XLD agar	20 ml	Harm EP, USP, JP	20	101241ZF
XLD agar	20 ml	ISO 6579	20	103542ZF
XLD novobiocin agar	20 ml	Harm Ph	20	101241AF
XLT4 agar	20 ml	-	120	101874ZAMP
XLT4 agar	20 ml	-	20	101874ZA
YGC agar	20 ml	ISO 7954 and FIL-IDF 94B	20	112230CA

Culture media, ready to use, in plates, 90 mm

Description	Filling	Standard	Pk	Cat. No.
Cetrimide agar	21 ml	EP, USP	20	AX051120
MacConkey agar	21 ml	EP, USP	20	AX051119
PCA agar	20 ml	ISO 4833, EPA	20	AX051105
R2A agar	20 ml	EP, EPA	20	AX051150
Sabouraud 4% glucose chloramphenicol agar	20 ml	USP, EuPh	20	AX051121
TSA tryptic soy agar	21 ml	-	20	AX051101
XLD agar	20 ml	EP, USP, ISO 6579	20	AX051112

Culture media, ready to use, in bags

Microbiology media in bags are ideally suited for high sample volumes.

- Space saving packaging
- No risk associated with broken glass bottles
- Media can be easily and conveniently dispensed using a gravimetric diluter or peristaltic pump

Description	Volume	Standard	Pk	Cat. No.
Bag connector	-		1	4992630O
Buffered peptone water	2000 ml	-	5	870179ZB
Buffered peptone water	3000 ml	-	3	800179ZB
Buffered peptone water	5000 ml	-	2	850179ZB
Buffered peptone water	5000 ml	ISO 6579 8523, 11290-2	2	AX031106
Fraser broth 1/2	2000 ml		5	870343VB
Fraser broth 1/2	3000 ml	-	3	800343VB
Fraser broth 1/2	5000 ml	-	2	850343VB
Fraser broth 1/2 conc	5000 ml	ISO-11290-1	2	AX031109
Maximum recovery diluent	3000 ml	-	3	803120ZB
Maximum recovery diluent	5000 ml	-	2	853120ZB
Modified Letheen broth with tween (MLBT)	3000 ml	-	3	802760ZA
MRS broth	900 ml	-	20	6141.01000
Polyvalent univ. neutraliser	2000 ml		5	872760TA
Polyvalent univ. neutraliser	5000 ml	-	2	852760TA
Tryptone soya broth (TSB)	3000 ml	-	3	801121ZB
Tryptone soya broth (TSB)	5000 ml	-	2	851121ZB
Tryptone soya broth (TSB), radiosterilised, (EP, USP, ISO 9308)	5000 ml	-	2	AX031110

MediaBag with screw cap

MediaBags are filled with pre-weighed granulated media in a double bagged bag and irradiated. Add sterile water under aseptic conditions.

- With screw cap 50 mm

Description	For	Pk	Cat. No.
BPW, big bag, 68,85 g	2700 ml	20	7201.02700
BPW, big bag, 86,06 g	3375 ml	20	7201.03375
MediaBag, big bag with BPW	3600 ml	20	7201.03600
MediaBag, big bag with skimmed milk, 375 g	3750 ml	20	7203.00372
MediaBag, standbag with BPW, double conc.	4500 ml	20	7205.04500

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Culture media, MediaBag

Each bag contains a pre-weighed amount of granulated media in a double bagged bag and is irradiated. Just in time enrichment - add sterile water and sample material.

- Space saving, no bottles taking up shelf space
- Long shelf life
- No autoclaving and optimum solubility
- Dust-free work condition

MediaBag, buffered peptone water (BPW) irradiated

Non selective pre-enrichment broth to increase recovery of bacteria, particularly pathogenic Enterobacteriaceae from foodstuffs. The culture medium complies with ISO 6579:2002.

The lab-blender bag contains 5,75 g of BPW to which 225 ml of sterile water and 25 g (or 25 ml) of sample material is added.

More media are available on request.

The following media are approved for the bag system:

Tryptic soy broth
Fraser broth base
Lactose broth
MacConkey broth

The composition is according to standard methods such as ISO, AFNOR, NMKL etc.

Packaging: Special formulations and packaging formats available on request.

Description	For	Pk	Cat. No.
Small bag, irradiated, ready to use			
MediaBag, BPW sachets	225 ml	100	7501.00225
MediaBag. skimmed milk sachets	125 ml	100	7503.00225
MediaBag, 1/2 Fraser broth sachets	225 ml	100	7504.00225
Standbag, irradiated, ready to use			
MediaBag, standbag with BPW	90 ml	100	7301.00090
MediaBag, standbag with BPW	225 ml	100	7301.00225
MediaBag, standbag with BPW	450 ml	100	7301.00450
MediaBag, standbag with BPW	1125 ml	100	7301.01125
MediaBag, standbag with BPW	2250 ml	100	7301.02250
MediaBag, BPW sachets	2700 ml	50	7301.02700
MediaBag, standbag skimmed milk	250 ml	100	7303.00225
Aluminium standbag, irradiated, ready to use			
MediaBag, aluminium standbag with BPW	3000 ml	50	7601.03000
MediaBag, aluminium standbag with BPW	4000 ml	50	7601.04000
MediaBag, standbag with BPW	3375 ml	50	7691.03375
Large bag, irradiated, ready to use			
MediaBag, big bag with BPW	4500 ml	20	7201.04500
MediaBag standbag, big bag with BPW	9000 ml	20	7201.09000
Accessories			
Standbag, 14x225 mm steril	-	50	8000.00302
Connector	-	1	MPC17004T03

VWR BDH CHEMICALS

AVS® TITRINORM® READY TO USE SOLUTIONS

- Volumetric solutions
- pH buffers
- AAS standard solutions
- Traceable to NIST
- Complete Certificate of Analysis available on the web

Culture media, MediaBag system T

The T bag is filled with pre-weighed granulated media. Connect the 0,2 µm filter unit aseptically to the tube by using the the connector device. Add water under aseptic conditions into the bag via the filter sytem. Protect the tube end with the red cap.

Description	For	Pk	Cat. No.
MediaBag T (tube-bag) for 3 l BPW (buffered peptone water)	3000 ml	25	7701.03000
MediaBag T BPW (buffered peptone water)	5000 ml	20	7701.05000
MediaBag T BPW (buffered peptone water)	10000 ml	20	7701.10000
MediaBag T BPW (buffered peptone water)	15000 ml	15	7701.15000
MediaBag T BPW (buffered peptone water)	20000 ml	15	7701.20000
MediaBag T maximum recovery diluent	3000 ml	25	7702.03000
MediaBag T maximum recovery diluent	5000 ml	20	7702.05000
MediaBag T maximum recovery diluent	10000 ml	20	7702.10000
MediaBag T maximum recovery diluent	20000 ml	15	7702.20000
MediaBag T half Fraser	5000 ml	15	7704.05000
MediaBag T half Fraser	10000 ml	15	7704.10000
MediaBag T TSB	5000 ml	15	7712.05000
MediaBag T BPW (buffered peptone water)	20000 ml	15	7716.20000
MediaBag T for BPW, 65 cm tube	20000 ml	15	7761.20000
MediaBag T BPW, with filter	20000 ml	15	7791.20000
MediaBag T Fraser broth 1/2	5000 ml	1	7794.05000

Culture Media, MediaBag

Description	For	Pk	Cat. No.
MediaBag, BPW	1350 ml	100	7801.01350
MediaBag, BPW, 1530 g	60000 ml	10	7891.60000
MediaBag, TSB, sterile, 11 kg	370 l	1	7812.11100
MediaBag, TSB, sterile, 5 kg	166 l	1	7812.05000
MediaBag, TSB, sterile, 6 kg	200 l	1	7812.06000

Culture Media, MediaBag, Twirl-bag

MediaBags are filled with pre-weighed granulated media in a double bagged bag and irradiated. Add sterile water under aseptic conditions.

- Twirl-bag

Description	For	Pk	Cat. No.
MediaBag T BPW	450 ml	100	7101.00450

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MediaBag sachets

For the preliminary, non selective enrichment of bacteria.

- Convenient, just add water
- No handling of glassware or weighing of culture media
- Light to transport and space saving

Description	For	Pk	Cat. No.
MediaBag, BPW sachets	450 ml	100	7501.00450
MediaBag 1/2 Fraser broth	2250 ml	100	7504.02250
MediaBag 1/2 Fraser broth	4500 ml	100	7504.04500
MediaBag Fraser broth	225 ml	100	7511.00225
Skimmilk food grade instant	5 ml	100	7583.0005
MediaBag Buffered peptone water	225 ml	100	7591.00225

Culture media, MediaBag system W

The W bags are folded bags without connectors.

Description	For	Pk	Cat. No.
MediaBag W BPW (buffered peptone water)	1125 ml	100	7901.01125
MediaBag W BPW (buffered peptone water)	1800 ml	50	7901.01800
MediaBag W BPW (buffered peptone water)	2700 ml	50	7901.02700
MediaBag W BPW (buffered peptone water)	3000 ml	50	7901.03000
MediaBag W BPW (buffered peptone water)	3375 ml	50	7901.03375
MediaBag W BPW (buffered peptone water)	3600 ml	50	7901.03600
MediaBag W Demi Fraser, sterile, 2250 g	2250 ml	25	7904.02250

Culture media in bags

Description	Volume	Pk	Cat. No.
Bactopeptone	1000 ml	1 l	MOPSBACTO

Buffered peptone water, for the preparation of 60 l solution

For the preliminary, non-selective enrichment of bacteria, particularly of pathogenic Enterobacteriaceae, from foodstuffs and other materials. This culture medium complies with the recommendations of the international Organization for Standardization (1975) and the DIN Norms 10181 an 10160 for the examination of milk/meat products respectively. The granulate product is non-sterile. Add the content of the sachet to 60 l of demineralised water. Sterilise by filtration or autoclaving. The prepared broth is clear and yellow and ready for use.

- The broth is rich in nutrients and produces high resuscitation rates for subletally injured bacteria and intense growth
- The phosphate buffer system prevents bacterial damage due to changes in the pH of the medium

Description	For	Pk	Cat. No.
BPW, sachet with 1530 g	60000 ml	10	7801.60000

Dip slides, push cap

Dip slides for microbiological monitoring of surfaces and in liquids. Each slide has media on both sides: Choice of the same medium or two different media on the two sides of the slides; this allows sampling of two surfaces with every single slide. Testing with dip slides is a safe, reliable, economical and fast indicator of the presence of microorganisms. Dip slides with a push cap have a larger contact area.

- Supplied sterile
- Sampling takes only a few seconds
- The results are easily read after just 24 - 48 hours

Description	Pk	Cat. No.
Baird Parker, on both sides	10	535302D
Baird Parker, on both sides	100	535303D
Baird Parker and Total count agar	10	535304D
Baird Parker and Total count agar	100	535305D
Baird Parker and VRBG	10	535308D
Malt extract agar, on both sides	10	535328D
Malt extract agar, on both sides	100	535329D
Nutrient agar and Pseudomonas agar	10	535182R
Nutrient agar and Pseudomonas agar	100	535184T
Nutrient agar with TTC, on both sides	10	535092Q
Nutrient agar with TTC, on both sides	100	535094S
Nutrient agar with TTC and malt extract agar	10	535102B
Nutrient agar with TTC and malt extract agar	100	535104D
Nutrient agar with TTC and neutralisers	10	535309D
Nutrient agar with TTC and neutralisers	100	535310D
Nutrient agar with TTC and Rose Bengal agar	10	535112D
Nutrient agar with TTC and Rose Bengal agar	100	535114F
PCA on both sides	100	535124H
Plate count agar and MacConkey agar	10	535142J
Plate count agar and MacConkey agar	100	535144L
Plate count agar and OGYE agar with neutralisers	10	535132H
Plate count agar and OGYE agar with neutralisers	100	535134J
Plate count agar and VRBGA	10	535162N
Plate count agar and VRBGA	100	535164P
Plate count agar and VRBGA with neutralisers	10	535172P
Plate count agar and VRBG with neutralisers	100	535174R
Plate count agar MacConkey agar with neutralisers	10	535152L
Plate count agar MacConkey agar with neutralisers	100	535154N
Plate count agar on both sides	10	535122F
Plate count agar with neutralisers, on both sides	10	535324D
Plate count agar with neutralisers, on both sides	100	535325D
Plate count agar with TTC, on both sides	10	535311D
Plate count agar with TTC, on both sides	100	535312D
Plate count agar with TTC and MacConkey agar 3	100	535319D
Plate count agar with TTC and MacConkey agar 3	10	535318D
Plate count agar with TTC and MacConkey agar 3 with neutralisers	10	535316D
Plate count agar with TTC and neutralisers, on both sides	10	535313D
Plate count agar with TTC and neutralisers, on both sides	100	535314D
Pseudomonas CFC and MacConkey agar 3	10	535322D
Pseudomonas CFC and MacConkey agar 3	100	535323D
Rose Bengal agar	10	535202E
Rose Bengal agar	100	535204G
TSA with malt extract agar, on both sides	10	535320D
TSA with neutralisers, on both sides	10	535326D
TSA with neutralisers, on both sides	100	535327D
TSA with TTC and malt extract agar	100	535321D

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Dip slides, screw cap

Dip slides for microbiological monitoring of surfaces and in liquids. Testing with dip slides is a safe, reliable, economical and fast indicator of the presence of microorganisms.

- Supplied sterile
- Sampling takes only a few seconds
- The results are easily read after just 24 - 48 hours

Description	Pk	Cat. No.
Nutrient agar TTC, on both sides	10	535306D
Nutrient agar TTC, on both sides	100	535307D

Surface sampling sponge kits

The surface sampling sponge kit is designed to collect and transport samples to detect the presence of microbiological contaminations such as *Listeria*, *Salmonella*, *E. coli*, and other foodborne pathogens on almost any surface. These kits are widely used in the food, medical, public health and cosmetic industries. Surface sampling kits come in two forms: Dry sponge sterile sampling bag with write-on strip containing a dry, biocide-free cellulose sponge (38×76×16 mm when hydrated) or wet sponge sterile sampling bag accompanied by a foil-sealed, pre-moistened cellulose sponge, holding 10 ml of sterile neutralising buffer.

- The sterile leakproof transport bags guarantee the rapid cooling of the samples put in refrigerator for transport
- All bags come with puncture-proof safety tabs, eliminating the sharp points that can cause bag puncture and/or abrasions
- Kits are sterilised using gamma irradiation
- The sponge allows you to sample a wide surface area in comparison with normal sampling swabs

In accordance with HACCP, USDA, ACIA and CFIA requirements.

Dimensions: 114×229 mm
Capacity of the sterile transport bag: 540 ml

Note: Gloves should be worn during all sampling procedures.

Description	Packed	Pk	Cat. No.
Surface sampling sponge, pre-moistened with neutralising buffer	5×20	100	300-0230
Surface sampling sponge, pre-moistened with Dey/Engley neutralising buffer	5×20	100	300-0231
Surface sampling sponge, sterile transport bag and sterile surface sampling sponge with handle, pre-moistened with neutralising buffer	10×10	100	300-0232
Surface sampling sponge, sterile transport bag and sterile surface sampling sponge with handle, pre-moistened with Dey/Engley neutralising buffer	10×10	100	300-0240
Surface sampling sponge, dry sponge in a bag for 450 ml volume, with gloves	4×100	400	710-0860
Surface sampling sponge, dry sponge in a bag for 540 ml volume	4×100	400	710-1020

Preservation system, Cryoinstant

Microbiological laboratories need a simple procedure to maintain important microorganisms rather than repetitive sub-culturing, which results in contaminated cultures, loss of viability and, even more importantly, loss of original characteristics by introducing biochemical and genetic changes. Cryoinstant consists of 25 porous beads in a vial filled with a broth containing glycerol. Microorganisms will bind to the porous surface of the beads. The excess broth is aspirated, then store the vials at temperatures down to –70 °C in a freezer.

- Quick and easy to use
- Colour-coded
- Storage down to –70 °C
- Quality controlled for fertility and sterility

Packaging: Cryoinstant is packed in packs of 50 vials of 2 ml.

Description	Pk	Cat. No.
Cryoinstant, mixed	50	822070ZA
Cryoinstant, red	50	822071ZA
Cryoinstant, blue	50	822072ZA
Cryoinstant, green	50	822073ZA
Cryoinstant, yellow	50	822074ZA
Cryoinstant, natural	50	822075ZA

Microscopical diagnostics

VWR has a large range of products many of which are IVD registered for the preparation, mounting and staining of tissues and cells.
This range has recently been extended by the acquisition of Labonord in France. Full details on the products including specifications can be found in the alphabetical part of this catalogue. Below are the main products that VWR has in the range.

Dyes and Stains

Description	Pk	Cat. No.
Carbol fuchsin Ziehl-Neelsen (Strong) Gurr	500 ml	350084R
Eosin yellowish for microscopical staining Gurr®	25 g	341972Q
Eosin yellowish for microscopical staining Gurr®	100 g	341973R
Eosin yellowish for microscopical staining Gurr®	1 kg	341975T
Feulgen stain (Schiff) (form. R.A. Lamb)	500 ml	351204L
Fuchsin (basic) Gurr 'Certistain'	100 g	340325K
Fuchsin basic	25 g	3525.0025
Giemsa`s stain improved R66 solution Gurr®	500 ml	350864X
Giemsa`s stain improved R66 solution Gurr®	1 l	350865P
Giemsa`s stain improved R66 solution Gurr®	25 l	35086HE
Giemsa`s stain solution	500 ml	352603R
Gram's decolorizing solution	5 l	9761.5000
Gram's decolorizing solution	5 l	99502.5000
Haemalum (Mayer`s) Gurr® for microscopical staining	500 ml	350604T
Haematoxylin (monohydrate) for microscopical staining Gurr®	25 g	340374T
Haematoxylin Harris (mercury-free)	1 l	351945S
Hema Gurr® rapid staining set for haematology	1	351042L
Leishman`s staining solution Gurr® for microscopical staining	500 ml	350224L
Malachite green oxalate (C.I. 42000)	100 g	3076.0100
May-Grunwald`s eosin methylene blue solution	1 l	352065W
May-Grunwald`s stain solution	1 l	352622M
Methyl blue TECHNICAL	100 g	34015.182
Methylene blue (C.I. 52015)	25 g	3470.0025
Methylene blue (C.I. 52015)	100 g	3470.0100
Methylene blue for microbiological staining Gurr® and reagent for molybdate	25 g	340484B
Neutral red for microscopical staining Gurr®	25 g	340564A
Neutral red for microscopical staining Gurr®	100 g	340565B
Nuclear fast red for microscopical staining Gurr®	25 g	342094W
Papanicolaou`s stain OG 6 Gurr®	1 l	350405X
Papanicolaou EA 50 Gurr® (new formulation)	1 l	351695T
Schiff's staining solution Q Path	450 ml	10047025.
Toluidine blue, certified grade	25 g	E847-25G

Ready to use staining solutions

Staining solutions used in histology and cytology for the staining and counterstaining in HE or PAP protocols.

Description	Page	Pk	Cat. No.
Bouin's solution GURR®	63, 290	1 l	7000.1000
Eosin Y aqueous solution Q Path® for microscopy	144, 290	450 ml	10047001.
Eosin Y aqueous solution Q Path® for microscopy	144, 290	2,5 l	10047101.
Eosin Y alcoholic Q Path® for microscopy	144, 290	450 ml	10047003.
Eosin Y alcoholic Q Path® for microscopy	144, 290	2,5 l	10047103.
Eosin Y alcoholic Q Path® for microscopy	144, 290	5 l	00607121.
Harris´s Haematoxylin solution Q Path® for microscopy	183, 290	450 ml	10047007.
Harris´s Haematoxylin solution Q Path® for microscopy	183, 290	2,5 l	10047107.
Harris´s Haematoxylin solution Q Path® for microscopy	183, 290	5 l	00607131.
Mayer´s Hematoxylin solution Q Path® for microscopy	183, 290	450 ml	10047005.
Mayer´s Hematoxylin solution Q Path® for microscopy	183, 290	2,5 l	10047105.
Mayer´s Hematoxylin solution Q Path® for microscopy	183, 290	5 l	00607126.
Malachite green oxalate for microscopy	248, 290	25 g	3076.0025
May Grunwald Eosin methylene blue Q Path®	251, 290	450 ml	10047018.
May Grunwald Eosin methylene blue Q Path®	251, 290	2,5 l	10047118.
Papanicolaou's solution EA 50 Q Path® for microscopy	290, 327	450 ml	10047011.
Papanicolaou's solution EA 50 Q Path® for microscopy	290, 327	2,5 l	10047111.
Papanicolaou's solution EA 50 Q Path® for microscopy	290, 327	5 l	00607141.
Papanicolaou's solution (OG 6) Q Path® for microscopy	290, 327	450 ml	10047010.
Papanicolaou's solution (OG 6) Q Path® for microscopy	290, 327	2,5 l	10047110.
Papanicolaou's solution (OG 6) Q Path® for microscopy	290, 327	5 l	00607136.
Periodic acid solution Q Path® for microscopy	290, 340	450 ml	10047024.
Phloxine B 0.1% Q Path® for microscopy	290, 351	1 l	10047229.
Saffron Powder Q Path®	290, 391	10 g	11507737.
Saffron strands Q Path®	290, 392	10 g	11507736.
Saffron alcoholic solution Q Path® for microscopy	290, 392	450 ml	10047028.
Shorr staining solution Q Path® for microscopy	290, 394	450 ml	10047013.
Shorr staining solution Q Path® for microscopy	290, 394	2,5 l	10047113.

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Staining solutions

Staining solutions used in histology and cytology for the counterstaining of the cell nuclei red. Classically in a Gram staining and endospore staining.

Description	Pk	Cat. No.
Methylene blue solution (3× 1 litre)	3	911490ZAMP
Crystal violet solution for gram staining (3× 1 litre)	3	911517ZAMP
Safranine solution for gram staining (3× 1 litre)	3	911540ZAMP
Methylene blue solution	1 l	911490ZA
Crystal violet solution for gram staining	1 l	911517ZA
Safranine solution for gram staining	1 l	911540ZA

Fixatives for microscopy

Description	Page	Pk	Cat. No.
Cryolab Q Path® freezing aerosol	100, 291	1 KIT	00528200.
Cryolab Q Path® freezing aerosol	100, 291	1 KIT	13328202.
Ethanol 50% fixative Q Path® for microscopy	149, 291	32	ALC0150AF59001
Ethanol 50% fixative Q Path® for microscopy	149, 291	50	ALC0060AF59001
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162, 291	1 l	20909.290
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162, 291	2,5 l	20909.330
Formaldehyde 36% (39% w/v) stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	43, 162, 291	5 l	20909.368
Formaldehyde 36% (39% w/v) stabilised GPR RECTAPUR®	162, 291	1 l	20910.294
Formaldehyde 36% (39% w/v) stabilised GPR RECTAPUR®	162, 291	2,5 l	20910.328
Formaldehyde 36% (39% w/v) stabilised GPR RECTAPUR®	162, 291	2,5 l	20910.330
Formaldehyde 36% (39% w/v) stabilised GPR RECTAPUR®	162, 291	5 l	20910.363
Formaldehyde 36% (39% w/v) stabilised GPR RECTAPUR®	162, 291	20 l	20910.443
Formaldehyde 35% stabilised TECHNICAL	162, 291	5 l	90240.5000
Formaldehyde 35% stabilised TECHNICAL	162, 291	10 l	90240.9010
Formaldehyde 35% stabilised TECHNICAL	162, 291	25 l	90240.9025
Formaldehyde 30% Q Path®	163, 291	5 l	11699031.
Formaldehyde 7.5%, buffered (pH 7.0 ± 0.2) TECHNICAL	163, 291	1 l	5534.1000
Formaldehyde 7.5%, buffered (pH 7.0 ± 0.2) TECHNICAL	163, 291	10 l	5534.9010
Formaldehyde 4% (= 10% Formaline solution), buffered (pH 7.0 ± 0.1) stabilised TECHNICAL	163, 291	1 l	9713.1000
Formaldehyde 4% (= 10% Formaline solution), buffered (pH 7.0 ± 0.1) stabilised TECHNICAL	163, 291	5 l	9713.5000
Formaldehyde 4% (= 10% Formaline solution), buffered (pH 7.0 ± 0.1) stabilised TECHNICAL	163, 291	10 l	9713.6010
Formaldehyde 4% (= 10% Formaline solution), buffered (pH 7.0 ± 0.1) stabilised TECHNICAL	163, 291	10 l	9713.9010
Formaldehyde 4% (= 10% Formaline solution), buffered (pH 7.0 ± 0.1) stabilised TECHNICAL	163, 291	25 l	9713.9025
Formaldehyde 4% buffered Q Path®	163, 291	32	FOR0150AF59001
Formaldehyde 4% buffered Q Path®	163, 291	50	FOR0060AF59001
Formaldehyde 4% buffered Q Path®	163, 291	50	FOR0070AF59001
Formaldehyde 4% buffered Q Path®	163, 291	102	FOR0020AF59001
Formaldehyde 4% buffered Q Path®	163, 291	250 ml	10099464.
Formaldehyde 4% buffered Q Path®	163, 291	500 ml	10099465.
Formaldehyde 4% buffered Q Path®	163, 291	1 l	11699455.
Formaldehyde 4% buffered Q Path®	163, 291	5 l	11699404.
Formaldehyde 4% buffered Q Path®	163, 291	10 l	11699408.
Formaldehyde 4% buffered Q Path®	163, 291	10 l	FOR010LAF59001
Formaldehyde 4% buffered (pink) Q Path®	163, 291	32	FOR0153AF59001
Formaldehyde 4% buffered (pink) Q Path®	163, 291	50	FOR0063AF59001
Formaldehyde 4% buffered (pink) Q Path®	163, 291	102	FOR0023AF59001
Formaldehyde neutraliser Q Path®	164, 291	5 kg	00699030.
Formalin acetic acid Q Path®	164, 291	5 l	11699025.
Freeze gel (Glue) Q Path®	167, 291	125 ml	07111245.
Histological Fixative (Formal saline) GURR®	190, 291	5 l	361367L
Histological Fixative (Formal saline) GURR®	190, 291	25 l	361368M
Histological fixative, AFA Q Path®	190, 291	32	AFA0150AF59001
Histological fixative, AFA Q Path®	190, 291	50	AFA0060AF59001
Histological fixative, AFA Q Path®	190, 291	102	AFA0020AF59001
Histological Fixative, AFA, containing Eosin Y GURR®	191, 291	5 l	81024.360
Stick on (Cell adhesive) Q Path® for microscopy	291, 465	500 ml	11047600.

More fixatives

Q Path® Cytofix p.129
Q Path® Easyfix p.129
Q Path® Labofix, vapouriser p.232

Embedding media

Description	Page	Pk	Cat. No.
OCT mounting medium Q Path®	292, 322	125 ml	00411243.
Wax Cyto-paraffin 56-58°C MICROCOLOR® for histology	292, 328	1 kg	26177.290
Wax Paramat extra, in pastille form GURR® for histology	292, 328	25 kg	361337F
Paraffin Q Path® for microscopy	292, 328	1 kg	10048500.
Paraffin Q Path® for microscopy	292, 328	2,5 kg	10048501.
Paraffin Q Path® for microscopy	292, 328	8 kg	10048502.

Embedding and mounting media

Paramat is a polymer-enriched paraffin of the highest purity and available with or without added dimethylsulphoxide (DMSO). Dimethylsulphoxide incorporated in the embedding agent leads to rapid infiltration of the specimen and guarantees total tissue penetration, thus considerably reducing embedding times. Residual moisture in the tissue and traces of intermedium are dispelled. The pastille shape makes for easy handling. Paramat extra (with DMSO) has a preservation effect.

Description	Pk	Cat. No.
Mollifex®, softening agent	500 ml	360584X
Paraffin wax, pastillated Gurr®, congealing point about 56 °C	10 kg	361077E
Paramat pastillated, Gurr® (paraffin wax blended with synthetic polymers) congealing point about 58 °C	2,5 kg	361144V
Paramat pastillated, Gurr® (paraffin wax blended with synthetic polymers) congealing point about 58 °C	10 kg	361147B
Paramat pastillated, Gurr® (paraffin wax blended with synthetic polymers) congealing point about 58 °C	25 kg	361148C
Paramat extra pastillated, Gurr® (paraffin wax blended with synthetic polymers and DMSO), congealing point about 58 °C	2,5 kg	361334C
Paramat extra pastillated, Gurr® (paraffin wax blended with synthetic polymers and DMSO), congealing point about 58 °C	10 kg	361336E

Q Path® Coverquick mounting agents for microscopy

A range of mounting media for manual and automatic mounting of slides. The Q Path® Coverquick range consists of four different mounting media with different viscosities to meet all microscopy needs. The number after the name indicates increasing viscosity: Q Path® Coverquick 1000 has the lower viscosity (around 260 mPaS) and Q Path® Coverquick 4000 has the higher viscosity (around 920 mPaS).

- A complete range of mounting media for histology and cytology
- The entire range is suitable for manual mounting
- For automatic mounting the Q Path® Coverquick 3000 and 4000 are recommended
- Delivered in PET amber bottle, only Q Path® Coverquick 3000 is delivered in a aluminium bottle
- Dries quickly in 15 to 20 minutes

Description	Pk	Cat. No.
Q Path® Coverquick 1000, 260 mPaS	500 ml	05547528
Q Path® Coverquick 2000, 470 mPaS	500 ml	05547530
Q Path® Coverquick 2000, 470 mPaS	1 l	05547531
Q Path® Coverquick 3000, 610 mPaS	500 ml	05547537
Q Path® Coverquick 4000, 920 mPaS	500 ml	05547539
Q Path® Coverquick 4000, 920 mPaS	1 l	05547540

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Turbitec, kits

The Turbitec consumables are sold in kits.

Description	Pk	Cat. No.
Turbitec kit 2 with 15 ml Q Path® Easyfix in 60 ml bottles (10×50), Q Path® NovaBrush 2 cervical brush (500), Turbitec slides (10×50)	1 SET	K2EAS60AF59001
Turbitec kit 4 with 15 ml Q Path® Easyfix in 60 ml bottles (10×50), Q Path® NovaBrush 3 cervical brush (500), Turbitec slides (10×50)	1 SET	K4EAS60AF59001
Turbitec kit 5 with 15 ml Q Path® Easyfix in 60 ml bottles (10×50), Q Path® NovaBrush 2 cervical brush (500), Turbitec slides (10×50), Q Path® QuickSpot (500)	1 SET	K5EAS60AF59001
Turbitec kit 6 with 15 ml Q Path® Easyfix in 60 ml bottles (10×50), Q Path® NovaBrush 3 cervical brush (500), Turbitec slides (10×50), Q Path® QuickSpot (500)	1 SET	K6EAS60AF59001

Special solvents for microscopy

	Page	Pk	Cat. No.
Clean-Lab Q Path® for paraffin removal	92, 293	100 ml	10047400.
Safesolv Q Path®	293, 391	5 l	00699464.

Q Path® Ink

Vials with chinese ink that can be used in macroscopy as marking ink.

- Very long lasting, non removable ink

Description	Pk	Cat. No.
Q Path® Ink, 40 ml, black	40 ml	01816200.
Q Path® Ink, 30 ml, green	30 ml	01816201.
Q Path® Ink, 30 ml, yellow	30 ml	01816202.
Q Path® Ink, 30 ml, blue	30 ml	01816203.
Q Path® Ink, 30 ml, red	30 ml	01816204.

Adjuncts for microscopy

Description	Page	Pk	Cat. No.
Glycerin albumen GURR®	175, 293	100 ml	361002Y
Glycerin albumen GURR®	175, 293	500 ml	361004K
Norflurano, Cryo-Jet Lamb's freezing aerosol	293, 321	275 ml	361852T

Mounting media

Q Path® Coverquick mounting agents for microscopy p.**227**
Isomount 2000 Q Path®..... p.**227**
Freeze gel (Glue) Q Path®..... p.**167**
Safemount Q Path®..... p.**391**

Microorganism test

See Coagulase test p.93

Milk sugar

See Lactose monohydrate p.235

Milk powder, non-fat (skim milk), proteomics grade

CAS 999999-99-4

Storage Temperature: Ambient

10 g per pack.

Moisture (LOD)..... < 4%

Cat. No.	Pk	Pack type
M203-10G-10PK	100 g	Set of items

Mineral oil, white (petroleum), high purity

Warning

CAS 8042-47-5

Boiling Pt: 300 °C (1013 hPa)

Density: 0,872 g/cm³ (20 °C)

Storage Temperature: Ambient

Specific Gravity..... 0.838 - 0.854

Viscosity @ 40°C..... 14.2 cS - 17 cS

Cat. No.	Pk	Pack type
J217-500ML	500 ml	Plastic bottle

Mineral separation reagents

Bromoform stabilised AnalaR NORMAPUR® analytical reagent, for mineralogy.. p.64

Diiodomethane AnalaR NORMAPUR® analytical reagent, for mineralogy . p.117

Minium

See Lead (II,IV) oxide..... p.239

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E.Z.N.A.® DNA Probe Purification Kit

The E.Z.N.A.® DNA Probe Purification Kit allows for the rapid and convenient recovery of up to 20 µg DNA from random-primer or nick labelling reactions. This kit can also be used for general DNA clean up, where as other methods may lead to nuclease contamination or loss of samples. HiBind® DNA spin-columns and optimised buffers facilitate the isolation of DNA free of nucleotides, unincorporated labels, enzymes and salts. Centrifugation and vacuum protocols are both included, and are designed to be simple and fast, while ensuing minimal DNase/RNase contamination.

Description	Recovery	Elution volume	Yield	Pk	Cat. No.
E.Z.N.A.® DNA Probe Purification Kit	85%	30 - 50 µl	20 µg DNA	200 Tests	D6538-02

E.Z.N.A.® MicroElute DNA Clean-Up Kit

The E.Z.N.A.® MicroElute DNA Clean-Up Kit is designed to purify DNA fragments from enzymatic reactions (such as labelling reactions) with a small elution volume of 10 to 15 µl. This method uses HiBind® DNA columns to recover DNA bands from 100 bp to 10 kb, free of oligonucleotides, nucleotides, and enzymes in yields exceeding 85%. Binding conditions are adjusted by the addition of a specially formulated buffer, and the sample is applied to a specially designed HiBind® DNA MicroElute column. Following a rapid wash step, DNA is eluted with as little as 10 µl deionised water or Elution Buffer ready for downstream applications.

Description	Fragment size	Recovery	Elution volume	Pk	Cat. No.
E.Z.N.A.® MicroElute® DNA Clean-Up Kit	100 bp - 10 kb	85%	10 - 15 µl	50 Tests	D6296-01
E.Z.N.A.® MicroElute® DNA Clean-Up Kit	100 bp - 10 kb	85%	10 - 15 µl	200 Tests	D6296-02

Mag-Bind® EquiPure gDNA and Library Normalization Kits

The Mag-Bind® EquiPure Normalization Kits can be used to normalise and purify gDNA and DNA libraries from various DNA concentrations. Using Mag-Bind® Normalizer Beads and a binding buffer system, input DNA of various quantities is simply bound, washed and eluted to a final normalised product. The magnetic beads have a limited binding capacity and therefore allow a predefined amount of DNA to be captured and eluted.

- DNA output concentrations of ±10%
- No quantification required
- Normalises genomic DNA or NGS libraries

Many high-throughput applications, such as sequencing and genotyping, require the input DNA concentration to be within a certain range for optimal results. Traditionally, a tedious process of quantification, calculation and concentration adjustment must be carried out to normalise the DNA samples. The Mag-Bind® EquiPure Normalizer Kit completely eliminates the need to quantify and aliquot DNA, saving time, quantification bias and tip cost.

The Mag-Bind® EquiPure Normalizer Kits are fully automatable on multiple liquid handling platforms, including Hamilton STAR, Tecan Evo, Caliper Sciclone, and Beckman Coulter Biomek instruments.

Description	Pk	Cat. No.
Mag-Bind® EquiPure gDNA Normalization Kit, 1×96 preps	1 KIT	M6423-00
Mag-Bind® EquiPure Library Normalization Kit, 1×96 preps	96 Tests	M6445-00
Mag-Bind® EquiPure Library Normalization Kit, 4×96 preps	384 Tests	M6445-01

E.Z.N.A.® Ultra-Sep® Gel Extraction Kit

The E.Z.N.A.® Ultra-Sep® Gel Extraction Kit is a convenient system for the isolation DNA fragments from agarose gel. By combining the silica particle method and gel extraction buffer system, this kit offers an easy and flexible protocol. The gel slice containing the DNA band of interest is excised and dissolved in Ultra-Sep® Binding Buffer. The sample is then mixed with Ultra-Sep® Beads that bind DNA. Following a rapid wash step, DNA is eluted with deionised water or Elution Buffer and is ready for downstream applications, such as ligations, PCR amplification, restriction enzyme digestion and various labelling reactions.

- DNA recovery from agarose gel in 20 minutes
- Optimised buffers guarantee pure DNA
- No organic extractions
- Purified DNA suitable for any application

Description	Fragment size	Recovery	Elution volume	Yield	Pk	Cat. No.
E.Z.N.A.® Ultra-Sep® Gel Extraction kit	60 - 200 bp 200 - 1000 bp 1 - 5 kb 25 - 50 kb	60% 85% 85% 80%	20 - 100 µl	60 - 200 bp 200 - 1000 bp 1 - 5 kb 25 - 50 kb	150 Tests	D2510-01

E.Z.N.A® Formalin-Fixed, Paraffin-Embedded (FFPE) Tissue DNA/RNA Kits

Selected protease digestion releases microgram amounts of DNA and RNA from FFPE samples. The purified nucleic acids, although highly fragmented, are suitable for a variety of downstream genomic and gene expression analyses. E.Z.N.A® spin column-based kits are ideal for low throughput applications while Mag-Bind® magnetic beads-based kits are designed specifically for high throughput users with automation capability.

- Impressive yield in as little as 40 minutes
- Standard protocol requires no xylene extraction
- Magnetic beads-based kits fully compatible with most automation platforms

Description	Pk	Cat. No.
E.Z.N.A.® FFPE DNA Isolation Kit	50 Tests	D3399-01
Mag-Bind® FFPE RNA 96 Kit (4×96)	1 KIT	M2551-01
Mag-Bind® FFPE RNA 96 Kit (20×96)	1 KIT	M2551-02
Mag-Bind® FFPE RNA 96 KF Kit for KingFisher® (4×96)	1 KIT	M6953-01
E.Z.N.A.® FFPE RNA Isolation Kit	50 Tests	R6954-01
E.Z.N.A.® FFPE RNA Isolation Kit	200 Tests	R6954-02

Mag-Bind® Viral DNA/RNA 96 Kit

Mag-Bind® Viral DNA/RNA Kit is designed for the rapid and reliable isolation of viral RNA and viral DNA from whole blood, serum, plasma, saliva and other body fluids. The Mag-Bind® magnetic beads technology enables purification of high quality nucleic acids that is free of proteins, nucleases, and other impurities. In addition to easily being adapted with automated systems, this procedure can also be scaled up or down, allowing for the purification from various amounts of starting materials. The purified nucleic acid is ready for direct use in downstream applications, such as amplification or other enzymatic reactions.

- Rapid isolation of high quality, ready to use viral DNA and RNA
- No phenol/chloroform extraction
- Purification from various amounts of starting material
- Reproducible DNA and RNA purification from a variety of samples

Description	Sample size	Pk	Cat. No.
Mag-Bind® Viral DNA/RNA 96 Kit (1×96 preps)	200 µl	1 KIT	M6246-01
Mag-Bind® Viral DNA/RNA 96 Kit (4×96 preps)	200 µl	1 KIT	M6246-02
Mag-Bind® Viral DNA/RNA 96 Kit (12×96 preps)	200 µl	1 KIT	M6246-03

E.Z.N.A.® Gel Extraction Kits

Gel purification of DNA is a common technique used for the isolation of specific DNA fragments. However, most methods either fail to completely remove agarose (which can lead to problems in downstream manipulations), shear the DNA, or result in very low yields.

- DNA recovery from agarose gel in under 15 minutes
- Optimised buffers guarantee pure DNA
- No organic extractions necessary
- Purified DNA produced that is suitable for any downstream application

The E.Z.N.A.® Gel Extraction kit uses HiBind® DNA spin-column technology to recover DNA bands 70 bp to 20 kb in length from all grades of agarose gel with yields up to 85%. The E.Z.N.A.® MicroElute Gel Extraction kit is designed for purification of DNA fragments from agarose gels with a small elution volume of 10 to 15 µl.

Q-spin columns are capless to allow for fast processing of multiple samples. These columns offer high yields and can be used in centrifugation protocols. V-spin columns feature an attached cap and a standard luer outlet at the bottom for easy, leak-free connection to a vacuum manifold or luer hub needle. These columns can be used for both centrifugation and vacuum protocols.

Description	Elution volume	Pk	Cat. No.
E.Z.N.A.® Gel Extraction kit (V-Spin column)	30 - 50 µl	50 Tests	D2500-01
E.Z.N.A.® Gel Extraction kit (V-Spin column)	30 - 50 µl	200 Tests	D2500-02
E.Z.N.A.® Gel Extraction Kit (Q-Spin column)	30 - 50 µl	50 Tests	D2501-01
E.Z.N.A.® Gel Extraction Kit (Q-Spin column)	30 - 50 µl	200 Tests	D2501-02
E.Z.N.A.® MicroElute Gel Extraction Kit	10 - 15 µl	50 Tests	D6294-01
E.Z.N.A.® MicroElute Gel Extraction Kit	10 - 15 µl	200 Tests	D6294-02

E.Z.N.A.® Bacterial DNA Kit

The E.Z.N.A.® Bacterial DNA Kit allows the rapid and reliable isolation of high quality total cellular DNA from a wide variety of bacterial species. This kit uses optimised lysis condition and up to 1×10^9 bacterial cells can be processed for each column. There are no organic extractions, thus reducing plastic waste and hands on time to allow multiple samples to be processed in parallel. Bacterial cells are grown to log-phase and harvested. The cell wall is removed by lysozyme digestion and bead beating, followed by protease digestion. Following lysis, binding conditions are adjusted and the sample is applied to a HiBind DNA spin-column. Two rapid wash steps remove trace salts and protein contaminants, and DNA is finally eluted in water or Elution Buffer. Purified DNA can be directly used in downstream applications without the need for further purification.

- Suitable for most bacterial strains
- DNA isolation in less than 20 minutes (after lysis)
- Optimised buffers guarantee pure DNA
- No organic extractions
- Purified DNA suitable for most applications

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® Bacterial DNA Mini Kit	3 ml log phase culture	15 - 30 µg	50 Tests	D3350-01
E.Z.N.A.® Bacterial DNA Mini Kit	3 ml log phase culture	15 - 30 µg	200 Tests	D3350-02

E.Z.N.A.® Blood DNA Kit

The E.Z.N.A.® Blood DNA Kit provides rapid total DNA isolation from up to 250 µl of fresh or frozen anticoagulated whole blood. The E.Z.N.A.® Blood DNA Kit can also be used for the preparation of genomic DNA from buffy coat, serum, plasma, bone marrow, lymphocytes, platelets, and body fluids. This kit allows for simultaneous processing of single or multiple samples in less than 30 minutes. Phenol/chloroform extractions, and time-consuming steps such as precipitation with isopropanol or ethanol have been eliminated. DNA purified with the E.Z.N.A.® Blood DNA method is ready for applications such as PCR, Southern blotting, or restriction enzyme digestion.

- Isolation of DNA in less than 30 minutes
- Optimised buffer system ensures reproducible results
- No organic extractions
- Purified DNA suitable for most downstream applications

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Blood DNA Mini Kit	10 - 250 µl	50 Tests	D3392-01
E.Z.N.A.® Blood DNA Mini Kit	10 - 250 µl	200 Tests	D3392-02

E.Z.N.A.® Blood DNA Midi Kit

The E.Z.N.A.® Blood DNA Midi Kit is specially designed for large scale isolation of genomic DNA. The kit provides a rapid purification of genomic DNA from up to 10 ml blood samples. Possible sample sources include fresh and frozen whole blood treated with common anticoagulants such as citrate, EDTA and heparin. In addition plasma, serum, buffy coat, bone marrow, lymphocytes, platelets, and body fluid samples can also be used. Phenol/chloroform extractions, and time-consuming steps such as precipitation with isopropanol have been eliminated. DNA purified using the E.Z.N.A.® Blood DNA Midi method is free of contaminants and enzyme inhibitors making it suitable for most downstream applications such as PCR, Southern blotting and restriction enzyme digestion.

- Large scale isolation of high quality total DNA
- No organic extraction or alcohol precipitation
- Pure DNA free of contaminants and enzyme inhibitors
- Entire procedure completion takes less than 60 minutes
- Purified DNA is suitable for downstream applications

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Blood DNA Midi Prep Kit II	250 - 2000 µl	100 Tests	D3494-04

E.Z.N.A.® Blood DNA Maxi Kit

The E.Z.N.A.® Blood DNA Maxi Kit is specially designed for large scale isolation of genomic DNA. The kit provides a rapid purification of genomic DNA from up to 10 ml whole blood samples. Sample sources include fresh and frozen whole blood treated with common anticoagulants such as citrate, EDTA and heparin. In addition plasma, serum, buffy coat, bone marrow, lymphocytes, platelets, and body fluid samples can also be used. Phenol/chloroform extractions, and time-consuming steps such as precipitation with isopropanol have been eliminated. DNA purified using the E.Z.N.A.® Blood DNA Maxi method is free of contaminants and enzyme inhibitors making it suitable for most downstream applications such as PCR, Southern blotting and restriction enzyme digestion of high-quality total DNA.

- Isolate DNA from samples up to 10 ml
- No organic extraction or alcohol precipitation
- Pure DNA, free of contaminants and enzyme inhibitors
- Entire procedure completion takes less than 60 minutes

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Blood DNA Maxi Kit	2 - 10 ml	50 Tests	D2492-03

Mag-Bind® HDQ Blood DNA 96 Kit

The Mag-Bind® Blood DNA HDQ 96 Kit is designed for rapid and reliable isolation of high-quality genomic DNA from 100 to 200 µl blood samples, buccal swabs, buffy coat and cultured cells. All heating steps that limit robotic applications have been removed to allow for faster processing. Mag-Bind® particles HDQ provide quick magnetic response time reducing overall processing time. Utilising paramagnetic particles provides high-quality DNA that is suitable for direct use in most downstream applications, such as qPCR, PCR and Next Generation Sequencing. The Mag-Bind® Blood DNA HDQ 96 Kit is compatible with many robotic liquid handlers and magnetic processors, including Thermo Scientific KingFisher® Flex.

- No organic extractions required
- High quality DNA for downstream applications such as qPCR and Next Generation Sequencing
- Rapid - no heating step required

Description	Pk	Cat. No.
Mag-Bind® HDQ Blood DNA 96 Kit (1×96 preps)	1 KIT	M6399-00
Mag-Bind® HDQ Blood DNA 96 Kit (4×96 preps)	1 KIT	M6399-01

E.Z.N.A.® Fungal DNA Kits

The E.Z.N.A.® Fungal DNA Kits allow for the rapid and reliable isolation of high quality total cellular DNA from a wide variety of fungal species without the need for organic extraction. The E.Z.N.A.® SP Fungal DNA Kit incorporates a filtration and homogenisation column that can efficiently remove cell debris and improve sample handling following lysis. The E.Z.N.A.® High Performance (HP) DNA Kit is designed for efficient recovery of genomic DNA up to 60 kb in size from fresh and dried fungal tissue samples rich in polysaccharides or with lower DNA contents.

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® HP Fungal DNA Kit	100 mg wet or 30 mg dry tissue	10 - 40 µg	50 Tests	D3195-01
E.Z.N.A.® Fungal DNA Mini Kit	100 mg wet or 30 mg dry tissue	10 - 40 µg	50 Tests	D3390-01
E.Z.N.A.® Fungal DNA Mini Kit	100 mg wet or 30 mg dry tissue	10 - 40 µg	200 T	D3390-02
E.Z.N.A.® SP Fungal DNA Mini Kit	100 mg wet or 30 mg dry tissue	10 - 20 µg	50 Tests	D5542-01
E.Z.N.A.® SP Fungal DNA Mini Kit	100 mg wet or 30 mg dry tissue	10 - 20 µg	200 Tests	D5542-02

E.Z.N.A.® Insect DNA Kit

The E.Z.N.A.® Insect DNA Kit is designed for efficient recovery of genomic DNA up to 60 kb in size from insects, arthropods, roundworms, flatworms, invertebrates, as well as some plant tissue samples. The method is suitable for samples frozen or preserved in alcohol or DNE solution, and good results can be obtained with formalin preserved material. The procedure relies on the well established properties of the cationic detergent, cetyltrimethyl ammonium bromide (CTAB), in conjunction with the selective DNA binding of HiBind matrix. This allows salts, proteins and other contaminants to be removed to yield high quality genomic DNA suitable for downstream applications such as endonuclease digestion, thermal cycle amplification, and hybridisation techniques.

- DNA isolation under 20 minutes following lysis
- Optimised buffer system guarantee pure DNA
- Purified DNA suitable for most downstream applications

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® Insect DNA Isolation Kit	30 mg tissue	10 - 50 µg	50 Tests	D0926-01
E.Z.N.A.® Insect DNA Isolation Kit	30 mg tissue	10 - 50 µg	200 Tests	D0926-02

E.Z.N.A.® Mollusc DNA Kit

The E.Z.N.A.® Mollusc DNA Kit is designed for efficient purification of genomic DNA from molluscs, arthropods, round worms, flatworms and other invertebrate tissues rich in mucopolysaccharides. Fresh and frozen samples that have been preserved in alcohol or DNE can be used with this kit. This procedure relies on the well established properties of the cationic detergent, cetyltrimethyl ammonium bromide (CTAB), in conjunction with the selective DNA binding of HiBind matrix. Samples are homogenised and chloroform is added to remove mucopolysaccharides. Following a rapid alcohol precipitation step, DNA is further purified and all salts, proteins and other contaminants are removed. High quality genomic DNA is suitable for downstream applications such as endonuclease digestion, thermal cycle amplification, and hybridisation techniques.

- DNA isolation under 20 minutes following lysis
- Optimised buffer system guarantee pure DNA
- Purified DNA suitable for any application
- Isolate DNA from a wide range of samples

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® Mollusc DNA Isolation Kit	30 mg tissue	10 - 50 µg	50 Tests	D3373-01
E.Z.N.A.® Mollusc DNA Isolation Kit	30 mg tissue	10 - 50 µg	200 Tests	D3373-02

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E.Z.N.A.® HP Plant DNA Kit

The E.Z.N.A.® HP Plant DNA Kit is designed for efficient recovery of genomic DNA up to 60 kb in size from fresh and dried plant tissue samples rich in lipids, polyphenols, polysaccharides, or those with lower DNA contents. Up to 100 mg of wet sample or 30 mg dry sample can be processed in less than 60 minutes. This procedure relies on the well-established properties of the cationic detergent, cetyltrimethyl ammonium bromide (CTAB), in conjunction with the selective DNA binding of HiBind® matrix. Samples are homogenised and lysed in a high salt buffer containing CTAB and extracted with chloroform to remove polysaccharides and other components that interfere with many DNA isolation and downstream applications. After adjusting the binding conditions, DNA is further purified using HiBind® DNA spin columns. Proteins and other contaminants are removed to yield high quality genomic DNA suitable for downstream applications such as endonuclease digestion, thermal cycle amplification and hybridisation techniques.

- DNA isolation in 60 minutes following lysis
- Reproducible DNA purification from variety of sample sources
- Purified DNA suitable for any application
- Efficient purification of DNA from even specialised samples

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® HP Plant DNA Kit	100 mg of wet or 30 mg dry tissue	10 - 50 µg DNA	50 Tests	D2485-01
E.Z.N.A.® HP Plant DNA Kit	100 mg of wet or 30 mg dry tissue	10 - 50 µg DNA	200 Tests	D2485-02

E.Z.N.A.® Plant DNA Kit

The E.Z.N.A.® Plant DNA Kit is designed for the rapid and reliable isolation of high quality total cellular DNA from a wide variety of plant species. Up to 100 mg of wet samples or 30 mg dry samples can be processed in less than 60 minutes. This kit uses a proprietary method to eliminate polysaccharides, phenolic compounds, and enzyme inhibitors from plant sample. Purified DNA is suitable for PCR, restriction enzyme digestion, and hybridisation techniques. There are no organic extractions, thus reducing plastic waste and hands-on time.

- DNA isolation under 60 minutes
- Optimised buffer system ensures the reproducible results
- No organic extractions
- Purified DNA suitable for most downstream applications

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® Plant DNA Kit	200 mg wet or 50 mg dry tissue	8 - 50 µg	50 Tests	D3485-01
E.Z.N.A.® Plant DNA Kit	200 mg wet or 50 mg dry tissue	8 - 50 µg	200 Tests	D3485-02

E.Z.N.A.® SP Plant DNA Kit

The E.Z.N.A.® SP Plant DNA Kit is specially designed for the rapid and reliable isolation of high quality total cellular DNA from a variety of plant species. Up to 100 mg of fresh samples or 30 mg of dry samples can be processed in less than 40 minutes. Purified DNA is suitable for most downstream applications including PCR, restriction digestions and hybridisation techniques.

- Rapid purification of ready to use DNA isolation in less 40 minutes
- Standardised method for reliable results from variety of samples
- No organic extractions
- Purified DNA suitable for most applications

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® SP Plant DNA Kit	100 mg of wet or 30 mg dry tissue	30 - 60 µg	50 Tests	D5511-01
E.Z.N.A.® SP Plant DNA Kit	100 mg of wet or 30 mg dry tissue	30 - 60 µg	200 Tests	D5511-02

E.Z.N.A.® SP Plant DNA Midi Kit

The E.Z.N.A.® SP Plant DNA Midi Kit is specially designed for rapid and reliable isolation of high quality total cellular DNA from a variety of plant species. Up to 500 mg wet plant tissue (or 125 mg dry plant tissue) can be processed by this kit. The optimised procedure incorporates the spin column, a unique filter and homogenisation column that can efficiently remove cell debris and improve sample handling following sample lysis. Purified DNA is suitable for most downstream applications including PCR, restriction enzyme digestion, and hybridisation techniques.

- Rapid purification of ready to use DNA isolation in less than 40 minutes
- Standardised method for reliable results from a variety of samples
- No organic extractions
- Purified DNA suitable for most downstream applications
- Large scale isolation of high quality total DNA

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® SP Plant DNA Midi Kit	500 mg of wet or 125 mg dry tissue	250 µg	10 Tests	D5528-01

E.Z.N.A.® SP Plant DNA Maxi Kit

Based on the same concept of the E.Z.N.A.® SP Plant DNA Kit, the E.Z.N.A.® SP Plant DNA Maxi Kit is specially designed for rapid and reliable isolation of high quality total cellular DNA from a variety of plant species. Up to 1 g of wet plant tissue (or 300 mg dry tissue) can be processed by this kit. The optimised procedure incorporates the homogeniser spin column, a unique filter and homogenisation column that can efficiently remove cell debris and improve sample handling following lysis. Purified DNA is suitable for most downstream applications including PCR, restriction enzyme digestion, and hybridisation techniques.

- Rapid purification of ready to use DNA isolation in less than 40 minutes
- Standardised method for reliable results from a variety of samples
- No organic extractions
- Purified DNA suitable for most downstream applications
- Large scale isolation of high quality total DNA

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® SP Plant DNA Maxi Kit	1 g of wet or 300 mg dry tissue	5 Tests	D5538-01

E-Z 96® Plant DNA Kit

The E-Z 96® Plant DNA Kit allows rapid and reliable isolation of high quality total cellular DNA from a wide variety of plant species and tissues in a 96-well format. E-Z 96® Plant DNA Kits utilise a buffer system adapted from the SP Plant DNA system, which is suitable for a variety of plants, such as those with unusually high levels of phenolic compounds or polysaccharides (for example, cotton, pine and peanut samples). Up to 50 mg of wet tissue or 12 mg dry tissue can be processed in each well in less than 1 hour. The system combines the reversible nucleic acid-binding properties of the HiBind matrix with the speed and versatility of the E-Z 96® DNA plate to eliminate polysaccharides, phenolic compounds, and enzyme inhibitors from plant tissue lysates. Purified DNA is suitable for PCR, restriction digestion, and hybridisation techniques.

- DNA isolation of 96 samples in <90 minutes
- Optimised buffers guarantee pure DNA very time
- No organic extractions
- Purified DNA suitable for most downstream applications
- E-Z 96® plate is suitable for most robotic workstations

Description	Sample size	Average yield	Pk	Cat. No.
E-Z 96® Plant DNA Kit (1×96 preps)	30 mg of wet or 10 mg dry tissue	10 - 25 µg DNA from 10 mg dry tissue	1 KIT	D1086-01
E-Z 96® Plant DNA Kit (4×96 preps)	30 mg of wet or 10 mg dry tissue	10 - 25 µg DNA from 10 mg dry tissue	1 KIT	D1086-02

Mag-Bind® Plant DNA Plus Kit

The Mag-Bind® Plant DNA 96 Plus Kit allows rapid and reliable isolation of high-quality genomic DNA from a wide variety of difficult to lyse and high polysaccharide plant species and tissues. The system utilises a CTAB-based lysis buffer without the need for a chloroform or other organic solvent steps. The proprietary wash buffer systems eliminate polysaccharides, phenolic compounds, and enzyme inhibitors from plant tissue lysates. This kit is designed for manual or fully automated high throughput preparation of genomic, chloroplast, and mitochondrial DNA. The Mag-Bind® Plant DNA Plus Kit also provides greater flexibility than silica plate based systems as partial plates can be used and can be scaled up to a 24-well format with the appropriate magnetic stand. The streamlined protocol can be easily adapted on most robotic liquid handling platforms. Purified DNA is suitable for PCR, qPCR, restriction digestion, hybridisation applications, as well as more demanding applications, such as RAPD.

- Simple, rapid, and reliable procedure
- Reproducible yields of pure, ready to use DNA
- Adaptable to most robotic liquid handling platform

Description	Sample size	Pk	Cat. No.
Mag-Bind® Plant DNA Plus Kit (1×96)	50 mg of wet tissue or 10 mg dry tissue	1 KIT	M1128-00
Mag-Bind® Plant DNA Plus Kit (4×96 preps)	50 mg of wet tissue or 10 mg dry tissue	1 KIT	M1128-01

E.Z.N.A.® Soil DNA Kit

The E.Z.N.A.® Soil DNA Kit is formulated to isolate high purity cellular DNA from soil samples typically containing humic acid and inhibitors of PCR. This kit has been successfully used to isolate DNA from tough-to-lyse bacteria, fungi, and algae that inhabit a range of samples including clay, sandy, peaty, chalky, and loamy soil samples. Isolated DNA can be used for most downstream applications including PCR, Southern blotting, and SNP analysis.

- DNA isolation in 1 hour
- Optimised buffers guarantee pure DNA every time
- Purified DNA suitable for most downstream applications

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Soil DNA Mini Kit	1 g	50 Tests	D5625-01
E.Z.N.A.® Soil DNA Mini Kit	1 g	200 Tests	D5625-02

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E.Z.N.A.® Stool DNA Kit

The E.Z.N.A.® Stool DNA Kit allows rapid and reliable isolation of high quality total DNA from fresh and frozen stool samples. Up to 200 mg of stool samples can be processed in less than 60 minutes. The system combines the reversible nucleic acid-binding properties of HiBind matrix with the speed and versatility of spin column technology to eliminate humic acid, polysaccharides, phenolic compounds, and enzyme inhibitors from stool samples. Purified DNA is suitable for PCR, restriction digestion, and hybridisation techniques.

- High quality DNA in less than 1 hour
- Optimised buffers guarantee pure DNA every time
- Purified DNA suitable for most downstream applications
- No phenol/chloroform extractions

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Stool DNA Kit	200 mg	50 Tests	D4015-01
E.Z.N.A.® Stool DNA Kit	200 mg	200 Tests	D4015-02

E.Z.N.A.® HP Tissue Kit

The E.Z.N.A.® HP Tissue Maxi Kit is designed for the efficient recovery of genomic DNA from tissues rich in fat, polysaccharides, and fibre (brain, adipose, muscle, liver). In addition these kits can also be used to isolate DNA from molluscs, insects, arthropods, and other invertebrate tissues rich in mucopolysaccharides. The E.Z.N.A.® HP Tissue DNA Maxi Kit is designed to isolate genomic DNA from up to 2 g of tissue. Samples are homogenised and lysed in a high salt buffer containing CTAB, and then digested with Proteinase K. After the addition of chloroform, the homogenate is separated into aqueous and organic phases by centrifugation. The upper aqueous phase is mixed with BL Buffer to provide appropriate binding conditions. The sample is then loaded onto a HiBind DNA Maxi spin column, where the genomic DNA binds to the membrane and salt and other contaminants are efficiently washed away. High quality genomic DNA is then eluted with Elution Buffer or water. Purified DNA is suitable for most downstream applications such as endonuclease digestion, PCR, and hybridisation techniques.

- DNA isolation in 60 minutes following lysis
- Reproducible DNA purification from variety of sample sources
- Purified DNA suitable for any application
- Efficient purification of DNA from even specialised samples

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® HP Tissue DNA Maxi Kit	Up to 2 g	1,0 - 1,2 mg	10 Tests	D5196-01

E.Z.N.A.® SQ Tissue DNA Kit

The E.Z.N.A.® SQ Tissue DNA Kit provides a reliable method for the isolation of high molecular weight genomic DNA from various types of fresh or frozen tissue samples. This solution-based system can process single or multiple samples simultaneously in less than 90 minutes. Samples are lysed with WTL Buffer/Protease and cellular proteins are removed by precipitation. High molecular genomic DNA remains in solution and is purified by isopropanol precipitation. DNA purified using the E.Z.N.A.® SQ Tissue DNA Kit is free of contaminants and enzyme inhibitors making it suitable for downstream applications such as PCR, Southern blotting and restriction enzyme digestion.

- Isolation of high molecular weight genomic DNA
- No phenol/chloroform extractions
- Flexible in amount of starting material
- Process single or multiple samples in less than 90 minutes
- Large yields of pure DNA

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® SQ Tissue DNA Kit (1 g)	1 g	Up to 450 µg	1 KIT	D6032-01

E.Z.N.A.® Tissue DNA Kit

The E.Z.N.A.® Tissue DNA Kit offers a simple, rapid, and cost effective method for the isolation of DNA from a wide variety of sample sources including fresh or frozen animal cells and tissues. After cell lysis, the DNA purification process can be completed in less than 30 minutes. Up to 30 mg of tissue at a time can be readily processed at a time using the simple E.Z.N.A.® Tissue DNA protocol. Single or multiple samples can be simultaneously processed with this spin-column based kit. There is no need for phenol/chloroform extractions, or time-consuming steps such as precipitation with isopropanol or ethanol. DNA purified using the E.Z.N.A.® Tissue DNA Kit is ready for most downstream applications such as PCR, Southern blot and restriction enzyme digestion.

- Isolation of DNA from either fresh or frozen samples
- Process 30 mg of tissue in under 20 minutes (after lysis)
- Purified DNA suitable for most downstream applications
- Optimised buffers guarantee pure DNA every time
- No organic extractions

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Tissue DNA Kit (V-Spin)	30 mg	10 - 40 µg DNA	100 - 200 µl	50 Tests	D3396-01
E.Z.N.A.® Tissue DNA Kit (V-Spin)	30 mg	10 - 40 µg DNA	100 - 200 µl	200 Tests	D3396-02

E-Z 96® Tissue DNA Kit

By adapting HiBind® technology with 96-well plates, the E-Z 96® Tissue DNA Kit provides a high throughput method to purify genomic DNA from whole blood, buccal swabs, mouse tail, rat tail, tissues and animal cells and tissues in a 96-well plate format. Purified DNA is suitable for most downstream applications such as PCR, restriction enzyme digestion, and hybridisation techniques.

- Isolation of DNA from 96 samples in less than 1 hour
- Reproducible DNA purification from variety of samples
- No phenol/chloroform extractions
- Purified DNA suitable for most downstream application

Description	Sample size	Average yield	Pk	Cat. No.
E-Z 96® Tissue DNA Kit (1×96 preps)	30 mg	10 - 40 µg DNA	1 KIT	D1196-00
E-Z 96® Tissue DNA Kit (4×96 preps)	30 mg	10 - 40 µg DNA	1 KIT	D1196-01
E-Z 96® Tissue DNA Kit (20×96 preps)	30 mg	10 - 40 µg DNA	1 KIT	D1196-02

Mag-Bind® Tissue DNA 96 KF Kit

The Mag-Bind® Tissue DNA 96 KF Kit allows rapid and reliable isolation of high quality genomic DNA from tissues or cultured cells on the KingFisher® magnetic particle processor. Up to 10 mg or 1×10^6 cells can be used in each well.

- Optimised protocols available
- No phenol/chloroform extractions
- Complete removal of contaminants and inhibitors
- Consistent yields at unsurpassed quality
- High purity DNA can be used for PCR and Real-Time PCR

Description	Pk	Cat. No.
E-Z 96® Mag-Bind® Tissue DNA KF Kit (20×96 preps)	1 KIT	M6329-02

E.Z.N.A.® Water DNA Kit

The E.Z.N.A.® Water DNA Kit is formulated to isolate high purity cellular DNA from water samples typically containing humic acid and inhibitors of PCR. This kit has been successfully used to isolate DNA from tough-to-lyse bacteria, fungi, and algae that inhabit a range of samples including tap water, lake, river and sewage samples. Isolated DNA can be used for most downstream applications including PCR, Southern blotting, SNP analysis.

Description	Pk	Cat. No.
E.Z.N.A.® Water DNA Kit	50 Tests	D5525-01

E.Z.N.A.® Yeast DNA Kit

The E.Z.N.A.® Yeast DNA Kit is comprised of a quick and efficient lysis procedure to isolate of high quality genomic, YAC, or plasmid DNA from yeast. There are no organic extractions, thus reducing plastic waste and hands-on time to allow for reliable isolation of total cellular DNA from a wide variety of yeast species. Purified DNA is suitable for PCR, restriction enzyme digestion, and hybridisation techniques to be processed in parallel.

- Reproducible DNA purification from variety of sample sources
- High yield - glass beads and enzymatic digestion for cell lysis

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Yeast DNA Kit	3 ml log phase culture	50 Tests	D3370-01

E.Z.N.A.® Endo-Free Plasmid Kits

Plasmid isolated with traditional purification procedures normally contain high levels of endotoxins that can significantly interfere with transfection experiments downstream. The E.Z.N.A.® Endo-Free Plasmid kits integrate an efficient endotoxin removal step into the plasmid purification procedure to produce high quality transfection grade plasmid.

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® Endo-Free Plasmid Midi Kit	200 µg	15 - 50 ml	10 Tests	D6915-01
E.Z.N.A.® Endo-Free Plasmid Midi Kit	200 µg	15 - 50 ml	25 Tests	D6915-03
E.Z.N.A.® Endo-Free Plasmid Midi Kit	200 µg	15 - 50 ml	100 Tests	D6915-04
E.Z.N.A.® Fastfilter® Endo-Free Plasmid Maxi Kit	1 mg	50 - 200 ml	6 Tests	D6926-01
E.Z.N.A.® Fastfilter® Endo-Free Plasmid Maxi kit	1 mg	50 - 200 ml	25 Tests	D6926-03
E.Z.N.A.® Fastfilter® Endo-Free Plasmid Maxi kit	1 mg	50 - 200 ml	100 Tests	D6926-04
E.Z.N.A.® Endo-Free Plasmid Mini Kit I	35 µg	1 - 5 ml	50 Tests	D6948-01

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E.Z.N.A.® and E-Z 96® Fastfilter® Plasmid Purification Kits

E.Z.N.A.® Fastfilter® Plasmid kits rapidly purify plasmid DNA utilising lysate clearance filter syringes, whilst E-Z 96® Fastfilter Plasmid kits employ lysate clearance plates in a 96-well format. Fastfilter® kits allow midi- and maxi-scale plasmid isolation in less than 40 minutes.

Description	Max. yield	Culture volume	Pk	Cat. No.
E-Z 96® Fastfilter® Plasmid Kit (4×96 preps)	12 µg/well	700 µl - 1 ml/well	1 KIT	D1097-01
E-Z 96® Fastfilter® Plasmid Kit (20×96)	12 µg/well	700 µl - 1 ml/well	1 KIT	D1097-02
E.Z.N.A.® Fastfilter® Plasmid Midi Kit	200 µg	15 - 50 ml	25 Tests	D6905-03
E.Z.N.A.® Fastfilter® Plasmid Midi Kit	200 µg	15 - 50 ml	100 Tests	D6905-04
E.Z.N.A.® Fastfilter® Plasmid Maxi Kit	1 mg	50 - 200 ml	5 Tests	D6924-01
E.Z.N.A.® Fastfilter® Plasmid Maxi kit	1 mg	50 - 200 ml	25 Tests	D6924-03
E.Z.N.A.® Fastfilter® Plasmid Maxi kit	1 mg	50 - 200 ml	100 Tests	D6924-04

E.Z.N.A.® Endo-Free Plasmid Mini Kit II

Plasmid isolated with traditional purification procedures normally contain high levels of endotoxins (also known as lipopolysaccharides or LPS) that can significantly interfere with transfection experiments downstream. The E.Z.N.A.® Endo-Free Plasmid Mini Kit II integrates an efficient endotoxin removal step into the plasmid purification procedure to produce high-quality transfection grade (<0.1 EU/µg) plasmid for efficient transfection. The bacterial cells are lysed using the alkaline-SDS lysis method. The cleared cell lysate is then treated with ETR reagent to efficiently remove the endotoxins. After adjusting the binding condition, the cell lysate is applied into the HiBind® DNA column and purified DNA is eluted from the column membrane.

- Endotoxins efficiently reduced (<0,1 EU/µg)
- No resin, slurries, or alcohol precipitation
- Fast, easy and convenient protocols

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® Endo-Free Plasmid Mini Kit II	70 µg	3 - 15 ml	50 Tests	D6950-01
E.Z.N.A.® Endo-Free Plasmid Mini Kit II	70 µg	3 - 15 ml	200 Tests	D6950-02

E.Z.N.A.® HP Plasmid Mini Kit I, V-spin (with lid)

The E.Z.N.A.® HP Plasmid Mini Kit I is designed to isolate up to 30 µg of high-quality plasmid DNA from 1 to 5 ml bacterial cultures from strains that are endonuclease positive. The HP Plasmid DNA Kit includes a protease digestion step to remove endonucleases and proteins from the sample. Plasmid DNA purification is simplified with HiBind® Mini Column technology into three quick steps: Bind, wash, and elute. Purified plasmid DNA is immediately ready for a wide variety of downstream applications such as routine screening, restriction enzyme digestion, and manual/automated fluorescent DNA sequencing.

- Purification of plasmid DNA in 30 minutes or less
- No phenol/chloroform extractions
- DNA suitable for downstream applications

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® HP Plasmid Mini Kit I (V-Spin column)	30 µg	1 - 5 ml	50 Tests	D7043-01

E.Z.N.A.® Plasmid Midi Kit

E.Z.N.A.® Plasmid Midi Kit offers a novel and reliable method of isolating up to 200 µg of plasmid DNA in less than 60 minutes. This kit combines HiBind® membrane technology with the time-tested consistency of alkaline SDS lysis of bacterial cells to deliver high-quality plasmid DNA. The DNase/RNase-free HiBind® DNA midi columns operate by eliminating time consuming phenol-chloroform extractions and alcohol precipitations. Plasmid purification using the E.Z.N.A.® Plasmid Midi Kit follows a simple bind-wash-elute procedure thereby making it possible for multiple samples to be processed. Although yields vary according to plasmid copy number, *E.coli* strain, and conditions of growth, 50 ml of an overnight culture in LB medium will typically produce 200 µg of high-copy number plasmid DNA. When working with low-copy number plasmids the starting culture volume can be increased up to 100 ml. High-quality DNA is ready for immediate use in routine molecular biology applications, such as automated fluorescent sequencing, restriction enzyme digestion, and transfection screening.

- Purification of plasmid DNA in <60 minutes
- No phenol/chloroform extractions
- DNA suitable for most downstream applications

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® Plasmid Midi Kit I	200 µg	15 - 50 ml	25 Tests	D6904-03
E.Z.N.A.® Plasmid Midi Kit I	200 µg	15 - 50 ml	100 Tests	D6904-04

E.Z.N.A.® Plasmid Maxi Kit

The E.Z.N.A.® Plasmid Maxi Kit is the maxi scale system to deliver high-quality plasmid DNA using the spin column format, without costly accessories. The HiBind® DNA Maxi column facilitates the binding, washing, and elution steps, thus enabling multiple samples to be simultaneously processed. Although yields vary according to plasmid copy number, *E.coli* strain, and conditions of growth, 50 to 200 ml of overnight culture in LB medium typically produces 0,5 to 1 mg of high copy number plasmid DNA. Up to 500 ml of culture may be processed when working with low copy number plasmid. The product is suitable for automated fluorescent DNA sequencing (typical reads exceed 800 bp), restriction enzyme digestion, transfection of mammalian cells, transcription *in vitro*, and other applications.

- Purification of plasmid DNA in < 60 minutes
- No phenol/chloroform extractions
- Yield up to 1 mg of Plasmid DNA
- DNA suitable for downstream applications

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® Plasmid Maxi Kit I	1 mg	50 - 200 ml	5 Tests	D6922-01
E.Z.N.A.® Plasmid Maxi Kit I	1 mg	50 - 200 ml	20 Tests	D6922-02
E.Z.N.A.® Plasmid Maxi Kit I	1 mg	50 - 200 ml	100 Tests	D6922-04

E.Z.N.A.® Plasmid Mini Kit I

The E.Z.N.A.® Plasmid Mini Kit I is designed to isolate up to 30 µg of high-quality plasmid DNA from 1 to 5 ml bacterial cultures in 30 minutes or less. Plasmid DNA purification is simplified with HiBind® Mini Column technology into three quick steps: Bind, wash, and elute. Purified plasmid DNA is immediately ready for a wide variety of downstream applications such as routine screening, restriction enzyme digestion, and manual/automated fluorescent DNA sequencing. E.Z.N.A.® Plasmid Mini Kit I is available in either V-spin or Q-spin column format. V-spin column formats have an attached lid while Q-spin columns do not. Both versions can be used for centrifugation or vacuum protocols.

- Purification of plasmid DNA in 30 minutes or less
- No phenol/chloroform extractions
- DNA suitable for downstream applications

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® Plasmid Mini Kit I (Q-Spin column)	35 µg	1 - 5 ml	50 Tests	D6942-01
E.Z.N.A.® Plasmid Mini Kit I (Q-Spin column)	35 µg	1 - 5 ml	200 Tests	D6942-02
E.Z.N.A.® Plasmid Mini Kit I (V-Spin column)	30 µg	1 - 5 ml	50 Tests	D6943-01
E.Z.N.A.® Plasmid Mini Kit I (V-Spin column)	30 µg	1 - 5 ml	200 Tests	D6943-02

E.Z.N.A.® Plasmid Mini Kit II, Q-spin (without lid)

This second generation plasmid miniprep kit yields 40 - 70 µg of high-quality DNA in less than 30 minutes using the same format as the E.Z.N.A.® Plasmid Mini Kit I. The increased DNA binding capacity of the HiBind® Mini Column II allows culture volumes of up to 15 ml to be used, thus bridging the gap between mini and midi prep protocols. Plasmid DNA can be readily and quickly isolated for most downstream applications such as routine screening, restriction enzyme digestion, and DNA sequencing.

- Purification of plasmid DNA in 30 minutes or less
- No phenol/chloroform extractions
- DNA suitable for downstream applications

Description	Max. yield	Culture volume	Pk	Cat. No.
E.Z.N.A.® Plasmid Mini Kit II (Q-Spin column)	70 µg	3 - 15 ml	50 Tests	D6945-01
E.Z.N.A.® Plasmid Mini Kit II (Q-Spin column)	70 µg	3 - 15 ml	200 Tests	D6945-02

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E.Z.N.A.® Blood RNA Kit

The E.Z.N.A.® Blood RNA Kit is designed for the isolation of total intracellular RNA from up to 1 ml of fresh, or frozen whole blood treated with any common anticoagulant such as heparin, EDTA or acid-citrate-dextrose. The procedure completely removes contaminants and enzyme inhibitors making total RNA isolation fast, convenient and reliable. Red blood cells are selectively lysed and white cells are collected by centrifugation. After lysis of white blood cells under denaturing conditions that inactivate RNases, the lysate is homogenised with a homogeniser spin column. The sample is then applied to a HiBind® spin column. Cellular debris and other contaminants such as haemoglobin are effectively washed away and high-quality RNA is finally eluted in DEPC treated water.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Blood RNA Kit	10 - 1000 µl	1 - 7 µg	40 - 70 µl	5 Tests	R6814-00
E.Z.N.A.® Blood RNA Kit	10 - 1000 µl	1 - 7 µg	40 - 70 µl	50 Tests	R6814-01

E.Z.N.A.® Blood RNA Midi Kit

E.Z.N.A.® Blood RNA Midi Kits are designed for isolation of total intracellular RNA from up to 10 ml of fresh, whole blood treated with any common anticoagulant such as heparin, EDTA, or acid-citrate-dextrose. 10 ml of blood typically yields 0,7 to 1mg of total RNA. The procedure completely removes contaminants and enzyme inhibitors making total RNA isolation fast, convenient, and reliable. There is no need for phenol/chloroform extractions, and time-consuming steps such as CsCl gradient ultracentrifugation, and precipitation with isopropanol or LiCl, are eliminated. The kit is also suitable for isolation of total RNA from cultured cells, tissues, bacteria, and from RNA viruses. RNA purified using the E.Z.N.A.® Blood RNA method is ready for applications such as RT-PCR.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Blood RNA Midi Kit	Up to 10 ml	10 - 70 µg	100 - 200 µl	2 Tests	R6615-00
E.Z.N.A.® Blood RNA Midi Kit	Up to 10 ml	10 - 70 µg	100 - 200 µl	10 Tests	R6615-01

E.Z.N.A.® MicroElute Total RNA Kit

E.Z.N.A.® MicroElute Total RNA Kit provides a rapid and easy method for the isolation of up to 50 µg of total RNA from small amounts of cultured eukaryotic cells, tissues such as as laser dissected samples (LDS) or fine needle aspirates(FNA). Normally, up to 5×10^5 eukaryotic cells or 5 mg tissue can be used in a single experiment depending on the type of tissue used. This kit allows processing of single or multiple of samples in less than 30 minutes. There is no need for phenol/chloroform extractions, and time-consuming steps such as CsCl gradient ultracentrifuation, and precipitation with isopropanol or LiCl. Purified RNA can be eluted with 10 - 15 µl nuclease-free water. Purified RNA is ready for most downstream applications such as RT-PCR, Northern blotting, Poly A+ purification, nuclease protection and *in vitro* translation.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® MicroElute® Total RNA Kit	5×10^5 cells or 5 mg tissue	1 - 30 µg	10 - 20 µl	50 Tests	R6831-01
E.Z.N.A.® MicroElute® Total RNA Kit	5×10^5 cells or 5 mg tissue	1 - 30 µg	10 - 20 µl	200 Tests	R6831-02

E.Z.N.A.® miRNA Isolation Kit

The E.Z.N.A.® miRNA Isolation Kit uses a rapid procedure to isolate small RNAs, such as micro RNA (miRNA), small interfering RNA (siRNA), and small nuclear RNA (snRNA), from wide range of tissues and cells. The fast and efficient silica membrane based method isolates total RNA ranging in size from kilo based down to decamers. The kit also provides reagents and a procedure to enrich the population of RNAs that are 200 bases and smaller, which enhances the sensitivity of small RNA detection by solution hybridisation, Northern analysis, and other methods.

- Efficient isolation of small RNA containing total RNA
- Enrich for small RNA <200 nt to increase sensitivity in downstream analysis
- Simple 30 minutes procedure
- Compatible with virtually all cell and tissue type

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® miRNA Isolation Kit	1×10^7 cells or 50 mg tissue	50 Tests	R7034-01

E.Z.N.A.® Plant RNA Kit

E.Z.N.A.® Plant RNA Kit provides a convenient and rapid method for the isolation of total RNA from a variety of plant samples. This kit provides a homogeniser column for filtration and homogenisation of viscous plant cell lysate by centrifugation in combination with the HiBind® RNA spin column for RNA purification. All the contaminants including polysaccharides and phenolic compounds are effectively removed. Purified RNA can be used for most downstream applications such as RT-PCR, Northern blot analysis, differential display, and poly(A)+ RNA selection.

- High quality RNA in 30 minutes
- No organic extractions
- Purified RNA suitable for most applications

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Plant RNA Kit	10 - 100 mg	30 - 60 µg	50 - 100 µl	50 Tests	R6827-01
E.Z.N.A.® Plant RNA Kit	10 - 100 mg	30 - 60 µg	50 - 100 µl	200 Tests	R6827-02

E.Z.N.A.® Soil RNA Kit

The E.Z.N.A.® Soil RNA Kit is designed to isolate high quality of total RNA from soil samples typically containing humic acid and inhibitor of RT-PCR. This kit has been successfully used to isolated RNA from forest, river, glass, rich soil samples. Isolated RNA can be used for most downstream applications including RT-PCR and Northern blotting.

- Optimised protocol ensure reproducible results
- Purified RNA suitable for most applications

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Soil RNA Kit	500 mg	50 Tests	R6825-01

E.Z.N.A.® Soil RNA Midi Kit

The E.Z.N.A.® Soil RNA Midi Kit uses a novel and proprietary method to isolate high quality total RNA from soil samples typically containing humic acid and inhibitors of RT-PCR. Soil samples are homogenised and extracted with phenol/chloroform. A specially formulated suspension buffer is added to remove colouration and inhibitors. By using an innovative DNA clearance column, DNA is effectively removed without the need for DNase digestion. Purified high quality RNA can be used for most downstream applications including RT-PCR, Northern blotting and more.

- Optimised protocol ensure reproducible results
- Purified RNA suitable for most applications

Description	Sample size	Pk	Cat. No.
E.Z.N.A.® Soil RNA Midi Kit	2 g	2 Tests	R6826-00
E.Z.N.A.® Soil RNA Midi Kit	2 g	5 Tests	R6826-01

E.Z.N.A.® Tissue RNA Kit

E.Z.N.A.® Tissue RNA Kit provides a rapid and easy method for the isolation of total RNA from difficult-to-lyse animal tissue samples including skeletal muscle, heart, and connective tissues. The Tissue RNA protocol integrates a Proteinase K digestion step in the RNA isolation procedure to breakdown the proteins. This step ensures easy and more efficient isolation of total RNA from fibre-rich tissues allowing improved yield and RNA quality. Purified RNA is ready for most downstream applications such as RT-PCR, Northern blotting, Poly(A)+ purification, nuclease protection, and *in vitro* translation.

- High quality RNA in under 60 minutes
- Optimised buffers ensure the reproducible results
- No organic extractions
- Purified RNA suitable for most downstream applications

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Tissue RNA Kit	30 mg tissue	10 - 30 µg	40 - 70 µl	50 Tests	R6688-01

E.Z.N.A.® Total RNA Kit I

The E.Z.N.A.® Total RNA Kit I provides a simple and rapid method for the isolation of up to 100 µg of total RNA from cultured eukaryotic cells and soft tissues. This kit enables simultaneous multiple samples processing in less than 20 minutes. Normally up to 1×10^7 eukaryotic cells or 30 mg tissue can be used in a single experiment. Purified RNA can be used in many downstream applications, such as RT-PCR, Northern blotting, nuclease protection assay, and *in vitro* translation.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Total RNA Kit I	$1x10^7$ cells or 30 µg tissue	20 - 70 µg	40 - 70 µl	50 Tests	R6834-01
E.Z.N.A.® Total RNA Kit I	$1x10^7$ cells or 30 µg tissue	20 - 70 µg	40 - 70 µl	200 Tests	R6834-02

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E.Z.N.A.® Total RNA Kit II

The E.Z.N.A.® Total RNA Kit II is designed for isolating total cellular RNA from tissues rich fibrous and fatty tissues such as skeletal muscle, heart, brain and adipose tissues. Compared to other standard silica-column procedures, the E.Z.N.A.® Total RNA Kit II provides higher yield and better quality of RNA from all types of tissue. This kit combines phenol/guanidine-base lysis and the silica membrane purification of RNA technology to provide a rapid and easy method of the isolation of total RNA from any tissue sample. RNA purified using the E.Z.N.A.® Total RNA method is ready for applications such as RT-PCR, Northern blotting, poly A+ RNA (mRNA) purification, nuclease protection, and *in vitro* translation.

- High quality RNA in 40 minutes
- Optimised buffers ensure the reproducible results
- Suited for all types of biological samples
- Purified RNA suitable for most downstream applications

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® Total RNA Kit II	10^7 eukaryotic cells, up to 10^9 bacterial cells, or 100 mg tissue	30 - 90 µg	50 Tests	R6934-01
E.Z.N.A.® Total RNA Kit II	10^7 eukaryotic cells, up to 10^9 bacterial cells, or 100 mg tissue	30 - 90 µg	200 Tests	R6934-02

E.Z.N.A.® Total RNA Midi Kit

E.Z.N.A.® Total RNA Midi Kit is designed for RNA isolation from large amount of samples. The E.Z.N.A.® Total RNA Midi kit can purify total RNA from up to 1×10^8 cultured cells or 200 mg animal tissues. By using the HiBind® Midi column technology, the E.Z.N.A.® Total RNA Midi kit greatly reduces processing time when compared to traditional method such as CsCl ultracentrifugation or phenol/chloroform methods. Purified RNA can be used in downstream applications such as RT-PCR, Northern blotting, nuclease protection assay, and *in vitro* translation.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Total RNA Midi Kit	1×10^8 cells or 50 - 200 mg tissue	0,5 - 1 mg	250 - 500 µl	2 Tests	R6664-00
E.Z.N.A.® Total RNA Midi Kit	1×10^8 cells or 50 - 200 mg tissue	0,5 - 1 mg	250 - 500 µl	25 Tests	R6664-02

E.Z.N.A.® Total RNA Maxi Kit

E.Z.N.A.® Total RNA Maxi Kit is designed for RNA isolation from large amount of samples. The E.Z.N.A.® Total RNA Maxi kit can purify total RNA from up to 5×10^8 cultured cells or 1 g of animal tissue. By using the HiBind® maxi column technology, the E.Z.N.A.® Total RNA Maxi Kit greatly reduces processing time when compared to traditional methods, such as CsCl ultracentrifugation or phenol/chloroform extraction. Purified RNA can be used in downstream applications such as RT-PCR, Northern blotting, nuclease protection and *in vitro* translation.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
E.Z.N.A.® Total RNA Maxi Kit	5×10^8 cells or 200 mg - 1g tissue	1 - 2,5 mg	0,7 - 1,5 ml	2 Tests	R6693-00

E.Z.N.A.® Ultra-Pure Total RNA Maxi Kit

Based on the same principle of E.Z.N.A.® Total RNA Kit II, the Ultra-Pure Total RNA Maxi Kit is designed for the isolation of total RNA from 5×10^8 cultured eukaryotic cells or 1 g of all types of animal and plant tissues. This kit combines phenol/guanidine-base lysis and silica membrane purification technology to provide a rapid and easy method of the isolation of total RNA from any tissue samples including difficult-to-lyse fibrous and fatty tissues such as skeleton muscle, heart, brain, adipose tissues, plant, and fungal samples. Compared to other standard silica-column procedures, the E.Z.N.A.® Ultra-Pure Total RNA Maxi Kit provides higher yield and better quality of RNA from all types of tissues.

- High quality RNA in 60 minutes
- Optimised buffers ensure the reproducible results
- Suited for all of biological samples
- Purified RNA suitable for most downstream applications

Description	Sample size	Average yield	Pk	Cat. No.
E.Z.N.A.® Ultra-Pure Total RNA Maxi Kit	5×10^8 cells or 1 g tissue	1 - 5 mg	5 Tests	R6755-01

Mag-Bind® PX Blood RNA 96 Kit

The Mag-Bind® PX Blood RNA Kit allows for the isolation of total RNA from 2,5 ml of whole blood that has been stored in PAXgene® Blood RNA tubes. Stabilised blood samples are first spun down and the nucleic acid pellets are washed and recollected. After washing, the nucleic acid pellet is dissolved into a specially formulated resuspension buffer. At this point the samples can be transferred to 96-well plates for processing in robotic liquid handlers and magnetic processors. High quality intact RNA can be isolated in less than 90 minutes.

Description	Sample size	Average yield	Pk	Cat. No.
Mag-Bind® PX Blood RNA Kit (1×96 preps)	1× PAXgene® tube	8 - 12 µg	1 KIT	M7763-00
Mag-Bind® PX Blood RNA Kit (4×96 preps)	1× PAXgene® tube	8 - 12 µg	1 KIT	M7763-01

Mag-Bind® Total RNA 96 Kit

The Mag-Bind® Total RNA Kit allows the rapid and reliable isolation of high-quality total cellular RNA from a wide variety of cells and tissues. The system combines the higher nucleic acid-binding properties of Mag-Bind® particles with the E.Z.N.A.® RNA isolation system to provide superior quality RNA. Unlike column-based systems, the binding of nucleic acids to magnetic particles occurs in solution, resulting in increased binding kinetics and binding efficiency. Particles are also completely re-suspended during the wash steps of the purification protocol, which enhances contact with the wash buffer and removal of contaminants and increasing nucleic acid purity. Mag-Bind® Total RNA procedure can be fully automated with most robotic workstations.

Description	Sample size	Average yield	Elution volume	Pk	Cat. No.
Mag-Bind® Total RNA 96 Kit (1×96 preps)	1×10^6 cells or 15 mg tissue	10 - 50 µg	30 - 100 µl	1 KIT	M6731-00
Mag-Bind® Total RNA 96 Kit (4×96 preps)	1×10^6 cells or 15 mg tissue	10 - 50 µg	30 - 100 µl	1 KIT	M6731-01

RNA-Solv® Reagent

RNA-Solv® Reagent is a one reagent system for the isolation of total RNA from cells and tissues. The reagent, a single-phase solution consisting of phenol and guanidine isothiocyanate, is a modification of the single-step RNA isolation method developed by Chomczynski and Sacchi. The sample is homogenised and lysed in RNA-Solv® Reagent, which maintains the integrity of the RNA while disrupting and denaturing endogenous RNases and other cellular components. Extraction of the lysate with chloroform further denatures proteins and separates the mixture into an organic and an aqueous phase. RNA remains exclusively in the aqueous phase, and is subsequently recovered by isopropanol.

This method is suitable for a wide range of starting material: Up to 1 g of tissue or 1×10^8 cells of human, animal, plant, or bacterial origin. The simplicity of the RNA-Solv® Reagent method allows simultaneous processing of a large number of samples. The entire procedure can be completed in one hour. Total RNA prepared can be used for Northern blot analysis, dot blot hybridisation, poly(A)+ selection, *in vitro* translation, RNase protection assay, and molecular cloning. For use in amplification by thermal cycling, treatment of the isolated RNA with RNase-free DNase I is recommended when the two amplimers lie within a single exon.

Description	Average yield	Sample size	Pk	Cat. No.
E.Z.N.A.® RNA-Solv® reagent	10 - 200 µg	1×10^7 cells or 100 mg tissue	40 ml	R6830-01IN
E.Z.N.A.® RNA-Solv® reagent	10 - 200 µg	1×10^7 cells or 100 mg tissue	100 ml	R6830-01
E.Z.N.A.® RNA-Solv® reagent	10 - 200 µg	1×10^7 cells or 100 mg tissue	200 ml	R6830-02

RNA homogeniser columns

Description	Pk	Cat. No.
RNA homogeniser columns	5 Tests	RHCR000
RNA homogeniser columns	50 Tests	RHCR001

Autoinduction media, ZYP-5052

ZYP-5052 autoinduction media is formulated to ensure consistent growth and protein expression using methodology developed by Dr. Studier at Brookhaven National Laboratory. ZYP-5052 autoinduction media activates recombinant protein expression in *E. coli* through diauxic growth, with the first growth phase producing a high density bacterial culture. During the second phase, *lac* promoters are activated and result in induction of prolific transcription and translation of the cloned DNA. A significant percentage of the total cell protein becomes comprised of recombinant DNA, which can then be isolated and purified for downstream applications.

- No monitoring cell density
- Automatic induction of protein expression
- High protein yield

Description	Pk	Cat. No.
Autoinduction media, ZYP-5052	1 l	N990-1L

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

E.Z.N.A.® RNA Transport

E.Z.N.A.® RNA Transport provides the ideal format for transporting samples at ambient temperatures. The procedure eliminates the need for dry or cold packs for transporting RNA. RNA can be shipped using ground services saving on shipping and dry ice costs.

Delivery information: RNA preservative reagent and a recovery column is supplied with each kit. The only additional reagents required are ethanol and water.

Description	Pk	Cat. No.
E.Z.N.A.® RNA Transport	50 Tests	R0527-01

Molecular sieve A3 (0.3 nm, 3 Å), extruders TECHNICAL 1.6 mm

CAS 308080-99-1

Adsorption of molecules smaller than 3 µm in diameter

Identification ..... Passes test

Cat. No.	Pk	Pack type
28463.292	1 kg	Plastic bottle for solids

Molecular sieve A4 (0.4 nm, 4 Å), extruders TECHNICAL 1.6 mm

CAS 70955-01-0

Density: 1,1-2,2g/cm^3 (20 °C)

Adsorption of molecules smaller than 4 µm in diameter

Identification ..... Passes test

Cat. No.	Pk	Pack type
28464.295	1 kg	Plastic bottle for solids
28464.364	5 kg	Bucket (Plastic)

Molecular sieve A5 (0.5 nm, 5 Å), extruders TECHNICAL 1.6 mm

CAS 69912-79-4

Adsorption of molecules smaller than 5 µm in diameter

Identification ..... Passes test

Cat. No.	Pk	Pack type
28465.298	1 kg	Plastic bottle for solids

Molybdate-Vanadate Reag. Ph. Eur.

Cat. No.	Pk	Pack type
85897.180	200 ml	Plastic bottle

NEW Molybdenum standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Molybdenum	1000 ppm	H_2O/ tr.NH_4OH	Plastic bottle	100 ml	457347G
Molybdenum	10 ppm	H_2O/tr HF	Plastic bottle	100 ml	85580.180

Molybdenum standard solution, 10,000 mg/l Mo in ammonium hydroxide solution (max. 1%) (from $(NH_4)_2MoO_4$) ARISTAR® standard for ICP

$(NH_4)_2MoO_4$ in HNO_3 tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455692P	100 ml	Plastic bottle

Molybdenum standard solution, 1,000 mg/l Mo in ammonium hydroxide solution (max. 1%) (from $(NH_4)_2MoO_4$) ARISTAR® standard for ICP

$(NH_4)_2MoO_4$ in HNO_3 tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455682N	100 ml	Plastic bottle
455684P	500 ml	Plastic bottle

Molybdenum standard solution, 1,000 mg/l Mo in water AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86692.180	100 ml	Plastic bottle
86692.260	500 ml	Plastic bottle

Molybdic acid, sodium salt dihydrate

See Sodium molybdate(VI) dihydrate..... p.429

Molybdophosphoric acid hydrate

See Dodecamolybdophosphoric acid hydrate..... p.127

Monoethanolamine

See Ethanolamine p.151

NEW Monoethanolamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84979.180	100 ml	Plastic bottle

(±)-Monopropylene glycol methyl ether

See (±)-1-Methoxy-2-propanol..... p.260

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MOPS (γ-(N-Morpholino)propanesulphonic acid) Electran® Molecular biology grade

CAS 1132-61-2

$C_7H_{15}NO_4S$ **M.W.** 209.27 g/mol

Melting Pt: > 250 °C

Storage Temperature: Ambient

Assay	Min. 99.00 %
Appearance	White crystalline powder
Identification	Passes test
DNases (exo- and endonucleases)	Not detected
RNases	Not detected
Proteases	Not detected
pH (0.1 mol/l)	3.50 - 4.50
Absorbance (260 nm) (0.1 mol/l)	Max. 0.050
Absorbance (280 nm) (0.1 mol/l)	Max. 0.050
Heavy metals (as Pb)	Max. 0.0005 %
Fe (Iron)	Max. 0.0001 %
Pb (Lead)	Max. 0.001 %

Cat. No.	Pk	Pack type
443832T	100 g	Plastic bottle

MOPS (γ-(N-Morpholino)propanesulphonic acid), ultrapure

CAS 1132-61-2

$C_7H_{15}NO_4S$ **M.W.** 209.27 g/mol

Melting Pt: > 250 °C

Storage Temperature: Ambient

Abs.@260nm (0.1M, Water)	< = 0.05
Abs.@280nm (0.1M, Water)	<= 0.05
DNase	none detected
RNase	none detected
pKa @(25°C)	7 - 7.4
Protease	none
Purity	> 99 %

Cat. No.	Pk	Pack type
0670-100G	100 g	Glass bottle
0670-250G	250 g	Glass bottle
0670-500G	500 g	Glass bottle

MOPS (γ-(N-Morpholino)propanesulphonic acid), proteomics grade

CAS 1132-61-2

$C_7H_{15}NO_4S$ **M.W.** 209.27 g/mol

Melting Pt: ? 250 °C

Storage Temperature: Ambient

Abs.@280nm (0.1M, Water)	< 0.05
DNase	none detected
Appearance	Fine, white crystalline powder.
Melting Point	277°C - 280°C
pKa @(25°C)	7 - 7.4
Protease	none detected
Purity	> = 99 %
RNase	none detected

Cat. No.	Pk	Pack type
M214-100G	100 g	Glass bottle

MOPS 10X buffer for biotechnology

MOPS is a zwitterionic buffer used as a running buffer for denaturing agarose gel electrophoresis of RNA. Having a buffering range from 6.5 - 7.9, MOPS works exceptionally well with formaldehyde gels at 20 mM concentration.

- Optimised for RNA agarose electrophoresis
- Ideal for use with RNA formaldehyde gels

Cat. No.	Pk	Pack type
E526-500ML	500 ml	Glass bottle

Buffer, MOPS-SDS, 20X, ultrapure

Useful for high resolution of proteins on neutral pH SDS-PAGE gels.

Cat. No.	Pk	Pack type
K855-500ML	500 ml	Plastic bottle

MOPS-Na, high purity

CAS 71119-22-7

$C_7H_{14}NNaO_4S$ **M.W.** 231.25 g/mol

Storage Temperature: Ambient

A zwitterionic buffer used as a running buffer for denaturing agarose gel electrophoresis of RNA.

Abs.@260nm (0.1M, Water)	< 0.03
DNase	none detected
Heavy Metals	< 0.005 %
Appearance	White powder
Loss on Drying	< 1 %
pH (0.1M, Water) @25°C	10 - 11
pKa (20°C)	7 - 7.4
Protease	none detected
Purity	> 99 %
RNase	none
Solubility (0.1M, Water)	Pass

Cat. No.	Pk	Pack type
E413-250G	250 g	Plastic bottle for solids

MOPS-Na, proteomics grade

CAS 71119-22-7

$C_7H_{14}NNaO_4S$ **M.W.** 231.25 g/mol

Storage Temperature: Ambient

A zwitterionic buffer used to prepare running buffer for high resolution of proteins on neutral pH SDS-PAGE gels.

Abs.@260nm (0.1M, Water)	< 0.03
DNase	none detected
Heavy Metals	< = 0.005 %
Appearance	White powder
Loss on Drying	< 1 %
pH (0.1M, Water) @25°C	10 - 11
pKa (20°C)	7 - 7.4
Protease	none detected
Purity	> = 99 %
RNase	none
Solubility (0.1M, Water)	Pass

Cat. No.	Pk	Pack type
M215-100G	100 g	Plastic bottle for solids

MOPSO (3-(4-Morpholino)-2-hydroxypropanesulphonic acid), ultrapure

Warning

CAS 68399-77-9

$C_7H_{15}NO_5S$

Storage Temperature: Ambient

Melting Point	276°C - 284°C
Moisture (KF)	< 1 %
Purity	> 98 %
Solubility (33.3%, Water)	Pass

Cat. No.	Pk	Pack type
J589-100G	100 g	Plastic bottle for solids

Morpholine, organic reference standard, 1000 mg/l in aqueous solution for ion chromatography

Cat. No.	Pk	Pack type
87732.260	500 ml	Plastic bottle

β-(N-Morpholino)ethanesulphonic acid

See MES (β-(N-Morpholino)ethanesulphonic acid) p.254

2-(N-Morpholino)ethanesulphonic acid

See MES (β-(N-Morpholino)ethanesulphonic acid) p.254

γ-(N-Morpholino)propanesulphonic acid

See MOPS (γ-(N-Morpholino)propanesulphonic acid) p.311

3-(N-Morpholino)propanesulphonic acid

See MOPS (γ-(N-Morpholino)propanesulphonic acid) p.311

Mounting media

Q Path® Coverquick mounting agents for microscopy p.227
Isomount 2000 Q Path® p.227
Freeze gel (Glue) Q Path® p.167
Safemount Q Path® p.391

MRS Agar

See Microbiology

MTBE

See tert-Butyl methyl ether p.72

Mueller Hinton Agar

See Microbiology

Muller Kauffmann MKTT broth

See Microbiology

Murexide analytical reagent

CAS 3051-09-0
$C_8H_8N_6O_6$ **M.W.** 284.19 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient
Suited for complexometry indicator ..... Passes test

Cat. No.	Pk	Pack type
25717.120	10 g	Plastic bottle for solids

VWR BDH CHEMICALS

FIRST FOR TRACE ANALYSIS

From the most exacting sample preparation with NORMATOM® high purity acids to ARISTAR® ICP/ICP-MS and AVS® TITRINORM® AAS standards, VWR are able to offer a comprehensive trace analysis package.

All backed by our extensive Certificates of Analysis for specific batch results – not typical analyses.

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Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Nalidixic acid, high purity

Danger

CAS 389-08-2
$C_{12}H_{12}N_2O_3$
Storage Temperature: Ambient
A bactericidal agent that inhibits DNA gyrase activity. Recommended working concentration: 15 µg/ml.

Heavy Metals (as Pb) ..... < = 0.002 %
Loss on Drying ..... <= 0.5 %
Melting Point ..... 225 °C - 231 °C
Purity ..... >= 98 %
Residue on Ignition ..... <= 0.2 %

Cat. No.	Pk	Pack type
0677-50G	50 g	Plastic bottle for solids

Naphthalene, extra pure

Warning

CAS 91-20-3 **UN:** 1334
$C_{10}H_8$ **M.W.** 128.17 g/mol
Boiling Pt: 218 °C (1013 hPa) **Melting Pt:** 79-82 °C **Density:** 1,145 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
123092C	100 mg	Glass ampoule

Naphthalene GPR RECTAPUR®

Warning

CAS 91-20-3 **UN:** 1334
$C_{10}H_8$ **M.W.** 128.17 g/mol
Boiling Pt: 218 °C (1013 hPa) **Melting Pt:** 79-82 °C **Density:** 1,145 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
Crystallisation point ..... 79 - 81 °C
Ignition residue (SO_4) ..... Max. 0.05 %

Cat. No.	Pk	Pack type
25751.297	1 kg	Plastic bottle for solids

Naphthol AS-MX phosphate, high purity

Warning

CAS 1596-56-1
$C_{19}H_{18}NO_5P$
Storage Temperature: Freezer
Histochemical substrate commonly used in conjunction with Fast Red TR for immunohistology, immunoblotting, and dot blot applications.

Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0460-5G	5 g	Glass bottle

1-Naphtholbenzeine analytical reagent

Warning

CAS 145-50-6
$C_{27}H_{18}O_2$ **M.W.** 374.44 g/mol
Melting Pt: 243-245 °C
Storage Temperature: Ambient

Suited for acid-base indicator ..... Passes test

Cat. No.	Pk	Pack type
25768.136	25 g	Glass bottle

1-Naphtholbenzeine 0.2% in acetic acid Reag. Ph. Eur. 1057601

CAS 145-50-6 **UN:** 2789
$C_{27}H_{18}O_2$ **M.W.** 374.44 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87874.180	100 ml	Plastic bottle

p-Naphtholbenzeine

See 1-Naphtholbenzeine p.313

α-Naphtholbenzeine

See 1-Naphtholbenzeine p.313

Natural Black 1

See Haematoxylin monohydrate p.290

NBT

See Nitro blue tetrazolium chloride (NBT) p.320

Neocuproine hydrochloride monohydrate analytical reagent

Warning

CAS 303136-82-5
$C_{14}H_{13}ClN_2 \cdot 1H_2O$ **M.W.** 262.74 g/mol
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
23519.100	5 g	Glass bottle

NEW Neodymium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Neodymium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457358H
Neodymium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85583.180

NEW Neodymium standard solution, 10,000 mg/l Nd in dil. nitric acid (from Nd_2O_3) ARISTAR® standard for ICP

Nd_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455712C	100 ml	Plastic bottle
455714E	500 ml	Plastic bottle

Neodymium standard solution, 1,000 mg/l Nd in dil. nitric acid (from Nd_2O_3) ARISTAR® standard for ICP

Nd_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455702A	100 ml	Plastic bottle

Neodymium standard solution, 1,000 mg/l Nd in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86695.180	100 ml	Plastic bottle
86695.260	500 ml	Plastic bottle

VWR LIFE SCIENCE Neomycin sulphate for tissue culture, γ-irradiated

CAS 1405-10-3

Storage Temperature: Ambient

Aseptic, gamma-irradiated tissue culture tested. Final concentration of 10 mg/ml when reconstituted in 20 ml sterile water.

pH (3.3%, Water) @25°C	5.0 - 7.5
Potency (anhydrous)	> 600 mcg/mg
Solubility (Vial Contents, 20ml Water)	Pass
Sterile (Gamma-Irradiated)	Pass
USP Grade Neomycin sulphate	Pass

Cat. No.	Pk	Pack type
E482-20ML	20 ml	Vial

VWR LIFE SCIENCE Neomycin sulphate, ultrapure

CAS 1405-10-3

Storage Temperature: Ambient

Antibiotic. Causes miscoding during protein synthesis. Recommended working concentration: 50 µg/ml.

Expiration Date	REPORT
Identification	PASS
Loss on Drying (%)	≤ 8.0
pH (3.3%, Water) @ 25 °C	5.0 – 7.5
Potency (Anhydrous) (mcg/mg)	≥ 600
Potency (as is) (mcg/mg)	REPORT

Cat. No.	Pk	Pack type
0558-EU-25G	25 g	Plastic bottle for solids

Nessler Reagent for determination of ammonia and ammonium salts

Danger

CAS 7783-33-7 **UN:** 2922

HgI_4K_2 **M.W.** 786.4 g/mol

Boiling Pt: >100 °C (1013hPa) **Density:** 1,2 g/cm³ (20 °C)

Sensitivity ..... Passes test

Cat. No.	Pk	Pack type
31074.265	500 ml	Plastic bottle

NEW Nickel standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Nickel	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456832N
Nickel	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85584.180

Nickel standard solution, 10,000 mg/l Ni in dil. nitric acid (from Ni) ARISTAR® standard for ICP

Ni in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455732G	100 ml	Plastic bottle
455734Y	500 ml	Plastic bottle

Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid (from Ni) ARISTAR® standard for ICP

Ni in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455722E	100 ml	Plastic bottle
455724G	500 ml	Plastic bottle

Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86696.180	100 ml	Plastic bottle
86696.260	500 ml	Plastic bottle

Nickel (II) chloride hexahydrate AnalaR NORMAPUR® analytical reagent (max. 0.005% Co)

Danger

CAS 7791-20-0 **UN:** 3288

$NiCl_2 \cdot 6H_2O$ **M.W.** 237.69 g/mol

Melting Pt: 140 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98.0 %	pH (20°C; 5 %)	3.5 - 7.0
Ca (Calcium)	Max. 0.02 %	Cd (Cadmium)	Max. 10 ppm
Co (Cobalt)	Max. 50 ppm	Cu (Copper)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm	Pb (Lead)	Max. 20 ppm
Zn (Zinc)	Max. 10 ppm		

Cat. No.	Pk	Pack type
25851.293	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Nickel (II) chloride hexahydrate GPR RECTAPUR®

Danger

CAS 7791-20-0 **UN:** 3288

$NiCl_2 \cdot 6H_2O$ **M.W.** 237.69 g/mol

Melting Pt: 140 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
SO_4 (Sulphate)	Max. 0.1 %
Cd (Cadmium)	Max. 20 ppm
Cu (Copper)	Max. 20 ppm
Fe (Iron)	Max. 100 ppm
Pb (Lead)	Max. 20 ppm
Zn (Zinc)	Max. 20 ppm

Cat. No.	Pk	Pack type
25850.290	1 kg	Plastic bottle for solids

Nickel (II) chloride hexahydrate TECHNICAL

Danger

CAS 7791-20-0 **UN:** 3288

$NiCl_2 \cdot 6H_2O$ **M.W.** 237.69 g/mol

Melting Pt: 140 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 97 %

Cat. No.	Pk	Pack type
25848.361	5 kg	Bucket (Plastic)

Nickel (II) nitrate hexahydrate AnalaR NORMAPUR® ACS analytical reagent (max. 0.005% Co)

Danger

CAS 13478-00-7 **UN:** 2725

$Ni(NO_3)_2 \cdot 6H_2O$ **M.W.** 290.79 g/mol

Boiling Pt: 137 °C (1013 hPa) **Melting Pt:** 56,7 °C **Density:** 2,05 g/cm³ (20 °C)

Assay	99.0 - 102.0 %	Insoluble substances	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	NH_4 (Ammonium)	Max. 0.05 %
SO_4 (Sulphate)	Max. 20 ppm	Ca (Calcium)	Max. 50 ppm
Co (Cobalt)	Max. 50 ppm	Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 100 ppm
Mg (Magnesium)	Max. 100 ppm	Mn (Manganese)	Max. 20 ppm
Na (Sodium)	Max. 50 ppm	Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 10 ppm	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
25873.232	250 g	Plastic bottle for solids

Nickel (II) nitrate hexahydrate GPR RECTAPUR®

Danger

CAS 13478-00-7 **UN:** 2725

$Ni(NO_3)_2 \cdot 6H_2O$ **M.W.** 290.79 g/mol

Boiling Pt: 137 °C (1013 hPa) **Melting Pt:** 56.7 °C **Density:** 2.05 g/cm³ (20 °C)

Assay	Min. 96 %
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
Cd (Cadmium)	Max. 25 ppm
Cu (Copper)	Max. 25 ppm
Pb (Lead)	Max. 25 ppm
Zn (Zinc)	Max. 25 ppm

Cat. No.	Pk	Pack type
25871.292	1 kg	Plastic bottle for solids

Nickel sulphate hexahydrate GPR RECTAPUR®

Danger

CAS 10101-97-0 **UN:** 3288

$NiSO_4 \cdot 6H_2O$ **M.W.** 262.85 g/mol

Melting Pt: 840 °C **Density:** 2,07 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
Cl (Chloride)	Max. 0.02 %
Cd (Cadmium)	Max. 25 ppm
Cu (Copper)	Max. 25 ppm
Pb (Lead)	Max. 25 ppm
Zn (Zinc)	Max. 25 ppm

Cat. No.	Pk	Pack type
25895.294	1 kg	Plastic bottle for solids

VWR LIFE SCIENCE beta-Nicotinamide adenine dinucleotide (NAD, oxidised form), reagent grade

Cat. No.	Pk	Pack type
0455-1G	1 g	Glass bottle
0455-5G	5 g	Glass bottle
0455-10G	10 g	Plastic bottle for solids

beta-Nicotinamide adenine dinucleotide phosphate (NADP-Na_2, oxidised form)

Cat. No.	Pk	Pack type
420514J	0,5 g	Glass bottle

VWR LIFE SCIENCE beta-Nicotinamide adenine dinucleotide phosphate (NADP, oxidised form) trihydrate, reagent grade

Cat. No.	Pk	Pack type
0760-500MG	500 mg	Glass bottle
0760-1G	1 g	Glass bottle
0760-5G	5 g	Glass bottle

Ninhydrin AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 485-47-2

$C_9H_6O_4$ **M.W.** 178.14 g/mol

Boiling Pt: 351 °C (1013 hPa) **Melting Pt:** 250-258 °C **Density:** 0,862 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification and melting point	Passes test	IR Spectrum	Passes test
Solubilty in water (10 g/l)	Passes test	Suited for amino acid reagent	Passes test
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
25905.107	5 g	Glass bottle
25905.153	50 g	Plastic bottle for solids
25905.180	100 g	Plastic bottle for solids

Ninhydrin solution R2 Reag. Ph. Eur. 1058305

Danger

Storage Temperature: Ambient
Ninhydrin R (3 g) in 100 ml of a 45,5 g/l solution of sodium metabisulphite R.

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87878.180	100 ml	Plastic bottle

Ninhydrin solution R3 Reag. Ph. Eur. 1058306

Danger

CAS 485-47-2 **UN:** 1993
$C_9H_6O_4$
Storage Temperature: Ambient
A 4 g/l solution in a mixture of 5 volumes of anhydrous acetic acid R and 95 volumes of butanol R.

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87879.180	100 ml	Plastic bottle

Ninhydrin solution Reag. Ph. Eur. 1058303

Danger

CAS 485-47-2 **UN:** 1993
$C_9H_6O_4$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87713.180	100 ml	Plastic bottle

Ninhydrin and stannous chloride reagent Reag. Ph. Eur. 1058301

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87875.180	100 ml	Plastic bottle

Ninhydrin reagent kit (Ninhydrin and stannous chloride reagent R1) Reag. Ph. Eur. 1058302

UN: 1188
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87876.180	100 ml	Plastic bottle

Ninhydrin 0.5% in 1-butanol, spray reagent for TLC

Danger

CAS 485-47-2 **UN:** 1950
$C_9H_6O_4$
Storage Temperature: Ambient

- Ozone friendly (Convention 07/02/1989)

Squeeze container gently to dispense. Allow container to vent after use

Suitable as reagent ..... Passes test
Performance of spray ..... Passes test

Cat. No.	Pk	Pack type
30960.226	240 ml	Aerosol can

NEW Niobium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Niobium	1000 ppm	H_2O/tr HF	Plastic bottle	100 ml	457369J
Niobium	10 ppm	2% HNO_3/0,5% HF	Plastic bottle	100 ml	85582.180

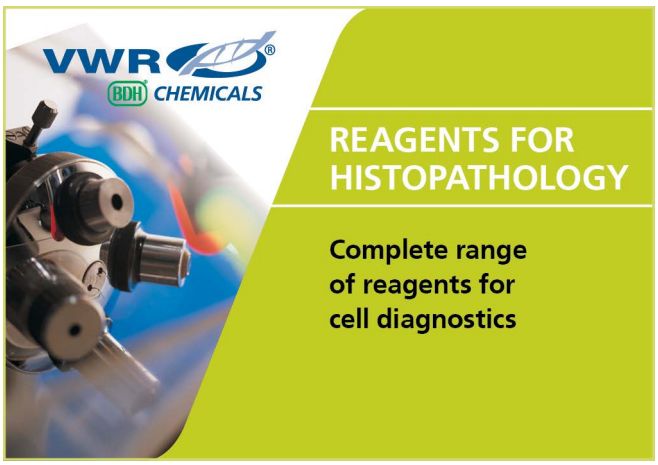
Niobium standard solution, 10,000 mg/l Nb in water with hydrofluoric acid (max. 1%) (from Nb_2O_5) ARISTAR® standard for ICP

Nb_2O_5 in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455752K	100 ml	Plastic bottle



Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Niobium standard solution, 1,000 mg/l Nb in water with hydrofluoric acid (max. 1%) (from Nb_2O_5) ARISTAR® standard for ICP

Nb_2O_5 in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455742Y	100 ml	Plastic bottle
455744K	500 ml	Plastic bottle

Niobium standard solution, 1,000 mg/l Nb in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86694.180	100 ml	Plastic bottle
86694.260	500 ml	Plastic bottle

Nitrate standard solution, 1,000 mg/l NO_3 in water (from $NaNO_3$) ARISTAR® standard for ion chromatography

NO_3 in H_2O

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458032U	100 ml	Plastic bottle
458034W	500 ml	Plastic bottle

Nitrate standard solution (1000 ppm NO_3^-) for the preparation of nitrate standard solution (100 ppm NO_3^-) Reag.Ph.Eur.; 5002100

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88088.180	100 ml	Plastic bottle

NEW Nitrate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84981.180	100 ml	Plastic bottle
84981.260	500 ml	Plastic bottle

NEW Nitrate (in N) 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84982.180	100 ml	Plastic bottle
84982.260	500 ml	Plastic bottle

Nitric acid 69% ARISTAR® for trace analysis

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	68.5 - 69.5 %	Cl (Chloride)	Max. 0.05 ppm
PO_4 (Phosphate)	Max. 0.1 ppm	Si (as silicate)	Max. 0.1 ppm
SO_4 (Sulphate)	Max. 0.5 ppm	As + Sb (as As)	Max. 0.005 ppm
Ag (Silver)	Max. 0.005 ppm	Al (Aluminium)	Max. 0.020 ppm
Au (Gold)	Max. 0.005 ppm	B (Boron)	Max. 0.005 ppm
Ba (Barium)	Max. 0.005 ppm	Be (Beryllium)	Max. 0.005 ppm
Bi (Bismuth)	Max. 0.005 ppm	Ca (Calcium)	Max. 0.05 ppm
Cd (Cadmium)	Max. 0.005 ppm	Co (Cobalt)	Max. 0.005 ppm
Cr (Chromium)	Max. 0.010 ppm	Cu (Copper)	Max. 0.005 ppm
Fe (Iron)	Max. 0.020 ppm	Ga (Gallium)	Max. 0.020 ppm
Ge (Germanium)	Max. 0.010 ppm	Hg (Mercury)	Max. 0.001 ppm
In (Indium)	Max. 0.010 ppm	K (Potassium)	Max. 0.010 ppm
Li (Lithium)	Max. 0.005 ppm	Mg (Magnesium)	Max. 0.010 ppm
Mn (Manganese)	Max. 0.005 ppm	Mo (Molybdenum)	Max. 0.005 ppm
Na (Sodium)	Max. 0.050 ppm	Ni (Nickel)	Max. 0.005 ppm
Pb (Lead)	Max. 0.005 ppm	Pt (Platinum)	Max. 0.005 ppm
Sn (Tin)	Max. 0.020 ppm	Sr (Strontium)	Max. 0.005 ppm
Ti (Titanium)	Max. 0.005 ppm	Tl (Thallium)	Max. 0.005 ppm
V (Vanadium)	Max. 0.005 ppm	Zn (Zinc)	Max. 0.010 ppm
Zr (Zirconium)	Max. 0.005 ppm	Ignition residue (SO_4)	Max. 1 ppm

Cat. No.	Pk	Pack type
450041M	500 ml	Glass bottle SAFEBREAK
450042N	1 l	Glass bottle SAFEBREAK
450043X	2,5 l	Glass bottle SAFEBREAK

Nitric acid 69% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	69.0 - 70.0 %	Appearance of solution	Passes test Ph.Eur.
Identification (NO_3)	Passes test Ph.Eur.	Colouration	Max. 10 APHA
Density (20/20)	1.384 - 1.416	Heavy metals (as Pb)	Max. 0.2 ppm
Ignition residue (SO_4)	Max. 5 ppm	Silica	Max. 0.2 ppm
Cl (Chloride)	Max. 0.5 ppm	PO_4 (Phosphate)	Max. 2 ppm
SO_4 (Sulphate)	Max. 1 ppm	Al (Aluminium)	Max. 0.05 ppm
As (Arsenic)	Max. 0.01 ppm	Ba (Barium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.1 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.05 ppm	Mg (Magnesium)	Max. 0.03 ppm
Mn (Manganese)	Max. 0.01 ppm	Mo (Molybdenum)	Max. 0.02 ppm
Na (Sodium)	Max. 0.3 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.01 ppm	Sr (Strontium)	Max. 0.01 ppm
Zn (Zinc)	Max. 0.05 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20425.242	1 l	Glass bottle SAFEBREAK
20425.297	1 l	Glass bottle
20425.322	2,5 l	Glass bottle SAFEBREAK
20425.420	2,5 l	Glass bottle

Nitric acid 69% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	68.5 - 69.5 %	Cl (Chloride)	Max. 0.00005 %
PO_4 (Phosphate)	Max. 0.00005 %	SO_4 (Sulphate)	Max. 0.00005 %
As + Sb (as As)	Max. 0.000001 %	Al (Aluminium)	Max. 0.000005 %
Au (Gold)	Max. 0.00001 %	B (Boron)	Max. 0.000005 %
Ba (Barium)	Max. 0.000005 %	Be (Beryllium)	Max. 0.000002 %
Bi (Bismuth)	Max. 0.00001 %	Ca (Calcium)	Max. 0.000010 %
Cd (Cadmium)	Max. 0.000002 %	Co (Cobalt)	Max. 0.000001 %
Cr (Chromium)	Max. 0.000002 %	Cu (Copper)	Max. 0.000002 %
Fe (Iron)	Max. 0.00002 %	Ga (Gallium)	Max. 0.000002 %
Ge (Germanium)	Max. 0.00001 %	In (Indium)	Max. 0.000002 %
K (Potassium)	Max. 0.00001 %	Li (Lithium)	Max. 0.000002 %
Mg (Magnesium)	Max. 0.000010 %	Mn (Manganese)	Max. 0.000001 %
Mo (Molybdenum)	Max. 0.000002 %	Na (Sodium)	Max. 0.00003 %
Ni (Nickel)	Max. 0.000002 %	Pb (Lead)	Max. 0.000005 %
Pt (Platinum)	Max. 0.00002 %	Sr (Strontium)	Max. 0.000002 %
Ti (Titanium)	Max. 0.00001 %	Tl (Thallium)	Max. 0.000005 %
V (Vanadium)	Max. 0.000005 %	Zn (Zinc)	Max. 0.00001 %
Zr (Zirconium)	Max. 0.00001 %	Residue on ignition	Max. 0.0005 %

Cat. No.	Pk	Pack type
101685D	2,5 l	Glass bottle SAFEBREAK

Nitric acid 69% VLSI Selectipur® for the electronics industry

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
50489134.	2,5 l	Glass bottle
50178448.	280 kg	Plastic drum

Nitric acid 68% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	68.0 - 70.0 %	Density (20/4)	1.404 - 1.413
Ignition residue (SO_4)	Max. 10 ppm	Cl (Chloride)	Max. 0.5 ppm
PO_4 (Phosphate)	Max. 2 ppm	SO_4 (Sulphate)	Max. 2 ppm
As (Arsenic)	Max. 0.01 ppm	Fe (Iron)	Max. 1 ppm
Mn (Manganese)	Max. 0.4 ppm	Pb (Lead)	Max. 0.05 ppm

Cat. No.	Pk	Pack type
20422.242	1 l	Glass bottle SAFEBREAK
20422.297	1 l	Glass bottle
20422.320	2,5 l	Plastic bottle
20422.322	2,5 l	Glass bottle SAFEBREAK
20422.360	5 l	Plastic bottle

Nitric acid 68% GPR RECTAPUR®

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	68 - 70 %
Density (20/4)	1.400 - 1.420
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 5 ppm
Fe (Iron)	Max. 2 ppm
Pb (Lead)	Max. 1 ppm

Cat. No.	Pk	Pack type
20413.420	2,5 l	Plastic bottle
20413.365	5 l	Plastic bottle
20413.460	25 l	Plastic drum

Nitric acid 68% TECHNICAL

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay 68 - 70 %

Cat. No.	Pk	Pack type
20406.292	1 l	Plastic bottle
20406.320	2,5 l	Plastic bottle
20406.361	5 l	Plastic bottle

Nitric acid 67% ULTRAPURE NORMATOM® for trace metal analysis

Danger

CAS 7697-37-2 **UN:** 2031

HNO_3 **M.W.** 63.01 g/mol

Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 67 %	Ag (Silver)	Max. 10 ppt
Al (Aluminium)	Max. 20 ppt	As (Arsenic)	Max. 20 ppt
Au (Gold)	Max. 20 ppt	B (Boron)	Max. 20 ppt
Ba (Barium)	Max. 10 ppt	Be (Beryllium)	Max. 10 ppt
Bi (Bismuth)	Max. 10 ppt	Ca (Calcium)	Max. 20 ppt
Cd (Cadmium)	Max. 10 ppt	Ce (Cerium)	Max. 10 ppt
Co (Cobalt)	Max. 10 ppt	Cr (Chromium)	Max. 20 ppt
Cs (Cesium)	Max. 10 ppt	Cu (Copper)	Max. 20 ppt
Dy (Dysprosium)	Max. 1 ppt	Er (Erbium)	Max. 1 ppt
Eu (Europium)	Max. 1 ppt	Fe (Iron)	Max. 20 ppt
Ga (Gallium)	Max. 10 ppt	Gd (Gadolinium)	Max. 1 ppt
Ge (Germanium)	Max. 10 ppt	Hf (Hafnium)	Max. 10 ppt
Hg (Mercury)	Max. 100 ppt	Ho (Holmium)	Max. 1 ppt
In (Indium)	Max. 1 ppt	K (Potassium)	Max. 10 ppt
La (Lanthanum)	Max. 1 ppt	Li (Lithium)	Max. 10 ppt
Lu (Lutetium)	Max. 1 ppt	Mg (Magnesium)	Max. 10 ppt
Mn (Manganese)	Max. 10 ppt	Mo (Molybdenum)	Max. 10 ppt
Na (Sodium)	Max. 10 ppt	Nb (Niobium)	Max. 1 ppt
Nd (Neodymium)	Max. 1 ppt	Ni (Nickel)	Max. 50 ppt
Pb (Lead)	Max. 10 ppt	Pd (Palladium)	Max. 20 ppt
Pr (Praseodymium)	Max. 1 ppt	Pt (Platinum)	Max. 20 ppt
Rb (Rubidium)	Max. 10 ppt	Re (Rhenium)	Max. 10 ppt
Rh (Rhodium)	Max 10 ppt	Ru (Ruthenium)	Max. 20 ppt
Sb (Antimony)	Max. 10 ppt	Sc (Scandium)	Max. 10 ppt
Sm (Samarium)	Max. 1 ppt	Sn (Tin)	Max. 20 ppt
Sr (Strontium)	Max. 10 ppt	Tb (Terbium)	Max. 1 ppt
Te (Tellurium)	Max. 1 ppt	Th (Thorium)	Max. 1 ppt
Ti (Titanium)	Max. 10 ppt	Tl (Thallium)	Max. 10 ppt
Tm (Thulium)	Max. 1 ppt	U (Uranium)	Max. 1 ppt
V (Vanadium)	Max. 10 ppt	W (Tungsten)	Max. 10 ppt
Y (Yttrium)	Max. 1 ppt	Yb (Ytterbium)	Max. 1 ppt
Zn (Zinc)	Max. 20 ppt	Zr (Zirconium)	Max. 10 ppt

Cat. No.	Pk	Pack type
83879.270	500 ml	Plastic bottle
83879.290	1 l	Plastic bottle
83879.300	2 l	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Nitric acid 67% NORMATOM® for trace metal analysis

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	67 - 69 %	Colouration	Max. 10 APHA
Cl (Chloride)	Max. 0.2 ppm	Total P (Phosphorus)	Max. 0.01 ppm
Total S (Sulphur)	Max. 0.3 ppm	Ag (Silver)	Max. 0.1 ppb
Al (Aluminium)	Max. 1 ppb	As (Arsenic)	Max. 0.5 ppb
Au (Gold)	Max. 0.1 ppb	B (Boron)	Max. 1 ppb
Ba (Barium)	Max. 0.1 ppb	Be (Beryllium)	Max. 0.1 ppb
Bi (Bismuth)	Max. 0.1 ppb	Ca (Calcium)	Max. 1 ppb
Cd (Cadmium)	Max. 0.5 ppb	Ce (Cerium)	Max. 0.1 ppb
Co (Cobalt)	Max. 0.5 ppb	Cr (Chromium)	Max. 1 ppb
Cs (Cesium)	Max. 0.1 ppb	Cu (Copper)	Max. 0.5 ppb
Dy (Dysprosium)	Max. 0.1 ppb	Er (Erbium)	Max. 0.1 ppb
Eu (Europium)	Max. 0.1 ppb	Fe (Iron)	Max. 1 ppb
Ga (Gallium)	Max. 0.1 ppb	Gd (Gadolinium)	Max. 0.1 ppb
Ge (Germanium)	Max. 0.1 ppb	Hf (Hafnium)	Max. 0.1 ppb
Hg (Mercury)	Max. 0.1 ppb	Ho (Holmium)	Max. 0.1 ppb
In (Indium)	Max. 0.1 ppb	K (Potassium)	Max. 1 ppb
La (Lanthanum)	Max. 0.1 ppb	Li (Lithium)	Max. 0.1 ppb
Lu (Lutetium)	Max. 0.1 ppb	Mg (Magnesium)	Max. 1 ppb
Mn (Manganese)	Max. 0.1 ppb	Mo (Molybdenum)	Max. 0.1 ppb
Na (Sodium)	Max. 1 ppb	Nb (Niobium)	Max. 0.1 ppb
Nd (Neodymium)	Max. 0.1 ppb	Ni (Nickel)	Max. 0.5 ppb
Pb (Lead)	Max. 0.1 ppb	Pd (Palladium)	Max. 0.5 ppb
Pr (Praseodymium)	Max. 0.1 ppb	Pt (Platinum)	Max. 0.5 ppb
Rb (Rubidium)	Max. 0.1 ppb	Re (Rhenium)	Max. 0.1 ppb
Rh (Rhodium)	Max. 0.5 ppb	Ru (Ruthenium)	Max. 0.5 ppb
Sb (Antimony)	Max. 0.5 ppb	Sc (Scandium)	Max. 0.1 ppb
Se (Selenium)	Max. 1 ppb	Sm (Samarium)	Max. 0.1 ppb
Sn (Tin)	Max. 0.5 ppb	Sr (Strontium)	Max. 0.1 ppb
Tb (Terbium)	Max. 0.1 ppb	Te (Tellurium)	Max. 0.1 ppb
Th (Thorium)	Max. 0.1 ppb	Ti (Titanium)	Max. 0.5 ppb
Tl (Thallium)	Max. 0.1 ppb	Tm (Thulium)	Max. 0.1 ppb
U (Uranium)	Max. 0.1 ppb	V (Vanadium)	Max. 0.5 ppb
W (Tungsten)	Max. 0.1 ppb	Y (Yttrium)	Max. 0.1 ppb

Cat. No.	Pk	Pack type
83872.270	500 ml	Plastic bottle
83872.290	1 l	Plastic bottle
83872.330	2,5 l	Plastic bottle

Nitric acid 65% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Boiling Pt: 120,5 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 65.0 %	Heavy metals (as Pb)	Max. 0.2 ppm
Ignition residue (SO_4)	Max. 5 ppm	Silica	Max. 0.2 ppm
Cl (Chloride)	Max. 0.5 ppm	PO_4 (Phosphate)	Max. 2 ppm
SO_4 (Sulphate)	Max. 1 ppm	Al (Aluminium)	Max. 0.1 ppm
As (Arsenic)	Max. 0.01 ppm	Ba (Barium)	Max. 0.05 ppm
Ca (Calcium)	Max. 1 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.05 ppm
Cu (Copper)	Max. 0.05 ppm	Fe (Iron)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm	Mg (Magnesium)	Max. 0.2 ppm
Mn (Manganese)	Max. 0.01 ppm	Mo (Molybdenum)	Max. 0.02 ppm
Na (Sodium)	Max. 3 ppm	Ni (Nickel)	Max. 0.05 ppm
Pb (Lead)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20429.245	1 l	Glass bottle SAFEBREAK
20429.291	1 l	Glass bottle
20429.320	2,5 l	Glass bottle
20429.427	2,5 l	Glass bottle SAFEBREAK
20429.460	25 l	Steel drum

Nitric acid 60% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Storage Temperature: Ambient

Assay	Min. 60.0 %	Density (20/4)	1.365 - 1.375
Heavy metals (as Pb)	Max. 0.2 ppm	Ignition residue (SO_4)	Max. 10 ppm
Cl (Chloride)	Max. 0.5 ppm	PO_4 (Phosphate)	Max. 2 ppm
SO_4 (Sulphate)	Max. 2 ppm	As (Arsenic)	Max. 0.01 ppm
Fe (Iron)	Max. 1 ppm	Mn (Manganese)	Max. 0.4 ppm
Pb (Lead)	Max. 0.05 ppm		

Cat. No.	Pk	Pack type
20423.291	1 l	Glass bottle
20423.360	5 l	Plastic bottle

Nitric acid 60% GPR RECTAPUR®

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Boiling Pt: ~120 °C (1013 hPa) **Melting Pt:** -22 °C **Density:** 1,37 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 60 %
Density (20/4)	1.366 - 1.380
Heavy metals (as Pb)	Max. 2 ppm
Ignition residue (SO_4)	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 10 ppm
As (Arsenic)	Max. 0.05 ppm
Fe (Iron)	Max. 2 ppm

Cat. No.	Pk	Pack type
20421.294	1 l	Glass bottle
20421.460	25 l	Steel drum
20421.551	200 l	Metal drum with liner

Nitric acid 52.5% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Storage Temperature: Ambient

Assay	52.5 - 54.0 %	Density (20/4)	1.325 - 1.335
Heavy metals (as Pb)	Max. 2 ppm	Ignition residue (SO_4)	Max. 10 ppm
Cl (Chloride)	Max. 0.5 ppm	PO_4 (Phosphate)	Max. 2 ppm
SO_4 (Sulphate)	Max. 2 ppm	As (Arsenic)	Max. 0.05 ppm
Fe (Iron)	Max. 1 ppm	Mn (Manganese)	Max. 0.4 ppm

Cat. No.	Pk	Pack type
20420.291	1 l	Glass bottle
20420.325	2,5 l	Glass bottle SAFEBREAK
20420.462	25 l	Steel drum

Nitric acid 52.5% GPR RECTAPUR®

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3 **M.W.** 63.01 g/mol
Storage Temperature: Ambient

Assay	52.5 - 54.0 %
Density (20/4)	1.325 - 1.335
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.02 %
Cl (Chloride)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20412.293	1 l	Glass bottle
20412.362	5 l	Plastic bottle

Nitric acid 20% Reag. Ph. Eur. 1058402

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3
M.W. 63.01 g/mol
Boiling Pt: ~86 °C (1013 hPa) **Melting Pt:** -42 °C **Density:** 1,2-1,4 g/cm³ (20°C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87880.180	100 ml	Plastic bottle

Nitric acid 0.1 mol concentrated solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3
M.W. 63.01 g/mol
Density: 1,38 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C) ..... 0.0998 - 0.1002 mol/l

Cat. No.	Pk	Pack type
32069.606	60 ml	Plastic ampoule

Nitric acid 1 mol/l (1 N) AVS TITRINORM® volumetric solution

Danger

CAS 7697-37-2 **UN:** 2031
HNO_3
M.W. 63.01 g/mol
Density: 1,035 g/cm³ (25 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30065.291	1 l	Glass bottle

NEW Nitrilotriacetate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84983.180	100 ml	Plastic bottle

2,2',2''-Nitrilotriethanol

See Triethanolamine (Trolamine) p.495

Nitrite (reagents for the analysis of)

Sulphanilic acid AnalaR NORMAPUR® analytical reagent p.468
Mercaptoacetic acid (Thioglycolic acid) GPR RECTAPUR® p.251

Nitrite standard solution, 1,000 mg/l NO_2^- in water (from $NaNO_2$) ARISTAR® standard for ion chromatography

(NO_2 in H_2O)

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458022S	100 ml	Plastic bottle
458024U	500 ml	Plastic bottle

Nitrite standard solution, 200 mg/l nitrite in water (from $NaNO_2$) ARISTAR® standard for ion chromatography

NO_2 in H_2O

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458092J	100 ml	Plastic bottle

NEW Nitrite 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84984.180	100 ml	Plastic bottle
84984.260	500 ml	Plastic bottle

NEW Nitrite (in N) 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84985.180	100 ml	Plastic bottle
84985.260	500 ml	Plastic bottle

Nitro blue tetrazolium chloride (NBT) Molecular biology grade

Warning

CAS 298-83-9
$C_{40}H_{30}Cl_2N_{10}O_6$ **M.W.** 817.65 g/mol
Melting Pt: 200 °C

Storage Temperature: Refrigerator

Assay ..... Min. 98.0 %
Appearance ..... Yellow powder
IR Spectrum ..... Passes test
Water ..... Max. 5.0 %
Sulphated ash ..... Max. 0.20 %
Absorptivity (256.6 nm) ..... Passes test
Control by TLC ..... Passes test

Cat. No.	Pk	Pack type
438592X	1 g	Glass bottle
438597T	100 g	Glass bottle

p-Nitroblue tetrazolium chloride

See Nitro blue tetrazolium chloride (NBT) p.320

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Nitrochromic reagent Reag. Ph. Eur. 1059100

Danger

UN: 3289
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87881.180	100 ml	Plastic bottle

Nitrogen (reagents for the analysis of) without catalyst

Copper (II) sulphate pentahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent..... p.99
Nessler Reagent for determination of ammonia and ammonium salts..... p.314
Sulphuric acid 95% AnalaR NORMAPUR® analytical reagent..... p.471

4-Nitrophenyl dihydrogen phosphate disodium salt hexahydrate

See di-Sodium 4-nitrophenyl phosphate hexahydrate..... p.430

(2-Nitrophenyl) β-D-galactopyranoside, ultrapure

CAS 369-07-3
$C_{12}H_{15}NO_8$
Storage Temperature: Freezer
Chromogenic substrate for the detection of β-galactosidase. Commonly used in ELISA. Absorbs at 410 nm.

Solubility (1%, Water)..... pass
Specific Rotation..... 185 °C - 190 °C

Cat. No.	Pk	Pack type
0789-5G	5 g	Glass bottle
0789-25G	25 g	Glass bottle

4-Nitrophenyl phosphate disodium salt hexahydrate

See di-Sodium 4-nitrophenyl phosphate hexahydrate..... p.430

p-Nitrophenyl phosphate disodium salt hexahydrate

See di-Sodium 4-nitrophenyl phosphate hexahydrate..... p.430

Nitrotetrazolium blue chloride

See Nitro blue tetrazolium chloride (NBT)..... p.320

NMP

See N-Methyl-2-pyrrolidone (NMP)..... p.263

N-(1-Naphthyl)ethylenediamine dihydrochloride

See N-2-Aminoethyl-1-naphthylamine dihydrochloride..... p.25

Nonidet® P 40 Substitute (NP-40), proteomics grade

Warning

CAS 9016-45-9
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 57-58 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Ambient
Non ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Density (20 °C)..... 1.05 - 1.07 g/ml
Protease..... NONE
Refractive Index..... 1.48 - 1.52
Solubility (5%, Water)..... PASS

Cat. No.	Pk	Pack type
M158-50ML	50 ml	Plastic bottle
M158-100ML	100 ml	Plastic bottle
M158-500ML	500 ml	Plastic bottle

Nonidet® P 40 Substitute (NP-40), reagent grade

Warning

CAS 9016-45-9
Boiling Pt: 290 °C (1013 hPa) **Melting Pt:** 57-58 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Ambient
Non ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Density (20°C)..... 1.05 g/ml - 1.07 g/ml
Refractive Index..... 1.48 - 1.52
Solubility (5%, Water)..... Pass

Cat. No.	Pk	Pack type
E109-50ML	50 ml	Plastic bottle
E109-100ML	100 ml	Plastic bottle
E109-500ML	500 ml	Plastic bottle

NP-40 lysis buffer, ultrapure

NP-40 Lysis Buffer is manufactured from Nonidet P-40 Substitute.

Cat. No.	Pk	Pack type
J619-500ML	500 ml	Plastic bottle

Norflurano, Cryo-Jet Lamb's freezing aerosol

Warning

CAS 811-97-2 **UN:** 3159
$C_2H_2F_4$ **M.W.** 102.03 g/mol
Boiling Pt: -26,2 °C (1013 hPa) **Melting Pt:** -101 °C **Density:** ~1,2 g/cm³ (20 °C)
Storage Temperature: Ambient
Formulation by Raymond A. Lamb

C.F.C. free aerosol, useful for quick cooling of paraffin blocks. It can be used for cryotomy for initial freezing of tissue before sectioning, replacing carbon dioxide, iso-pentane and liquid nitrogen.

Cat. No.	Pk	Pack type
361852T	275 ml	Aerosol can

Nuclear Fast Red TECHNICAL

CAS 6409-77-4
$C_{14}H_8NNaO_7S$ **M.W.** 357.28 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient

Identification..... Passes test

Cat. No.	Pk	Pack type
27416.101	5 g	Glass bottle

Nucleic acid purification

See Molecular biology

Nutrient Agar

See Microbiology

Nystatin for tissue culture, γ-irradiated

Warning

CAS 1400-61-9
$C_{47}H_{75}NO_{17}$
Storage Temperature: Freezer
Aseptically prepared, gamma-irradiated, tissue culture tested. Nystatin is a broad spectrum antimyctotic agent that alters membrane permeability in yeasts and moulds. 5 mg/ml solution when reconstituted in 10 ml of sterile, distilled water.

Loss on Drying..... 5.0 %
pH (3 %, Water) @25 °C..... 6.5 - 8.0
Potency (Anhydrous)..... 4400 U/mg

Cat. No.	Pk	Pack type
E474-10ML	10 ml	Vial

OCT mounting medium Q Path®

IVD

Storage Temperature: Ambient
High viscosity mounting media for cryotomy.

Appearance	Colourless liquid
Viscosity (20°C)	7500 - 9500 mPa.s
Viscosity (30°C)	5500 - 6500 mPa.s
Viscosity (40°C)	3000 - 4000 mPa.s
Viscosity (56-60°C)	1500 - 2500 mPa.s

Cat. No.	Pk	Pack type
00411243.	125 ml	Dosing Bottle (Plastic)

Octadecylic acid

See Stearic acid p.464

n-Octane GPR RECTAPUR®

Danger

CAS 111-65-9 **UN:** 1262
$H_3C(CH_2)_6CH_3$ **M.W.** 114.23 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** -57 °C **Density:** 0,703 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Boiling point	125 - 127 °C
Density (20/4)	0.700 - 0.710
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
26025.238	250 ml	Glass bottle
26025.466	25 l	Metal drum

n-Octane TECHNICAL

Danger

CAS 111-65-9 **UN:** 1262
$H_3C(CH_2)_6CH_3$ **M.W.** 114.23 g/mol
Boiling Pt: 126 °C (1013 hPa) **Melting Pt:** -57 °C **Density:** 0,703 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 95 %

Cat. No.	Pk	Pack type
26024.292	1 l	Glass bottle

1-Octanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC

Warning

CAS 5324-84-5
$C_8H_{17}NaO_3S$ **M.W.** 216.28 g/mol
Melting Pt: > 300 °C
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99 %
IR Spectrum	Passes test
pH (10 %)	5.5 - 7.5
Loss on drying (120°C; under vacuum)	Max. 2 %
Transmittance (200 nm) (0,005 mol/l)	Min. 70 %
Transmittance (220 nm) (0.005 mol/l)	Min. 90 %
Transmittance (250 nm) (0.005 mol/l)	Min. 98 %

Cat. No.	Pk	Pack type
152802T	25 g	Plastic bottle for solids
152803U	100 g	Plastic bottle for solids

1-Octanol, purified

Warning

CAS 111-87-5
$H_3C(CH_2)_6CH_2OH$ **M.W.** 130.23 g/mol
Boiling Pt: 195 °C (1013 hPa) **Melting Pt:** -16 °C **Density:** 0,8246 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Boiling point	194 - 196 °C
Density (20/4)	0.824 - 0.827

Cat. No.	Pk	Pack type
20850.296	1 l	Glass bottle

Octyl β-D-glucopyranoside, reagent grade

Warning

CAS 29836-26-8
$C_{14}H_{28}O_6$ **M.W.** 292.37 g/mol
Melting Pt: 110 °C
Storage Temperature: Freezer
Non ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Protease	none detected
Purity	>=98%
Solubility (10%, Water)	Pass
Specific Rotation	From -32 ° to -28 °

Cat. No.	Pk	Pack type
0479-5G	5 g	Glass bottle

Octyl β-D-thioglucopyranoside, ultrapure

CAS 85618-21-9
$C_{14}H_{28}O_5S$
Storage Temperature: Freezer
Non ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Purity	> = 98%
Solubility (5%, Water)	Pass
Specific Rotation (1%, MeOH)	(- 55°) - (-49°)

Cat. No.	Pk	Pack type

OGYE Agar

See Microbiology

Oil 10 S VOLTALEF®

See Oil 10 S..... p.355

Oil for baths

See Silicone

Oil of castor GPR RECTAPUR®

CAS 8001-79-4
Boiling Pt: 313 °C (1013 hPa) **Melting Pt:** -10 °C **Density:** 0,95 g/cm³ (20 °C)
Storage Temperature: Ambient

Solubility in methanol	Passes test
Acid value	Max. 1
Density (20/4)	0.950 - 0.970
Iodine value	80 - 95
Saponification value	170 - 190
Non-saponifiable matter	Max. 0.8 %

Cat. No.	Pk	Pack type
24667.290	1 l	Glass bottle
24667.368	5 l	Plastic container

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Oil of cedar wood (natural)

Warning

CAS 8000-27-9

Density: 0,98 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
23686.232	250 ml	Glass bottle

Oil of turpentine

See Turpentine oil p.504

Oil Red O, high purity

CAS 1320-06-5

$C_{26}H_{24}N_4O$

Melting Pt: >126 °C

Storage Temperature: Ambient

Em (Lambda Max, Toluene) ..... >= 24000

Cat. No.	Pk	Pack type
0684-250G	250 g	Glass bottle for solids

Oleic acid GPR RECTAPUR®, purified

CAS 112-80-1

$C_{18}H_{34}O_2$

M.W. 282.47 g/mol

Boiling Pt: 286 °C (1013 hPa) **Melting Pt:** 16,7 °C **Density:** 0,8946 g/cm³ (20 °C)

Storage Temperature: Freezer

Acid value ..... 198 - 240
Iodine value ..... 92 - 100
Linoleic acid (C18:2) ..... Max. 18 %
Oleic acid (C18:1) ..... Min. 72 %
Palmitic acid ..... Max. 8 %
Palmitoleic acid ..... Max. 1 %
Stearic acid ..... Max. 4 %

Cat. No.	Pk	Pack type
20447.293	1 l	Glass bottle
20447.362	5 l	Plastic bottle

OPD tablets 15 mg, ultrapure

Danger

UN: 1673

Widely used to detect horseradish peroxidase activity in ELISA and solution assays. Absorbs at 492 nm. Each tablet contains 15 mg of OPD.

Appearance ..... White tablets,
Conductivity (1tab/20ml Water) @25°C ..... 3170 umhos - 4300 umhos
Dissolution (1tab/20ml Water) ..... Pass
pH (1tab/20ml Water) @25°C ..... 3.7 - 4.5
Tablet Weight ..... 162 mg - 198 mg

Cat. No.	Pk	Pack type
J348-50T	50 Tab.	Glass bottle

Orange lead

See Lead (II,IV) oxide p.239

Orthoperiodic acid AnalaR NORMAPUR® analytical reagent

Danger

CAS 10450-60-9 **UN:** 3085

H_5IO_6

M.W. 227.94 g/mol

Melting Pt: 122 °C **Density:** 1,3875 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.5 %
Ignition residue (SO_4) ..... Max. 0.2 %
SO_4 (Sulphate) ..... Max. 100 ppm
Insolubility in water ..... Max. 50 ppm
Cl + ClO_3 + Br + BrO_3 (as Cl) ..... Max. 0.02 %

Cat. No.	Pk	Pack type
20593.151	50 g	Plastic bottle for solids
20593.180	100 g	Plastic bottle for solids

Orthoperiodic acid GPR RECTAPUR®

Danger

CAS 10450-60-9 **UN:** 3085

H_5IO_6

M.W. 227.94 g/mol

Melting Pt: 122 °C **Density:** 1,3875 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 97 %
Ignition residue (SO_4) ..... Max. 0.5 %

Cat. No.	Pk	Pack type
20592.124	10 g	Plastic bottle for solids
20592.181	100 g	Plastic bottle for solids

Orthoperiodic acid 50% GPR RECTAPUR®

Danger

CAS 10450-60-9 **UN:** 3098

H_5IO_6

M.W. 227.94 g/mol

Assay ..... 48 - 53 %

Cat. No.	Pk	Pack type
294604D	100 ml	Glass bottle

Orthoperiodic acid 0.002 mol/l in acetic acid Reag. Ph. Eur. 1063000

Danger

CAS 10450-60-9 **UN:** 2920

H_5IO_6

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87887.180	100 ml	Plastic bottle

Orthophosphoric acid 85% HiPerSolv CHROMANORM® for HPLC

Danger

CAS 7664-38-2 **UN:** 1805

H_3PO_4

Melting Pt: 28 °C **Density:** 1,689 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 85.0 %
Volatile acids ..... Max. 0.0002 meq/g
Fe (Iron) ..... Max. 10 ppm
Pb (Lead) ..... Max. 2 ppm
Transmittance (254 nm) (0,1 mol/l) ..... Min. 80 %

Cat. No.	Pk	Pack type
153154D	250 ml	Glass bottle

Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4

Melting Pt: 28 °C **Density:** 1,689 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	85.0 - 90.0 %
Hypophosphorous and phosphorous acids Ph.Eur.	Passes test
Identification B	Passes test Ph.Eur.
Colouration	Max. 10 APHA
Volatile acids	Max. 0.0002 meq/g
Insoluble substances	Max. 10 ppm
Substances reducing $KMnO_4$ (as O)	Max. 10 ppm
Cl (Chloride)	Max. 2 ppm
NO_2 (Nitrite)	Max. 0.05 ppm
SO_4 (Sulphate)	Max. 30 ppm
Ca (Calcium)	Max. 20 ppm
Co (Cobalt)	Max. 1 ppm
Fe (Iron)	Max. 5 ppm
Mg (Magnesium)	Max. 10 ppm
Na (Sodium)	Max. 0.025 %
Pb (Lead)	Max. 1 ppm
Zn (Zinc)	Max. 2 ppm
Conforms to Reag. Ph.Eur.	Passes test
Appearance of solution S	Passes test Ph.Eur.
Identification A	Passes test Ph.Eur.
Substances precipitated with ammonia . Ph.Eur.	Passes test
Density (20/4)	1.680 - 1.710
Heavy metals (as Pb)	Max. 5 ppm
Reducing substances (as H3PO3)	Max. 50 ppm
Silica	Max. 0.025 %
F (Fluoride)	Max. 1 ppm
NO_3 (Nitrate)	Max. 5 ppm
As (Arsenic)	Max. 0.5 ppm
Cd (Cadmium)	Max. 1 ppm
Cu (Copper)	Max. 1 ppm
K (Potassium)	Max. 5 ppm
Mn (Manganese)	Max. 0.5 ppm
Ni (Nickel)	Max. 1 ppm
Sb (Antimony)	Max. 5 ppm
Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
20624.262	500 ml	Glass bottle
20624.295	1 l	Glass bottle
20624.310	1 l	Plastic bottle
20624.330	2,5 l	Plastic bottle
20624.420	2,5 l	Glass bottle

Orthophosphoric acid 85 % Ph. Eur.

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4

Melting Pt: 28 °C **Density:** 1,689 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	84.0 - 90.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Substances precipitated with ammonia	Passes test
Hypophosphorous and phosphorous acids	Passes test
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 2 ppm
Fe (Iron)	Max. 50 ppm
Heavy metals (as Pb)	Max. 10 ppm
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
20626.292	1 l	Glass bottle
20626.361	5 l	Plastic container
20626.463	25 l	Plastic drum

Orthophosphoric acid 85% GPR RECTAPUR®

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4

Melting Pt: 28 °C **Density:** 1,689 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	85 - 87 %
Density (20/4)	1.680 - 1.710
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 5 ppm
NO_3 (Nitrate)	Max. 10 ppm
$PO_3 + PO_2$ (as H_3PO_3)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.035 %
Ca + Mg (as Ca)	Max. 100 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
20621.290	1 l	Plastic bottle
20621.320	2,5 l	Glass bottle SAFEBREAK
20621.330	2,5 l	Plastic bottle
20621.364	5 l	Plastic bottle
20621.460	25 l	Plastic drum

Orthophosphoric acid 85% TECHNICAL

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4

Melting Pt: 28 °C **Density:** 1,689 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 85 %

Cat. No.	Pk	Pack type
90045.5000	5 l	Plastic container

Orthophosphoric acid 85% VLSI Selectipur® for the electronics industry

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4

Melting Pt: 28 °C **Density:** 1.71 to 1.87 g/cm³ (25 °C)

Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
51151401.	2,5 l	Plastic bottle

Orthophosphoric acid 75% GPR RECTAPUR®

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4

Density: 1,689 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	75 - 78 %
Density (20/4)	1.579 - 1.610
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
20623.292	1 l	Glass bottle
20623.361	5 l	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Orthophosphoric acid 25% TECHNICAL

Danger

CAS 7664-38-2 **UN:** 1805
H_3PO_4
Density: 1,1462 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... 24 - 26 %

Cat. No.	Pk	Pack type
20629.463	25 l	Plastic drum

Orthophosphoric acid 10% Reag. Ph. Eur. 1065101

Warning

CAS 7664-38-2 **UN:** 1805
H_3PO_4
Density: 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87895.180	100 ml	Plastic bottle

Orthophosphoric acid 10% TECHNICAL

Warning

CAS 7664-38-2 **UN:** 1805
H_3PO_4
Density: 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 10 %
Appearance ..... Clear colourless liquid

Cat. No.	Pk	Pack type
31142.294	1 l	Plastic bottle

Orthophosphoric acid 150 ml/l AVS TITRINORM® for TOC

Warning

CAS 7664-38-2 **UN:** 1805
H_3PO_4
Density: 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
310337.2500	2,5 l	Glass bottle

Ovalbumin

See Albumin from chicken egg, technical grade..... p.22

NEW Oxalate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84986.180	100 ml	Plastic bottle

Oxalic acid dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 6153-56-6 **UN:** 3261
$HO_2CCO_2H{\cdot}2H_2O$
M.W. 126.07 g/mol
Boiling Pt: 149-160 °C (1013 hPa) **Melting Pt:** 101 °C **Density:** 1,65 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119534576-33

Assay	99.5 - 102.5 %	IR Spectrum	Passes test
Reaction with sulphuric acid	Passes test	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 100 ppm	Insolubility in water	Max. 50 ppm
Total N (Nitrogen)	Max. 10 ppm	Cl (Chloride)	Max. 5 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ca (Calcium)	Max. 10 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 2 ppm
Mg (Magnesium)	Max. 5 ppm	Pb (Lead)	Max. 5 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
20562.234	250 g	Plastic bottle for solids
20562.260	500 g	Plastic bottle for solids
20562.291	1 kg	Plastic bottle for solids

Oxalic acid dihydrate GPR RECTAPUR®

Warning

CAS 6153-56-6 **UN:** 3261
$HO_2CCO_2H{\cdot}2H_2O$
M.W. 126.07 g/mol
Boiling Pt: 149-160 °C (1013 hPa) **Melting Pt:** 101 °C **Density:** 1,65 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119534576-33

Assay..... Min. 99 %
Heavy metals (as Pb) ..... Max. 10 ppm
Ignition residue (SO_4)..... Max. 0.05 %
Fe (Iron)..... Max. 20 ppm

Cat. No.	Pk	Pack type
20558.296	1 kg	Plastic bottle for solids
20558.365	5 kg	Bucket (Plastic)

Oxalic acid dihydrate TECHNICAL

Warning

CAS 6153-56-6 **UN:** 3261
$HO_2CCO_2H{\cdot}2H_2O$
M.W. 126.07 g/mol
Boiling Pt: 149-160 °C (1013 hPa) **Melting Pt:** 101 °C **Density:** 1,65 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119534576-33

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
20555.296	1 kg	Plastic bottle for solids
20555.365	5 kg	Bucket (Plastic)

Oxalic acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 144-62-7
$H_2C_2O_4$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30086.293	1 l	Plastic bottle

Oxalic acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 144-62-7
$H_2C_2O_4$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30093.297	1 l	Plastic bottle

NEW Oxalic acid (6.3%) in aqueous solution USP test solutions (TS)

CAS 144-62-7 **UN:** 3265
$C_2H_2O_4$
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85358.180	100 ml	Glass bottle
85358.260	500 ml	Glass bottle

Oxalic acid 0.5% in sulphuric acid 50% (v/v) Reag. Ph. Eur. 1061401

Danger

CAS 144-62-7 **UN:** 2796
$H_2C_2O_4$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87883.290	1 l	Plastic bottle

Oxalic acid ammonium salt monohydrate

See di-Ammonium oxalate monohydrate p.37

Oxalic acid iron (II) salt dihydrate

See Iron (II) oxalate dihydrate p.225

Oxalic acid potassium salt monohydrate

See di-Potassium oxalate monohydrate p.372

NEW Oxidase swabs in metallic bags

Swabs imprenated with reagent for the detection and verification of bacterial cytochrome oxidase.

- 2×25 swabs

Cat. No.	Pk	Pack type
942152ZF	50	Pouch

VWR LIFE SCIENCE 2-Oxoglutaric acid, high purity

Danger

CAS 328-50-7
$HOOCCH_2CH_2COCOOH$ **M.W.** 146.1 g/mol
Boiling Pt: 323 °C (1013 hPa) **Melting Pt:** 112-116 °C
Storage Temperature: Refrigerator

Arsenic ..... < 0.0001 %
Ash ..... <= 0.07 %
Chloride ..... < 0.02 %
Heavy Metals (as Pb) ..... < 0.002 %
Loss on Drying ..... <= 0.5 %
Purity ..... > 99.5 %
Solubility (1%, Water) ..... pass
Sulphate ..... < 0.03 %

Cat. No.	Pk	Pack type
0216-250G	250 g	Plastic bottle for solids

2-Oxopropionic acid sodium salt

See Sodium pyruvate p.433

2,2'-Oxybisethane

See Diethyl ether p.114

2,2'-Oxydiethane

See Diethyl ether p.114

PAH Mix 1, EPA 610

Multi-component standard with 0.1 mg/ml of each component in methanol.

16 components: Acenaphthene Chrysene; Acenaphthylene Dibenz[a,h] anthracene; Anthracene Fluoranthene; Benzo[a]anthracene Fluorene; Benzo[a]pyrene Indeno[1,2,3-cd]pyrene; Benzo[b]fluoranthene Naphthalene; Benzo[g,h,i]perylene Phenanthrene; Benzo[k]fluoranthene Pyrene

Cat. No.	Pk	Pack type
124812X	1 ml	Vial

Polynuclear Aromatic Hydrocarbons (PAH) Mix 3

16 components

5 µg/ml : Benzo(k)fluoranthene
10 µg/ml : Benzo(a)pyrene; Dibenz(a,h)anthracene; Fluoranthene; Benz(a) anthracene; Benzo(b)fluoranthene; Benzo(g,h,i)perylene; Indeno(1,2,3-cd) pyrene; Chrysene; Pyrene
100 µg/ml : Fluorene; Naphthalene; Acenaphthylene; Anthracene; Phenanthrene; Acenaphthene

Description	Pk	Cat. No.
PAH mix in acetonitrile, 16 components	1 ml	124832S

Palcam Listeria Agar

See Microbiology

NEW Palladium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Palladium	1000 ppm	10% HCl	Plastic bottle	100 ml	457371K
Palladium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85587.180

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Palladium standard solution, 10,000 mg/l Pd in 10% hydrochloric acid (from Pd) ARISTAR® standard for ICP

Pd in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455772X	100 ml	Plastic bottle

Palladium standard solution, 1,000 mg/l Pd in 10% hydrochloric acid (from Pd) ARISTAR® standard for ICP

Pd in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455762M	100 ml	Plastic bottle
455764X	500 ml	Plastic bottle

Palladium standard solution, 1,000 mg/l Pd in 5% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86700.180	100 ml	Plastic bottle
86700.260	500 ml	Plastic bottle

Palladium (II) chloride 59% Pd

Warning

CAS 7647-10-1 **UN:** 3260

$PdCl_2$ **M.W.** 177.33 g/mol

Melting Pt: 678 °C **Density:** 4 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on dried substance) ..... Min. 99 %

Cat. No.	Pk	Pack type
26136.083	1 g	Glass bottle

Palladium (II) chloride 0.4% in hydrochloric acid 13.5% Reag. Ph. Eur. 1061501

Warning

CAS 7647-10-1 **UN:** 3264

$PdCl_2$ **M.W.** 177.33 g/mol

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87884.180	100 ml	Plastic bottle

Palladium dichloride

See Palladium (II) chloride p.327

Pancreatin, 150 U/mg, technical grade

Cat. No.	Pk	Pack type
26145.186	100 g	Plastic bottle for solids

Papanicolaou's solution EA 50 Q Path® for microscopy

Danger IVD

UN: 1992

Density: 0,82 g/cm³ (20 °C)

Storage Temperature: Ambient

Ready to use solution for Papanicolaou cytological staining.

IVD registered. Instructions for use on vwr.com- just search for the product.

Appearance ..... Clear liquid
Cyanophilic cytoplasm ..... Blue-green
Eosinophilic cytoplasm ..... Pink
Nuclei ..... Blue to dark violet
Suitable for microscopy (vaginal smear) ..... Passes test

Cat. No.	Pk	Pack type
10047011.	450 ml	Pouch
10047111.	2,5 l	Plastic bottle
00607141.	5 l	Bag-in-box (Cubitainer)

Papanicolaou's solution (OG 6) Q Path® for microscopy

Danger IVD

UN: 1170

Storage Temperature: Ambient

Ready to use solution for Papanicolaou cytological staining in easy to use and safe pouch.

Appearance ..... Clear liquid
Colour of solution ..... Orange
Density (20/4) ..... 0,82 - 0,834
pH (20°C) ..... 7,3 - 8,5
Absorbance (0.5 %) ..... 469 - 486 nm

Cat. No.	Pk	Pack type
10047010.	450 ml	Pouch
10047110.	2,5 l	Plastic container
00607136.	5 l	Bag-in-box (Cubitainer)

Paraffin, solidification point 52-54°C, pellets Ph. Eur.

CAS 8002-74-2

Melting Pt: 52-54 °C **Density:** 0,9 g/cm³ (20 °C)

Appearance ..... White mass
Identification A ..... Passes test
Melting point ..... 50 - 61 °C
Acidity or alkalinity ..... Passes test
Polycyclic aromatic hydrocarbons ..... Passes test
SO_4 (Sulphate) ..... Max. 150 ppm
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
26157.291	1 kg	Plastic bottle for solids

Paraffin, solidification point 52-54°C, pellets TECHNICAL

CAS 8002-74-2

Melting Pt: 52-54 °C **Density:** 0,9 g/cm³ (20 °C)

Melting point ..... 52 - 54 °C

Cat. No.	Pk	Pack type
26155.294	1 kg	Plastic bottle for solids

Wax Cyto-paraffin 56-58°C MICROCOLOR® for histology

CAS 8002-74-2

Melting Pt: 56-58 °C **Density:** 0,9 g/cm³ (20 °C)

Contains 0,05% of yellow beeswax

Identification ..... Passes test

Cat. No.	Pk	Pack type
26177.290	1 kg	Plastic bottle for solids

Paraffin, solidification point 58-60°C, granules TECHNICAL

CAS 8002-74-2

Melting Pt: 58-60 °C **Density:** 0,9 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
26154.291	1 kg	Plastic bottle for solids

Wax Paramat extra, in pastille form GURR® for histology

CAS 8002-74-2

Paraffin wax blended with synthetic polymers and DMSO

Appearance (molten after 7 days; 65°C) ..... Clear
Cutting/ribboning ..... Passes test
Congealing temperature ..... 55 - 58 °C

Cat. No.	Pk	Pack type
361337F	25 kg	Plastic bag

Paraffin Q Path® for microscopy

IVD

CAS 8002-74-2

Wax (56-58 °C) for embedding and tissue processing of histological samples.

Cat. No.	Pk	Pack type
10048500.	1 kg	Plastic bag
10048501.	2,5 kg	Plastic bag
10048502.	8 kg	Cardboard carton

Paraffin, liquid Ph. Eur.

CAS 8012-95-1

Boiling Pt: 300-500 °C (1013 hPa) **Density:** 0,86 g/cm³ (20 °C)

Storage Temperature: Ambient

Appearance ..... Clear oily liquid
Identification A ..... Passes test
Acidity or alkalinity ..... Passes test
Relative density ..... 0.81 - 0.875
Viscosity ..... 25 - 80 mPa.s
Polycyclic aromatic hydrocarbons ..... Passes test
Readily carbonisable substances ..... Passes test
Solid paraffins ..... Passes test
Residual solvents ..... Unlikely by manuf.process

Cat. No.	Pk	Pack type
8577.5000	5 l	Plastic container

Paraffin, liquid GPR RECTAPUR®

CAS 8012-95-1

Boiling Pt: 300-500 °C (1013 hPa) **Density:** 0,86 g/cm³ (20 °C)

Storage Temperature: Ambient

Polycyclic aromatic hydrocarbons ..... Passes test
Readily carbonisable substances ..... Passes test
Solid paraffins ..... Passes test
Acidity ..... Max. 0.002 meq/g
Colouration ..... Max. 20 APHA
Density (20/4) ..... 0.850 - 0.885
Viscosity (40°C) ..... Min. 34.5 cSt
Ignition residue (SO_4) ..... Max. 0.1 %

Cat. No.	Pk	Pack type
24679.291	1 l	Plastic bottle
24679.320	2,5 l	Plastic bottle
24679.360	5 l	Plastic bottle
24679.462	25 l	Plastic drum

Paraffin, liquid

Sterile liquid paraffin is mostly used in microbiology as a vehicle to improve the anaerobic culture media as : O / F, decarboxylase medium, MIO, etc. Typically the product (approx 2 ml) is aseptically dispensed on the surface of the sterile culture medium in a culture tube.

- Supplied in a tightly closed container with good seal, protected from light
- Colourless

Description	Pk	Cat. No.
Paraffin, sterile, 100 ml	100 ml	301440ZK

Paraffin, liquid TECHNICAL

CAS 8012-95-1

Boiling Pt: 300-500 °C (1013 hPa) **Density:** 0,86 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24677.294	1 l	Plastic bottle
24677.363	5 l	Plastic container

Paraffin, highly liquid, colourless GPR RECTAPUR®

CAS 8012-95-1

Boiling Pt: 300-450 °C (1013hPa) **Density:** 0,86 g/cm³ (20 °C)

Storage Temperature: Ambient

Density (20/20) ..... 0.818 - 0.875
Viscosity (40°C) ..... Max. 33.5 cSt

Cat. No.	Pk	Pack type
294365H	2,5 l	Plastic bottle

Paraformaldehyde, powder TECHNICAL

Warning

CAS 30525-89-4 **UN:** 2213

$(CH_2O)n$ **M.W.** 30.03 g/mol

Boiling Pt: 135-136 °C (13torr) **Melting Pt:** 120-170 °C **Density:** 0,88 g/cm³ (25 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
28794.295	1 kg	Plastic bottle for solids
28794.364	5 kg	Bucket (Plastic)
28794.460	25 kg	Plastic drum

Pararosaniline solution, decolourised Reag. Ph. Eur. 1062201

Danger

Boiling Pt: ~100 °C (1013 hPa) **Density:** 1,01 g/cm³ (20 °C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87885.180	100 ml	Plastic bottle

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Patent blue V calcium salt TECHNICAL

CAS 3536-49-0
$C_{54}H_{62}CaN_4O_{14}S_4$ **M.W.** 1159.45 g/mol
Melting Pt: 200 °C
Storage Temperature: Ambient
Identification ..... Passes test

Cat. No.	Pk	Pack type
34233.128	10 g	Glass bottle

Patton-Reeders reagent (Calconcarboxylic acid) analytical reagent

Warning

CAS 3737-95-9
$C_{21}H_{14}N_2O_7S$ **M.W.** 438.42 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient
Metal indicator; 3-Hydroxy-4-(2-hydroxy-4-sulfo-1-naphthylazo) naphthalene-2-carboxylic acid ; calconcarboxylic acid
Suited for calcium reagent ..... Passes test

Cat. No.	Pk	Pack type
20326.136	25 g	Plastic bottle for solids

PBS tablets, buffer, Biotechnology Grade

Pre-measured tablets for convenient preparation of 1X PBS solution, pH 7,3 - 7,5.

Each tablet, when dissolved in 100 ml of water, prepares 1X PBS solution containing 137 mM sodium chloride, 2,7 mM potassium chloride, and 10 mM phosphate buffer.

Cat. No.	Pk	Pack type
E404-100TABS	100 Tab.	Plastic bottle for solids
E404-200TABS	200 Tab.	Plastic bottle for solids

PBS and TBS Wash buffers

Wash buffers ideal for use in applications such as Western blotting and ELISA. Prevent high background by effectively removing unbound reagents.

Description	Pk	Cat. No.	Pack type
PBS powder, each pack prepares 1 litre of 10X concentrate	2	0780-2PK	Pouch
TBS, 20X Ready-Pack™, each pack prepares 1 litre of 20X concentrate	2	0788-2PK	Pouch
PBS buffer solution 20X concentrate (phosphate buffered saline) ultra pure grade	500 ml	E703-500ML	Plastic bottle
PBS, 20X liquid concentrate, prepares 20 litres of 1X buffer	1 l	E703-1L	Plastic bottle
TBS, 20X liquid concentrate, prepares 80 litres of 1X buffer	4 l	J640-4L	Bag-in-box (Cubitainer)
PBS powder, sufficient to prepare 10 litres of 1X buffer	10 l	0780-10L	Plastic bottle for solids
PBS powder, sufficient to prepare 50 litres of 1X buffer	50 l	0780-50L	Plastic bottle for solids

Buffer, PBS solution 10X concentrate (phosphate buffered saline), ultrapure

- No DNases, RNasaes or proteases detected

pH @ 25 °C (10% in water) 7.3 - 7.5
Conductivity (10% in water) 14000 - 17000 mhos
Conductivity (10% in water) mhos 14,000 - 17,000

Cat. No.	Pk	Pack type
J373-4L	4 l	Bag-in-box (Cubitainer)

Buffer, PBS solution 10X concentrate (phosphate buffered saline), USP sterile, ultrapure

Dulbecco's formulation.

- No DNases, RNasaes or proteases detected
- Sterile

Product tested according to USP specification

pH @ 25 °C (1:10 water) 6.6 - 7.2

Cat. No.	Pk	Pack type
K813-500ML	500 ml	Plastic bottle

Buffer, PBS solution (phosphate buffered saline), ultrapure

Dulbecco's formulation without calcium and magnesium.

- No DNases, RNasaes or proteases detected

137.7 mM sodium chloride, 2.7 mM potassium chloride, 9.55 mM phosphate buffer

pH @ 25 °C 7.1 - 7.7

Cat. No.	Pk	Pack type
K812-20L	20 l	Bag-in-box (Cubitainer)
K812-500ML	500 ml	Plastic bottle

Phosphate buffered saline (PBS) 1X, for biotechnology

137 mM sodium chloride, 2.7 mM potassium chloride, 12 mM phosphate buffer

- Sterile
- pH 7,4

Description	Cat. No.	Pk	Pack type
Phosphate buffered saline (PBS), 1X solution, sterile, pH 7,4	E504-100ML	100 ml	Plastic bottle
Phosphate buffered saline (PBS), 1X solution, sterile, pH 7,4	E504-500ML	500 ml	Plastic bottle

Phosphate buffered saline (PBS), high phosphate

Irradiated solution, pH 7.2, for washing blots.

- NaCl 8.77 g/l
- Na_2HPO_4, $12H_20$ 19.2 g/l
- NaH_2PO_4, $2H_2O$ 6.55g/l

Cat. No.	Pk	Pack type
444037E	10 l	Bag-in-box (Cubitainer)

Phosphate buffered saline (PBS), low phosphate

Irradiated solution for use in washing cells.

- KCl 0.2 g/l
- NaCl 7.01 g/l
- Na_2HPO_4, $12H_20$ 1.28 g/l
- NaH_2PO_4, $2H_2O$ 0.44g/l

Cat. No.	Pk	Pack type
444057Y	10 l	Bag-in-box (Cubitainer)

Phosphate buffered saline (PBS), low phosphate, 10X

Irradiated concentrate of PBS, suitable for use in washing cells after dilution.

- KCl 2.0 g/l
- NaCl 70.1 g/l
- Na_2HPO_4, $2H_20$ 12.8 g/l
- NaH_2PO_4, $1H_2O$ 4.4g/l

Add 1 ml of 10xPBS to 9 ml of water to give a 1xPBS solution

pH (20°C): 6.90 - 7.30

Cat. No.	Pk	Pack type
437117K	10 l	Bag-in-box (Cubitainer)

PBS/Tween® buffer concentrate, 20X

PBS Tween® 20 blot wash buffer is a 20X concentration with 1% Tween® 20. When diluted down to a 1X concentration, 0.05% Tween® 20 is present. Concentrate (500 ml) prepares 10 litres of a 1X buffer.

- Prevents high background by efficiently removing unbound reagents
- Convenient liquid concentrate for blotting and ELISA applications

pH (1:20, water) @ 25 °C 7.50 - 7.70

Cat. No.	Pk	Pack type
K875-500ML	500 ml	Plastic bottle

Wash buffer, PBS with 0,05% Tween® 20, pH 7,4

Pre-blended buffer supplied as a ready to use pouch. Each pack prepares 1 litre of 1X PBS/Tween® 20 solution (10 mmol phosphate buffer, 137 mmol sodium chloride, 2.7 mmol potassium chloride, 0.05% Tween® 20) when pouch contents are added to 1 litre of water.

Conductivity@25 °C (10.38g/l water) 5.5 - 16.5

pH@25 °C (10.38g/l water) 7.2 - 7.6

Cat. No.	Pk	Pack type
M245-10.4G-5PK	1 KIT	Pouch

PBS-Tween® wash buffer, pH 7,5, ultrapure

Phosphate Buffered Saline (PBS) with 0.05% Tween® 20, pH 7.5 is a ready-to-use 1X concentration.

Cat. No.	Pk	Pack type
E715-1L	1 l	Plastic bottle
E715-500ML	500 ml	Plastic bottle

PCA

See Microbiology

PCA agar

See Microbiology

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Taq **DNA Polymerase**

VWR® *Taq* DNA Polymerase is an ultra-pure, thermostable, recombinant DNA polymerase, which provides robust PCR performance in a wide range of PCR applications, without time-consuming optimisation. The enzyme is isolated from *Thermus aquaticus* and has a molecular weight of approximately 94 kDa. VWR® *Taq* DNA Polymerase has both a 5′ - 3′ DNA polymerase and a double strand 5′ - 3′ exonuclease activity. It leaves an A overhang, which makes the enzyme ideal for TA cloning. VWR® Red *Taq* DNA Polymerase is a blend of *Taq* DNA polymerase combined with an inert red dye. The dye enables quick visual recognition of reactions to which enzyme has been added, as well as confirmation of complete mixing. A glycerol-free *Taq* DNA Polymerase is also available for automation and freeze drying.

- Most suitable choice for routine applications
- High performance, thermostable DNA polymerase
- Optimal for TA cloning

Taq DNA polymerase concentration: 5 Units/µl

10X Key Buffer: Tris-HCl pH 8,5, $(NH_4)_2SO_2$, 15 mM $MgCl_2$, 1% Tween-20®
10X Extra Buffer: Tris-HCl pH 8,3, KCl, 15 mM $MgCl_2$, 1% Triton X-100
10X Mg-Free Key Buffer: Tris-HCl pH 8,5, $(NH_4)_2SO_2$, 1% Tween-20®
10X Mg-Free Extra Buffer: Tris-HCl pH 8,3, KCl, 1% Triton X-100

EU = Units

Description	Pk	Cat. No.
Taq DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	250 EU	733-1300
Taq DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	500 EU	733-1301
Taq DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	1.000 EU	733-1302
Taq DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	2.500 EU	733-1819
Taq DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	5.000 EU	733-1820
Taq DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	10.000 EU	733-1303
Taq DNA Polymerase, 10X $MgCl_2$-free Key Buffer, 25 mM $MgCl_2$	500 EU	733-1311
Taq DNA Polymerase, 10X $MgCl_2$-free Key Buffer, 25 mM $MgCl_2$	1.000 EU	733-1312
Taq DNA Polymerase, 10X $MgCl_2$-free Key Buffer, 25 mM $MgCl_2$	2.500 EU	733-1313
Taq DNA Polymerase, 10X $MgCl_2$-free Key Buffer, 25 mM $MgCl_2$	10.000 EU	733-2009
Taq DNA Polymerase, 10X $MgCl_2$-free Extra Buffer, 25 mM $MgCl_2$	500 EU	733-1304
Taq DNA Polymerase, 10X $MgCl_2$-free Extra Buffer, 25 mM $MgCl_2$	1.000 EU	733-1305
Taq DNA Polymerase, 10X Tween-free Key Buffer (15 mM $MgCl_2$), 10X Triton-free Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	500 EU	733-2407
Taq DNA Polymerase, 10X Tween-free Key Buffer (15 mM $MgCl_2$), 10X Triton-free Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	1.000 EU	733-1307
Taq DNA Polymerase, 10X Tween-free Key Buffer (15 mM $MgCl_2$), 10X Triton-free Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	10.000 EU	733-1823
Red *Taq* DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	500 EU	733-2408
Red *Taq* DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	1.000 EU	733-2409
Red *Taq* DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	2.500 EU	733-1323
Red *Taq* DNA Polymerase, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	10.000 EU	733-1834
Taq DNA Polymerase, glycerol-free, without Key or Extra Buffer, 25 mM $MgCl_2$	5.000 EU	733-1999
Taq DNA Polymerase, glycerol-free, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	500 EU	733-2410
Taq DNA Polymerase, glycerol-free, 10X Key Buffer (15 mM $MgCl_2$), 10X Extra Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	1.000 EU	733-1817

Taq **DNA Polymerase Master Mix**

VWR® *Taq* DNA Polymerase Master Mix is a ready to use 1,1X or 2X reaction mix. Simply add primers, template and water to carry out primer extensions and other molecular biology applications.

VWR® Red *Taq* DNA Polymerase Master Mix, which also contains an inert red dye, can be directly loaded onto an agarose gel without addition of electrophoresis loading buffers.

Tests = Reactions

Description	Pk	Cat. No.
Taq DNA Polymerase 1,1X Master Mix, 1,5 mM $MgCl_2$	500 Tests	733-2540
Taq DNA Polymerase 1,1X Master Mix, 1,5 mM $MgCl_2$	2.500 Tests	733-1314
Taq DNA Polymerase 1,1X Master Mix, 2,0 mM $MgCl_2$	500 Tests	733-2541
Taq DNA Polymerase 1,1X Master Mix, 2,0 mM $MgCl_2$	2.500 Tests	733-1315
Taq DNA Polymerase 2X Master Mix, 1,5 mM $MgCl_2$	500 Tests	733-2542
Taq DNA Polymerase 2X Master Mix, 1,5 mM $MgCl_2$	2.500 Tests	733-1316
Taq DNA Polymerase 2X Master Mix, 2,0 mM $MgCl_2$	500 Tests	733-2543
Taq DNA Polymerase 2X Master Mix, 2,0 mM $MgCl_2$	2.500 Tests	733-1317
Red *Taq* DNA Polymerase 1,1X Master Mix, 1,5 mM $MgCl_2$	500 Tests	733-2544
Red *Taq* DNA Polymerase 1,1X Master Mix, 1,5 mM $MgCl_2$	2.500 Tests	733-1318
Red *Taq* DNA Polymerase 1,1X Master Mix, 2,0 mM $MgCl_2$	500 Tests	733-2545
Red *Taq* DNA Polymerase 1,1X Master Mix, 2,0 mM $MgCl_2$	2.500 Tests	733-1319
Red *Taq* DNA Polymerase 2X Master Mix, 1,5 mM $MgCl_2$	5.000 Tests	733-2130
Red *Taq* DNA Polymerase 2X Master Mix, 1,5 mM $MgCl_2$	2.500 Tests	733-1320
Red *Taq* DNA Polymerase 2X Master Mix, 1,5 mM $MgCl_2$	500 Tests	733-2546
Red *Taq* DNA Polymerase 2X Master Mix, 1,5 mM $MgCl_2$	10.000 Tests	733-2131
Red *Taq* DNA Polymerase 2X Master Mix, 2,0 mM $MgCl_2$	500 Tests	733-2547
Red *Taq* DNA Polymerase 2X Master Mix, 2,0 mM $MgCl_2$	2.500 Tests	733-1321

TEMPase Hot Start 2X Master Mix

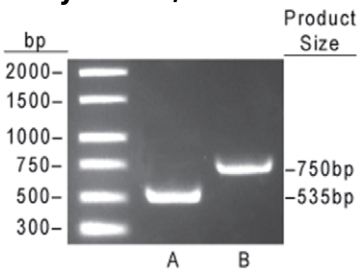
TEMPase Hot Start DNA Polymerase Master Mix and Blue TEMPase Master Mix are good alternatives to TEMPase Hot Start DNA Polymerase. The master mixes offer easy reaction assembly at room temperature, reduced set-up time and fewer handling steps, which lead to increased reproducibility. As a consequence TEMPase Hot Start DNA Polymerase Master Mix is highly suited for standard tests.

The blue loading dye in Blue TEMPase Hot Start DNA Polymerase Master Mix facilitates direct gel loading and eliminates the need for separate loading dye - no need for time-consuming sample preparation before electrophoresis.

Ready-to-use GC TEMPase 2X Master Mixes I and II are designed for amplification of GC-rich sequences. Multiplex 2X Master Mix is composed of TEMPase Hot Start DNA Polymerase and a specialised buffer system designed for multiplex PCR.

Description	Pk	Cat. No.
TEMPase Hot Start 2X Master Mix, with Master Mix K, 1,5 mM $MgCl_2$	100 Tests	733-2411
TEMPase Hot Start 2X Master Mix, with Master Mix K, 1,5 mM $MgCl_2$	500 Tests	733-2581
TEMPase Hot Start 2X Master Mix, with Master Mix K, 1,5 mM $MgCl_2$	2.500 Tests	733-2582
TEMPase Hot Start 2X Master Mix, with Master Mix C, 1,5 mM $MgCl_2$	100 Tests	733-2412
TEMPase Hot Start 2X Master Mix, with Master Mix C, 1,5 mM $MgCl_2$	500 Tests	733-2548
TEMPase Hot Start 2X Master Mix, with Master Mix C, 1,5 mM $MgCl_2$	2.500 Tests	733-1840
Blue TEMPase Hot Start 2X Master Mix, with Blue Master Mix K, 1,5 mM $MgCl_2$	100 Tests	733-2413
Blue TEMPase Hot Start 2X Master Mix, with Blue Master Mix K, 1,5 mM $MgCl_2$	500 Tests	733-2584
Blue TEMPase Hot Start 2X Master Mix, with Blue Master Mix K, 1,5 mM $MgCl_2$	2.500 Tests	733-2585
Blue TEMPase Hot Start 2X Master Mix, with Blue Master Mix C, 1,5 mM $MgCl_2$	100 Tests	733-2414
Blue TEMPase Hot Start 2X Master Mix, with Blue Master Mix C, 1,5 mM $MgCl_2$	500 Tests	733-2290
Blue TEMPase Hot Start 2X Master Mix, with Blue Master Mix C, 1,5 mM $MgCl_2$	2.500 Tests	733-1841
GC TEMPase Hot Start 2X Master Mix, with Master Mix I, 1,5 mM $MgCl_2$	100 Tests	733-2415
GC TEMPase Hot Start 2X Master Mix, with Master Mix I, 1,5 mM $MgCl_2$	500 Tests	733-2561
GC TEMPase Hot Start 2X Master Mix, with Master Mix I, 1,5 mM $MgCl_2$	2.500 Tests	733-2562
GC TEMPase Hot Start 2X Master Mix, with Master Mix II, 1,5 mM $MgCl_2$	100 Tests	733-2416
GC TEMPase Hot Start 2X Master Mix, with Master Mix II, 1,5 mM $MgCl_2$	500 Tests	733-2564
GC TEMPase Hot Start 2X Master Mix, with Master Mix II, 1,5 mM $MgCl_2$	2.500 Tests	733-2565
Multiplex TEMPase Hot Start 2X Master Mix, 1,5 mM $MgCl_2$ with separate vial of $MgCl_2$	100 Tests	733-2417
Multiplex TEMPase Hot Start 2X Master Mix, 1,5 mM $MgCl_2$ with separate vial of $MgCl_2$	500 Tests	733-2568
Multiplex TEMPase Hot Start 2X Master Mix, 1,5 mM $MgCl_2$ with separate vial of $MgCl_2$	2.500 Tests	733-2569

Ready PCR Mix, 2X

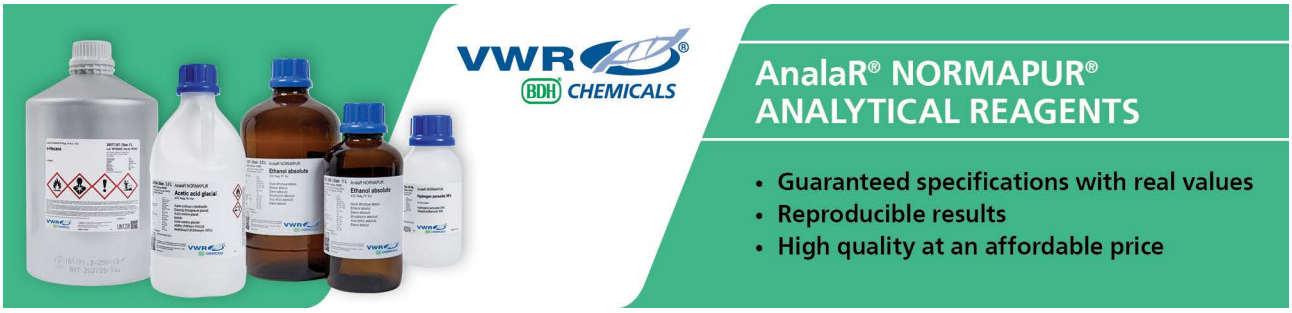


Efficient Amplification of Purified DNA with Ready PCR Mix, 2X. Single copy targets were amplified from 50 ng of pUC19 plasmid (A) or S. aureus genomic DNA (B) for 35 cycles. Aliquots (10 µl) of each PCR reaction was directly loaded onto a 1% agarose gel and visualized with a Syngene HR gel doc system.

Ready PCR Mix, 2X offers a single-step procedure for performing PCR reactions followed by analysis on agarose gels without the addition of loading buffer. All components for assembly and performance of PCR reactions as well as loading and visualisation of PCR products on agarose gels are included. The user supplies primer and template DNA.

- Direct to gel loading
- Immediate visualisation
- Safe to use

Description	Pk	Cat. No.
Ready PCR Mix, 2X	1,25 ml	N806-1.25ML
Ready PCR Mix, 2X, 2×1,25 ml	1 KIT	N806-2X1.25ML



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Proofreading DNA polymerase, AccuPOL

AccuPOL DNA Polymerase is a thermostable enzyme that possesses 3' - 5' exonuclease proofreading ability, which enables the polymerase to correct nucleotide misincorporation errors. AccuPOL is recommended for applications which require extremely high fidelity with low error rate. PCR fragments generated with AccuPOL DNA Polymerase are also ideal for blunt end cloning.

- The choice for high fidelity amplifications
- Provides 16x higher fidelity than *Taq* DNA polymerase
- Optimal for blunt end cloning
- Processes up to 3 kb with extremely high fidelity

Optimal reaction conditions are achieved by using the 10X Key Buffer containing 15 mM $MgCl_2$ provided with the enzyme. A separate vial of 25 mM $MgCl_2$ is also included in case a higher $MgCl_2$ concentration is required for a specific reaction.

EU = Units

Description	Pk	Cat. No.
AccuPOL DNA Polymerase (2,5 U/µl), with 10X Key Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	250 EU	733-1324
AccuPOL DNA Polymerase (2,5 U/µl), with 10X Key Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	500 EU	733-1325
AccuPOL DNA Polymerase (2,5 U/µl), with 10X Key Buffer (15 mM $MgCl_2$), 25 mM $MgCl_2$	1.000 EU	733-1326
AccuPOL DNA Polymerase (2,5 U/µl), with 10X Key Buffer (Mg-free, Tween®-free), 25 mM $MgCl_2$	250 EU	733-1328
AccuPOL DNA Polymerase (2,5 U/µl), with 10X Key Buffer (Mg-free, Tween®-free), 25 mM $MgCl_2$	1.000 EU	733-1329

TEMPase Hot Start DNA Polymerase

VWR® TEMPase Hot Start DNA Polymerases are highly stable polymerases, featuring higher specificity, superior sensitivity and greater yields compared to standard DNA polymerases. These features make them well suited for detection of low abundance targets. Other uses include screening, amplification of GC-rich sequences, multiplex PCR, direct PCR and qPCR. A glycerol-free TEMPase Hot Start DNA Polymerase is also available for automation and freeze drying.

The GC-Rich Template kit is specifically designed for difficult GC-rich sequences. Combined with TEMPase, GC buffers I and II promote excellent amplification. The kit is designed for initial testing before using one of the GC-TEMPase 2X Master Mixes.

Description	Pk	Cat. No.
TEMPase Hot Start DNA Polymerase, 5 U/µl, with 10X Key Buffer, 10X Combination Buffer and $MgCl_2$	500 EU	733-1331
TEMPase Hot Start DNA Polymerase, 5 U/µl, with 10X Key Buffer, 10X Combination Buffer and $MgCl_2$	2.500 EU	733-1333
TEMPase Hot Start DNA Polymerase, 5 U/µl, with 10X Key Buffer, 10X Combination Buffer and $MgCl_2$	10.000 EU	733-1838
TEMPase Hot Start DNA Polymerase, glycerol-free, 5 U/µl, without buffers	500 Tests	733-2552
TEMPase Hot Start DNA Polymerase, glycerol-free, 5 U/µl, without buffers	2.500 Tests	733-2553
TEMPase Hot Start DNA Polymerase, glycerol-free, 5 U/µl, with 10X Key Buffer and $MgCl_2$	500 Tests	733-2555
TEMPase Hot Start DNA Polymerase, glycerol-free, 5 U/µl, with 10X Key Buffer and $MgCl_2$	2.500 Tests	733-2556
TEMPase Hot Start DNA Polymerase, glycerol-free, 5 U/µl, with 10X Combination Buffer and $MgCl_2$	500 Tests	733-2558
TEMPase Hot Start DNA Polymerase, glycerol-free, 5 U/µl, with 10X Combination Buffer and $MgCl_2$	2.500 Tests	733-2559
GC-Rich DNA Target kit, with TEMPase Hot Start DNA Polymerase, 4X GC Buffers I and II, and 25 mM $MgCl_2$	500 Tests	733-2567

dNTP

Ready to use molecular biology grade dNTP mixes and dNTP sets. The dNTP mix is designed to save hands-on time for researchers and reduce the possibility of contamination by reducing pipetting. The dNTP solutions are also available in sets of four individual dNTPs, each 100 mM. Both are convenient for use in DNA polymerisation reactions, DNA labelling and sequencing processes.

- Available as pre-mixed 10 mM or 25 mM solutions, or as sets of individual 100 mM dNTP solutions
- Both pre-mixed and sets have been functionally tested in PCR
- Purity >99% by HPLC
- Supplied in solution at pH 7,3 - 7,5

Description	Pk	Cat. No.
dNTP mix, 10 mM of each dA, dC, dG, and dT, 2×500 µl	1.000 µl	733-1363
dNTP mix, 25 mM of each dA, dC, dG, and dT, 2×1 ml	2.000 µl	733-1854
dNTP set, separate vials of dA, dC, dG, dT, each 100 mM, 16×250 µl	1 SET	733-1855
dNTP set, separate vials of dA, dC, dG, dT, each 100 mM, 4×250 µl	1 SET	733-1364

dNTP mix, 10 mM

Ready to use dNTP mixture, 10 mM solution.

Description	Pk	Cat. No.
dNTP mix, 10 mM	0,5 ml	N557-0.5ML

Betaine Enhancer, 5 M (5X)

Betaine Enhancer is especially effective when used with high GC-rich regions or templates with a high degree of secondary structures. It has a decreasing effect on the primer melting temperature.

Description	Pk	Cat. No.
5X Betaine Enhancer solution, 5 M, 5×1 ml	5 ml	733-1361
5X Betaine Enhancer solution, 5 M, 100×10 ml	1 KIT	733-2450
5X Betaine Enhancer solution, 5 M, 10×100 ml	1 KIT	733-2451

PCR buffers

An optimal buffer system is critical for the performance of successful PCR. VWR® Taq DNA Polymerase kits generally include two different buffers, Key Buffer and Extra Buffer, which are suited for different PCR needs. All buffers contain Tris and 15 mM $MgCl_2$ (1,5 mM $MgCl_2$ final concentration). Additional $MgCl_2$ for easy optimisation is included in a separate vial.

Key Buffer: Key Buffer (NH_4^+) gives a superior amplification signal (high yield) and minimises the need for optimisation of the Mg^{2+} concentration or the annealing temperature in most primer-template systems.

Extra Buffer: Extra Buffer is the traditional potassium (K^+) buffer. Extra Buffer promotes high specificity. Careful optimisation of primer annealing temperatures and Mg^{2+} concentrations may be required.

Combination Buffer: Combination Buffer is a proprietary mixture of K^+ and NH_4^+. It combines high specificity with good product yield and high tolerance to optimisation of primer annealing temperatures and Mg^{2+} concentrations due to its balanced ammonium-potassium formulation.

Buffers for GC-rich templates: Combined with VWR® TEMPase the GC buffers promote excellent amplification results with targets of varying degrees of GC content. This confirms that the choice of buffer is crucial for any successful amplification.

Description	Pk	Cat. No.
10X Key Buffer, 15 mM $MgCl_2$, 3×1,5 ml	1 SET	733-1349
10X Combination Buffer, 15 mM $MgCl_2$, 3×1,5 ml	1 SET	733-1352
10X Extra Buffer, 15 mM $MgCl_2$, 3×1,5 ml	1 KIT	733-2303
4X GC Buffer I, 10×1,5 ml	1 KIT	733-2571
4X GC Buffer II, 10×1,5 ml	1 KIT	733-2572

Dye terminator removal, Mag-Bind® SeqDTR™

Mag-Bind® SeqDTR™ is designed for the effective and reliable removal of unincorporated terminators from sequencing reaction. Sequencing products are first mixed with the Mag-Bind® SeqDTR™. DNA then selectively binds to the Mag-Bind® SeqDTR™ particles. With two rapid wash steps, trace contaminants such as nucleotides, primers and small, non targeted amplification products are removed.

Mag-Bind® SeqDTR™ can be processed in 96- and 384-well formats and is compatible with many liquid handling instruments.

Description	Elution volume	Pk	Cat. No.
Mag-Bind™ SeqDTR™	40 - 70 µl	50 ml	M1300-08
Mag-Bind™ SeqDTR™	40 - 70 µl	500 ml	M1300-50

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E.Z.N.A.® and E-Z 96® Cycle Pure Kits

E.Z.N.A.® Cycle Pure Kits are designed for the rapid purification of single- or double-stranded DNA from PCR or other enzymatic reactions. The purification procedure completely removes primers, nucleotides, enzymes, salts, and other impurities from DNA samples. E.Z.N.A.® MicroElute Cycle Pure Kits are specifically intended to purify PCR samples with a small elution volume of 10 to 15 µl. The E-Z® 96 Cycle Pure Kit procedure allows for the parallel purification of up to 96 PCR samples from multiple amplifications. The E-Z® 96 Cycle Pure Kit utilises multiwell technology for manual or fully automated high throughput purification.

V-spin columns have an attached cap, while Q-spin columns are capless. The columns are otherwise identical in use and application.

Description	Fragment size	Recovery	Elution volume	Yield	Pk	Cat. No.
E-Z 96® Cycle Pure Kit (1×96)	100 bp - 10 kb	85%	80 - 100 µl	100 bp-10 kb	1 KIT	D1043-01
E-Z 96® Cycle Pure Kit (5×96)	100 bp - 10 kb	85%	80 - 100 µl	100 bp-10 kb	1 KIT	D1043-02
E.Z.N.A.® MicroElute Cycle Pure Kit	100 bp - 10 kb	85%	10 - 15 µl	100 bp - 20 kb	50 Tests	D6293-01
E.Z.N.A.® MicroElute Cycle Pure Kit	100 bp - 10 kb	85%	10 - 15 µl	100 bp - 20 kb	200 Tests	D6293-02
E.Z.N.A.® Cycle Pure Kit (V-Spin column)	100 bp - 10 kb	85%	30 - 50 µl	100 bp - 20 kb	50 Tests	D6492-01
E.Z.N.A.® Cycle Pure Kit (V-Spin column)	100 bp - 10 kb	85%	30 - 50 µl	100 bp - 20 kb	200 Tests	D6492-02
E.Z.N.A.® Cycle Pure Kit (Q-spin)	100 bp - 10 kb	85%	30 - 50 µl	100 bp-10 kb	50 Tests	D6493-01
E.Z.N.A.® Cycle Pure Kit (Q-spin)	100 bp - 10 kb	85%	30 - 50 µl	100 bp - 20 kb	200 Tests	D6493-02

Mag-Bind® RXNPure Plus Kit

Mag-Bind® RXNPure Plus Kit allows rapid and reliable isolation DNA from PCR and enzymatic reactions with high recovery rates. The system combines proprietary chemistries with the reversible nucleic acid-binding properties of magnetic beads that selectively bind PCR amplicons 100 bp and larger, and eliminate excess nucleotides, primers and small, non targeted amplification products, such as primer dimers.

- Efficiently removes excess primers, primer-dimers, dNTPs and salts
- No centrifugation/filtration steps
- Scalable - can be adapted to most standard liquid handling robots
- Use in 96- or 384- well format

This kit is designed for both manual and fully automated purification and may not require reprogramming of liquid handling instruments depending on your current method.

Description	Pk	Cat. No.
Mag-Bind® RXNPure Plus Kit	50 ml	M1386-01
Mag-Bind® RXNPure Plus Kit	500 ml	M1386-02

PCTFE 800

See Oil 10 S..... p.355

PEG 300

See Polyethylene glycol 300..... p.356

PEG 400

See Polyethylene glycol 400..... p.356

PEG 1,500

See Polyethylene glycol 1,500..... p.356

PEG 4,000

See Polyethylene glycol 4,000..... p.356

PEG 6,000

See Polyethylene glycol 6,000..... p.355

Penicillin G potassium salt

Warning

CAS 113-98-4
$C_{16}H_{17}KN_2O_4S$
M.W. 372.49 g/mol
Melting Pt: 214-217 °C **Density:** 1,359 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Cat. No.	Pk	Pack type
441972W	25 g	Plastic bottle for solids

Penicillin G sodium salt for tissue culture

CAS 69-57-8
$C_{16}H_{17}N_2NaO_4S$
M.W. 356.38 g/mol
Melting Pt: 255 °C **Density:** 1.38 g/cm³ (20 °C)
Storage Temperature: Ambient
Aseptically prepared, gamma-irradiated, tissue culture tested. 10,000 U/ml solution when reconstituted in 20 ml of sterile water.

Expiration Date	REPORT
pH (6 %, Water) @25 °C	5.0 - 7.5
Potency (Anhydrous)	1500 - 1750 U/mg
Solubility (Vial Contents, 20 ml Water)	PASS
Sterile (Gamma-Irradiated)	PASS
USP Grade Penicillin G Sodium	PASS

Cat. No.	Pk	Pack type
E480-20ML	20 ml	Vial

Penicillin-Streptomycin 100X, tissue culture grade

Sterile, endotoxin tested liquid stable antibiotic solution for tissue culture applications. Targets gram-positive and gram-negative bacteria. 100x solution; 10,000 U/ml penicillin; 10 mg/ml streptomycin.

Description	Cat. No.	Pk	Pack type
Penicillin/Streptomycin, 100X solution, working concentration 10 ml/l, tissue culture grade	K952-100ML	100 ml	Plastic bottle

Penicillin-Streptomycin, γ-irradiated, tissue culture grade

Aseptic, gamma-irradiated, tissue culture tested. 10,000 U/ml penicillin. 10 mg/ml streptomycin solution when reconstituted in 20 ml of sterile water.

Description	Cat. No.	Pk	Pack type
Penicillin-Streptomycin, γ-irradiated, tissue culture grade	E490-20ML	20 ml	Vial

Penicillin-Streptomycin-Amphotericin B

Aseptic, gamma-irradiated, tested for tissue culture. 10,000 U/ml penicillin, 10 mg/ml streptomycin, and 25 µg/ml amphotericin B when reconstituted in 20 ml of sterile water.

Description	Cat. No.	Pk	Pack type
Penicillin-Streptomycin-Amphotericin B	E485-20ML	20 ml	Vial

Penicillinase (beta-Lactamase)

A freeze-dried product with >3000 ß-I units per vial.
One unit of ß-I activity is defined as the amount of enzyme that will catalyse the hydrolysis of 1.0 µmole of benzylpenicillin per minute at 25°C and pH 7.0.

Cat. No.	Pk	Pack type
390843G	1 Vial	Vial

(2R,3S,4S,5R)-Pentahydroxyhexanal

See D(+)-Galactose..... p.168

Pentamethylene

See Cyclopentane..... p.103

n-Pentane ≥99% HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$
M.W. 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay (GC)	Min. 99.00 %
Water	Max. 0.0100 %
Non-volatile residue	Max. 0.0005 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Fluorescence (as quinine) (254 nm)	Max. 0.001 ppm
Fluorescence (as quinine) (365 nm)	Max. 0.001 ppm
Transmittance (200 nm)	Min. 10.0 %
Transmittance (210 nm)	Min. 40.00 %
Transmittance (215 nm)	Min. 70.00 %
Transmittance (222 nm)	Min. 90.0 %
Transmittance (240 nm)	Min. 98.0 %

Cat. No.	Pk	Pack type
83632.320	2,5 l	Glass bottle

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n-Pentane ≥95% HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$ **M.W.** 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay (on anhydrous substance)	Min. 95.0 %
Acidity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.01 %
Transmittance (200 nm)	Min. 56 %
Transmittance (210 nm)	Min. 71 %
Transmittance (220 nm)	Min. 89 %
Transmittance (230 nm)	Min. 98 %
Transmittance (240 nm)	Min. 99 %

Cat. No.	Pk	Pack type
83993.320	2,5 l	Glass bottle

n-Pentane SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$ **M.W.** 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay (GC)	Min. 99.0 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.01 %
Transmittance (200 nm)	Min. 20 %
Transmittance (210 nm)	Min. 60 %
Transmittance (220 nm)	Min. 85 %
Transmittance (230 nm)	Min. 95 %
Transmittance (240 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84714.290	1 l	Glass bottle
84714.320	2,5 l	Glass bottle

n-Pentane PESTINORM® for capillary GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$ **M.W.** 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay (on anhydrous substance)	Min. 99.0 %
Acidity	Max. 0.0005 meq/g
Evaporation residue (100°C)	Max. 0.0005 %
Water	Max. 0.01 %
Organic residue (as Octanol) (GC/FID)	Max. 10 ng/l
Halogenated residue (as Lindane)(GC/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83964.320	2,5 l	Glass bottle

n-Pentane AnalaR NORMAPUR® analytical reagent

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$ **M.W.** 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay (on anhydrous substance)	Min. 99.0 %	Assay (C_5 isomers)	Min. 99.9 %
Acidity	Max. 0.004 meq/g	Boiling point	35 - 37 °C
Colouration	Max. 10 APHA	Density (20/4)	0.625 - 0.632
Aromatics (as C_6H_6)	Max. 50 ppm	Evaporation residue	Max. 10 ppm
Total S (as SO_4)	Max. 50 ppm	Water	Max. 100 ppm

Cat. No.	Pk	Pack type
26185.297	1 l	Glass bottle
26185.322	2,5 l	Glass bottle
26185.460	25 l	Metal drum

n-Pentane GPR RECTAPUR®

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$ **M.W.** 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay	Min. 99 %
Boiling point	35 - 37 °C
Density (20/4)	0.625 - 0.632
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
26206.291	1 l	Glass bottle
26206.325	2,5 l	Glass bottle
26206.360	5 l	Aluminium bottle
26206.460	25 l	Metal drum

n-Pentane TECHNICAL

Danger

CAS 109-66-0 **UN:** 1265
$H_3C(CH_2)_3CH_3$ **M.W.** 72.15 g/mol
Boiling Pt: 35-36 °C (1013 hPa) **Melting Pt:** -130 °C **Density:** 0,63 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119459286-30

Assay	Min. 95 %
Boiling point	35 - 37 °C

Cat. No.	Pk	Pack type
26192.292	1 l	Glass bottle
26192.361	5 l	Aluminium bottle
26192.463	25 l	Metal drum
26192.554	200 l	Metal drum

iso-Pentane

See 2-Methylbutane p.260

1-Pentanesulphonic acid sodium salt HiPerSolv CHROMANORM® for HPLC

CAS 22767-49-3
$C_5H_{11}O_3SNa$ **M.W.** 174.2 g/mol
Melting Pt: > 300 °C
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99 %
IR Spectrum	Passes test
pH (10 %)	5.5 - 7.5
Loss on drying (120°C; under vacuum)	Max. 2 %
Transmittance (200 nm) (0,005 mol/l)	Min. 70 %
Transmittance (220 nm) (0.005 mol/l)	Min. 90 %
Transmittance (250 nm) (0.005 mol/l)	Min. 98 %

Cat. No.	Pk	Pack type
152812V	25 g	Plastic bottle for solids
152813W	100 g	Plastic bottle for solids

1-Pentanol AnalaR NORMAPUR® analytical reagent

Warning

CAS 71-41-0 **UN:** 1105
$H_3C(CH_2)_3CH_2OH$ **M.W.** 88.15 g/mol
Boiling Pt: 137,9 °C (1013 hPa) **Melting Pt:** -79 °C **Density:** 0,81 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.5 %	Boiling point	137 - 139 °C
Density (20/4)	0.813 - 0.817	Non-volatile residue	Max. 50 ppm
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20791.292	1 l	Glass bottle

1-Pentanol TECHNICAL

Warning

CAS 71-41-0 **UN:** 1105
$H_3C(CH_2)_3CH_2OH$ **M.W.** 88.15 g/mol
Boiling Pt: 137,9 °C (1013 hPa) **Melting Pt:** -79 °C **Density:** 0,81 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
20800.294	1 l	Glass bottle

iso-Pentanol

See Isoamyl alcohol p.226

1-Pentyl alcohol

See 1-Pentanol p.338

Pepsin, 1:3000, proteomics grade

Cat. No.	Pk	Pack type
M142-250G	250 g	Plastic bottle for solids

Pepsin, 1:3000, high purity grade

Pepsin is a proteolytic enzyme product derived from porcine stomach linings. Pepsin 1:3000 is equivalent to 3000 FCC units/mg.

Cat. No.	Pk	Pack type
0685-250G	250 g	Glass bottle for solids

Pepstatin A, ultrapure

An aspartic acid protease inhibitor of pepsin, renin, and cathepsin D. Also an inhibitor of the HIV protease. Not water soluble.

Cat. No.	Pk	Pack type
J583-5MG	5 mg	Glass bottle
J583-25MG	25 mg	Glass bottle

Pepstatin A, proteomics grade

Cat. No.	Pk	Pack type
M183-5MG	5 mg	Glass bottle

Peptide synthesis solvents

High purity solvents to meet the demanding requirements of peptide synthesis

- Guaranteed low water content
- Evaporation residue less than 10 ppm
- Guaranteed low free amine content
- Other impurities affecting peptide synthesis yields eliminated by chemical and physical treatments

Purified from selected raw materials under ISO 9001 conditions, these solvents are also :

- Filtered at 0.2 µm and packed under nitrogen
- Fitted with caps with PTFE liners to prevent contamination
- Packed in 2.5 L and 1 L glass bottles with DIN 45 closures

Description	Page	Pk	Cat. No.
N,N-Dimethylformamide for peptide synthesis	119, 338	2,5 l	84571.320
Ethyl acetate for peptide synthesis	153, 338	2,5 l	84579.320
N-Ethyldiisopropylamine for peptide synthesis	154, 338	1 l	84574.290
1,1,1,3,3,3-Hexafluoro-2-propanol for peptide synthesis	187, 338	100 ml	84576.180
1,1,1,3,3,3-Hexafluoro-2-propanol for peptide synthesis	187, 338	500 ml	84576.260
N-Methyl-2-pyrrolidone (NMP) for peptide synthesis	263, 338	2,5 l	84572.320
Trifluoroacetic acid for peptide synthesis	338, 496	1 l	84578.290

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Peptone

See Base materials for microbiology media p.270

NEW Perchlorate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84987.180	100 ml	Plastic bottle

Perchloric acid 70% AnalaR NORMAPUR® ACS analytical reagent

Danger

CAS 7601-90-3 **UN:** 1873

$HClO_4$

Boiling Pt: 160-181 °C (1013hPa) **Melting Pt:** -112,2 °C **Density:** 1,67 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	70.0 - 72.0 %	Colouration	Max. 10 APHA
Free chlorine	Max. 0.5 ppm	Heavy metals (as Pb)	Max. 1 ppm
Ignition residue (SO_4)	Max. 30 ppm	Ignition residue (600°C)	Max. 30 ppm
Nitrogen compounds (as N)	Max. 10 ppm	Cl (Chloride)	Max. 3 ppm
ClO_3 (Chlorate)	Max. 10 ppm	$PO_4 + SiO_4$ (as SiO_2)	Max. 5 ppm
SO_4 (Sulphate)	Max. 10 ppm	Ag (Silver)	Max. 0.1 ppm
As (Arsenic)	Max. 0.05 ppm	Ba (Barium)	Max. 0.02 ppm
Be (Beryllium)	Max. 0.02 ppm	Bi (Bismuth)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.05 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 1 ppm	Ge (Germanium)	Max. 0.05 ppm
K (Potassium)	Max. 0.3 ppm	Li (Lithium)	Max. 0.02 ppm
Mg (Magnesium)	Max. 0.5 ppm	Mn (Manganese)	Max. 0.02 ppm
Mo (Molybdenum)	Max. 0.05 ppm	Ni (Nickel)	Max. 0.1 ppm
Pb (Lead)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.02 ppm
Ti (Titanium)	Max. 1 ppm	Tl (Thallium)	Max. 0.05 ppm
V (Vanadium)	Max. 0.05 ppm	Zn (Zinc)	Max. 0.1 ppm
Zr (Zirconium)	Max. 0.1 ppm	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
20589.260	500 ml	Glass bottle
20589.247	1 l	Glass bottle SAFEBREAK
20589.293	1 l	Glass bottle
20589.327	2,5 l	Glass bottle SAFEBREAK

Perchloric acid 70% GPR RECTAPUR®

Danger

CAS 7601-90-3 **UN:** 1873

$HClO_4$

Boiling Pt: 160-181 °C (1013hPa) **Melting Pt:** -112,2 °C **Density:** 1,53-1,768 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	69 - 72 %
Ignition residue (SO_4)	Max. 0.02 %
Cl (Chloride)	Max. 25 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20587.296	1 l	Glass bottle

Perchloric acid 65% NORMATOM® for trace metal analysis

Danger

CAS 7601-90-3 **UN:** 1873

$HClO_4$

Boiling Pt: 160-181 °C (1013hPa) **Melting Pt:** -112,2 °C **Density:** 1,53-1,768 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	65 - 71 %	Colouration	Max. 10 APHA
Free chlorine	Max. 0.5 ppm	Ignition residue (SO_4)	Max. 30 ppm
Total N (Nitrogen)	Max. 10 ppm	Cl (Chloride)	Max. 3 ppm
ClO_3 (Chlorate)	Max. 10 ppm	$PO_4 + SiO_4$ (as SiO_2)	Max. 5 ppm
SO_4 (Sulphate)	Max. 10 ppm	Ag (Silver)	Max. 1 ppb
Al (Aluminium)	Max. 1 ppb	As (Arsenic)	Max. 0.5 ppb
Au (Gold)	Max. 0.5 ppb	Ba (Barium)	Max. 1 ppb
Be (Beryllium)	Max. 0.5 ppb	Bi (Bismuth)	Max. 0.5 ppb
Ca (Calcium)	Max. 1 ppb	Cd (Cadmium)	Max. 1 ppb
Ce (Cerium)	Max. 0.5 ppb	Co (Cobalt)	Max. 0.5 ppb
Cs (Cesium)	Max. 0.5 ppb	Cu (Copper)	Max. 0.5 ppb
Dy (Dysprosium)	Max. 0.5 ppb	Er (Erbium)	Max. 0.5 ppb
Eu (Europium)	Max. 0.5 ppb	Fe (Iron)	Max. 1 ppb
Ga (Gallium)	Max. 0.5 ppb	Gd (Gadolinium)	Max. 0.5 ppb
Ho (Holmium)	Max. 0.5 ppb	In (Indium)	Max. 0.5 ppb
K (Potassium)	Max. 1 ppb	La (Lanthanum)	Max. 0.5 ppb
Li (Lithium)	Max. 0.5 ppb	Lu (Lutetium)	Max. 0.5 ppb
Mg (Magnesium)	Max. 1 ppb	Mn (Manganese)	Max. 1 ppb
Mo (Molybdenum)	Max. 0.5 ppb	Na (Sodium)	Max. 1 ppb
Nd (Neodymium)	Max. 0.5 ppb	Ni (Nickel)	Max. 1 ppb
Pb (Lead)	Max. 1 ppb	Pd (Palladium)	Max. 0.5 ppb
Pr (Praseodymium)	Max. 0.5 ppb	Pt (Platinum)	Max. 0.5 ppb
Rb (Rubidium)	Max. 0.5 ppb	Rh (Rhodium)	Max. 0.5 ppb
Ru (Ruthenium)	Max. 0.5 ppb	Sb (Antimony)	Max. 0.5 ppb
Sc (Scandium)	Max. 0.5 ppb	Sm (Samarium)	Max. 0.5 ppb
Sn (Tin)	Max. 1 ppb	Sr (Strontium)	Max. 0.5 ppb
Tb (Terbium)	Max. 0.5 ppb	Te (Tellurium)	Max. 0.5 ppb
Th (Thorium)	Max. 1 ppb	Ti (Titanium)	Max. 1 ppb
Tl (Thallium)	Max. 0.5 ppb	Tm (Thulium)	Max. 0.5 ppb
U (Uranium)	Max. 0.5 ppb	V (Vanadium)	Max. 0.5 ppb
Y (Yttrium)	Max. 0.5 ppb	Yb (Ytterbium)	Max. 0.5 ppb
Zn (Zinc)	Max. 1 ppb	Zr (Zirconium)	Max. 0.5 ppb

Cat. No.	Pk	Pack type
83874.260	500 ml	Glass bottle
83874.320	2,5 l	Glass bottle
83874.420	2,5 l	Glass bottle SAFEBREAK

Perchloric acid 65% TECHNICAL

Danger

CAS 7601-90-3 **UN:** 1873

$HClO_4$

Boiling Pt: 160-181 °C (1013hPa) **Melting Pt:** -112,2 °C **Density:** 1,53-1,768 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	Min. 65 %

Cat. No.	Pk	Pack type
20585.290	1 l	Glass bottle

Perchloric acid 60% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7601-90-3 **UN:** 1873

$HClO_4$

Boiling Pt: 160-181 °C (1013hPa) **Melting Pt:** -112,2 °C **Density:** 1,53-1,768 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	60 - 62 %	Free chlorine	Max. 5 ppm
Ignition residue (SO_4)	Max. 30 ppm	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 3 ppm	ClO_3 (Chlorate)	Max. 10 ppm
$PO_4 + SiO_4$ (as SiO_2)	Max. 5 ppm	SO_4 (Sulphate)	Max. 10 ppm
Ag (Silver)	Max. 5 ppm	As (Arsenic)	Max. 0.05 ppm
Cu (Copper)	Max. 0.1 ppm	Fe (Iron)	Max. 1 ppm
Mg (Magnesium)	Max. 10 ppm	Mn (Manganese)	Max. 0.5 ppm
Pb (Lead)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20583.260	500 ml	Glass bottle
20583.240	1 l	Glass bottle SAFEBREAK
20583.327	2,5 l	Glass bottle SAFEBREAK

Perchloric acid 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7601-90-3 **UN:** 3264
$HClO_4$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30111.291	1 l	Glass bottle

Perchloric acid 0.1 mol/l (0.1 N) in aqueous solution Reag. Ph. Eur. 1062901

Warning

CAS 7601-90-3 **UN:** 3264
$HClO_4$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87886.180	100 ml	Plastic bottle

NEW Perchloric acid 0,1 N in aqueous solution USP test solutions (TS) 34

Warning

CAS 7601-90-3 **UN:** 3264
$HClO_4$
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85359.180	100 ml	Glass bottle
85359.260	500 ml	Glass bottle

Perchloric acid 0.1 mol/l (0.1 N) in aqueous solution

Danger

CAS 7601-90-3 **UN:** 2920
$HClO_4$
Boiling Pt: 120 °C (1013 hPa) **Density:** 1,050 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.098 - 0.102 mol/l

Cat. No.	Pk	Pack type
86732.290	1 l	Plastic bottle

Perchloric acid 0.1 mol/l (0.1 N) in anhydrous acetic acid AVS TITRINORM® volumetric solution

Danger

CAS 7601-90-3 **UN:** 2920
$HClO_4$
Boiling Pt: 120 °C (1013 hPa) **Density:** 1,050 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30110.264	500 ml	Glass bottle
30110.297	1 l	Glass bottle
30110.320	2,5 l	Glass bottle SAFEBREAK

Perchloroethylene

See Tetrachloroethylene p.482

Periodic acid solution Q Path® for microscopy

IVD

CAS 10450-60-9
Storage Temperature: Ambient
Ready to use periodic acid for histological staining in easy to use and safe pou ch.

Appearance ..... Clear colourless liquid
Density (20/4) ..... 0,99 - 1,01

Cat. No.	Pk	Pack type
10047024.	450 ml	Pouch

Perlite for high clarity filtration

CAS 93763-70-3

Melting Pt: > 1093 °C **Density:** 2,2-2,4g/cm³ (20 °C)

pH (10 %) ..... 6.50 - 7.50
Specific gravity ..... 1.9 - 2.5
Particle size (> 50 µm) ..... Max. 25 %

Cat. No.	Pk	Pack type
84101.290	1 kg	Bucket (Plastic)
84101.360	5 kg	Bucket (Plastic)

VWR LIFE SCIENCE Peroxidase, from Horseradish, reagent grade

Catalyses the decomposition of hydrogen peroxide in solution causing the oxidation of a number of substrates.

Cat. No.	Pk	Pack type
0417-25000U	25 KU	Glass bottle
0417-100000U	100 KU	Glass bottle

VWR LIFE SCIENCE Peroxidase, from Horseradish, for conjugation

Catalyses the decomposition of hydrogen peroxide in solution causing the oxidation of a number of substrates. Used extensively as a label for immunohistological assays and ELISA. Its exceptional stability in powdered and solution form enhances its desirability as an enzyme conjugate.

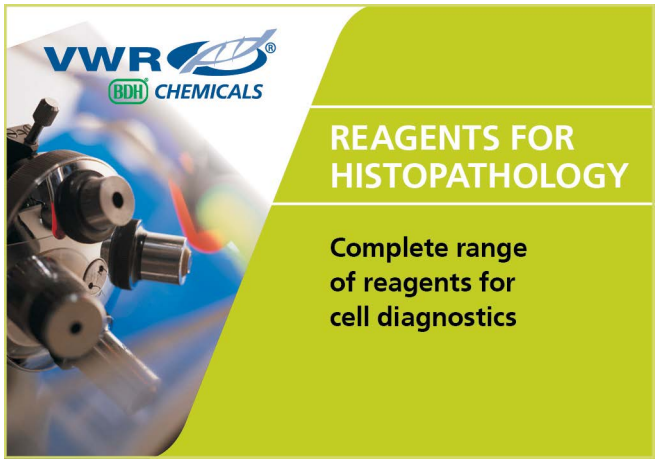
Cat. No.	Pk	Pack type
0343-10000U	10 KU	Glass bottle
0343-25000U	25 KU	Glass bottle

Peroxydisulphuric acid dipotassium salt

See Potassium peroxodisulphate p.373

Peroxydisulphuric acid disodium salt

See Sodium peroxodisulphate p.432



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Pesticides Mix 2, EPA 608

Chlordane (0.02 mg/ mL) & Toxaphene (0.20 mg/ mL) in methanol.

Cat. No.	Pk	Pack type
124782C	1 ml	Glass ampoule

Pesticide reference standard, Performance Check Solution pesticides and PCBs, EPA 608

17 components

20 µg/ml : Aldrin; a-BHC; b-BHC; d-BHC; g-BHC; p,p'-DDD; p,p'-DDE; Dieldrin; Endosulfan I; Endrin aldehyde; Heptachlor; Heptachlor epoxide (Isomer B); Methoxychlor

100 µg/ml : p,p'-DDT; Endosulfan II; Endosulfan sulfate; Endrin

Cat. No.	Pk	Pack type
124802M	1 ml	Vial

Petroleum ether 40-60°C

See Petroleum spirit 40-60°C p.342

Petroleum ether 40-65°C

See Petroleum spirit 40-65°C p.342

Petroleum ether 60-80°C

See Petroleum spirit 60-80°C p.342

Petroleum ether 60-95°C

See Petroleum spirit 60-95°C p.341

Petroleum ether 80-100°C

See Petroleum spirit 80-100°C p.341

Petroleum ether 100-120°C

See Petroleum spirit 100-120°C p.341

Petroleum spirit 100-120°C AnalaR NORMAPUR® ACS analytical reagent

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 100-120 °C (1013 hPa) **Density:** 0,7 g/cm³ (20 °C)
Storage Temperature: Ambient

Acidity	Max. 0.00005 meq/g	Aromatics (as C_6H_6)	Max. 20 ppm
Bromine value	Max. 3.0	Colouration	Max. 10 APHA
Distillation (min. 90 %)	100 --> 120 °C	Evaporation residue	Max. 10 ppm
Substances coloured by H_2SO_4	Max. 10 APHA	Sulphur compounds (as S)	Max. 50 ppm
Water	Max. 100 ppm	Al (Aluminium)	Max. 0.1 ppm
Ba (Barium)	Max. 0.05 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test		

Cat. No.	Pk	Pack type
101814R	2,5 l	Glass bottle

Petroleum spirit 100-120°C TECHNICAL

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 100-120 °C (1013 hPa) **Density:** 0,7 g/cm³ (20 °C)
Storage Temperature: Ambient

Substances coloured by H_2SO_4	Passes test
Acidity	Max. 0.0003 meq/g
Density (20/4)	0.690 - 0.750
Distillation (min. 90 %)	100 - 125 °C
Evaporation residue	Max. 20 ppm

Cat. No.	Pk	Pack type
23845.323	2,5 l	Glass bottle
23845.460	25 l	Metal drum
23845.551	200 l	Metal drum

Petroleum spirit 80-100°C TECHNICAL

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 80-100 °C (1013 hPa) **Density:** 0,69 g/cm³ (20 °C)
Storage Temperature: Ambient

Density (20/4)	0.680 - 0.730
Distillation (min. 90 %)	80 - 100 °C

Cat. No.	Pk	Pack type
23841.320	2,5 l	Glass bottle
23841.364	5 l	Metal can

Petroleum spirit 60-95°C AnalaR NORMAPUR® analytical reagent

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 60 - 95 °C (1013 hPa) **Melting Pt:** Max. -40 °C **Density:** 0.67 g/cm³ (20 °C)
Storage Temperature: Ambient

Heavy oils and fats	Passes test	Acidity	Max. 0.0001 meq/g
Evaporation residue	Max. 10 ppm	Sulphur compounds (as S)	Max. 50 ppm
Water	Max. 0.02 %		

Cat. No.	Pk	Pack type
1991.1000	1 l	Glass bottle

Petroleum spirit 60-95°C TECHNICAL

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 60-95 °C (1013 hPa) **Melting Pt:** < -40 °C **Density:** 0,67 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119475514-35

Distillation (min. 90 %)	60 - 95 °C
Evaporation residue	Max. 60 ppm

Cat. No.	Pk	Pack type
87125.320	2,5 l	Glass bottle
87125.360	5 l	Metal can
87125.460	25 l	Metal drum

Petroleum spirit 60-80°C AnalaR NORMAPUR® analytical reagent

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 60-80 °C (1013 hPa) **Density:** 0,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Acidity	Max. 0.0002 meq/g	Bromine value	Max. 3
Colouration	Max. 10 APHA	Substances coloured by H_2SO_4	Max. 150 APHA
Boiling range (60-80°C)	Min. 90 %	Evaporation residue	Max. 10 ppm
Sulphur compounds (as CS_2)	Max. 3 ppm	Water	Max. 100 ppm
Al (Aluminium)	Max. 0.15 ppm	Ba (Barium)	Max. 0.08 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.3 ppm
Mg (Magnesium)	Max. 0.08 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.75 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.08 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.03 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
23840.326	2,5 l	Glass bottle
23840.460	25 l	Metal drum

Petroleum spirit 40-65°C, anhydrous TECHNICAL (max. 0.01% aromatic hydrocarbons)

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-65 °C (1013 hPa) **Density:** 0,65 g/cm³ (20 °C)
Storage Temperature: Ambient

Distillation range	40 - 65 °C

Cat. No.	Pk	Pack type
23837.291	1 l	Glass bottle

NEW Petroleum spirit 40-60°C PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,645-0,665g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119474679-18

Assay (on anhydrous substance)	Min. 99.9 %
Evaporation residue	Max 0.0003%
Colouration	Max 10 APHA
Water	Max 0.05%
GC/ECD Dioxins, Furans & PCB's	Max 5 ng/l
GC/ECD any pesticide (as Lindane)	Max 5 ng/l
GC/NPD any pesticide (as Parathion)	Max 10 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane)	Max 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max 2 ng/l
GC/FID C10 to C40 (as n-Decane)	Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu)	Max 2 ng/l
Filtered through 0.2um, filled under inert gas	Conforms

Cat. No.	Pk	Pack type
85392.320	2,5 l	Glass bottle

Petroleum spirit 40-60°C PESTINORM® for capillary GC analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,645-0,665g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119474679-18

Boiling range (40-60°C)(1013hPa) (Vol %)	Min. 90.0 V%
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 0.0005 %
Water	Max. 0.01 %
Organic residue (as Octanol) (GC/FID)	Max. 10 ng/l
Halogenated residue (as Lindane)(GC/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83965.320	2,5 l	Glass bottle

Petroleum spirit 40-60°C PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,645-0,665g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119474679-18

Boiling range (40-60°C) (Vol %)	Min. 90.0 %
Evaporation residue	Max. 5 ppm
Water	Max. 0.0200 %
Pesticide analysis (Ethylparathion/PND)	Max. 10 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l
Pesticide analysis (Lindane/ECD)	Max. 5 ng/l

Cat. No.	Pk	Pack type
83663.320	2,5 l	Glass bottle

Petroleum spirit 40-60°C, anhydrous (max. 0.005% H_2O) AnalaR NORMAPUR® analytical reagent

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,645-0,665g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119474679-18

Appearance	Clear liquid	Colour value	Max. 10 APHA
Density (20/4)	0.631 - 0.645 kg/l	Acidity	Max. 0.0002 meq/g
Residue on evaporation	Max. 0.0010 %	Water (K.F.)	Max. 0.0050 %
Benzene	Max. 0.0100 %	Substances discoloured by H_2SO_4	Max. 150.0 APHA
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.1 ppm	Total S (Sulphur)	Max. 50 ppm

Cat. No.	Pk	Pack type
23849.292	1 l	Glass bottle

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Petroleum spirit 40-60°C AnalaR NORMAPUR® ACS analytical reagent (max. 0.01% aromatic hydrocarbons)

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,645-0,665g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119474679-18

Acidity	Max. 0.0002 meq/g	Bromine value	Max. 1
Colouration	Max. 10 APHA	Distillation range	40 - 60 °C
Substances coloured by H_2SO_4	Max. 150 APHA	Benzene	Max. 100 ppm
Evaporation residue	Max. 10 ppm	Total S (as SO_4)	Max. 50 ppm
Water	Max. 100 ppm	Al (Aluminium)	Max. 0.2 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.3 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 1 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.03 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test		

Cat. No.	Pk	Pack type
23835.294	1 l	Glass bottle
23835.328	2,5 l	Glass bottle
23835.363	5 l	Aluminium bottle
23835.460	25 l	Metal drum
23835.556	200 l	Metal drum

Petroleum spirit 40-60°C AnalaR NORMAPUR® analytical reagent

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,65 g/cm³ (20 °C)
Storage Temperature: Ambient
EU hazard statements: EUH066

Colouration	Max 10 HU	Bromine number	Max 3.0
Acidity	Max 0.002 ml N%	Distillation Range (90% min)	40 to 60 °C
Substances discoloured by H_2SO_4	Passes test	Non-volatile matter	Max 0.001 %
Water	Max 0.01 %	Sulphur compounds (total S)	Max 0.005 %
Al (Aluminium)	Max 0.00002 %	Ba (Barium)	Max 0.00001 %
Ca (Calcium)	Max 0.00005 %	Cd (Cadmium)	Max 0.000005 %
Co (Cobalt)	Max 0.000002 %	Cr (Chromium)	Max 0.000002 %
Cu (Copper)	Max 0.000002 %	Fe (Iron)	Max 0.00001 %
K (Potassium)	Max 0.00003 %	Mg (Magnesium)	Max 0.00001 %
Mn (Manganese)	Max 0.000002 %	Na (Sodium)	Max 0.0001 %
Ni (Nickel)	Max 0.000002 %	Pb (Lead)	Max 0.00001 %
Sn (Tin)	Max 0.00001 %	Sr (Strontium)	Max 0.000003 %
Zn (Zinc)	Max 0.00001 %		

Cat. No.	Pk	Pack type
101786H	2,5 l	Glass bottle SAFEBREAK

Petroleum spirit 40-60°C GPR RECTAPUR®

Danger

CAS 64742-49-0 **UN:** 1268
Boiling Pt: 40-60 °C (1013 hPa) **Density:** 0,645-0,665g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119474679-18

Acidity or alkalinity	Max. 0.0002 meq/g
Bromine index	Max. 1
Distillation range	40 - 60 °C
Substances coloured by H_2SO_4	Max. 150 APHA
Benzene	Max. 0.15 %
Evaporation residue	Max. 10 ppm
Total S (as SO_4)	Max. 50 ppm
Water	Max. 0.015 %

Cat. No.	Pk	Pack type
23826.293	1 l	Glass bottle
23826.327	2,5 l	Glass bottle

pH Buffers, Solutions, Mixtures & Tablets

See Buffer

pH Papers

See Indicators

pH (Dye dry indicators for)

Congo Red TECHNICAL p.96
1-Naphtholbenzeine analytical reagent p.313
Phenolphthalein GPR RECTAPUR® p.349

pH-Indicator paper congo red Reag. Ph. Eur. 1022002

Storage Temperature: Ambient
Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87806.600	50 Tests	Kit

pH-Indicator paper phenolphthalein Reag. Ph. Eur. 1063704

Storage Temperature: Ambient
Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87891.150	50 Tests	Kit

Pharmacopoeia grade products

The requirements and regulations faced by manufacturers of pharmaceuticals purchasing chemicals for production purposes today are higher than ever before. VWR can help and offers a range of chemicals which are in compliance with the European Pharmacopoeia and/or other Pharmacopoeia as indicated by the specification for each product.

Description	Page	Pk	Cat. No.
Acetic acid 100% Ph. Eur.	3, 344	1 l	20102.292
Acetic acid 100% Ph. Eur.	3, 344	2,5 l	20102.320
Acetic acid 100% Ph. Eur.	3, 344	25 l	20102.463
Acetone Ph. Eur.	7, 344	1 l	20165.298
Acetone Ph. Eur.	7, 344	2,5 l	20165.323
Acetone Ph. Eur.	7, 344	5 l	20165.367
Acetone Ph. Eur.	7, 344	25 l	20165.460
Ammonium carbonate Ph. Franç	31, 344	1 kg	83516.290
L(+)-Ascorbic acid USP, Ph. Eur.	50, 344	100 g	83568.180
L(+)-Ascorbic acid USP, Ph. Eur.	50, 344	1 kg	83568.290
L(+)-Ascorbic acid USP, Ph. Eur.	50, 344	5 kg	83568.360
L(+)-Ascorbic acid USP, Ph. Eur.	50, 344	25 kg	83568.460
Barium sulphate, fine powder Ph. Eur.	54, 344	1 kg	21763.292
Barium sulphate, fine powder Ph. Eur.	54, 344	25 kg	21763.463
Benzocaine (Ethyl 4-aminobenzoate) Ph. Eur.	56, 344	50 g	83530.150
Bismuth (III) carbonate basic Ph. Eur.	59, 344	250 g	83518.230
Boric acid, crystallised Ph. Eur.	61, 344	1 kg	20181.294
Boric acid, crystallised Ph. Eur.	61, 344	5 kg	20181.363
Boric acid, crystallised Ph. Eur.	61, 344	25 kg	20181.465
Calcium chloride dihydrate Ph. Eur.	75, 344	1 kg	22322.295
Calcium chloride dihydrate Ph. Eur.	75, 344	5 kg	22322.364
Calcium chloride dihydrate Ph. Eur.	75, 344	25 kg	22322.466
Chloroform stabilised	87, 344	2,5 l	22705.323
Citric acid, anhydrous, powder Ph. Eur.	91, 344	1 kg	20282.293
Citric acid, anhydrous, powder Ph. Eur.	91, 344	5 kg	20282.362
Citric acid, anhydrous, powder Ph. Eur.	91, 344	25 kg	20282.464
Citric acid monohydrate, powder Ph. Eur.	91, 344	1 kg	85514.290
Citric acid monohydrate, powder Ph. Eur.	91, 344	5 kg	85514.360
Citric acid monohydrate, powder Ph. Eur.	91, 344	25 kg	85514.460
Dichloromethane stabilised Ph. Eur.	112, 344	1 l	23365.290
Dichloromethane stabilised Ph. Eur.	112, 344	25 l	23365.461
Dichloromethane stabilised Ph. Eur.	112, 344	190 l	23365.552
Diethyl ether stabilised Ph. Eur.	115, 344	1 l	23819.298
Diethyl ether stabilised Ph. Eur.	115, 344	5 l	23819.367
Diethyl ether stabilised Ph. Eur.	115, 344	25 l	23819.460
Dimethyl sulphoxide Ph. Eur.	121, 344	1 l	83529.290
EDTA disodium salt dihydrate Ph. Eur.	130, 344	1 kg	20309.296
EDTA disodium salt dihydrate Ph. Eur.	130, 344	5 kg	20309.365
Ethanol absolute Ph. Eur., USP	146, 344	1 l	20816.298
Ethanol absolute Ph. Eur., USP	146, 344	5 l	20816.367
Ethanol absolute Ph. Eur., USP	146, 344	25 l	20816.470
Ethanol 96% (v/v) Ph. Eur.	148, 344	1 l	20905.296
Ethanol 96% (v/v) Ph. Eur.	148, 344	2,5 l	20905.320
Ethanol 96% (v/v) Ph. Eur.	148, 344	5 l	20905.365
Ethanol 96% (v/v) Ph. Eur.	148, 344	25 l	20905.467
D(-)-Fructose Ph. Eur.	167, 344	1 kg	24282.290
D(-)-Fructose Ph. Eur.	167, 344	5 kg	24282.368
D(-)-Fructose Ph. Eur.	167, 344	25 kg	24282.461
Gelatine, powder Ph. Eur.	172, 344	250 g	24360.233
Gelatine, powder Ph. Eur.	172, 344	5 kg	24360.368
D(+)-Glucose, anhydrous Ph. Eur., USP	173, 344	500 g	284504S
D(+)-Glucose, anhydrous Ph. Eur., USP	173, 344	5 kg	284508W
D(+)-Glucose, anhydrous Ph. Eur., USP	173, 344	25 kg	28450BF
D(+)-Glucose monohydrate Ph. Eur.	173, 344	1 kg	24369.290
D(+)-Glucose monohydrate Ph. Eur.	173, 344	25 kg	24369.461
L(+)-Glutamic acid Ph. Eur.	174, 344	250 g	20350.232
Glycerine (glycerol) Ph. Eur.	175, 344	1 l	24386.298
Glycerine (glycerol) Ph. Eur.	175, 344	5 l	24386.367
Gum tragacanth Ph. Eur., USP, NF	182, 344	500 g	24437.260
Hydrochloric acid 37 % Ph. Eur.	197, 344	1 l	20255.290
Hydrochloric acid 37 % Ph. Eur.	197, 344	2,5 l	20255.324
Hydrochloric acid 37 % Ph. Eur.	197, 344	2,5 l	20255.420
Hydrochloric acid 37 % Ph. Eur.	197, 344	5 l	20255.368
Hydrochloric acid 37 % Ph. Eur.	197, 344	20 l	20255.440
Hydrochloric acid 25% Reag. Ph. Eur.	200, 344	5 l	84514.360
Hydrogen peroxide 30 % stabilised Ph. Eur.	207, 344	500 ml	23622.260
Hydrogen peroxide 30 % stabilised Ph. Eur.	207, 344	1 l	23622.298
Hydrogen peroxide 30 % stabilised Ph. Eur.	207, 344	2,5 l	23622.330
Hydrogen peroxide 30 % stabilised Ph. Eur.	207, 344	5 l	23622.367
Iodine Ph. Eur.	220, 344	500 g	24762.265
Iron (II) sulphate heptahydrate Ph. Eur.	225, 344	1 kg	24246.295

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Description	Page	Pk	Cat. No.
Lactic acid 90 % Ph. Eur.	235, 345	1 l	20370.297
Lactic acid 90 % Ph. Eur.	235, 345	5 l	20370.366
Magnesium chloride hexahydrate Ph. Eur., BP, USP	246, 345	1 kg	87060.290
Magnesium chloride hexahydrate Ph. Eur., BP, USP	246, 345	5 kg	87060.360
Magnesium chloride hexahydrate Ph. Eur., BP, USP	246, 345	25 kg	87060.460
Magnesium hydroxide Ph. Eur.	247, 345	1 kg	25059.295
Magnesium hydroxide Ph. Eur.	247, 345	25 kg	25059.466
Magnesium oxide heavy Ph. Eur.	247, 345	1 kg	83540.290
Magnesium sulphate, dried USP	247, 345	1 kg	7154.1000
Magnesium sulphate heptahydrate Ph. Eur.	248, 345	1 kg	25167.298
Magnesium sulphate heptahydrate Ph. Eur.	248, 345	5 kg	25167.367
Magnesium sulphate heptahydrate Ph. Eur.	248, 345	25 kg	25167.460
D(-)-Mannitol Ph. Eur., USP	250, 345	1 kg	25311.297
D(-)-Mannitol Ph. Eur., USP	250, 345	5 kg	25311.366
D(-)-Mannitol Ph. Eur., USP	250, 345	25 kg	25311.468
Methyl 4-hydroxybenzoate Ph. Eur.	262, 345	1 kg	25604.290
Orthophosphoric acid 85 % Ph. Eur.	324, 345	1 l	20626.292
Orthophosphoric acid 85 % Ph. Eur.	324, 345	5 l	20626.361
Orthophosphoric acid 85 % Ph. Eur.	324, 345	25 l	20626.463
Paraffin, solidification point 52-54°C, pellets Ph. Eur.	327, 345	1 kg	26157.291
Paraffin, liquid Ph. Eur.	328, 345	5 l	8577.5000
Phenol, detached crystals Ph. Eur.	345, 347	1 kg	20596.297
Phenol, detached crystals Ph. Eur.	345, 347	25 kg	20596.468
Phenolphthalein Ph. Eur.	345, 349	100 g	83544.180
2-Phenoxyethanol Ph. Eur.	345, 350	1 l	26244.290
Polyvinylpyrrolidone 40,000 (K30) Ph. Eur.	345, 357	1 kg	26617.291
Polyvinylpyrrolidone 40,000 (K30) Ph. Eur.	345, 357	5 kg	26617.360
Potassium acetate Ph. Eur.	345, 358	1 kg	85507.290
Potassium chloride Ph. Eur., USP	345, 360	1 kg	26760.295
Potassium chloride Ph. Eur., USP	345, 360	5 kg	26760.364
Potassium chloride Ph. Eur., USP	345, 360	25 kg	26760.466
Potassium dihydrogen phosphate, crystallised Ph. Eur.	345, 363	1 kg	26922.295
Potassium dihydrogen phosphate, crystallised Ph. Eur.	345, 363	5 kg	26922.364
Potassium dihydrogen phosphate, crystallised Ph. Eur.	345, 363	25 kg	26922.466
di-Potassium hydrogen phosphate Ph. Eur.	345, 366	1 kg	26932.290
di-Potassium hydrogen phosphate Ph. Eur.	345, 366	5 kg	26932.368
di-Potassium hydrogen phosphate Ph. Eur.	345, 366	25 kg	26932.461
L(+)-Potassium hydrogen tartrate Ph. Eur.	345, 367	5 kg	27057.361
Potassium hydroxide, pellets Ph. Eur.	345, 368	1 kg	26670.294
Potassium hydroxide, pellets Ph. Eur.	345, 368	5 kg	26670.363
Potassium hydroxide, pellets Ph. Eur.	345, 368	25 kg	26670.465
Potassium iodide Ph. Eur.	345, 370	250 g	26850.230
Potassium iodide Ph. Eur.	345, 370	500 g	26850.260
Potassium iodide Ph. Eur.	345, 370	1 kg	26850.296
Potassium iodide Ph. Eur.	345, 370	5 kg	26850.365
Potassium permanganate, crystallised Ph. Eur.	345, 372	1 kg	26904.293
Potassium permanganate, crystallised Ph. Eur.	345, 372	25 kg	26904.464
Potassium sorbate, granules Ph. Eur.	345, 374	1 kg	26976.291
Potassium sorbate, granules Ph. Eur.	345, 374	25 kg	26976.462
2-Propanol Ph. Eur., USP	345, 378	1 l	20904.293
2-Propanol Ph. Eur., USP	345, 378	2,5 l	20904.320
2-Propanol Ph. Eur., USP	345, 378	5 l	20904.362
2-Propanol Ph. Eur., USP	345, 378	25 l	20904.465
Resorcinol Ph. Eur.	345, 388	1 kg	27379.294
Salicylic acid, powder Ph. Eur.	345, 392	1 kg	20662.296
Salicylic acid, powder Ph. Eur.	345, 392	25 kg	20662.467
Silver nitrate Ph. Eur.	345, 403	100 g	83517.180
Sodium acetate trihydrate Ph. Eur.	345, 408	1 kg	27649.297
Sodium acetate trihydrate Ph. Eur.	345, 408	25 kg	27649.468
Sodium benzoate Ph. Eur.	345, 409	1 kg	83551.290
Sodium benzoate Ph. Eur.	345, 409	5 kg	83551.360
Sodium carbonate, anhydrous Ph. Eur.	345, 410	1 kg	27767.295
Sodium carbonate, anhydrous Ph. Eur.	345, 410	25 kg	27767.466
Sodium carbonate decahydrate Ph. Eur.	345, 410	1 kg	27761.295
Sodium chloride Ph. Eur.	345, 412	1 kg	27808.297
Sodium chloride Ph. Eur.	345, 412	5 kg	27808.366
Sodium chloride Ph. Eur.	345, 412	25 kg	27808.468
tri-Sodium citrate dihydrate, crystallised Ph. Eur.	345, 413	1 kg	27831.297
tri-Sodium citrate dihydrate, crystallised Ph. Eur.	345, 413	5 kg	27831.366
Sodium dihydrogen phosphate dihydrate Ph. Eur.	345, 415	1 kg	28014.291
Sodium dihydrogen phosphate dihydrate Ph. Eur.	345, 415	5 kg	28014.360
Sodium fluoride Ph. Eur.	345, 418	1 kg	27859.293
Sodium fluoride Ph. Eur.	345, 418	25 kg	27859.464
Sodium hydrogen carbonate Ph. Eur.	345, 419	1 kg	27775.293
Sodium hydrogen carbonate Ph. Eur.	345, 419	5 kg	27775.362
Sodium hydrogen carbonate Ph. Eur.	345, 419	25 kg	27775.464
di-Sodium hydrogen phosphate dihydrate Ph. Eur., USP	345, 420	1 kg	87010.290
di-Sodium hydrogen phosphate dihydrate Ph. Eur., USP	345, 420	5 kg	87010.360
di-Sodium hydrogen phosphate dihydrate Ph. Eur., USP	345, 420	25 kg	87010.460
di-Sodium hydrogen phosphate dodecahydrate Ph. Eur.	345, 420	1 kg	28035.293
di-Sodium hydrogen phosphate dodecahydrate Ph. Eur.	345, 420	5 kg	28035.362
Sodium hydroxide, pellets Ph. Eur.	345, 421	1 kg	28248.298
Sodium hydroxide, pellets Ph. Eur.	345, 421	5 kg	28248.367
Sodium hydroxide, pellets Ph. Eur.	345, 421	25 kg	28248.460
Sodium iodide Ph. Eur.	345, 428	1 kg	27916.291
Sodium iodide Ph. Eur.	345, 428	5 kg	27916.360

Description	Page	Pk	Cat. No.
Sodium iodide Ph. Eur.	346, 428	25 kg	27916.462
DL-Sodium lactate 50 % in aqueous solution Ph. Eur.	346, 429	1 l	27927.298
Sodium sulphate, anhydrous, fine powder Ph. Eur.	346, 434	1 kg	28105.295
Sodium sulphate, anhydrous, fine powder Ph. Eur.	346, 434	5 kg	28105.364
Sodium sulphate, anhydrous, fine powder Ph. Eur.	346, 434	25 kg	28105.466
Sodium sulphite, anhydrous Ph. Eur.	346, 435	1 kg	28125.294
Sodium sulphite, anhydrous Ph. Eur.	346, 435	5 kg	28125.363
Sodium sulphite, anhydrous Ph. Eur.	346, 435	25 kg	28125.465
di-Sodium tetraborate decahydrate Ph. Eur.	346, 436	1 kg	83555.290
di-Sodium tetraborate decahydrate Ph. Eur.	346, 436	25 kg	83555.460
D(+)-Sucrose (Saccharose) Ph. Eur.	346, 467	1 kg	27483.294
D(+)-Sucrose (Saccharose) Ph. Eur.	346, 467	5 kg	27483.363
D(+)-Sucrose (Saccharose) Ph. Eur.	346, 467	25 kg	27483.465
Sulphuric acid 96% Ph. Eur.	346, 470	1 l	85508.290
Sulphuric acid 96% Ph. Eur.	346, 470	2,5 l	85508.320
Talc Ph. Eur.	346, 477	500 g	83557.260
L(+)-Tartaric acid, powder Ph. Eur.	346, 479	1 kg	83511.290
L(+)-Tartaric acid, powder Ph. Eur.	346, 479	5 kg	83511.360
Thymol Ph. Eur.	346, 487	100 g	83558.180
Trichloroacetic acid, crystallised Ph. Eur.	346, 493	1 kg	20741.290
Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) Ph. Eur., USP	346, 499	1 kg	87020.290
Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) Ph. Eur., USP	346, 499	5 kg	87020.360
Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) Ph. Eur., USP	346, 499	25 kg	87020.460
Vaseline white Ph. Eur.	346, 508	1 kg	28908.290
Water Ph. Eur., USP, NF, purified	346, 514	10 l	90200.9010
Water Ph. Eur., USP, NF, purified	346, 514	25 l	90200.9025
Zinc sulphate heptahydrate Ph. Eur.	346, 526	1 kg	29158.294
Zinc sulphate heptahydrate Ph. Eur.	346, 526	5 kg	29158.363

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Phenanthrene

Warning

CAS 85-01-8 **UN:** 3077
$C_{14}H_{10}$ **M.W.** 178.23 g/mol
Boiling Pt: 340 °C (1013 hPa) **Melting Pt:** 97-99 °C **Density:** 1,19 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
123112M	100 mg	Glass ampoule

1,10-Phenanthroline monohydrate analytical reagent

Danger

CAS 5144-89-8 **UN:** 2811
$C_{12}H_8N_2 \cdot 1H_2O$ **M.W.** 198.22 g/mol
Melting Pt: 93-94 °C **Density:** 1,259 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.0 %
Suited for iron reagent ..... Passes test
Melting point ..... 93 - 110 °C
Ignition residue (SO_4) ..... Max. 0.1 %

Cat. No.	Pk	Pack type
26227.101	5 g	Glass bottle

VWR LIFE SCIENCE 1,10-Phenanthroline monohydrate, proteomics grade

Danger

CAS 5144-89-8 **UN:** 2811
$C_{12}H_8N_2 \cdot 1H_2O$ **M.W.** 198.22 g/mol
Melting Pt: 93-94 °C **Density:** 1,259 g/cm³ (20 °C)
Storage Temperature: Ambient
A metalloprotease inhibitor useful for chelating iron and other divalent metals.
Working concentration: 20 mM

Iron Test ..... PASS
Protease ..... NONE
Redox Test ..... PASS

Cat. No.	Pk	Pack type
M135-10G	10 g	Glass bottle

1,10-Phenanthroline hydrochloride monohydrate analytical reagent

Danger

CAS 3829-86-5 **UN:** 2811
$C_{12}H_9ClN_2 \cdot 1H_2O$ **M.W.** 234.68 g/mol
Melting Pt: 224-226 °C **Density:** 1,385 g/cm³ (-100,15 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.0 %
Suited for iron reagent ..... Passes test
Suited for oxido reduction indicator ..... Passes test
Ignition residue (SO_4) ..... Max. 0.2 %
Loss on drying (100-105°C) ..... Max. 8.0 %

Cat. No.	Pk	Pack type
26230.102	5 g	Plastic bottle for solids

1,10-Phenanthroline monohydrochloride monohydrate

See 1,10-Phenanthroline hydrochloride monohydrate p.347

1,10-Phenanthrolinium chloride monohydrate

See 1,10-Phenanthroline hydrochloride monohydrate p.347

Phenetole

Warning

CAS 103-73-1 **UN:** 3271
$C_6H_5OC_2H_5$ **M.W.** 122.17 g/mol
Boiling Pt: 170 °C (1013 hPa) **Melting Pt:** 169,9 °C **Density:** 0,956 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.5 %
Phenol ..... Max. 0.05 %
Water ..... Max. 0.5 %

Cat. No.	Pk	Pack type
27295.294	1 l	Plastic bottle

Phenol, detached crystals AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 108-95-2 **UN:** 1671
C_6H_5OH
Boiling Pt: 181,8 °C (1013 hPa) **Melting Pt:** 40,8 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471329-32

Assay ..... 99.0 - 100.5 %
Acidity ..... Passes test Ph.Eur.
Clarity of solution ..... Passes test ACS
Identification B ..... Passes test Ph.Eur.
Solution S ..... Passes test Ph.Eur.
o-Cresol ..... Max. 0.05 %
p-Cresol ..... Max. 0.05 %
Heavy metals (as Pb) ..... Max. 10 ppm
Water ..... Max. 0.2 %
Cu (Copper) ..... Max. 0.05 ppm
K (Potassium) ..... Max. 10 ppm
Pb (Lead) ..... Max. 0.1 ppm
Conforms to ACS ..... Passes test
Assay (GC) ..... Min. 99.5 %
Appearance of solution ..... Passes test Ph.Eur.
Identification A ..... Passes test Ph.Eur.
Identification C ..... Passes test Ph.Eur.
Freezing point ..... Min. 40.5 °C
m-Cresol ..... Max. 0.05 %
Evaporation residue ..... Max. 100 ppm
Insolubility in water ..... Max. 50 ppm
Cl (Chloride) ..... Max. 5 ppm
Fe (Iron) ..... Max. 1 ppm
Na (Sodium) ..... Max. 10 ppm
Zn (Zinc) ..... Max. 0.5 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
20599.231	250 g	Plastic bottle for solids
20599.260	500 g	Plastic bottle for solids
20599.297	1 kg	Plastic bottle for solids

Phenol, detached crystals Ph. Eur.

Danger

CAS 108-95-2 **UN:** 1671
C_6H_5OH
Boiling Pt: 181,8 °C (1013 hPa) **Melting Pt:** 40,8 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471329-32

Assay ..... 99.0 - 100.5 %
Appearance ..... Conforms (see CoA/CoS)
Identification A ..... Passes test
Identification B ..... Passes test
Identification C ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Acidity ..... Passes test
Freezing point ..... Min. 39.5 °C
Residue on evaporation ..... Max. 0.05 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
20596.297	1 kg	Plastic bottle for solids
20596.468	25 kg	Plastic drum

Phenol, detached crystals GPR RECTAPUR®

Danger

CAS 108-95-2 **UN:** 1671
C_6H_5OH
Boiling Pt: 181,8 °C (1013 hPa) **Melting Pt:** 40,8 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471329-32

Assay ..... Min. 99 %
Congealing temperature ..... Min. 39.5 °C
Evaporation residue ..... Max. 0.025 %

Cat. No.	Pk	Pack type
20598.465	25 kg	Metal drum

Phenol 89% liquefied

Danger

CAS 108-95-2 **UN:** 2821
C_6H_5OH
Storage Temperature: Ambient

Distilling Range ..... >= 182.5° C
Nonvolatile Residue ..... >= 0.05 %

Cat. No.	Pk	Pack type
E357-500ML	500 ml	Glass bottle

Phenol 80% liquefied

Danger

CAS 108-95-2 **UN:** 2821
C_6H_5OH
Storage Temperature: Ambient

Assay ..... 78.5 - 81.5 %

Cat. No.	Pk	Pack type
294785A	2,5 l	Glass bottle SAFEBREAK

Phenol liquefied/Tris-Cl Gen-Apex® for DNA extraction

Danger

CAS 108-95-2 **UN:** 2821
C_6H_5OH
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
33595.188	100 ml	Glass bottle

Phenol saturated with buffer (pH 4.5) for biotechnology

Danger

CAS 108-95-2 **UN:** 2821
C_6H_5OH
Storage Temperature: Ambient

An ideal replacement for water-saturated phenol in many protocols. Offers the high purity and performance of water saturated phenol with greatly enhanced stability and safety.

O.D.@ 330nm ..... < = 0.2
O.D.@ 405nm ..... < = 0.1
O.D.@ 510nm ..... < = 0.1
pH (Buffer) @25°C 4.1-4.5
Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0981-100ML	100 ml	Glass bottle
0981-400ML	400 ml	Glass bottle

Phenol saturated with buffer for biotechnology

Danger

CAS 108-95-2 **UN:** 2821
C_6H_5OH
Storage Temperature: Ambient

Packaged at pH 6.6, this mixture is provided with a supplemental alkaline buffer that allows the researcher to easily increase the pH to 7.9 for DNA purification.

Abs.@ 330nm ..... < = 0.2
Abs.@ 405nm ..... <= 0.1
Abs.@ 510nm ..... <= 0.1
pH (Buffer) @25°C ..... 7.7 - 8.1
Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0945-100ML	100 ml	Glass bottle
0945-400ML	400 ml	Glass bottle

Phenol saturated with buffer for biotechnology

Danger

CAS 108-95-2 **UN:** 2821
C_6H_5OH
Storage Temperature: Ambient

Ready-to-use, single-phase phenol solution that does not have to be equilibrated with a buffering solution prior to use.

Conductivity(5%, Water) @25°C ..... < 180 uS
pH(5%, Water) @25°C ..... 7.5 - 7.8

Cat. No.	Pk	Pack type
K168-400ML	400 ml	Glass bottle

Phenol : Chloroform : iso-Amyl alcohol (125:24:1) for biotechnology

Danger

UN: 2810
Storage Temperature: Ambient

An optimised mixture that can be used directly to replace the phenol and chloroform recommended in the one-step phenol purification method.

Abs.@ 330 nm 0.2
Abs.@ 405 nm 0.1
Abs.@ 510 nm 0.1
pH @25 °C ..... 4.3 - 4.7
Purity 99.0

Cat. No.	Pk	Pack type
E277-100ML	100 ml	Glass bottle

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Phenol : Chloroform : iso-Amyl alcohol (25:24:1), high purity

Danger

UN: 2810

Storage Temperature: Ambient

Premixed with isoamyl alcohol (25:24:1). A 1:1 saturated phenol:chloroform mixture is ideal for the extraction of protein from DNA preparations. Packaged at pH 6.7, this product is accompanied by a separate alkaline buffer which allows the researcher to increase the pH to 8.0.

Appearance	Colorless, 2-layer liquid
DNase	none detected
O.D.@ 330nm	<= 0.2
O.D.@ 405nm	<= 0.1
O.D.@ 510nm	<= 0.1
pH @25°C	6.5 - 6.9
Protease	none detected
Purity	>= 99%
RNase	none detected

Cat. No.	Pk	Pack type
0883-100ML	100 ml	Glass bottle
0883-400ML	400 ml	Glass bottle

Phenol : Chloroform : iso-Amyl alcohol (25:24:1) for biotechnology

Danger

UN: 2810

Storage Temperature: Ambient

Ready-to-use, single-phase solution that does not have to be equilibrated with a buffering purification solution prior to use. Premixed with Isoamyl Alcohol (25:24:1).

Conductivity(50%, Water)@25°C	250 uS - 330 uS
pH(50%, Water)@25°C	8.05 - 8.35

Cat. No.	Pk	Pack type
K169-100ML	100 ml	Glass bottle
K169-400ML	400 ml	Glass bottle

Phenol : Chloroform : iso-Amyl alcohol (25:24:1)

Danger

UN: 2810

Storage Temperature: Ambient

A 25:24:1 mixture of phenol, chloroform, and isoamyl alcohol useful for preparing RNA with maximal recovery of poly (A+) RNA for subsequent mRNA purification and generation of cDNA.

O.D.@ 330nm	< = 0.2
O.D.@ 405nm	<= 0.1
O.D.@ 510nm	<= 0.1
pH @25°C	4.9 - 5.5
Purity	>= 99 %

Cat. No.	Pk	Pack type
0966-100ML	100 ml	Glass bottle
0966-400ML	400 ml	Glass bottle

Organic reference standard, Phenol Mix 1, EPA 604

0.5 mg/ml of each component in methanol

2,4-Dichlorophenol ; 2,4-Dimethylphenol ; 2,4-Dinitrophenol ; 4-Chloro-3-methylphenol; 2-Chlorophenol ; 2-Methyl-4,6-dinitrophenol ; 2-Nitrophenol ; 4-Nitrophenol ; Phenol; Pentachlorophenol; 2,4,6-Trichlorophenol

Cat. No.	Pk	Pack type
124742R	1 ml	Vial

Phenolphthalein Ph. Eur.

Danger

CAS 77-09-8

$C_{20}H_{14}O_4$

M.W. 318.33 g/mol

Melting Pt: 258-262 °C

Density: 1,3 g/cm³ (20 °C)

Storage Temperature: Ambient

REACh: 01-2119498295-24

Assay (calculated on dried substance)	98.0 - 101.0 %
Appearance	White/almost white powder
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Related substances	Passes test
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 200 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C)	Max. 0.5 %
Sulphated ash	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
83544.180	100 g	Glass bottle for solids

Phenolphthalein GPR RECTAPUR®

Danger

CAS 77-09-8

$C_{20}H_{14}O_4$

M.W. 318.33 g/mol

Melting Pt: 258-262 °C

Density: 1,3 g/cm³ (20 °C)

Storage Temperature: Ambient

REACh: 01-2119498295-24

Suited for pH indicator	Passes test
Melting point	259 - 264 °C
Ignition residue (SO_4)	Max. 0.1 %
Insolubility in ethanol 96 % (1% W/V)	Max. 50 ppm

Cat. No.	Pk	Pack type
26237.231	250 g	Glass bottle for solids

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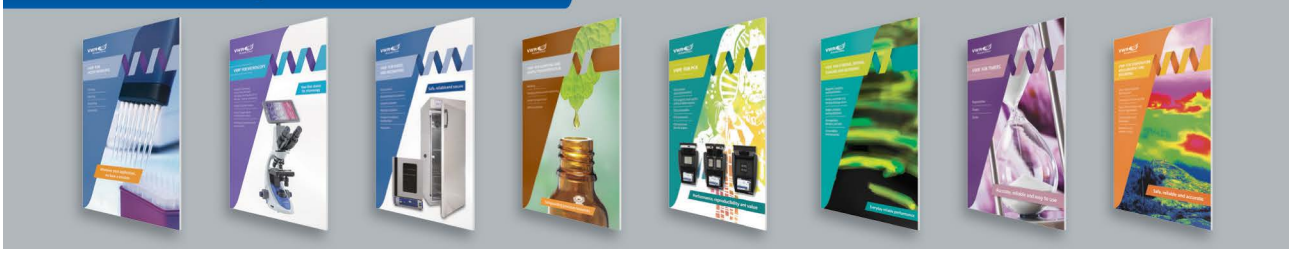


Phenolphthalein 1% in ethanol 50% pH-indicator

Danger

CAS 77-09-8 **UN:** 1170
$C_{20}H_{14}O_4$
Storage Temperature: Ambient
1% solution in 50% ethanol.

Application test ..... Passes test

Cat. No.	Pk	Pack type
210893Q	250 ml	Glass bottle
210894R	1 l	Glass bottle

Phenolphthalein 0.5% in ethanol 50% for milk analysis

Danger

CAS 77-09-8 **UN:** 1170
$C_{20}H_{14}O_4$
Storage Temperature: Ambient

pH (20°C) ..... 6.5 - 7.0

Cat. No.	Pk	Pack type
210296B	2,5 l	Glass bottle

Phenolphthalein 0.2% in ethanol TECHNICAL

Danger

CAS 77-09-8 **UN:** 1170
$C_{20}H_{14}O_4$
Density: 0,884 g/cm³ (20 °C)
Storage Temperature: Ambient

Transition range: pH 8,2-9,8

Identification ..... Passes test

Cat. No.	Pk	Pack type
31724.295	1 l	Glass bottle

Phenolphthalein 1% in 2-propanol TECHNICAL

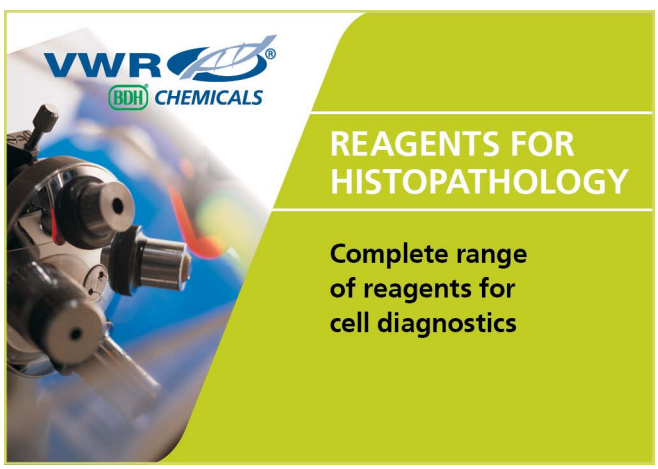
Danger

CAS 77-09-8 **UN:** 1219
$C_{20}H_{14}O_4$
Boiling Pt: 82 °C (1013 hPa) **Density:** 0,79 g/cm³ (20 °C)
Storage Temperature: Ambient

Transition range: pH 8,2-9,8

Sensitivity ..... Passes test

Cat. No.	Pk	Pack type
8626.1000	1 l	Glass bottle



Phenol red 0.4 g/l in ethanol TECHNICAL

Danger

CAS 143-74-8 **UN:** 1170
$C_{19}H_{14}O_5S$
Storage Temperature: Ambient

Transition range: pH 6,4 - 8,2

Identification ..... Passes test

Cat. No.	Pk	Pack type
34304.237	250 ml	Glass bottle

Phenol red 0.002% and ammonium sulphate 0.01% aqueous solution, buffered pH 4.7 Reag. Ph. Eur. 1063604

CAS 34487-61-1
$C_{19}H_{13}NaO_5S$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87890.260	500 ml	Plastic bottle

Phenol red 0.002% and ammonium sulphate 0.005% aqueous solution, buffered pH 4.7 Reag. Ph. Eur. 1063603

CAS 34487-61-1
$C_{19}H_{13}NaO_5S$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87889.260	500 ml	Plastic bottle

2-Phenoxyethanol Ph. Eur.

Warning

CAS 122-99-6
$C_6H_5OCH_2CH_2OH$ **M.W.** 138.17 g/mol
Boiling Pt: 245 °C (1013 hPa) **Melting Pt:** 12 °C **Density:** 1,1094 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 99.0 - 100.5 %
Appearance ..... C'less slightly visc.liq.
Identification (IR) ..... Passes test
Relative density ..... 1.105 - 1.11
Resolution ..... Min. 15
Unspecified impurities (for each) ..... Max. 0.10 %
Total impurities ..... Max. 0.3 %
Reporting treshold ..... Max. 0.05 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
26244.290	1 l	Glass bottle

6-(2-Phenylacetamido)penicillanic acid potassium salt

See Penicillin G potassium salt p.336

Phenylalcohol

See Phenol p.347

Phenylamine

See Aniline p.47

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N-Phenylaniline

See Diphenylamine p.124

N-Phenylbenzeneamine

See Diphenylamine p.124

Phenylcarbinol

See Benzyl alcohol p.56

Phenyl cellosolve

See 2-Phenoxyethanol p.350

Phenylchloride

See Chlorobenzene p.85

VWR LIFE SCIENCE o-Phenylenediamine, reagent grade

Danger

CAS 95-54-5 **UN:** 1673

$C_6H_8N_2$ **M.W.** 108.14 g/mol

Boiling Pt: 257 °C (1013 hPa) **Melting Pt:** 103 °C **Density:** 1,21 g/cm³ (20 °C)

Storage Temperature: Ambient

Widely used to detect horseradish peroxidase activity in ELISA and solution assays. Absorbs at 492 nm.

Ash ..... < = 0.1 %
Purity ..... >= 98 %

Cat. No.	Pk	Pack type
0688-25G	25 g	Plastic bottle for solids
0688-50G	50 g	Plastic bottle for solids

Phenylhydrazinium chloride 0.36% in hydrochloric acid 5% Reag. Ph. Eur. 1064501

CAS 59-88-1 **UN:** 1789

$C_6H_5NHNH_2 \cdot HCl$ **M.W.** 144.6 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87892.230	250 ml	Plastic bottle

Phenylmethane

See Toluene p.491

Phenylmethane-D8

See Toluene-[D8] p.492

Phloroglucinol hydrochloric solution according to the NF Q 03-001 standard

Danger

UN: 2924

Boiling Pt: >78 °C (1013hPa) **Density:** 1,1 g/cm³ (20 °C)

Used in research of lignified fibres in paper

Appearance ..... Yellowish brown liquid
Identification ..... Passes test

Cat. No.	Pk	Pack type
26337.180	100 ml	Glass bottle

Phloxine B 0.1% Q Path® for microscopy

IVD

Storage Temperature: Ambient

Ready to use solution for HPS histological staining.

Cat. No.	Pk	Pack type
10047229.	1 l	Plastic bottle

Phosphatase substrate

See di-Sodium 4-nitrophenyl phosphate hexahydrate p.430

Phosphate standard solution, 1,000 mg/l PO_4^{3-} in water (from KH_2PO_4) ARISTAR® standard for ion chromatography

PO_4 in H_2O

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458052B	100 ml	Plastic bottle
458054D	500 ml	Plastic bottle

Phosphate standard solution, 200 mg/l PO_4^{3-} in water (from KH_2PO_4) ARISTAR® standard for ion chromatography

PO_4 in H_2O

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458122V	100 ml	Plastic bottle

NEW Phosphate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84988.180	100 ml	Plastic bottle
84988.260	500 ml	Plastic bottle

NEW Phosphate (in P) 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84989.180	100 ml	Plastic bottle
84989.260	500 ml	Plastic bottle

Standard solution (500 ppm PO_4) for the preparation of phosphate standard solution (5 ppm PO_4) Reag.Ph.Eur. 5002200

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88089.180	100 ml	Plastic bottle

Phosphomolybdotungstic reagent dilute Reag. Ph. Eur. 1065001

UN: 3264

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87894.180	100 ml	Plastic bottle

Phosphomolybdotungstic reagent Reag. Ph. Eur. 1065000

Warning

UN: 3264

Boiling Pt: 213 °C

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87893.180	100 ml	Plastic bottle

Phosphoric acid

See Orthophosphoric acid 85%..... p.323

meta-Phosphoric acid, lumps AnalaR NORMAPUR® analytical reagent

Danger

CAS 37267-86-0 **UN:** 3260
$(HPO_3)n$ **M.W.** 79.98 g/mol
Boiling Pt: 260 °C (1013 hPa) **Melting Pt:** 21 °C **Density:** 2,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Mixture of metaphosphoric acid and sodium metaphosphate ($NaPO_3$: 56 to 60%)

Assay (calculated as HPO_3) (39-45 %) ... Passes test	Assay (calculated as $NaPO_3$) (55-61 %).. Passes test
Heavy metals (as Pb) ..... Max. 20 ppm	Substances reducing $KMnO_4$ (as H_3PO_3) ... Max. 100 ppm
Cl (Chloride) ..... Max. 20 ppm	SO_4 (Sulphate)..... Max. 100 ppm
As (Arsenic)..... Max. 5 ppm	Ca (Calcium)..... Max. 100 ppm
Fe (Iron)..... Max. 10 ppm	Mn (Manganese) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
20632.236	250 g	Plastic bottle for solids
20632.293	1 kg	Plastic bottle for solids

meta-Phosphoric acid GPR RECTAPUR®

Danger

CAS 37267-86-0 **UN:** 3260
$(HPO_3)n$ **M.W.** 79.98 g/mol
Boiling Pt: 260 °C (1013 hPa) **Melting Pt:** 21 °C **Density:** 2,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Containing approximately 40% HPO_3 and 60% $NaPO_3$

Identification ..... Passes test
Cl (Chloride) ..... Max. 50 ppm
SO_4 (Sulphate)..... Max. 0.02 %
Fe (Iron)..... Max. 20 ppm
Pb (Lead)..... Max. 20 ppm

Cat. No.	Pk	Pack type
291903W	250 g	Plastic bottle for solids
291904A	500 g	Plastic bottle for solids

Phosphoric anhydride

See di-Phosphorus pentoxide p.353

Phosphoric acid - acetic acid - nitric acid mixture (77:19:4)

See Etch Mixture PES 77-19-04 ..... p.145

NEW Phosphorus standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Phosphorus	10 ppm	H_2O	Plastic bottle	100 ml	85585.180
Phosphorus	1000 ppm	H_2O	Plastic bottle	100 ml	456842P
Phosphorus	10000 ppm	H_2O	Plastic bottle	100 ml	457112P

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Phosphorus standard solution, 10,000 mg/l P in water (from $(NH_4)PO_4H_2$) ARISTAR® standard for ICP

$NH_4H_2PO_4$ in H_2O

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455792S	100 ml	Plastic bottle
455794U	500 ml	Plastic bottle

Phosphorus standard solution, 1,000 mg/l P in water (from $(NH_4)PO_4H_2$) ARISTAR® standard for ICP

$NH_4H_2PO_4$ in H_2O

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455782Q	100 ml	Plastic bottle
455784S	500 ml	Plastic bottle

Phosphorus standard solution, 1,000 mg/l P in water AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86698.180	100 ml	Plastic bottle
86698.260	500 ml	Plastic bottle

di-Phosphorus pentoxide AnalaR NORMAPUR® analytical reagent

Danger

CAS 1314-56-3 **UN:** 1807

P_2O_5 **M.W.** 141.94 g/mol

Melting Pt: 562 °C **Density:** 2,253 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98.0 %	Insolubility in water	Max. 50 ppm
Reducing substances (as P_2O_3)	Max. 0.02 %	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 10 ppm	SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 150 ppm	Cd (Cadmium)	Max. 5 ppm
Cu (Copper)	Max. 20 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 100 ppm	Mn (Manganese)	Max. 5 ppm
Na (Sodium)	Max. 0.02 %	Ni (Nickel)	Max. 20 ppm
Pb (Lead)	Max. 10 ppm	Zn (Zinc)	Max. 20 ppm

Cat. No.	Pk	Pack type
21411.230	250 g	Plastic bottle for solids
21411.296	1 kg	Plastic bottle for solids

di-Phosphorus pentoxide TECHNICAL

Danger

CAS 1314-56-3 **UN:** 1807

P_2O_5 **M.W.** 141.94 g/mol

Melting Pt: 562 °C **Density:** 2,253 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
21410.293	1 kg	Plastic bottle for solids

Phosphotungstic acid hydrate AnalaR NORMAPUR® analytical reagent sodium free

Danger

CAS 12501-23-4 **UN:** 3260

$H_3[P(W_3O_{10})_4]\cdot nH_2O$ **M.W.** 2898.07 g/mol

Melting Pt: 107 °C

Loss on ignition (750°C)	Max. 17 %	Total N (Nitrogen)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm	SO_4 (Sulphate)	Max. 100 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 20 ppm
K (Potassium)	Max. 0.02 %	Na (Sodium)	Max. 0.02 %
Pb (Lead)	Max. 20 ppm		

Cat. No.	Pk	Pack type
20636.183	100 g	Plastic bottle for solids

Phosphotungstic acid 22% in orthophosphoric acid 11% Reag. Ph. Eur. 1065200

Danger

CAS 1343-93-7 **UN:** 3264

$H_3[P(W_3O_{10})_4]$ **M.W.** 2880.05 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87896.180	100 ml	Plastic bottle

NEW Phosphotungstic acid 1% USP test solutions (TS)

CAS 1343-93-7

$H_3O_{40}PW_{12}$

Storage Temperature: Ambient

Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85363.180	100 ml	Plastic bottle
85363.260	500 ml	Plastic bottle

Phthalic acid diethyl ester

See Diethyl phthalate p.115

Phthalic acid potassium salt

See Potassium hydrogen phthalate p.367

Picric acid 12 g/l in aqueous solution TECHNICAL

CAS 88-89-1

$(O_2N)_3C_6H_2OH$

Assay ..... 1.15 - 1.30 %

Cat. No.	Pk	Pack type
84512.260	500 ml	Plastic bottle

Picric acid 10 g/l in aqueous solution Reag. Ph. Eur. 1065801

CAS 88-89-1
$(O_2N)_3C_6H_2OH$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87897.180	100 ml	Plastic bottle

VWR LIFE SCIENCE PIPES, high purity

CAS 5625-37-6
$C_8H_{18}N_2O_6S_2$ **M.W.** 302.37 g/mol
Boiling Pt: 499 °C (1013 hPa) **Melting Pt:** 300 °C
Storage Temperature: Ambient

Abs.@260nm (1%, 1N NaOH)	< = 0.05
DNase	none
Heavy Metals (as Pb)	< 5 ppm
pKa	6.7 - 6.9
Protease	none detected
Purity	> 98 %
Residue after Ignition	< 0.3 %
RNase	none detected
Solubility (1%, 1N NaOH)	none detected

Cat. No.	Pk	Pack type
0488-100G	100 g	Plastic bottle for solids
0488-500G	500 g	Plastic bottle for solids

NEW PIPES free acid for biopharmaceutical production

CAS 5625-37-6
$C_8H_{18}N_2O_6S_2$ **M.W.** 302.37 g/mol
Boiling Pt: 499 °C (1013 hPa) **Melting Pt:** 300 °C
Storage Temperature: Ambient

Assay	Min. 98.0 %
Appearance	White crystalline powder
Cell culture toxicity	Passes test
DNases	Not detected
Identification by IR	Conforms to structure
Proteases	Not detected
RNases	Not detected
Solubility (0.1 mol/l in NaOH 1 N)	Clear and complete
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (110°C; 2 h)	Max. 3.0 %
Fe (Iron)	Max. 10 ppm
Absorbance (260 nm) (0,1 mol/l;NaOH 1 N)	Max. 0.05
Absorbance (280 nm) (0,1 mol/l;NaOH 1 N)	Max. 0.05
Bioburden	Max. 100 CFU/g
Endotoxin (1 %) (EU/mg)	Max. 0.1 EU/mg

Cat. No.	Pk	Pack type
73007.297	1 kg	Plastic bottle for solids
73007.366	5 kg	Bucket (Plastic)
73007.468	25 kg	Bucket (Plastic)

VWR LIFE SCIENCE PIPES sesquisodium salt, high purity

CAS 100037-69-2
$C_{16}H_{33}N_4Na_3O_{12}S_4$ **M.W.** 670.69 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient

Chloride	< = 1 %
Heavy Metals	<= 0.0001 %
pKa (25°C)	6.7 - 6.9
Purity (Anhydrous)	>= 99 %

Cat. No.	Pk	Pack type
0169-100G	100 g	Plastic bottle for solids

NEW PIPES sesquisodium salt for biopharmaceutical production

CAS 100037-69-2
$C_{16}H_{33}N_4Na_3O_{12}S_4$ **M.W.** 670.69 g/mol
Melting Pt: 300 °C
Storage Temperature: Ambient

Assay	Min. 98.0 %
Appearance	White crystalline powder
Cell culture toxicity	Passes test
DNases	Not detected
Identification by IR	Conforms to structure
Na (Sodium)	Passes test
Proteases	Not detected
RNases	Not detected
Solubility (0.1 mol/l)	Clear and complete
pH (1 %)	6.5 - 7.5
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (110°C; 2 h)	Max. 3.0 %
Fe (Iron)	Max. 10 ppm
Bioburden	Max. 100 CFU/g
Endotoxin (1 %) (EU/mg)	Max. 0.1 EU/mg

Cat. No.	Pk	Pack type
73257.297	1 kg	Plastic bottle for solids
73257.366	5 kg	Bucket (Plastic)
73257.468	25 kg	Bucket (Plastic)

NEW PIPES disodium for biopharmaceutical production

CAS 76836-02-7
$C_8H_{16}N_2Na_2O_6S_2$ **M.W.** 346.34 g/mol

Assay	Min. 99.0 %
Appearance	White powder
Cell culture toxicity	Passes test
DNases	Not detected
Identification by IR	Conforms to structure
Na (Sodium)	Passes test
Proteases	Not detected
RNases	Not detected
Solubility (0.1 mol/l)	Clear and complete
pH (25°C; 1 %)	9.2 - 10.5
Heavy metals (as Pb)	Max. 5 ppm
Loss on drying (110°C; 2 h)	Max. 3.0 %
Absorbance (260 nm) (0,1 mol/l)	Max. 0.04
Absorbance (280 nm) (0,1 mol/l)	Max. 0.02
Bioburden	Max. 100 CFU/g
Endotoxin (1 %) (EU/mg)	Max. 0.1 EU/mg

Cat. No.	Pk	Pack type
73305.297	1 kg	Plastic bottle for solids
73305.366	5 kg	Bucket (Plastic)
73305.468	25 kg	Bucket (Plastic)

Plaster of Paris

See Calcium sulphate hemihydrate p.78

Plate Count Agar

See Microbiology

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Platinum standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Platinum	1000 ppm	10% HCl	Plastic bottle	100 ml	457382L
Platinum	10 ppm	2% HCl	Plastic bottle	100 ml	85589.180

Platinum standard solution, 1,000 mg/l Pt in 10% hydrochloric acid (from Pt) ARISTAR® standard for ICP

Pt in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455802D	100 ml	Plastic bottle
455804F	500 ml	Plastic bottle

Platinum standard solution, 1,000 mg/l Pt in 10% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86701.180	100 ml	Plastic bottle
86701.260	500 ml	Plastic bottle

VWR LIFE SCIENCE pNPP substrate 30 mg, tablets, reagent grade

Warning

CAS 4264-83-9

$C_6H_4NO_6PNa_2 \cdot 6H2O$ **M.W.** 371.1 g/mol

Preferred substrate for high sensitivity detection of alkaline phosphatase in EIA assays. Read at 405 nm. Each 175 mg tablet contains 30 mg of p-NPP.

Cat. No.	Pk	Pack type
0617-100TABS	100	Glass bottle

VWR LIFE SCIENCE pNPP substrate 5 mg, tablets, reagent grade

Warning

CAS 4264-83-9

$C_6H_4NO_6PNa_2 \cdot 6H2O$ **M.W.** 371.1 g/mol

Storage Temperature: Refrigerator

5mg PNPP Substrate tablets, preferred substrate for high sensitivity detection of alkaline phosphatase in EIA assays. Read at 405 nm. Each 175 mg tablet contains 5 mg of p-NPP. Soluble. Reaction Condition: 1 mg/ml in 10 mM Diethanolamine and 0.5 mM $MgCl_2$, pH 9.5. Absorbs at 405 nm.

Abs.@309nm (1 tab/250mL Water) ..... 0.48 - 0.58
Background Color ..... <= 0.14
Mean Tablet Weight ..... 170 mg - 180 mg

Cat. No.	Pk	Pack type
0405-100T	100	Glass bottle

PNPP

See di-Sodium 4-nitrophenyl phosphate hexahydrate p.430

Oil 10 S VOLTALEF®

CAS 9002-83-9

$(C_2ClF_3)_n$ **M.W.** 800 g/mol

Density: 1,9 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
24627.188	100 g	Glass bottle

Polyester-Wax for microscopy

Steedman, Nature, 1957, 179, 1345

Cat. No.	Pk	Pack type
360704E	500 g	Plastic bottle

VWR LIFE SCIENCE Polyethylene glycol 8,000 for biotechnology

CAS 25322-68-3

$H(OCH_2CH_2)_nOH$ **M.W.** 8000 g/mol

Boiling Pt: >250°C **Density:** 1,21 g/cm³ (20 °C)

Storage Temperature: Ambient

DNase ..... none detected
pH (5%, Water) @25°C ..... 4.5 - 7.5
RNase ..... none detected
Solidification Point ..... 55 °C - 64 °C

Cat. No.	Pk	Pack type
0159-500G	500 g	Plastic bottle for solids
0159-1KG	1 kg	Plastic bottle for solids
0159-2.5KG	2,5 kg	Bucket (Plastic)

Polyethylene glycol 6,000 for biochemistry

CAS 25322-68-3

$H(OCH_2CH_2)_nOH$ **M.W.** 6000 g/mol

Boiling Pt: >250°C **Melting Pt:** 60-63 °C **Density:** 1,21 g/cm³ (20 °C)

Storage Temperature: Ambient

IR Spectrum ..... Passes test
Average molecular weight ..... 5000 - 7000
Heavy metals (as Pb) ..... Max. 10 ppm
Absorbance (260 nm) (0,01 mol/l) ..... Max. 0.2
Absorbance (280 nm) (0,01 mol/l) ..... Max. 0.1

Cat. No.	Pk	Pack type
442714K	500 g	Plastic bottle for solids

Polyethylene glycol 6,000 Electran® Molecular biology grade

CAS 25322-68-3

$H(OCH_2CH_2)_nOH$ **M.W.** 6000 g/mol

Boiling Pt: >250°C **Melting Pt:** 60-63 °C **Density:** 1,21 g/cm³ (20 °C)

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
443912S	100 g	Plastic bottle
443915V	1 kg	Plastic bottle

Polyethylene glycol 6,000 TECHNICAL

CAS 25322-68-3
$H(OCH_2CH_2)_nOH$ **M.W.** 6000 g/mol
Boiling Pt: >250°C **Melting Pt:** 60-63 °C **Density:** 1,21 g/cm³ (20 °C)
Storage Temperature: Ambient

Hydroxyl value ..... 16 - 22
Solidification point ..... 55 - 61 °C

Cat. No.	Pk	Pack type
26603.293	1 kg	Plastic bottle for solids
26603.360	5 kg	Bucket (Plastic)
26603.460	25 kg	Bucket (Plastic)

Polyethylene glycol 4,000 TECHNICAL

CAS 25322-68-3
$H(OCH_2CH_2)_nOH$ **M.W.** 4000 g/mol
Boiling Pt: >250 °C (1013hPa) **Melting Pt:** 53-58 °C **Density:** 1,21 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
26606.293	1 kg	Plastic bottle for solids
26606.464	25 kg	Bucket (Plastic)

Polyethylene glycol 1,500 TECHNICAL

CAS 25322-68-3
$H(OCH_2CH_2)_nOH$ **M.W.** 1500 g/mol
Boiling Pt: >250 °C (1013hPa) **Melting Pt:** 44-48 °C **Density:** 1,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
26604.296	1 kg	Plastic bottle for solids

Polyethylene glycol 400 TECHNICAL

CAS 25322-68-3
$H(OCH_2CH_2)_nOH$ **M.W.** 400 g/mol
Boiling Pt: >250 °C (1013hPa) **Melting Pt:** 4-8 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test
Acid value (mg KOH/g) ..... Max. 0.2
Density (20/4) ..... 1.120 - 1.130
Hydroxyl value ..... 200 - 300

Cat. No.	Pk	Pack type
26602.290	1 l	Glass bottle
26602.320	2,5 l	Glass bottle
26602.460	25 l	Plastic drum

Polyethylene glycol 300 TECHNICAL

CAS 25322-68-3
$H(OCH_2CH_2)_nOH$ **M.W.** 300 g/mol
Melting Pt: -15-(-10) °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
26600.293	1 l	Glass bottle

Polyoxyethylene-20-Sorbitan Monolaurate

See Tween® 20 (Polysorbate) p.504

Polyoxyethylene-20-Sorbitan Monooleate

See Tween® 80 (Polysorbate) p.505

Polypropylene glycol 2,000

CAS 25322-69-4
$H(OCH_2CH_2CH_2)_nOH$ **M.W.** 2000 g/mol
Density: 1,005 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification by IR ..... Passes test
Colouration ..... Max. 20 APHA
Hydroxyl value ..... 53 - 58
Viscosity (25°C) ..... 300 - 340 mPa.s
Water ..... Max. 0.05 %

Cat. No.	Pk	Pack type
297776T	2,5 l	Plastic bottle

Polysorbate 20

See Tween® 20 (Polysorbate) p.504

Polysorbate 80

See Tween® 80 (Polysorbate) p.505

Polyvidone 40,000

See Polyvinylpyrrolidone 40,000 (K30) p.357

Polyvidone K30

See Polyvinylpyrrolidone 40,000 (K30) p.357

Polyvinylacetate 35,000-45,000

CAS 9003-20-7

Viscosity (10 %; ethyl acetate) ..... 2.5 - 3.0 mPa.s
Acidity ..... Max. 0.008 meq/g
Residual monomer ..... Max. 5 ppm

Cat. No.	Pk	Pack type
87121.290	1 kg	Plastic bottle for solids

Polyvinyl alcohol 22,000, min. 98% hydrolysed

CAS 9002-89-5
$(CH_2CHOH)_n$ **M.W.** 22000 g/mol

Viscosity (20°C; 4 %; water) ..... 5 - 6 mPa.s
Degree of hydrolysis ..... Min. 98 %
Ignition residue (SO_4) ..... Max. 1 %
Loss on drying (105°C) ..... Max. 5 %

Cat. No.	Pk	Pack type
305735B	500 g	Plastic bottle for solids

Polyvinyl alcohol 115,000, min. 88% hydrolysed

CAS 9002-89-5
$(CH_2CHOH)_n$ **M.W.** 115000 g/mol

Appearance ..... White granular powder
pH (4 %) ..... 4.5 - 6.5
Viscosity (20°C; 4 %; water) ..... 46 - 54 mPa.s
Degree of hydrolysis ..... 86.5 - 89 %
Ignition residue ..... Max. 0.5 %
Loss on drying (60°C) ..... Max. 5 %
Organic volatile impurities ..... Max. 1 %

Cat. No.	Pk	Pack type
297914D	500 g	Plastic bottle for solids

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Polyvinyl alcohol, polymer with vinyl acetate, 25/140 RHODOVIOL®

CAS 25213-24-5

Appearance	Granular powder
Solvent	Water
Acidity	Max. 0.08 meq/g
Apparent density	0.530 - 0.600
Ester value	120 - 150
pH (20°C)	5 - 7
Viscosity (20°C; 4 %; water)	24 - 30 mPa.s
Ignition residue (as Na_2O)	Max. 0.5 %
Volatile matter	Max. 5 %

Cat. No.	Pk	Pack type
20954.295	1 kg	Plastic bottle for solids

Polyvinylpyrrolidone 360,000 (K90) Electran® Molecular biology grade

CAS 9003-39-8

$(C_6H_9NO)_n$ **M.W.** 360000 g/mol

Storage Temperature: Ambient

N (Nitrogen)	11.50 - 12.80 %
Identity (IR)	Passes test
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Heavy metals (as Pb)	Max. 0.001 %
Loss on drying (105°C)	Max. 5.00 %
pH (20°C; 1 %)	5.00 - 8.00

Cat. No.	Pk	Pack type
436032C	100 g	Glass bottle
436035F	1 kg	Glass bottle

Polyvinylpyrrolidone 40,000 (K30) Ph. Eur.

CAS 9003-39-8

$(C_6H_9NO)_n$ **M.W.** 40000 g/mol

Storage Temperature: Ambient

Assay (N) (calculated on anhydrous)	11.5 - 12.8 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification E	Passes test
Solution S	Passes test
Solution S1	Passes test
Appearance of solution	Passes test
pH (5 %)	3.0 - 5.0
Viscosity (expressed as K-value)	27.0 - 32.4
Aldehydes (as C_2H_4O)	Max. 500 ppm
Peroxides (as H_2O_2)	Max. 400 ppm
Formic acid	Max. 0.5 %
Hydrazine	Max. 1 ppm
Impurity A	Max. 10 ppm
Impurity B	Max. 3.0 %
Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 5.0 %
Sulphated ash	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
26617.291	1 kg	Plastic bottle for solids
26617.360	5 kg	Bucket (Plastic)

Polyvinylpyrrolidone 40,000 (K30), high purity

CAS 9003-39-8

$(C_6H_9NO)_n$ **M.W.** 40000 g/mol

Storage Temperature: Ambient

Heavy Metals	< 0.001 %
pH (5%, Water) @25°C	3 - 7
Purity (Dry Basis)	> 99 %

Cat. No.	Pk	Pack type
0507-500G	500 g	Plastic bottle for solids
0507-1KG	1 kg	Plastic bottle for solids

Polyvinylpyrrolidone 40,000 (K30), dry TECHNICAL

CAS 9003-39-8

$(C_6H_9NO)_n$ **M.W.** 40000 g/mol

Storage Temperature: Ambient

Average molecular weight : 40.000 - PVP

Identification	Passes test

Cat. No.	Pk	Pack type
26616.184	100 g	Plastic bottle for solids
26616.297	1 kg	Bucket (Plastic)

Polyvinylpyrrolidone K30

See Polyvinylpyrrolidone 40,000 (K30) p.357

Ponceau S, high purity

Warning

CAS 6226-79-5

$C_{22}H_{12}N_4Na_4O_{13}S_4$

Storage Temperature: Ambient

A substitute for acid fuschin in Van Gieson stain. Also used for staining proteins after electrophoresis.

DNase	none detected
Em (520nm, Water)	>= 27000
Loss on Drying	<= 6 %
Protease	none detected
RNase	none detected
Solubility (0.1%, Water)	pass

Cat. No.	Pk	Pack type
0860-50G	50 g	Glass bottle
0860-100G	100 g	Plastic bottle for solids

Ponceau S, proteomics grade

Warning

CAS 6226-79-5

$C_{22}H_{12}N_4Na_4O_{13}S_4$

Storage Temperature: Ambient

Abs.@ Lambda Max (1:50, Water)	0.9 - 1.4
Lambda Max (1:50, Water)	517 nm - 523 nm

Cat. No.	Pk	Pack type
K793-50ML	50 ml	Plastic bottle
K793-500ML	500 ml	Plastic bottle

NEW Potassium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Potassium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85574.180
Potassium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456852R
Potassium	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457122R

Potassium standard solution, 10,000 mg/l K in dil. nitric acid (from KNO_3) ARISTAR® standard for ICP

KNO_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455832J	100 ml	Plastic bottle
455834L	500 ml	Plastic bottle

Potassium standard solution, 1,000 mg/l K in dil. nitric acid (from K) ARISTAR® standard for ion chromatography

K in H_2O tr.HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458222B	100 ml	Plastic bottle

Potassium standard solution, 1,000 mg/l K in dil. nitric acid (from KNO_3) ARISTAR® standard for ICP

KNO_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455822H	100 ml	Plastic bottle
455824J	500 ml	Plastic bottle

Potassium standard solution, 1,000 mg/l K in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86686.180	100 ml	Plastic bottle
86686.260	500 ml	Plastic bottle

NEW Potassium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84990.180	100 ml	Plastic bottle
84990.260	500 ml	Plastic bottle

Potassium standard solution, 200 mg/l K in dil. nitric acid (from K) ARISTAR® standard for ion chromatography

K in H_2O tr.HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458302A	100 ml	Plastic bottle

Potassium acetate AnalaR NORMAPUR® analytical reagent

CAS 127-08-2

CH_3COOK **M.W.** 98.14 g/mol

Melting Pt: 304 °C **Density:** 1,57 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 99.0 %	Acidity or alkalinity	Max. 0.005 meq/g
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Loss on drying (130°C)	Max. 3.0 %	Cl (Chloride)	Max. 50 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 20 ppm
As (Arsenic)	Max. 2 ppm	Fe (Iron)	Max. 5 ppm
Na (Sodium)	Max. 0.4 %		

Cat. No.	Pk	Pack type
26667.236	250 g	Plastic bottle for solids
26667.293	1 kg	Plastic bottle for solids
26667.320	2,5 kg	Plastic bottle for solids

Potassium acetate Ph. Eur.

CAS 127-08-2

CH_3COOK **M.W.** 98.14 g/mol

Melting Pt: 304 °C **Density:** 1,57 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (5 %)	7.5 - 9.0
Reducing substances	Passes test
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 200 ppm
Fe (Iron)	Max. 20 ppm
Heavy metals (as Pb)	Max. 4 ppm
Na (Sodium)	Max. 0.5 %
Loss on drying (105°C)	Max. 3.0 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
85507.290	1 kg	Plastic bottle for solids

Potassium acetate GPR RECTAPUR®

CAS 127-08-2

CH_3COOK **M.W.** 98.14 g/mol

Melting Pt: 304 °C **Density:** 1,57 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26664.293	1 kg	Plastic bottle for solids
26664.362	5 kg	Bucket (Plastic)

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Potassium acetate Electran® Molecular biology grade

CAS 127-08-2
CH_3COOK **M.W.** 98.14 g/mol
Melting Pt: 304 °C **Density:** 1,57 g/cm³ (25 °C)
Storage Temperature: Ambient

Appearance	White powder
Assay (calculated on dried substance)	99.0 - 101.0 %
Heavy metals (as Pb)	Max. 0.001 %
pH (5°C)	7.5 - 8.5
DNases, RNases, proteases	Not detectable
Cl (Chloride)	Max. 0.005 %
NO_3 (Nitrate)	Max. 0.005 %
SO_4 (Sulphate)	0.001 %
As (Arsenic)	Max. 0.0001 %
Fe (Iron)	Max. 0.0005 %
Na (Sodium)	Max. 0.5 %
Zn (Zinc)	Max. 0.005 %

Cat. No.	Pk	Pack type
437063N	250 g	Plastic bottle for solids
437065P	1 kg	Plastic bottle

NEW Potassium acetate in aqueous solution USP test solutions (TS) 34

CAS 127-08-2
H_3CCOOK
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85364.180	100 ml	Plastic bottle
85364.260	500 ml	Plastic bottle

Potassium bicarbonate

See Potassium hydrogen carbonate p.366

Potassium bisulphate

See Potassium hydrogen sulphate p.367

Potassium bromate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7758-01-2 **UN:** 1484
$KBrO_3$ **M.W.** 167 g/mol
Melting Pt: 350 °C **Density:** 3,218 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.8 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Total N (Nitrogen)	Max. 10 ppm
Br (Bromide)	Max. 0.02 %	SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 1 ppm	Na (Sodium)	Max. 10 ppm

Cat. No.	Pk	Pack type
26703.232	250 g	Plastic bottle for solids

NEW Potassium bromate 0,100 N in aqueous solution USP test solutions (TS) 34

CAS 7758-01-2
$BrKO_3$
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85334.180	100 ml	Glass bottle
85334.260	500 ml	Glass bottle

Potassium bromide AnalaR NORMAPUR® analytical reagent

Warning

CAS 7758-02-3
KBr **M.W.** 119 g/mol
Boiling Pt: 1435 °C (1013 hPa) **Melting Pt:** 730 °C **Density:** 2,75 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Acidity or alkalinity	Passes test
pH (20°C; 5 %)	5 - 8	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Loss on drying (105°C)	Max. 0.5 %
BrO_3 (Bromate)	Max. 10 ppm	Cl (Chloride)	Max. 0.1 %
I (Iodide)	Max. 10 ppm	IO_3 (Iodate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ba (Barium)	Max. 20 ppm
Ca (Calcium)	Max. 10 ppm	Fe (Iron)	Max. 5 ppm
Mg (Magnesium)	Max. 10 ppm	Na (Sodium)	Max. 0.02 %

Cat. No.	Pk	Pack type
26708.238	250 g	Plastic bottle for solids
26708.295	1 kg	Plastic bottle for solids

Potassium bromide GPR RECTAPUR®

Warning

CAS 7758-02-3
KBr **M.W.** 119 g/mol
Boiling Pt: 1435 °C (1013 hPa) **Melting Pt:** 730 °C **Density:** 2,75 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.5 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.5 %
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26704.292	1 kg	Plastic bottle for solids

Potassium carbonate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Warning

CAS 584-08-7
K_2CO_3 **M.W.** 138.21 g/mol
Melting Pt: 891 °C **Density:** 2,42 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.0 %	Ba (Barium)	Passes test
CN (Cyanide)	Passes test	Sulphur compounds (as S)	Passes test
Free potassium hydroxide	Max. 0.05 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Substances precipitated by NH_4OH	Max. 100 ppm
Cl (Chloride)	Max. 30 ppm	NO_3 (Nitrate)	Max. 30 ppm
PO_4 (Phosphate)	Max. 10 ppm	$SO_4 + SO_3$ (as SO_4)	Max. 20 ppm
As (Arsenic)	Max. 2 ppm	Ca + Mg (as Ca)	Max. 100 ppm
Fe (Iron)	Max. 5 ppm	Na (Sodium)	Max. 0.2 %
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
26726.260	500 g	Plastic bottle for solids
26726.297	1 kg	Plastic bottle for solids
26726.322	2,5 kg	Plastic bottle for solids
26726.460	25 kg	Bucket (Plastic)

Potassium carbonate AnalaR NORMAPUR® analytical reagent sodium free

Warning

CAS 584-08-7
K_2CO_3
M.W. 138.21 g/mol
Melting Pt: 891 °C **Density:** 2,42 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99.0 %
Insolubility in water	Max. 50 ppm
Substances precipitated by NH_4OH	Max. 100 ppm
Total S (as SO_4)	Max. 30 ppm
PO_4 (Phosphate)	Max. 10 ppm
Ca (Calcium)	Max. 20 ppm
Fe (Iron)	Max. 5 ppm
Na (Sodium)	Max. 0.02 %
Heavy metals (as Pb)	Max. 5 ppm
Loss on drying (300 °C)	Max. 1 %
Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 30 ppm
SiO_4 (as SiO_2)	Max. 50 ppm
Cu (Copper)	Max. 5 ppm
Mg (Magnesium)	Max. 10 ppm
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
26727.267	500 g	Plastic bottle for solids

Potassium carbonate GPR RECTAPUR®

Warning

CAS 584-08-7
K_2CO_3
M.W. 138.21 g/mol
Melting Pt: 891 °C **Density:** 2,42 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 + SO_3 (as SO_4)	Max. 100 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
26724.291	1 kg	Plastic bottle for solids
26724.360	5 kg	Bucket (Plastic)

NEW Potassium carbonate in aqueous solution USP test solutions (TS)

CAS 584-08-7
KCO_3
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85365.180	100 ml	Plastic bottle
85365.260	500 ml	Plastic bottle

Potassium chlorate AnalaR NORMAPUR® analytical reagent

Danger

CAS 3811-04-9 **UN:** 1485
$KClO_3$
M.W. 122.55 g/mol
Boiling Pt: 400 °C (1013 hPa) **Melting Pt:** 356 °C **Density:** 2,34 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 100 ppm
Cl (Chloride)	Max. 5 ppm
As (Arsenic)	Max. 2 ppm
Ca (Calcium)	Max. 5 ppm
Na (Sodium)	Max. 100 ppm
Acidity or alkalinity	Max. 0.002 meq/g
Insolubility in water	Max. 50 ppm
BrO_3 (Bromate)	Max. 100 ppm
SO_4 (Sulphate)	Max. 50 ppm
Ba (Barium)	Max. 20 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
26746.296	1 kg	Plastic bottle for solids

Potassium chloride AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

CAS 7447-40-7
KCl
M.W. 74.55 g/mol
Boiling Pt: 1420 °C (1013 hPa) **Melting Pt:** 773 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.5 - 101.0 %
Identification A	Passes test Ph.Eur.
Solution S	Passes test Ph.Eur.
pH (5 %)	5.0 - 8.0
Insolubility in water	Max. 100 ppm
Mg and alkaline earth metals (as Ca)	Max. 0.02 %
Br (Bromide)	Max. 0.1 %
PO_4 (Phosphate)	Max. 5 ppm
Al (Aluminium)	Max. 10 ppm
Ba (Barium)	Max. 10 ppm
Cu (Copper)	Max. 2 ppm
Na (Sodium)	Max. 0.02 %
Appearance of solution S	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.
Acidity or alkalinity	Max. 0.0005 meq/g
Heavy metals (as Pb)	Max. 5 ppm
Loss on drying (105°C)	Max. 1.0 %
Total N (Nitrogen)	Max. 40 ppm
I (Iodide)	Max. 20 ppm
SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 0.5 ppm
Ca (Calcium)	Max. 10 ppm
Fe (Iron)	Max. 2 ppm
Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
26764.232	250 g	Plastic bottle for solids
26764.260	500 g	Plastic bottle for solids
26764.298	1 kg	Plastic bottle for solids
26764.367	5 kg	Plastic bottle for solids
26764.460	25 kg	Bucket (Plastic)

Potassium chloride Ph. Eur., USP

CAS 7447-40-7
KCl
M.W. 74.55 g/mol
Boiling Pt: 1420 °C (1013 hPa) **Melting Pt:** 773 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Colour	White or almost white
Identification (Cl)	Passes test
Identification (K)	Passes test
Solution S	Passes test Ph.Eur.
Appearance of solution	Passes test Ph.Eur.
Calcium and magnesium	Passes test USP
Acidity or alkalinity	Passes test
Br (Bromide)	Max. 0.1 %
I (Iodide)	Max. 0.005 %
SO_4 (Sulphate)	Max. 300 ppm
Ba (Barium)	Passes test Ph.Eur.
Fe (Iron)	Max. 20 ppm
Na (Sodium)	Passes test USP
Mg and alkaline-earth metals (as Ca)	Max. 200 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C; 3 h)	Max. 1.0 %
Residues of metal catalysts or reagents	Unlikely by manuf.process
Residual solvents	Unlikely by manuf.process
Conforms to Ph.Eur.	Passes test
Conforms to USP	Passes test

Cat. No.	Pk	Pack type
26760.295	1 kg	Plastic bottle for solids
26760.364	5 kg	Plastic bottle for solids
26760.466	25 kg	Bucket (Plastic)

Potassium chloride GPR RECTAPUR®

CAS 7447-40-7
KCl
M.W. 74.55 g/mol
Boiling Pt: 1420 °C (1013 hPa) **Melting Pt:** 773 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26759.291	1 kg	Plastic bottle for solids
26759.360	5 kg	Plastic bottle for solids
26759.462	25 kg	Bucket (Plastic)

Potassium chloride Electran® Molecular biology grade

CAS 7447-40-7
KCl
M.W. 74.55 g/mol
Boiling Pt: 1420 °C (1013 hPa) **Melting Pt:** 773 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
437023F	250 g	Plastic bottle for solids
437025H	1 kg	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Potassium chloride TECHNICAL

CAS 7447-40-7
KCl **M.W.** 74.55 g/mol
Boiling Pt: 1420 °C (1013 hPa) **Melting Pt:** 773 °C **Density:** 1,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
26752.366	5 kg	Bucket (Plastic)

Potassium chloride electrolytic solutions, AVS TITRINORM®

Potassium chloride 3M solution may also be used as an electrode storage solution.

For full information concerning health and safety data please see the SDS on the www.vwr.com website.

Description	Pk	Cat. No.
Potassium chloride 3 mol/l (3 N) in aqueous solution AVS TITRINORM® electrolytic solution	100 ml	83605.180
Potassium chloride 3 mol/l (3 N) in aqueous solution AVS TITRINORM® electrolytic solution	500 ml	83605.260
Potassium chloride 3 mol/l (3 N) in aqueous solution AVS TITRINORM® electrolytic solution	1 l	83605.290
Potassium chloride aqueous solution 3 mol/l (3 N) saturated with silver chloride aqueous solution AVS TITRINORM® for filling electrodes	500 ml	83606.260
Potassium chloride aqueous solution 3 mol/l (3 N) saturated with silver chloride aqueous solution AVS TITRINORM® for filling electrodes	1 l	83606.290

Potassium chloride 0.1 mol/l (0.1 N) in aqueous solution Reag. Ph. Eur. 1069101

CAS 7447-40-7
KCl **M.W.** 74.55 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87898.290	1 l	Plastic bottle

Potassium chromate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7789-00-6 **UN:** 3087
K_2CrO_4 **M.W.** 194.19 g/mol
Boiling Pt: 1000 °C (1013 hPa) **Melting Pt:** 985 °C **Density:** 2,73 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.5 %
Insolubility in water ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Cu (Copper) ..... Max. 10 ppm
Na (Sodium) ..... Max. 0.03 %
pH (20°C; 5 %) ..... 8.6 - 9.8
Cl (Chloride) ..... Max. 10 ppm
Ca (Calcium) ..... Max. 50 ppm
Fe (Iron) ..... Max. 15 ppm
Pb (Lead) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
26774.236	250 g	Plastic bottle for solids
26774.293	1 kg	Plastic bottle for solids

Potassium chromate GPR RECTAPUR®

Danger

CAS 7789-00-6 **UN:** 3087
K_2CrO_4 **M.W.** 194.19 g/mol
Boiling Pt: 1000 °C (1013 hPa) **Melting Pt:** 985 °C **Density:** 2,73 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
Identification ..... Passes test
Cl (Chloride) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 0.05 %
Ca (Calcium) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
29598AP	5 kg	Plastic bottle for solids

Potassium chromate 5% in aqueous solution Reag. Ph. Eur. 1069201

Danger

CAS 7789-00-6 **UN:** 3082
K_2CrO_4

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87899.290	1 l	Plastic bottle

Potassium chromate 5% in aqueous solution

Danger

CAS 7789-00-6 **UN:** 3082
K_2CrO_4

5% w/v (free from Cl) for titration of chloride using silver nitrate

Assay (W/V) ..... 4.975 - 5.025 %
Cl (Chloride) ..... Max. 2 ppm

Cat. No.	Pk	Pack type
160254K	500 ml	Glass bottle

tri-Potassium citrate monohydrate AnalaR NORMAPUR® analytical reagent

CAS 6100-05-6
$HOC(COOK)(CH_2COOK)_2 \cdot H_2O$ **M.W.** 324.41 g/mol
Melting Pt: 230 °C **Density:** 1,98 g/cm³ (20 °C)

Assay (on anhydrous substance) ..... Min. 99.0 %
pH (20°C; 5 %) ..... 8.0 - 9.5
C_2O_4 (Oxalate) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Fe (Iron) ..... Max. 5 ppm
Pb (Lead) ..... Max. 5 ppm
Solution in water ..... Passes test
Total N (Nitrogen) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 20 ppm
Cu (Copper) ..... Max. 1 ppm
Na (Sodium) ..... Max. 0.2 %

Cat. No.	Pk	Pack type
102004S	500 g	Plastic bottle for solids

tri-Potassium citrate monohydrate GPR RECTAPUR®

CAS 6100-05-6
$HOC(COOK)(CH_2COOK)_2 \cdot H_2O$ **M.W.** 324.41 g/mol
Melting Pt: 230 °C **Density:** 1,98 g/cm³ (20 °C)

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Fe (Iron) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
26789.294	1 kg	Plastic bottle for solids

Potassium citrate tribasic monohydrate

See tri-Potassium citrate monohydrate p.361

Potassium cyanide AnalaR NORMAPUR® analytical reagent

Danger

CAS 151-50-8 **UN:** 1680
KCN **M.W.** 65.12 g/mol
Boiling Pt: 1625 °C (1013 hPa) **Melting Pt:** 634 °C **Density:** 1,55 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486407-29

Assay ..... Min. 98.0 %
Cl (Chloride) ..... Max. 0.5 %
S (Sulphide) ..... Max. 5 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Na (Sodium) ..... Max. 0.5 %
Insolubility in water ..... Max. 50 ppm
PO_4 (Phosphate) ..... Max. 0.1 %
SCN (Thiocyanate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 0.02 %
Pb (Lead) ..... Max. 2 ppm

Cat. No.	Pk	Pack type
26802.234	250 g	Plastic bottle for solids
26802.291	1 kg	Plastic bottle for solids

Potassium cyanide TECHNICAL

Danger

CAS 151-50-8 **UN:** 1680
KCN **M.W.** 65.12 g/mol
Boiling Pt: 1625 °C (1013 hPa) **Melting Pt:** 634 °C **Density:** 1,55 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119486407-29

Assay ..... Min. 96 %

Cat. No.	Pk	Pack type
26800.261	500 g	Plastic bottle for solids
26800.294	1 kg	Plastic bottle

Potassium dichromate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7778-50-9 **UN:** 3087
$K_2Cr_2O_7$ **M.W.** 294.18 g/mol
Boiling Pt: 500 °C (1013 hPa) **Melting Pt:** 398 °C **Density:** 2,67 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119454792-32

Assay (calculated on dried substance) .. Min. 99.8 %
Loss on drying (130°C) ..... Max. 0.05 %
SO_4 (Sulphate) ..... Max. 50 ppm
Cu (Copper) ..... Max. 10 ppm
Na (Sodium) ..... Max. 0.1 %
Statement on the use ..... Confirmed
Insolubility in water ..... Max. 0.03 %
Cl (Chloride) ..... Max. 0.02 %
Ca (Calcium) ..... Max. 20 ppm
Fe (Iron) ..... Max. 10 ppm
Pb (Lead) ..... Max. 50 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
26784.231	250 g	Plastic bottle for solids
26784.297	1 kg	Plastic bottle for solids

Potassium dichromate GPR RECTAPUR®

Danger

CAS 7778-50-9 **UN:** 3087
$K_2Cr_2O_7$ **M.W.** 294.18 g/mol
Boiling Pt: 500 °C (1013 hPa) **Melting Pt:** 398 °C **Density:** 2,67 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119454792-32

Assay ..... Min. 99 %
Cl (Chloride) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 0.05 %
Fe (Iron) ..... Max. 20 ppm
Pb (Lead) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
26781.297	1 kg	Plastic bottle for solids

Potassium dichromate TECHNICAL

Danger

CAS 7778-50-9 **UN:** 3087
$K_2Cr_2O_7$ **M.W.** 294.18 g/mol
Boiling Pt: 500 °C (1013 hPa) **Melting Pt:** 398 °C **Density:** 2,67 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119454792-32

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
26776.290	1 kg	Plastic bottle for solids
26776.368	5 kg	Bucket (Plastic)

Potassium dichromate 1/60 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 7778-50-9 **UN:** 3287
$K_2Cr_2O_7$
Storage Temperature: Ambient

Titer (20°C) ..... 0.01658 - 0.01675 mol/l

Cat. No.	Pk	Pack type
32061.600	60 ml	Plastic ampoule

Potassium dichromate 0.5% in aqueous solution Reag. Ph. Eur. 1069502

Danger

CAS 7778-50-9 **UN:** 3287
$K_2Cr_2O_7$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87900.290	1 l	Plastic bottle

Potassium dichromate 0.36 mol/l (106 g/l) in aqueous solution Reag. Ph. Eur. 1069501

Danger

CAS 7778-50-9 **UN:** 3287
$K_2Cr_2O_7$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87716.180	100 ml	Plastic bottle
87716.260	500 ml	Plastic bottle

Potassium dichromate 1/6 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7778-50-9 **UN:** 3287
$K_2Cr_2O_7$ **M.W.** 294.18 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.1657 - 0.1663 mol/l
Appearance ..... Clear orange liquid
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31396.291	1 l	Glass bottle

Potassium dichromate 0.04 mol/l (0.24 N) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard

Danger

CAS 7778-50-9 **UN:** 3287
$K_2Cr_2O_7$ **M.W.** 294.18 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.03992 - 0.04008 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30892.298	1 l	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Potassium dichromate 1/60 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7778-50-9 **UN:** 3287

$K_2Cr_2O_7$ **M.W.** 294.18 g/mol

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.01663 - 0.01670 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
191005X	2,5 l	Glass bottle

Potassium dichromate 0.04 mol/l (0.24 N) with mercury (II) sulphate 80 g/l in sulphuric acid solution AVS TITRINORM® volumetric solution, for COD determination in water

Danger

CAS 7778-50-9 **UN:** 3289

$K_2Cr_2O_7$

Boiling Pt: >100 °C (1013hPa) **Density:** 1,19 g/cm³ (20 °C)

Storage Temperature: Ambient

According to NFT 90-101 standard

Titer (20°C; real value 0.2 % accuracy) ..... 0.03992 - 0.04008 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30891.295	1 l	Glass bottle
30891.420	2,5 l	Glass bottle SAFEBREAK

Potassium dihydrogen phosphate HiPerSolv CHROMANORM® for HPLC

CAS 7778-77-0

KH_2PO_4 **M.W.** 136.09 g/mol

Boiling Pt: ~100 °C (1013 hPa) **Melting Pt:** 253 °C **Density:** 2,3 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490224-41

Assay ..... Min. 99.5 %
pH (20°C; 5 %) ..... 4.3 - 4.5
Heavy metals (as Pb) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 5 ppm
SO_4 (Sulphate) ..... Max. 30 ppm
Fe (Iron) ..... Max. 10 ppm
Transmittance (254 nm) (0.1 mol/l) ..... Min. 90 %

Cat. No.	Pk	Pack type
153184U	500 g	Plastic bottle for solids

Potassium dihydrogen phosphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

CAS 7778-77-0

KH_2PO_4 **M.W.** 136.09 g/mol

Boiling Pt: ~100 °C (1013 hPa) **Melting Pt:** 253 °C **Density:** 2,3 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490224-41

Assay (calculated on dried substance) 99.5 - 100.5 %
Identification A ..... Passes test Ph.Eur.
Identification C ..... Passes test Ph.Eur.
Solubility in water ..... Passes test
pH (20°C; 5 %) ..... 4.2 - 4.5
Loss on drying (105°C) ..... Max. 2 %
Water ..... Max. 0.2 %
SO_4 (Sulphate) ..... Max. 30 ppm
Ca (Calcium) ..... Max. 100 ppm
Fe (Iron) ..... Max. 10 ppm
Na (Sodium) ..... Max. 0.02 %
Conforms to Reag. Ph.Eur. ..... Passes test
Appearance of solution S ..... Passes test Ph.Eur.
Identification B ..... Passes test Ph.Eur.
Reducing substances ..... Passes test Ph.Eur.
Solution S ..... Passes test Ph.Eur.
Heavy metals (as Pb) ..... Max. 10 ppm
Total N (Nitrogen) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 5 ppm
As (Arsenic) ..... Max. 0.5 ppm
Cu (Copper) ..... Max. 3 ppm
Mg (Magnesium) ..... Max. 20 ppm
Pb (Lead) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
26936.236	250 g	Plastic bottle for solids
26936.260	500 g	Plastic bottle for solids
26936.293	1 kg	Plastic bottle for solids
26936.320	2,5 kg	Plastic bottle for solids
26936.460	25 kg	Cardboard carton

Potassium dihydrogen phosphate, crystallised Ph. Eur.

CAS 7778-77-0

KH_2PO_4 **M.W.** 136.09 g/mol

Boiling Pt: ~100 °C (1013 hPa) **Melting Pt:** 253 °C **Density:** 2,3 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490224-41

Assay (calculated on dried substance) ..... 98.0 - 100.5 %
Appearance ..... Conforms (see CoA/CoS)
Identification A ..... Passes test
Identification B ..... Passes test
Identification C ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
pH (5 %) ..... 4.2 - 4.5
Reducing substances ..... Passes test
Cl (Chloride) ..... Max. 200 ppm
SO_4 (Sulphate) ..... Max. 300 ppm
As (Arsenic) ..... Max. 2 ppm
Fe (Iron) ..... Max. 10 ppm
Heavy metals (as Pb) ..... Max. 10 ppm
Loss on drying (125-130°C) ..... Max. 2.0 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
26922.295	1 kg	Plastic bottle for solids
26922.364	5 kg	Plastic bottle for solids
26922.466	25 kg	Bucket (Plastic)

Potassium dihydrogen phosphate, crystallised GPR RECTAPUR®

CAS 7778-77-0

KH_2PO_4 **M.W.** 136.09 g/mol

Boiling Pt: ~100 °C (1013 hPa) **Melting Pt:** 253 °C **Density:** 2,3 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490224-41

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 50 ppm
Cl (Chloride) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 0.02 %
Fe (Iron) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
26923.298	1 kg	Plastic bottle for solids
26923.367	5 kg	Plastic bottle for solids

Potassium dihydrogen phosphate, powder GPR RECTAPUR®

CAS 7778-77-0

KH_2PO_4 **M.W.** 136.09 g/mol

Boiling Pt: ~100 °C (1013 hPa) **Melting Pt:** 253 °C **Density:** 2,3 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490224-41

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 50 ppm
Cl (Chloride) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 0.02 %
Fe (Iron) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
26925.295	1 kg	Plastic bottle for solids
26925.364	5 kg	Plastic bottle for solids
26925.460	25 kg	Bucket (Plastic)

Potassium dihydrogen phosphate Electran® Molecular biology grade

CAS 7778-77-0

KH_2PO_4 **M.W.** 136.09 g/mol

Boiling Pt: ~100 °C (1013 hPa) **Melting Pt:** 253 °C **Density:** 2,3 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490224-41

Appearance ..... White crystalline powder
Assay ..... Min. 99.5 %
Heavy metals (as Pb) ..... Max. 0.001 %
Absorbance (260 nm) (0.1 mol/l) ..... Max. 0.05
Absorbance (280 nm) (0,1 mol/l) ..... Max. 0.05
DNases (exo- and endonucleases) ..... Not detected
RNases ..... Not detected
Proteases ..... Not detected

Cat. No.	Pk	Pack type
436053H	250 g	Glass bottle for solids

Potassium dihydrogen phosphate 0.2 mol/l in aqueous solution Reag. Ph. Eur. 1069601

CAS 7778-77-0
KH_2PO_4
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87901.290	1 l	Plastic bottle

di-Potassium disulphite AnalaR NORMAPUR® analytical reagent

Danger

CAS 16731-55-8
K_2SO_5
M.W. 222.33 g/mol
Melting Pt: 190 °C **Density:** 1,2 g/cm³ (20 °C)

Assay	Min. 96.0 %	Heavy metals (as Pb)	Max. 10 ppm
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 50 ppm
As (Arsenic)	Max. 1 ppm	Cu (Copper)	Max. 10 ppm
Fe (Iron)	Max. 5 ppm	Zn (Zinc)	Max. 10 ppm

Cat. No.	Pk	Pack type
26805.291	1 kg	Plastic bottle for solids

Potassium disulphite

See di-Potassium disulphite p.364

Potassium ethanedioate monohydrate

See di-Potassium oxalate monohydrate p.372

Potassium ferricyanide

See Potassium hexacyanoferrate (III) p.365

Potassium ferriperiodate solution Reag. Ph. Eur. 1070801

UN: 1719

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87917.130	50 ml	Plastic bottle

Potassium ferrocyanide trihydrate

See Potassium hexacyanoferrate (II) trihydrate p.365

Potassium fluoride AnalaR NORMAPUR® analytical reagent

Danger

CAS 7789-23-3 **UN:** 1812
KF
M.W. 58.1 g/mol
Boiling Pt: 1505 °C (1013 hPa) **Melting Pt:** 860 °C **Density:** 2,48 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Acidity	Max. 0.025 meq/g
Alkalinity	Max. 0.01 meq/g	Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 50 ppm	SiF_6 (Hexafluorosilicate)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.05 %	Cu (Copper)	Max. 25 ppm
Fe (Iron)	Max. 10 ppm	Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 25 ppm		

Cat. No.	Pk	Pack type
26820.236	250 g	Plastic bottle for solids
26820.293	1 kg	Plastic bottle for solids

Potassium fluoride GPR RECTAPUR®

Danger

CAS 7789-23-3 **UN:** 1812
KF
M.W. 58.1 g/mol
Boiling Pt: 1505 °C (1013 hPa) **Melting Pt:** 860 °C **Density:** 2,48 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98.5 %
Acidity	Max. 0.05 meq/g
Alkalinity	Max. 0.02 meq/g
Heavy metals (as Pb)	Max. 30 ppm
Insolubility in water	Max. 0.1 %
Cl (Chloride)	Max. 0.05 %
SiF_6 (Hexafluorosilicate)	Max. 0.3 %
Fe (Iron)	Max. 30 ppm

Cat. No.	Pk	Pack type
26821.230	250 g	Plastic bottle for solids
26821.296	1 kg	Plastic bottle for solids
26821.365	5 kg	Bucket (Plastic)

Potassium heptaiodobismuthate 8% with potassium iodide in aqueous L(+)-tartaric acid solution Reag. Ph. Eur. 1070602

CAS 41944-01-8
K_4BiI_7

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87914.180	100 ml	Plastic bottle

Potassium heptaiodobismuthate 6.1% with potassium iodide in dil. acetic acid Reag. Ph. Eur. 1070600

CAS 41944-01-8 **UN:** 2790
K_4BiI_7

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87912.180	100 ml	Plastic bottle

Potassium heptaiodobismuthate 6.1% with potassium iodide in aqueous L(+)-tartaric acid solution Reag. Ph. Eur. 1070601

CAS 41944-01-8
K_4BiI_7

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87913.270	600 ml	Plastic bottle

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Potassium heptaiodobismuthate 0.5% with potassium iodide in aqueous L(+)-tartaric acid solution Reag. Ph. Eur. 1070603

CAS 41944-01-8
K_4BiI_7

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87915.260	500 ml	Plastic bottle

Potassium heptaiodobismuthate 0.5% with barium chloride and potassium iodide in dil. acetic acid Reag. Ph. Eur. 1070605

CAS 41944-01-8
K_4BiI_7

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87916.180	100 ml	Plastic bottle

di-Potassium hexachloroplatinate TECHNICAL

Danger

CAS 16921-30-5
K_2PtCl_6
UN: 3290
M.W. 485.99 g/mol
Melting Pt: 250 °C
Density: 3,344 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated as Pt) ..... Min. 39.5 %

Cat. No.	Pk	Pack type
26749.081	1 g	Glass bottle

Potassium hexacyanoferrate (II) trihydrate AnalaR NORMAPUR® analytical reagent

CAS 14459-95-1
$K_4Fe(CN)_6 \cdot 3H_2O$
M.W. 422.39 g/mol
Melting Pt: 70 °C
Density: 1,889 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Ba (Barium)	Passes test
Insolubility in water	Max. 0.03 %	Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 50 ppm	Na (Sodium)	Max. 0.02 %

Cat. No.	Pk	Pack type
26816.232	250 g	Plastic bottle for solids
26816.298	1 kg	Plastic bottle for solids

Potassium hexacyanoferrate (II) trihydrate GPR RECTAPUR®

CAS 14459-95-1
$K_4Fe(CN)_6 \cdot 3H_2O$
M.W. 422.39 g/mol
Melting Pt: 70 °C
Density: 1,889 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Cl (Chloride) ..... Max. 0.02 %
SO_4 (Sulphate) ..... Max. 0.02 %

Cat. No.	Pk	Pack type
26815.262	500 g	Plastic bottle for solids

Potassium hexacyanoferrate (II) trihydrate TECHNICAL

CAS 14459-95-1
$K_4Fe(CN)_6 \cdot 3H_2O$
M.W. 422.39 g/mol
Melting Pt: 70 °C
Density: 1,889 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 96 %

Cat. No.	Pk	Pack type
26812.295	1 kg	Plastic bottle for solids
26812.460	25 kg	Bucket (Plastic)

Potassium hexacyanoferrate (II) trihydrate 5.3% (w/v) in aqueous solution Reag. Ph. Eur. 1069801

CAS 14459-95-1
$K_4Fe(CN)_6 \cdot 3H_2O$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87902.180	100 ml	Plastic bottle

NEW Potassium hexacyanoferrate (II) 0.25 mol/l in aqueous solution (CARREZ I Solution)

CAS 13943-58-3
$C_6FeK_4N_6$
Density: 1,060 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer ..... 0,2375 - 0,2625 mol/l

Cat. No.	Pk	Pack type
85733.290	1 l	Plastic bottle

Potassium hexacyanoferrate (III) AnalaR NORMAPUR® analytical reagent

CAS 13746-66-2
$K_3Fe(CN)_6$
M.W. 329.25 g/mol
Density: 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Hexacyanoferrate (II) (as $Fe(CN)_6$)	Max. 0.05 %
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 50 ppm	Pb (Lead)	Max. 20 ppm

Cat. No.	Pk	Pack type
26810.232	250 g	Plastic bottle for solids
26810.298	1 kg	Plastic bottle for solids

Potassium hexacyanoferrate (III) GPR RECTAPUR®

CAS 13746-66-2
$K_3Fe(CN)_6$
M.W. 329.25 g/mol
Density: 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Cl (Chloride) ..... Max. 0.02 %
SO_4 (Sulphate) ..... Max. 0.02 %

Cat. No.	Pk	Pack type
26809.294	1 kg	Plastic bottle for solids

Potassium hexacyanoferrate (III) TECHNICAL

CAS 13746-66-2
$K_3Fe(CN)_6$
M.W. 329.25 g/mol
Density: 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 96 %

Cat. No.	Pk	Pack type
26807.297	1 kg	Plastic bottle for solids

NEW Potassium hexacyanoferrate (III) in ammoniacal solution USP test solutions (TS)

CAS 13746-66-2
K3Fe(CN)6

Cat. No.	Pk	Pack type
85327.180	100 ml	Plastic bottle
85327.260	500 ml	Plastic bottle

Potassium hexahydroxoantimonate 0.05 mol/l in potassium hydroxide solution 1.6% Reag. Ph. Eur. 1071301

Warning

CAS 12208-13-8 **UN:** 3266
$KSb(OH)_6$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87725.180	100 ml	Plastic bottle

Potassium hydrogen carbonate AnalaR NORMAPUR® analytical reagent

CAS 298-14-6
$KHCO_3$

M.W. 100.12 g/mol
Melting Pt: 292 °C **Density:** 2,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Substances reducing iodine (0,1 N)	Passes test
pH (20°C; 5 %)	8.2 - 8.8	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Substances precipitated by NH_4OH	Max. 100 ppm
Cl (Chloride)	Max. 10 ppm	NH_4 (Ammonium)	Max. 10 ppm
NO_3 (Nitrate)	Max. 10 ppm	PO_4 (Phosphate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm	As (Arsenic)	Max. 2 ppm
Ca + Mg (as Ca)	Max. 100 ppm	Fe (Iron)	Max. 2 ppm
Na (Sodium)	Max. 0.025 %		

Cat. No.	Pk	Pack type
26733.292	1 kg	Plastic bottle for solids

Potassium hydrogen carbonate GPR RECTAPUR®

CAS 298-14-6
$KHCO_3$

M.W. 100.12 g/mol
Melting Pt: 292 °C **Density:** 2,17 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26730.361	5 kg	Plastic bottle for solids

di-Potassium hydrogen orthophosphate

See di-Potassium hydrogen phosphate..... p.366

di-Potassium hydrogen phosphate analytical reagent

CAS 7758-11-4
K_2HPO_4

M.W. 174.18 g/mol
Melting Pt: 340 °C **Density:** 2,3 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
pH (20°C; 5 %)	8.7 - 9.3
Heavy metals (as Pb)	Max. 5 ppm
Loss on drying (130°C)	Max. 1 %
Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 30 ppm
SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26931.263	500 g	Plastic bottle for solids
26931.365	5 kg	Bucket (Plastic)

di-Potassium hydrogen phosphate Ph. Eur.

CAS 7758-11-4
K_2HPO_4

M.W. 174.18 g/mol
Melting Pt: 340 °C **Density:** 2,3 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	98.0 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Reducing substances	Passes test
Monopotassium phosphate	Max. 2.5 %
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 0.1 %
As (Arsenic)	Max. 2 ppm
Fe (Iron)	Max. 10 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (125-130°C)	Max. 2.0 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
26932.290	1 kg	Plastic bottle for solids
26932.368	5 kg	Bucket (Plastic)
26932.461	25 kg	Bucket (Plastic)

di-Potassium hydrogen phosphate GPR RECTAPUR®

CAS 7758-11-4
K_2HPO_4

M.W. 174.18 g/mol
Melting Pt: 340 °C **Density:** 2,3 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
26930.260	500 g	Plastic bottle for solids
26930.293	1 kg	Plastic bottle for solids
26930.362	5 kg	Bucket (Plastic)

di-Potassium hydrogen phosphate Gen-Apex® Molecular biology grade

CAS 7758-11-4
K_2HPO_4

M.W. 174.18 g/mol
Melting Pt: 340 °C **Density:** 2,3 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Colouration (0,3 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 10 ppm
Transmittance (230 nm) (0,3 mol/l)	Min. 70 %
Transmittance (260 nm) (0,3 mol/l)	Min. 75 %
Transmittance (280 nm) (0.3 mol/l)	Min. 80 %
Transmittance (320 nm) (0.3 mol/l)	Min. 95 %

Cat. No.	Pk	Pack type
33612.268	500 g	Plastic bottle for solids

di-Potassium hydrogen phosphate TECHNICAL

CAS 7758-11-4
K_2HPO_4

M.W. 174.18 g/mol
Melting Pt: 340 °C **Density:** 2,3 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 96 %

Cat. No.	Pk	Pack type
26927.361	5 kg	Bucket (Plastic)
26927.460	25 kg	Bucket (Plastic)

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di-Potassium hydrogen phosphate trihydrate AnalaR NORMAPUR® analytical reagent

CAS 16788-57-1
$K_2HPO_4 \cdot 3H_2O$ **M.W.** 228.22 g/mol
Boiling Pt: < 340 °C (1013 hPa) **Density:** 2,504 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (acidimetric)	Min. 99.0 %	pH (5 %)	9.2 - 9.4
Solution in water	Passes test	Cl (Chloride)	Max. 0.001 %
SO_4 (Sulphate)	Max. 0.005 %	Total N (Nitrogen)	Max. 0.001 %
Heavy metals (as Pb)	Max. 0.001 %	As (Arsenic)	Max. 0.00005 %
Cu (Copper)	Max. 0.0003 %	Fe (Iron)	Max. 0.0005 %
Na (Sodium)	Max. 0.1 %	Pb (Lead)	Max. 0.001 %

Cat. No.	Pk	Pack type
103494G	500 g	Plastic bottle
103495H	2,5 kg	Plastic bottle

Potassium hydrogen phthalate AnalaR NORMAPUR® analytical reagent

CAS 877-24-7
$HOOCC_6H_4COOK$
M.W. 204.22 g/mol
Melting Pt: 295-300 °C **Density:** 1,6362 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99.5 %	IR Spectrum	Passes test
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Loss on drying (105°C)	Max. 0.2 %	Sulphur compounds (as SO_4)	Max. 50 ppm
Cl (Chloride)	Max. 20 ppm	Cu (Copper)	Max. 2 ppm
Fe (Iron)	Max. 5 ppm	Na (Sodium)	Max. 100 ppm
Pb (Lead)	Max. 5 ppm		

Cat. No.	Pk	Pack type
26948.146	30 g	Plastic bottle for solids
26948.237	250 g	Plastic bottle for solids
26948.260	500 g	Plastic bottle for solids
26948.294	1 kg	Plastic bottle for solids

Potassium hydrogen phthalate 0.2 mol/l in aqueous solution Reag. Ph. Eur. 1070001

CAS 877-24-7
$HOOCC_6H_4COOK$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87903.290	1 l	Plastic bottle

Potassium hydrogen sulphate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7646-93-7 **UN:** 2509
$KHSO_4$
M.W. 136.17 g/mol
Melting Pt: 214 °C **Density:** 2,32 g/cm³ (20 °C)

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 10 ppm	Cl (Chloride)	Max. 5 ppm
PO_4 (Phosphate)	Max. 10 ppm	Al (Aluminium)	Max. 20 ppm
Ca (Calcium)	Max. 50 ppm	Fe (Iron)	Max. 5 ppm
Na (Sodium)	Max. 50 ppm		

Cat. No.	Pk	Pack type
27011.237	250 g	Plastic bottle for solids
27011.294	1 kg	Plastic bottle for solids

Potassium hydrogen sulphate GPR RECTAPUR®

Danger

CAS 7646-93-7 **UN:** 2509
$KHSO_4$
M.W. 136.17 g/mol
Melting Pt: 214 °C **Density:** 2,32 g/cm³ (20 °C)

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 20 ppm
PO_4 (Phosphate)	Max. 20 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27012.297	1 kg	Plastic bottle for solids

Potassium hydrogen sulphate TECHNICAL

Danger

CAS 7646-93-7 **UN:** 2509
$KHSO_4$
M.W. 136.17 g/mol
Melting Pt: 214 °C **Density:** 2,32 g/cm³ (20 °C)

Assay	Min. 97 %

Cat. No.	Pk	Pack type
27013.360	5 kg	Bucket (Plastic)

L(+)-Potassium hydrogen tartrate AnalaR NORMAPUR® analytical reagent

CAS 868-14-4
$KOOC(CHOH)_2COOH$
M.W. 188.18 g/mol
Melting Pt: 250 °C **Density:** 1,943 g/cm³ (20 °C)

Assay (on anhydrous substance)	99.5 - 100.5 %	Insolubility in water	Max. 50 ppm
Loss on drying (105°C)	Max. 0.5 %	Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %	As (Arsenic)	Max. 1 ppm
Ba (Barium)	Max. 0.1 %	Ca (Calcium)	Max. 0.02 %
Cu (Copper)	Max. 25 ppm	Fe (Iron)	Max. 20 ppm
Zn (Zinc)	Max. 25 ppm		

Cat. No.	Pk	Pack type
27058.238	250 g	Plastic bottle for solids

L(+)-Potassium hydrogen tartrate Ph. Eur.

CAS 868-14-4
$KOOC(CHOH)_2COOH$
M.W. 188.18 g/mol
Melting Pt: 250 °C **Density:** 1,943 g/cm³ (20 °C)

Assay (calculated on dried substance)	99.5 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test
Identification C	Passes test
Identification D	Passes test
Spec. opt. rotation (dried substance)	8 - 9.2 °
Oxalic acid	Max. 500 ppm
Cl (Chloride)	Max. 500 ppm
SO_4 (Sulphate)	Max. 500 ppm
Ba (Barium)	Passes test
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C)	Max. 0.5 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27057.361	5 kg	Bucket (Plastic)

(+)-Potassium hydrogen L-tartrate

See L(+)-Potassium hydrogen tartrate p.367

(R,R)-(+)-Potassium hydrogen tartrate

See L(+)-Potassium hydrogen tartrate p.367

Potassium hydroxide, pellets AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 1310-58-3 **UN:** 1813
KOH
M.W. 56.11 g/mol
Boiling Pt: 1320 °C (1013 hPa) **Melting Pt:** 360 °C **Density:** 2,04 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119487136-33

Assay (calculated as KOH)	85.0 - 100.5 %	Solution in water	Passes test
Appearance of solution	Passes test Ph.Eur.	Identification B (K)	Passes test Ph.Eur.
Solution S1	Passes test Ph.Eur.	Solution S2	Passes test Ph.Eur.
pH (20°C; 0.01 %)	Min. 10.5	Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 5 ppm	Cl (Chloride)	Max. 10 ppm
CO_3 (as K_2CO_3)	Max. 1.0 %	PO_4 (Phosphate)	Max. 5 ppm
SiO_4 (as SiO_2)	Max. 50 ppm	SO_4 (Sulphate)	Max. 5 ppm
Al (Aluminium)	Max. 0.2 ppm	Ca (Calcium)	Max. 10 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 5 ppm
Na (Sodium)	Max. 0.5 %	Ni (Nickel)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
26668.263	500 g	Plastic bottle for solids
26668.296	1 kg	Plastic bottle for solids
26668.365	5 kg	Plastic bottle for solids
26668.460	25 kg	Bucket (Plastic)

Potassium hydroxide, pellets Ph. Eur.

Danger

CAS 1310-58-3 **UN:** 1813
KOH **M.W.** 56.11 g/mol
Boiling Pt: 1320 °C (1013 hPa) **Melting Pt:** 360 °C **Density:** 2,04 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119487136-33

Assay (calculated as KOH)	85.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
pH (20°C; 0,01 %)	Min. 10.5
Identification B (K)	Passes test
Solution S1	Passes test
Solution S2	Passes test
Appearance of solution	Passes test
CO_3 (as K_2CO_3)	Max. 2.0 %
Cl (Chloride)	Max. 200 ppm
PO_4 (Phosphate)	Max. 100 ppm
SO_4 (Sulphate)	Max. 200 ppm
Fe (Iron)	Max. 10 ppm
Na (Sodium)	Max. 1.0 %
Heavy metals (as Pb)	Max. 10 ppm
Residual solvents	Passes test
Conforms to Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
26670.294	1 kg	Plastic bottle for solids
26670.363	5 kg	Plastic bottle for solids
26670.465	25 kg	Bucket (Plastic)

Potassium hydroxide, pellets GPR RECTAPUR®

Danger

CAS 1310-58-3 **UN:** 1813
KOH **M.W.** 56.11 g/mol
Boiling Pt: 1320 °C (1013 hPa) **Melting Pt:** 360 °C **Density:** 2,04 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119487136-33

Assay	Min. 85 %
Total N (Nitrogen)	Max. 5 ppm
Cl (Chloride)	Max. 50 ppm
CO_3 (as K_2CO_3)	Max. 2.0 %
PO_4 (Phosphate)	Max. 20 ppm
SiO_4 (as SiO_2)	Max. 100 ppm
SO_4 (Sulphate)	Max. 50 ppm
Al (Aluminium)	Max. 10 ppm
Ca (Calcium)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm
Pb (Lead)	Max. 20 ppm

Cat. No.	Pk	Pack type
26669.266	500 g	Plastic bottle for solids
26669.290	1 kg	Plastic bottle for solids
26669.368	5 kg	Plastic bottle for solids
26669.460	25 kg	Bucket (Plastic)

Potassium hydroxide 38% in aqueous solution AnalaR NORMAPUR® analytical reagent

Danger

CAS 1310-58-3 **UN:** 1814
KOH
Density: 1,38 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	38.0 - 40.3 %	Density (20/4)	1.375 - 1.400
Heavy metals (as Pb)	Max. 2 ppm	Potassium carbonate	Max. 1.0 %
Silica	Max. 10 ppm	Total N (Nitrogen)	Max. 1 ppm
Cl (Chloride)	Max. 2 ppm	PO_4 (Phosphate)	Max. 1 ppm
SO_4 (Sulphate)	Max. 2 ppm	Al (Aluminium)	Max. 1 ppm
Ba (Barium)	Max. 1 ppm	Ca (Calcium)	Max. 5 ppm
Cd (Cadmium)	Max. 0.1 ppm	Co (Cobalt)	Max. 0.1 ppm
Cr (Chromium)	Max. 2 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 1 ppm	Hg (Mercury)	Max. 0.01 ppm
Mg (Magnesium)	Max. 1 ppm	Mn (Manganese)	Max. 0.1 ppm
Na (Sodium)	Max. 0.25 %	Ni (Nickel)	Max. 2 ppm
Pb (Lead)	Max. 0.5 ppm	Zn (Zinc)	Max. 0.5 ppm

Cat. No.	Pk	Pack type
26632.293	1 l	Plastic bottle

Potassium hydroxide 34% in aqueous solution AnalaR NORMAPUR® analytical reagent

Danger

CAS 1310-58-3 **UN:** 1814
KOH
Storage Temperature: Ambient

Assay	34.0 - 36.0 %	Ba (Barium)	Passes test
Density (20/4)	1.330 - 1.352	Heavy metals (as Pb)	Max. 5 ppm
Potassium carbonate	Max. 1.0 %	Substances precipitated by NH_4OH	Max. 100 ppm
Cl (Chloride)	Max. 30 ppm	NH_4 (Ammonium)	Max. 10 ppm
NO_3 (Nitrate)	Max. 10 ppm	PO_4 (Phosphate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm	Ca + Mg (as Ca)	Max. 100 ppm
Fe (Iron)	Max. 5 ppm		

Cat. No.	Pk	Pack type
26630.296	1 l	Plastic bottle

Potassium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 1814
KOH
Storage Temperature: Ambient

NIST traceable	Confirmed
Titer (20°C; real value 0.2 % accuracy)	0.998 - 1.002 mol/l

Cat. No.	Pk	Pack type
31300.291	1 l	Plastic bottle

Potassium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 1814
KOH
Density: 1.023 g/cm³ (20 °C)
Storage Temperature: Ambient

NIST traceable	Confirmed
Titer (20°C; real value 0.2 % accuracy)	0.499 - 0.501 mol/l

Cat. No.	Pk	Pack type
31950.296	1 l	Plastic bottle

NEW Potassium hydroxide 0.23 mol/l (0.23 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 1310-58-3 **UN:** 1814
KOH
Density: 1,009 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer	0,2185 - 0,2415 mol/l

Cat. No.	Pk	Pack type
5045.9010	10 l	Plastic drum

Potassium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 1310-58-3 **UN:** 1814
KOH
Storage Temperature: Ambient

NIST traceable	Confirmed
Titer (20°C; real value 0.2 % accuracy)	0.0998 - 0.1002 mol/l

Cat. No.	Pk	Pack type
31780.298	1 l	Plastic bottle

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Potassium hydroxide 1 mol/l (1 N) in ethanol AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 2924

KOH

Storage Temperature: Ambient

This product may develop a yellow-brown colour during storage.

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31306.267	500 ml	Glass bottle

Potassium hydroxide 0.5 mol/l (0.5 N) in ethanol AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 2924

KOH

Storage Temperature: Ambient

This product may develop a yellow-brown colour during storage.

Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31308.264	500 ml	Glass bottle
31308.297	1 l	Glass bottle

Potassium hydroxide 0.1 mol/l (0.1 N) in ethanol AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 2924

KOH

Storage Temperature: Ambient

This product may develop a yellow-brown colour during storage.

NIST traceable ..... Confirmed
Appearance ..... Clear colourless liquid
Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l

Cat. No.	Pk	Pack type
31303.291	1 l	Glass bottle

Potassium hydroxide 0.05 mol/l (0.05 N) in ethanol AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 1170

KOH

Storage Temperature: Ambient

This product may develop a yellow-brown colour during storage.

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31305.297	1 l	Glass bottle

Potassium hydroxide 0.5 mol/l (0.5 N) in methanol AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 2924

KOH

Storage Temperature: Ambient

NIST traceable ..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l

Cat. No.	Pk	Pack type
31984.293	1 l	Glass bottle

Potassium hydroxide 0.1 mol/l 0.1 N in methanol AVS TITRINORM® volumetric solution

Danger

CAS 1310-58-3 **UN:** 2924

KOH

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
Colouration ..... Max. 100 APHA
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
32304.291	1 l	Plastic bottle
32304.427	2,5 l	Glass bottle SAFEBREAK

Potassium iodate AnalaR NORMAPUR® analytical reagent

Warning

CAS 7758-05-6 **UN:** 1479

KIO_3

M.W. 214 g/mol

Melting Pt: 560 °C **Density:** 3,98 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	99.7 - 100.4 %	pH (20°C; 5 %)	5.0 - 8.0
Heavy metals (as Pb)	Max. 5 ppm	Loss on drying (130°C)	Max. 0.1 %
Total N (Nitrogen)	Max. 20 ppm	Cl + ClO_3 + Br + BrO_3 (as Cl)	Max. 100 ppm
I (Iodide)	Max. 20 ppm	SO_4 (Sulphate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm	Na (Sodium)	Max. 50 ppm

Cat. No.	Pk	Pack type
26840.235	250 g	Plastic bottle for solids

Potassium iodate GPR RECTAPUR®

Warning

CAS 7758-05-6 **UN:** 1479

KIO_3

M.W. 214 g/mol

Melting Pt: 560 °C **Density:** 3,98 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 20 ppm
Br + Cl + ClO_3 (as Cl) ..... Max. 0.05 %
SO_4 (Sulphate) ..... Max. 0.02 %
Fe (Iron) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
26839.264	500 g	Plastic bottle for solids

Potassium iodate/-iodide, 0.713g/l KIO_3 (0.02 N) aqueous stabilised volumetric solution

Stabilised with $HgCl_2$ 10 ppm

CAS 7758-05-6

KIO_3

Storage Temperature: Ambient

Standard solution for the determination of sulphite in boiler water.

Assay (Potassium iodate) ..... 0.7126 - 0.7140 g/l

Cat. No.	Pk	Pack type
160274X	500 ml	Glass bottle
160276Q	2,5 l	Glass bottle

Potassium iodide AnalaR NORMAPUR® analytical reagent

CAS 7681-11-0

KI **M.W.** 166 g/mol

Boiling Pt: 1330 °C (1013 hPa) **Melting Pt:** 681 °C **Density:** 3,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Solution in water	Passes test
Alkalinity	Max. 0.002 meq/g	pH (20°C; 5 %)	5.7 - 9.2
Heavy metals (as Pb)	Max. 2 ppm	Insolubility in water	Max. 50 ppm
Loss on drying (150°C)	Max. 0.2 %	Reducing substances (as I)	Max. 10 ppm
Total N (Nitrogen)	Max. 10 ppm	Cl + Br (as Cl)	Max. 100 ppm
IO_3 (Iodate)	Max. 2 ppm	PO_4 (Phosphate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 10 ppm	As (Arsenic)	Max. 0.1 ppm
Ba (Barium)	Max. 20 ppm	Ca (Calcium)	Max. 10 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 2 ppm
Mg (Magnesium)	Max. 5 ppm	Na (Sodium)	Max. 0.03 %
Pb (Lead)	Max. 5 ppm		

Cat. No.	Pk	Pack type
26846.235	250 g	Plastic bottle for solids
26846.268	500 g	Plastic bottle for solids
26846.292	1 kg	Plastic bottle for solids

Potassium iodide AST 1g, tablets

CAS 7681-11-0

KI **M.W.** 166 g/mol

Boiling Pt: 1330 °C (1013 hPa) **Melting Pt:** 681 °C **Density:** 3,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Appearance	White biconvex tablets without any trace of yellowness
Average Weight Range	980 - 1020 mg
Weight Uniformity	NMT 10% outside 950 - 1050 mg none outside 930 - 1070 mg
Diameter	11.0 - 11.5 mm
Hardness	NLT 8KP off machine; NLT 3Kp before despatc

Cat. No.	Pk	Pack type
296322E	100 Tab.	Plastic bottle

Potassium iodide Ph. Eur.

CAS 7681-11-0

KI **M.W.** 166 g/mol

Boiling Pt: 1330 °C (1013 hPa) **Melting Pt:** 681 °C **Density:** 3,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Alkalinity	Passes test
IO_3 (Iodate)	Passes test
SO_4 (Sulphate)	Max. 150 ppm
S_2O_3 (Thiosulphate)	Passes test
Heavy metals (as Pb)	Max. 10 ppm
Fe (Iron)	Max. 20 ppm
Loss on drying (105°C)	Max. 1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
26850.230	250 g	Plastic bottle for solids
26850.260	500 g	Plastic bottle for solids
26850.296	1 kg	Plastic bottle for solids
26850.365	5 kg	Plastic bottle for solids

VWR LIFE SCIENCE Potassium iodide ACS

CAS 7681-11-0

KI **M.W.** 166 g/mol

Boiling Pt: 1330 °C (1013 hPa) **Melting Pt:** 681 °C **Density:** 3,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Barium	< 0.002%
Calcium	<= 0.002%
Chloride & Bromide	<= 0.01%
Heavy Metals (as Pb)	<= 0.0005%
Insolubles	<= 0.005%
Iodate	<= 0.0003%
Iron	<= 0.0003%
Loss on Drying	<= 0.2%
Magnesium	<= 0.001%
pH (5%, Water) @25°C	6 - 9.2
Phosphate	<= 0.001%
Purity	>= 99%
Sodium	<= 0.005%
Sulphate	<= 0.005%

Cat. No.	Pk	Pack type
0512-500G	500 g	Plastic bottle

Potassium iodide GPR RECTAPUR®

CAS 7681-11-0

KI **M.W.** 166 g/mol

Boiling Pt: 1330 °C (1013 hPa) **Melting Pt:** 681 °C **Density:** 3,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26843.235	250 g	Plastic bottle for solids
26843.268	500 g	Plastic bottle for solids
26843.292	1 kg	Plastic bottle for solids
26843.361	5 kg	Plastic bottle for solids
26843.460	25 kg	Bucket (Plastic)

Potassium iodide 40 g/l in aqueous solution GPR RECTAPUR®

CAS 7681-11-0

KI

Storage Temperature: Ambient

Assay	Min. 40 g/l

Cat. No.	Pk	Pack type
26852.293	1 l	Plastic bottle

Potassium iodide 1 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1070502

CAS 7681-11-0

KI

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87909.290	1 l	Plastic bottle

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Potassium iodide saturated solution in water Reag. Ph. Eur. 1070504

CAS 7681-11-0
KI
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87911.180	100 ml	Plastic bottle

NEW Potassium iodide (16,5% w/v) in aqueous solution USP test solutions (TS)

CAS 7681-11-0
KI
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85366.180	100 ml	Glass bottle
85366.260	500 ml	Glass bottle

Iodinated potassium iodide solution (mixture of 40 g/l potassium iodide and 20 g/l iodine in aqueous solution) Reag. Ph. Eur. 1070503

KI

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87910.180	100 ml	Plastic bottle

Potassium iodide and starch solution Reag. Ph. Eur. 1070501

KI

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87908.200	100 ml	Plastic bottle

Potassium iodo mercurate (II) reagent, solution B (sodium hydroxide 20% aqueous solution) Reag. Ph. Eur. 1071600 for determination of ammonia and ammonium salts

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87710.180	100 ml	Plastic bottle

Potassium metabisulphite

See di-Potassium disulphite p.364

Potassium metaperiodate

See Potassium periodate..... p.372

Potassium monohydrogen phosphate

See di-Potassium hydrogen phosphate..... p.366

Potassium monohydrogen phosphate trihydrate

See di-Potassium hydrogen phosphate trihydrate p.367

Potassium nitrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 7757-79-1 **UN:** 1486
KNO_3
M.W. 101.1 g/mol
Melting Pt: 334 °C **Density:** 2,109 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488224-35

Assay	Min. 99.0 %	pH (20°C; 5 %)	5.0 - 7.5
Heavy metals (as Pb)	Max. 5 ppm	Cl (Chloride)	Max. 10 ppm
IO_3 (Iodate)	Max. 5 ppm	NH_4 (Ammonium)	Max. 10 ppm
NO_2 (Nitrite)	Max. 10 ppm	PO_4 (Phosphate)	Max. 5 ppm
SO_4 (Sulphate)	Max. 30 ppm	Ca (Calcium)	Max. 10 ppm
Cu (Copper)	Max. 1 ppm	Fe (Iron)	Max. 3 ppm
Mg (Magnesium)	Max. 15 ppm	Na (Sodium)	Max. 0.02 %
Pb (Lead)	Max. 1 ppm		

Cat. No.	Pk	Pack type
26869.234	250 g	Plastic bottle for solids
26869.260	500 g	Plastic bottle for solids
26869.291	1 kg	Plastic bottle for solids

Potassium nitrate GPR RECTAPUR®

Warning

CAS 7757-79-1 **UN:** 1486
KNO_3
M.W. 101.1 g/mol
Melting Pt: 334 °C **Density:** 2,109 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488224-35

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.1 %
SO_4 (Sulphate)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26863.291	1 kg	Plastic bottle for solids
26863.360	5 kg	Plastic bottle for solids

Potassium nitrate TECHNICAL

Warning

CAS 7757-79-1 **UN:** 1486

KNO_3 **M.W.** 101.1 g/mol

Melting Pt: 334 °C **Density:** 2,109 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119488224-35

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
26857.368	5 kg	Bucket (Plastic)

di-Potassium oxalate monohydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 6487-48-5 **UN:** 2811

$(COOK)_2 \cdot H_2O$ **M.W.** 184.23 g/mol

Melting Pt: 356 °C **Density:** 2,154 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 99.5 - 101.0 %
Heavy metals (as Pb) ..... Max. 20 ppm
Cl (Chloride) ..... Max. 20 ppm
Fe (Iron) ..... Max. 5 ppm
pH (20°C; 5 %) ..... 7.0 - 8.5
Insolubility in water ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Na (Sodium) ..... Max. 0.02 %

Cat. No.	Pk	Pack type
26887.293	1 kg	Plastic bottle for solids

Potassium periodate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7790-21-8 **UN:** 1479

KIO_4 **M.W.** 230 g/mol

Melting Pt: 576-588 °C **Density:** 3,62 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay (calculated on dried substance) .. Min. 99.5 %
Br + Cl + ClO_3 (as Cl) ..... Max. 0.02 %
I (Iodide) ..... Max. 50 ppm
Ba (Barium) ..... Max. 50 ppm
Heavy metals (as Pb) ..... Max. 5 ppm
NH_4 (Ammonium) ..... Max. 20 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Mn (Manganese) ..... Max. 3 ppm

Cat. No.	Pk	Pack type
26900.186	100 g	Plastic bottle for solids

Potassium permanganate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7722-64-7 **UN:** 1490

$KMnO_4$ **M.W.** 158.03 g/mol

Melting Pt: > 240 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 99.0 - 100.5 %
Identification A ..... Passes test Ph.Eur.
Insolubility in water ..... Max. 0.1 %
Total N (Nitrogen) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Pb (Lead) ..... Max. 20 ppm
Appearance of solution ..... Passes test Ph.Eur.
Identification B ..... Passes test Ph.Eur.
Cl (Chloride) ..... Max. 0.02 %
Fe (Iron) ..... Max. 20 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
26910.237	250 g	Plastic bottle for solids
26910.294	1 kg	Plastic bottle for solids

Potassium permanganate, crystallised Ph. Eur.

Danger

CAS 7722-64-7 **UN:** 1490

$KMnO_4$ **M.W.** 158.03 g/mol

Melting Pt: > 240 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... 99.0 - 100.5 %
Appearance ..... Conforms (see CoA/CoS)
Identification A ..... Passes test
Identification B ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Substances insoluble in water ..... Max. 1.0 %
Cl (Chloride) ..... Max. 200 ppm
SO_4 (Sulphate) ..... Max. 500 ppm
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
26904.293	1 kg	Plastic bottle for solids
26904.464	25 kg	Bucket (Plastic)

Potassium permanganate GPR RECTAPUR®

Danger

CAS 7722-64-7 **UN:** 1490

$KMnO_4$ **M.W.** 158.03 g/mol

Melting Pt: > 240 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Cl (Chloride) ..... Max. 0.02 %
SO_4 (Sulphate) ..... Max. 0.02 %
Pb (Lead) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
26906.290	1 kg	Plastic bottle for solids
26906.368	5 kg	Plastic bottle for solids

Potassium permanganate 3% in aqueous solution Reag. Ph. Eur. 1070902

CAS 7722-64-7 **UN:** 3082

$KMnO_4$ **M.W.** 158.03 g/mol

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87919.290	1 l	Plastic bottle

Potassium permanganate 0.2 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7722-64-7 **UN:** 3082

$KMnO_4$ **M.W.** 158.03 g/mol

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.1996 - 0.2004 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31451.292	1 l	Glass bottle
31451.326	2,5 l	Glass bottle SAFEBREAK

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Potassium permanganate 0.02 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7722-64-7 **UN:** 3082
$KMnO_4$ **M.W.** 158.03 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.01996 - 0.02004 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31455.295	1 l	Glass bottle
31455.320	2,5 l	Glass bottle

NEW Potassium permanganate (0,1 N) in aqueous solution USP test solutions (TS)

CAS 7722-64-7 **UN:** 3082
$KMnO_4$ **M.W.** 158.03 g/mol
Storage Temperature: Ambient
Ready to use test solution (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85367.180	100 ml	Glass bottle
85367.260	500 ml	Glass bottle

Potassium permanganate 30 g/l in ortho-phosphoric acid 22% Reag. Ph. Eur. 1070901

CAS 7722-64-7 **UN:** 1805
$KMnO_4$ **M.W.** 158.03 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87918.180	100 ml	Plastic bottle

Potassium peroxodisulphate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7727-21-1 **UN:** 1492
$K_2S_2O_8$ **M.W.** 270.32 g/mol
Melting Pt: 100 °C **Density:** 2,477 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98.0 %
Insolubility in water ..... Max. 50 ppm
NH_4 (Ammonium) ..... Max. 0.25 %
Fe (Iron) ..... Max. 10 ppm
Conforms to Reag. Ph.Eur. ..... Passes test
Heavy metals (as Pb) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 5 ppm
NO_3 + ClO_3 (as NO_3) ..... Max. 100 ppm
Mn (Manganese) ..... Max. 2 ppm

Cat. No.	Pk	Pack type
26915.187	100 g	Plastic bottle for solids
26915.291	1 kg	Plastic bottle for solids

di-Potassium peroxodisulphate

See Potassium peroxodisulphate p.373

Potassium persulphate

See Potassium peroxodisulphate p.373

Potassium phosphate dibasic

See di-Potassium hydrogen phosphate p.366

Potassium phosphate dibasic trihydrate

See di-Potassium hydrogen phosphate trihydrate p.367

Potassium phosphate monobasic

See Potassium dihydrogen phosphate p.363

Potassium plumbite solution Reag. Ph. Eur. 1071200

Danger

UN: 1719

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87920.180	100 ml	Plastic bottle

Potassium pyrosulphite

See di-Potassium disulphite p.364

Potassium rhodanide

See Potassium thiocyanate p.375

L(+)-Potassium sodium tartrate tetrahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 6381-59-5
$KOOC(CHOH)_2COONa{\cdot}4H_2O$ **M.W.** 282.22 g/mol
Melting Pt: 70-80 °C **Density:** ~1,767 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119524666-34

Assay ..... 99.0 - 102.0 %
Heavy metals (as Pb) ..... Max. 5 ppm
NH_4 (Ammonium) ..... Max. 20 ppm
PO_4 (Phosphate) ..... Max. 10 ppm
Ca (Calcium) ..... Max. 40 ppm
Fe (Iron) ..... Max. 5 ppm
Conforms to ACS ..... Passes test
pH (25°C; 5 %) ..... 7.0 - 8.5
Insolubility in water ..... Max. 50 ppm
Cl (Chloride) ..... Max. 5 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Cu (Copper) ..... Max. 5 ppm
Pb (Lead) ..... Max. 5 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
27068.233	250 g	Plastic bottle for solids
27068.290	1 kg	Plastic bottle for solids

L(+)-Potassium sodium tartrate tetrahydrate GPR RECTAPUR®

CAS 6381-59-5
$KOOC(CHOH)_2COONa{\cdot}4H_2O$ **M.W.** 282.22 g/mol
Melting Pt: 70-80 °C **Density:** ~1,767 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119524666-34

Assay ..... Min. 98 %
Heavy metals (as Pb) ..... Max. 20 ppm
Cl (Chloride) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 0.02 %
Fe (Iron) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
27066.293	1 kg	Plastic bottle for solids
27066.362	5 kg	Plastic bottle for solids

L(+)-Potassium sodium tartrate tetrahydrate TECHNICAL

CAS 6381-59-5
$KOOC(CHOH)_2COONa{\cdot}4H_2O$ **M.W.** 282.22 g/mol
Melting Pt: 70-80 °C **Density:** ~1,767 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119524666-34

Identification ..... Passes test

Cat. No.	Pk	Pack type
27062.290	1 kg	Plastic bottle for solids

(+)-Potassium sodium L-tartrate tetrahydrate

See L(+)-Potassium sodium tartrate tetrahydrate p.373

Potassium sodium L(+)-tartrate tetrahydrate

See L(+)-Potassium sodium tartrate tetrahydrate p.373

(R,R)-(+)-Potassium sodium tartrate tetrahydrate

See L(+)-Potassium sodium tartrate tetrahydrate p.373

Potassium sorbate, granules Ph. Eur.

Warning

CAS 24634-61-5

$CH_3CH=CHCH=CHCOOK$

M.W. 150.22 g/mol

Melting Pt: 270 °C **Density:** 1,36 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test
Identification D	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Aldehydes (calculated as C_2H_4O)	Max. 0.15 %
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C; 3 h)	Max. 1.0 %
Statement of original manufacturer	(*)
Acetone (*)	Max. 200 ppm
Other residual solvents (*)	Unlikely by manuf.process

Cat. No.	Pk	Pack type
26976.291	1 kg	Plastic bottle for solids
26976.462	25 kg	Bucket (Plastic)

Potassium sulphate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7778-80-5

K_2SO_4

M.W. 174.26 g/mol

Boiling Pt: 1698 °C (1013 hPa) **Melting Pt:** 1069 °C **Density:** 2,66 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (25°C; 5 %)	5.5 - 7.5
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 100 ppm
Total N (Nitrogen)	Max. 5 ppm	Cl (Chloride)	Max. 5 ppm
As (Arsenic)	Max. 2 ppm	Ca (Calcium)	Max. 50 ppm
Fe (Iron)	Max. 5 ppm	Mg (Magnesium)	Max. 20 ppm
Na (Sodium)	Max. 0.02 %	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
26997.293	1 kg	Plastic bottle for solids

Potassium sulphate GPR RECTAPUR®

CAS 7778-80-5

K_2SO_4

M.W. 174.26 g/mol

Boiling Pt: 1698 °C (1013 hPa) **Melting Pt:** 1069 °C **Density:** 2,66 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
NH_4 (Ammonium)	Max. 20 ppm
NO_3 (Nitrate)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
26994.293	1 kg	Plastic bottle for solids
26994.362	5 kg	Plastic bottle for solids
26994.460	25 kg	Plastic container

NEW Potassium sulphate in aqueous solution USP test solutions (TS)

CAS 7778-80-5

K_2O_4S

Storage Temperature: Ambient

Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85368.180	100 ml	Plastic bottle
85368.260	500 ml	Plastic bottle

di-Potassium L(+)-tartrate hemihydrate GPR RECTAPUR®

CAS 6100-19-2

$KOOC(CHOH)_2COOK{\cdot}0{,}5H_2O$

M.W. 235.28 g/mol

Density: 1,943 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27048.291	1 kg	Plastic bottle for solids

L(+)-Potassium tartrate dibasic hemihydrate

See di-Potassium L(+)-tartrate hemihydrate p.374

(R,R)-(+)-Potassium tartrate dibasic hemihydrate

See di-Potassium L(+)-tartrate hemihydrate p.374

Potassium tellurite

See di-Potassium tellurium trioxide p.374

Potassium tellurium (IV) oxide

See di-Potassium tellurium trioxide p.374

di-Potassium tellurium trioxide TECHNICAL

Danger

CAS 7790-58-1 **UN:** 3284

K_2TeO_3

M.W. 253.79 g/mol

Melting Pt: 460-470 °C

Storage Temperature: Refrigerator

Identification	Passes test

Cat. No.	Pk	Pack type
27074.154	50 g	Plastic bottle for solids

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Potassium tetraiodomercurate solution Reag. Ph. Eur. 1071500

Danger

UN: 2024

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87921.180	100 ml	Plastic bottle

Potassium tetroxoiodate (VII)

See Potassium periodate..... p.372

Potassium thiocyanate AnalaR NORMAPUR® analytical reagent

Warning

CAS 333-20-0
KSCN
M.W. 97.18 g/mol
Boiling Pt: 500 °C (1013 hPa) **Melting Pt:** 175 °C **Density:** 1,61 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (25°C; 5 %)	5.3 - 8.5
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in alcohol	Max. 100 ppm
Insolubility in water	Max. 30 ppm	Substances reducing iodine (as I)	Max. 0.025 %
Cl (Chloride)	Max. 50 ppm	NH_4 (Ammonium)	Max. 20 ppm
S (Sulphide)	Max. 10 ppm	SO_4 (Sulphate)	Max. 20 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 1 ppm
Na (Sodium)	Max. 50 ppm	Pb (Lead)	Max. 2 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
27035.230	250 g	Plastic bottle for solids

Potassium thiocyanate GPR RECTAPUR®

Warning

CAS 333-20-0
KSCN
M.W. 97.18 g/mol
Boiling Pt: 500 °C (1013 hPa) **Melting Pt:** 175 °C **Density:** 1,61 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
27033.290	1 kg	Plastic bottle for solids
27033.368	5 kg	Plastic bottle for solids

Potassium thiocyanate 1 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1071801

CAS 333-20-0
KSCN
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87922.290	1 l	Plastic bottle

Potassium thiocyanate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 333-20-0
KSCN
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31481.295	1 l	Plastic bottle

Potassium (E,E)-hexa-2,4-dienoate

See Potassium sorbate p.374

Potassium trans,trans-hexa-2,4-dienoate

See Potassium sorbate p.374

Potato dextrose agar

See Microbiology

NEW Praseodymium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Praseodymium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457393M
Praseodymium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85588.180

NEW Praseodymium standard solution, 10,000 mg/l Pr in dil. nitric acid (from Pr_6O_{11}) ARISTAR® standard for ICP

Pr_6O_{11} in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455852N	100 ml	Glass bottle

Praseodymium standard solution, 1,000 mg/l Pr in dil. nitric acid (from Pr_6O_{11}) ARISTAR® standard for ICP

Pr_6O_{11} in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455844N	500 ml	Plastic bottle
455842L	100 ml	Plastic bottle

Preservation system from microorganisms

See Microbiology

Primary colour solutions

See Section Reagents Ph Eur p.387

Prop-2-enamide

See Acrylamide (monomer)..... p.15

Pronamide

See Propyzamide p.380

VWR LIFE SCIENCE Pronase E, for biotechnology

Cat. No.	Pk	Pack type
E629-1G	1 g	Glass bottle
E629-5G	5 g	Glass bottle

(±)-1,2-Propanediol TECHNICAL

CAS 57-55-6

$CH_3CH(OH)CH_2OH$ **M.W.** 76.1 g/mol

Boiling Pt: 187,6 °C (1013 hPa) **Melting Pt:** -59 °C **Density:** 1,04 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
n 20/D	1.431 - 1.435

Cat. No.	Pk	Pack type
24414.296	1 l	Plastic bottle
24414.321	2,5 l	Plastic bottle
24414.365	5 l	Plastic bottle
24414.467	25 l	Metal drum

1,3-Propanediol GPR RECTAPUR® for synthesis

CAS 504-63-2

$HO(CH_2)_3OH$ **M.W.** 76.1 g/mol

Boiling Pt: 214 °C (1013 hPa) **Melting Pt:** -32 °C **Density:** 1,0597 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.7 %
IR Spectrum	Passes test
Colouration	Max. 15 APHA
Water	Max. 0.05 %

Cat. No.	Pk	Pack type
87134.290	1 l	Glass bottle
87134.360	5 l	Plastic bottle

1,2,3-Propanetriol

See Glycerine..... p.175

1-Propanol HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 71-23-8 **UN:** 1274

$H_3CCH_2CH_2OH$ **M.W.** 60.1 g/mol

Boiling Pt: 97 °C (1013 hPa) **Melting Pt:** -127 °C **Density:** 0,8053 g/cm³ (20 °C, DIN 51757)

Storage Temperature: Ambient

Assay (GC)	Min. 99.80 %
Acidity	Max. 0.0005 %
Alkalinity	Max. 0.0002 %
Evaporation residue (100°C)	Max. 0.0010 %
Water	Max. 0.0500 %
Transmittance (230 nm)	Min. 50.0 %
Transmittance (240 nm)	Min. 80.0 %
Transmittance (270 nm)	98.0 %
Conforms to BDH 15303	Passes test

Cat. No.	Pk	Pack type
83635.320	2,5 l	Glass bottle

NEW 1-Propanol, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85675.180	100 ml	Glass bottle

1-Propanol AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 71-23-8 **UN:** 1274

$H_3CCH_2CH_2OH$ **M.W.** 60.1 g/mol

Boiling Pt: 97 °C (1013 hPa) **Melting Pt:** -127 °C **Density:** 0,8053 g/cm³ (20 °C, DIN 51757)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.5 %	Distillation range	Passes test Reag.Ph.Eur.
Acidity	Max. 0.0005 meq/g	Alkalinity	Max. 0.0006 meq/g
Boiling point	96.9 - 97.5 °C	Colouration	Max. 10 APHA
Density (20/4)	0.801 - 0.804	Density (20/20)	0.802 - 0.806
Acetone	Max. 100 ppm	Evaporation residue	Max. 10 ppm
Ethanol	Max. 0.05 %	Methanol	Max. 0.05 %
Propan-2-ol	Max. 0.05 %	Propionaldehyde	Max. 0.06 %
Water	Max. 0.1 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.05 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20861.294	1 l	Glass bottle
20861.320	2,5 l	Glass bottle
20861.363	5 l	Plastic bottle

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1-Propanol GPR RECTAPUR®

Danger

CAS 71-23-8 **UN:** 1274
$H_3CCH_2CH_2OH$ **M.W.** 60.1 g/mol
Boiling Pt: 97 °C (1013 hPa) **Melting Pt:** -127 °C **Density:** 0,8053 g/cm³ (20 °C, DIN 51757)

Storage Temperature: Ambient

Assay	Min. 99 %
IR Spectrum	Passes test
Acidity	Max. 0.0005 meq/g
Boiling point	96.9 - 97.5 °C
Density (20/4)	0.801 - 0.804
Substances coloured by H_2SO_4	Max. 150 APHA
Evaporation residue	Max. 100 ppm
Methanol	Max. 0.1 %
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
20858.293	1 l	Plastic bottle
20858.362	5 l	Plastic bottle
20858.464	25 l	Metal drum

NEW 2-Propanol HiPerSolv CHROMANORM® for LC-MS

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay (on anhydrous substance)	Min. 99.9 %	Acidity	Max. 0.0002 meq/g
Alkalinity	Max. 0.0002 meq/g	Evaporation residue	Max. 0.0001 %
Water	Max. 0.005 %	Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm	Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm	Transmittance (205 nm)	Min. 10 %
Transmittance (210 nm)	Min. 50 %	Transmittance (225 nm)	Min. 80 %
Transmittance (240 nm)	Min. 95 %	Transmittance (255 nm)	Min. 99 %
Suitable for LC-MS	Passes test		

Cat. No.	Pk	Pack type
84881.290	1 l	Glass bottle
84881.320	2,5 l	Glass bottle

2-Propanol HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.1 %
Absorbance (220 nm)	Max. 0.3
Absorbance (230 nm)	Max. 0.1
Absorbance (250 nm)	Max. 0.01
Conforms to BDH 15252	Passes test
Transmittance (220 nm)	Min. 50 %
Transmittance (230 nm)	Min. 80 %
Transmittance (250 nm)	Min. 98 %

Cat. No.	Pk	Pack type
20880.290	1 l	Glass bottle
20880.320	2,5 l	Glass bottle
20880.400	4 l	Glass bottle

2-Propanol HiPerSolv CHROMANORM® for preparative HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay (on anhydrous substance)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
84531.460	25 l	Metal drum
84531.550	200 l	Metal drum

2-Propanol SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 0.1 %
Transmittance (210 nm)	Min. 25 %
Transmittance (220 nm)	Min. 55 %
Transmittance (230 nm)	Min. 75 %
Transmittance (250 nm)	Min. 95 %
Transmittance (260 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84706.320	2,5 l	Glass bottle

NEW 2-Propanol, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85676.180	100 ml	Glass bottle

NEW 2-Propanol PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay (on anhydrous substance)	Min. 99.9 %
Evaporation residue	Max 0.0003%
Colouration	Max 10 APHA
Water	Max 0.05%
GC/ECD Dioxins, Furans & PCB's	Max 5 ng/l
GC/ECD any pesticide (as Lindane)	Max 5 ng/l
GC/NPD any pesticide (as Parathion)	Max 10 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane)	Max 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM)	Max 2 ng/l
GC/FID C10 to C40 (as n-Decane)	Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu)	Max 2 ng/l
Filtered through 0.2um, filled under inert gas	Conforms

Cat. No.	Pk	Pack type
85391.320	2,5 l	Glass bottle

2-Propanol, anhydrous (max. 0.003% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (calculated on anhydrous)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 0.0005 %
Water	Max. 0.0030 %

Cat. No.	Pk	Pack type
83677.230	250 ml	Glass bottle with septum cap
83677.290	1 l	Glass bottle

2-Propanol, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Appearance	Clear colourless liquid	Colour value	Max. 10 APHA
Assay	Min. 99.8 %	Aldehydes	Max. 0.0002 %
Formaldehyde	Max. 0.0002 %	Ketones (as C_3H_6O)	Max. 0.0050 %
Methanol	Max. 0.1 %	Residue on evaporation	Max. 0.0010 %
Water (K.F.)	Max. 0.0100 %	Formaldehyde-sulphuric colouration	Max. 60.0 APHA
Acidity	Max. 0.0020 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.1 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.01 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.01 ppm

Cat. No.	Pk	Pack type
20838.294	1 l	Glass bottle

2-Propanol AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay (on anhydrous substance)	Min. 99.7 %	Benzene and related substances	Passes test
IR Spectrum	Passes test	Peroxides	Passes test
Solubility in water	Passes test ACS	Acidity	Max. 0.0001 meq/g
Alkalinity	Max. 0.0001 meq/g	Boiling point	82.2 - 82.6 °C
Colouration	Max. 10 APHA	Density (20/4)	0.784 - 0.786
Density (20/20)	0.785 - 0.787	Density (25/25)	0.783 - 0.790
n 20/D	1.376 - 1.378	Substances coloured by H_2SO_4	Max. 60 APHA
Aldehydes (as CH_3CHO)	Max. 2 ppm	Carbonyl compounds (as acetone)	Max. 20 ppm
Carbonyl compounds (as propionaldehyde)	Max. 20 ppm	Ethanol	Max. 100 ppm
Evaporation residue	Max. 10 ppm	Formaldehyde	Max. 2 ppm
Methanol	Max. 100 ppm	Substances reducing $KMnO_4$ (as O)	Max. 5 ppm
Water	Max. 0.1 %	Al (Aluminium)	Max. 0.1 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.05 ppm
Ca (Calcium)	Max. 0.2 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.01 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.05 ppm
K (Potassium)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.01 ppm	Na (Sodium)	Max. 0.2 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.05 ppm
Zn (Zinc)	Max. 0.01 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
20842.298	1 l	Glass bottle
20842.312	1 l	Plastic bottle
20842.323	2,5 l	Glass bottle
20842.330	2,5 l	Plastic bottle
20842.367	5 l	Plastic bottle
20842.460	25 l	Metal drum
20842.550	200 l	Metal drum

2-Propanol Ph. Eur., USP

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay	Min. 99.0 %	Appearance	Clear colourless liquid
Relative density	0.785 - 0.789	Specific gravity	0.783 - 0.787
Refractive index (20°C)	1.376 - 1.378	Identification (IR)	Passes test USP
Identification B (*)	Passes test USP	Appearance test	Passes test Ph.Eur.
Acidity or alkalinity	Passes test	Absorbance (230 nm)	Max. 0.3
Absorbance (250 nm)	Max. 0.1	Absorbance (270 nm)	Max. 0.03
Absorbance (290 nm)	Max. 0.02	Absorbance (310 nm)	Max. 0.01
The absorption curve is smooth .	Passes test Ph.Eur.	Benzene	Max. 2 ppm
Total of impurities apart from 2-butanol	Max. 0.3 %	Peroxides	Passes test Ph.Eur.
Non-volatile substances	Max. 20 ppm	Water	Max. 0.5 %
Each individual impurity (*)	Max. 0.1 %	Total impurities (*)	Max. 1 %
Residual solvents (CPMP/ICH/283/95)	Conforms	Residues of metal catalysts or reagents	Conforms
Conforms to Ph.Eur.	Passes test	Conforms to USP	Passes test
(*): Results based on manufacturer	(*)		

Cat. No.	Pk	Pack type
20904.293	1 l	Glass bottle
20904.320	2,5 l	Glass bottle
20904.362	5 l	Metal can
20904.465	25 l	Plastic drum
20904.550	200 l	Metal drum

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

2-Propanol GPR RECTAPUR®

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay	Min. 99.0 %
Acidity	Passes test
Acidity or alkalinity	Passes test
Benzene and related substances	Passes test
IR Spectrum	Passes test
Peroxides	Passes test
Boiling point	82.2 - 82.6 °C
Density (20/20)	0.785 - 0.789
Density (25/25)	0.783 - 0.790
n 20/D	1.376 - 1.378
Evaporation residue	Max. 20 ppm
Water	Max. 0.5 %

Cat. No.	Pk	Pack type
20839.297	1 l	Plastic bottle
20839.366	5 l	Plastic bottle
20839.468	25 l	Plastic drum

VWR LIFE SCIENCE 2-Propanol for biotechnology

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Color (APHA)	< = 10
Density	0.782 g/mL - 0.788 g/mL
Moisture (KF)	<= 0.2 %
Purity	>= 99 %

Cat. No.	Pk	Pack type
0918-500ML	500 ml	Plastic bottle
0918-1L	1 l	Plastic bottle
0918-4L	4 l	Plastic bottle

2-Propanol TECHNICAL

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Assay	Min. 98 %

Cat. No.	Pk	Pack type
20922.320	2,5 l	Plastic bottle
20922.364	5 l	Plastic bottle
20922.411	10 l	Plastic drum
20922.466	25 l	Plastic drum
20922.557	200 l	Metal drum

2-Propanol VLSI Selectipur® for the electronics industry

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Product from BASF

This product is not available in all countries. Please check with your local VWR International office or supplier.

Cat. No.	Pk	Pack type
51152037.	2,5 l	Glass bottle
52107626.	20 kg	Metal drum lined

2-Propanol SLSI Selectipur® for the electronics industry

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Product from BASF

This product is not available in all countries. Please check with your local VWR International office or supplier.

Cat. No.	Pk	Pack type
51153150.	2,5 l	Glass bottle
56998148.	147 kg	Steel drum

2-Propanol Selectipur® for the electronics industry

Danger

CAS 67-63-0 **UN:** 1219
$(CH_3)_2CHOH$ **M.W.** 60.1 g/mol
Boiling Pt: 82 °C (1013 hPa) **Melting Pt:** -89 °C **Density:** 0,786 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457558-25

Product from BASF

This product is not available in all countries. Please check with your local VWR International office or supplier.

Cat. No.	Pk	Pack type
52106195.	150 kg	Plastic drum

IPA spray, sterile, IPASEPT 70 Premium

70% Iso-propyl alcohol compliant with Ph. Eur. and 30% water for injection according to USP, filtered at 0,2 µm

IPASEPT 70 Premium is ideal for the routine cleaning of all surfaces in pharmaceutical facilities, such as cleanroom work surfaces, process equipment, isolators and biosafety cabinets, etc.. It is also recommended for decontamination of materials before entering the cleanroom, and for spraying on gloved hands.

- Ready to use, eliminates the need for on-site preparation of alcohol solution
- 0,2 µm filtered and irradiated with SAL 10^{-6}, for use in Grade A and B cleanrooms
- Airless system, preventing airborne contamination being sucked in
- Collapsible inner pouch, reducing waste and disposal costs
- Double bagged for easy transfer into a cleanroom
- Traceability and assurance of quality

Packaging: Double bagged and labelled with batch number and shelf life.

Description	Packed	Pk	Cat. No.
IPASEPT 70 Premium	6× 1 litre trigger spray bottles	6 l	94018.1006

IPASEPT 70, γ-irradiated

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

IVD

CAS 67-63-0 **UN:** 1219

$(CH_3)_2CHOH$

Density: 0,85 g/cm³ (20 °C)

Storage Temperature: Ambient

70% Iso-propyl alcohol compliant with Ph. Eur. and 30% water, filtered at 0,2 µm

Assay (Propan-2-ol) (V/V) ..... 68 - 72 %
Assay (Propan-2-ol) (V/V) (USP) ..... Passes test USP
Appearance ..... Clear colourless liquid
Acidity ..... Passes test USP
Raw materials ..... Passes test Ph.Eur.
Density (20/4) ..... 0.872 - 0.883
Non-volatile matter ..... Max. 100 mg/l

Cat. No.	Pk	Pack type
94006.1001	1 l	Plastic bottle
94006.1016	6 l	6× 1 litre trigger spray bottles

Propanone

See Acetone p.6

2-Propanone

See Acetone p.6

Propanone-D6

See Acetone-[D6] p.8

(±)-Propene oxide

See Propylene oxide p.380

NEW Propionate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84991.180	100 ml	Plastic bottle

1-Propyl alcohol

See 1-Propanol p.376

Propyl carbinol

See 1-Butanol p.70

1,3-Propylene glycol

See 1,3-Propanediol p.376

(±)-1,2-Propylene glycol

See (±)-1,2-Propanediol p.376

Propylene oxide TECHNICAL

Danger

CAS 75-56-9 **UN:** 1280

C_3H_6O **M.W.** 58.08 g/mol

Boiling Pt: 34,3 °C (1013 hPa) **Melting Pt:** -112 °C **Density:** 0,83 g/cm³ (20 °C)

Storage Temperature: Refrigerator

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
27165.295	1 l	Glass bottle

Propylic alcohol

See 1-Propanol p.376

Propyzamide, extra pure

Warning

CAS 23950-58-5 **UN:** 3077

$C_{12}H_{11}Cl_2NO$ **M.W.** 256.13 g/mol

Boiling Pt: 321 °C (1013 hPa) **Melting Pt:** 156 °C

Storage Temperature: Ambient

Cat. No.	Pk	Pack type
124482Q	10 mg	Glass ampoule

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Protease inhibitor cocktails, general use

Contains a mixture of protease inhibitors: AEBSF, Aprotinin, E-64, Bestatin and Leupeptin. Each vial can be reconstituted in 1 ml deionised water to form a 100X solution.

M222 with EDTA

Cat. No.	Pk	Pack type
M221-1ML	1 ml	Vial
M222-1ML	1 ml	Vial

Proteinase K, from Tritirachium album, Electran® for electrophoresis, chromatographically purified

Activity approximately 30 Anson units per mg.
1 Anson unit is the amount of enzyme which liberates 1 mmol of Folin positive amino acids per minute at pH 7.5 and 35°C using haemoglobin as substrate. Powerful proteolytic activity on proteins, glycoproteins and peptides. Used to inactivate DNases and RNases during isolation of nucleic acids.

Cat. No.	Pk	Pack type
390972X	100 mg	Glass bottle
390973P	0,5 g	Glass bottle
39097CB	10 g	Glass bottle

Proteinase K, from Tritirachium album, biotechnology grade

Lyophilised powder. A non specific protease with a molecular weight of approximately 18 kDa. Exhibits high stability and activity in the presence of SDS, EDTA, and urea, as well as over a wide pH range. Activity >30 units/mg.

Cat. No.	Pk	Pack type
0706-100MG	100 mg	Glass bottle
0706-500MG	500 mg	Glass bottle
0706-1G	1 g	Glass bottle

Proteinase K 20 mg/ml aqueous solution (600 mAnsonU/ml) for biotechnology

A non specific serine protease with a molecular weight of approximately 18 kDa. This enzyme exhibits high stability and activity in the presence of SDS, EDTA and urea, as well as over a wide pH range. Activity >30 units/mg.

Cat. No.	Pk	Pack type
E195-5ML	5 ml	Plastic bottle
E195-25ML	25 ml	Plastic bottle

Protein expression

See Molecular biology

Protein purification

See Molecular biology

Pseudomonas Agar

See Microbiology

PTFE tape

Colour: white

Description	Length	Width	Pk	Cat. No.
PTFE tape	12 m	12 mm	1 Roll	332362S

Pumice stone, granules analytical reagent, washed

CAS 1332-09-8

Melting Pt: > 500 °C

Heavy metals (as Pb) ..... Max. 50 ppm
Solubility in water ..... Max. 0.5 %
Soluble chlorides ..... Max. 0.05 %

Cat. No.	Pk	Pack type
26398.293	1 kg	Plastic bottle for solids
26398.362	5 kg	Bucket (Plastic)

Pumice stone, powder TECHNICAL

CAS 1332-09-8

Melting Pt: > 500 °C

Identification ..... Passes test

Cat. No.	Pk	Pack type
26396.365	5 kg	Bucket (Plastic)

Puromycin dihydrochloride, ultrapure

Warning

CAS 58-58-2
$C_{22}H_{31}Cl_2N_7O_5$
Storage Temperature: Freezer
Inhibits protein synthesis. Working concentration: 50 µg/ml

Melting Point ..... 168 - 178 °C
Purity ..... 98 %
Solubility (5%, Water) ..... PASS

Cat. No.	Pk	Pack type
J593-25MG	25 mg	Glass bottle

Purpuric acid ammonium salt

See Murexide p.312

PVP40

See Polyvinylpyrrolidone 40,000 (K30) p.357

PVP 40,000

See Polyvinylpyrrolidone 40,000 (K30) p.357

PVP K30

See Polyvinylpyrrolidone 40,000 (K30) p.357

Pyrene, neat

CAS 129-00-0
$C_{16}H_{10}$ **M.W.** 202.26 g/mol
Boiling Pt: 404 °C (1013 hPa) **Melting Pt:** 148-150 °C **Density:** 1,27 g/cm³ (20 °C)

Cat. No.	Pk	Pack type
123132Q	100 mg	Glass ampoule

Pyridine, anhydrous (max. 0.003% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 110-86-1 **UN:** 1282
C_5H_5N **M.W.** 79.1 g/mol
Boiling Pt: 115 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,983 g/cm³ (20 °C)
Storage Temperature: Ambient

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (on anhydrous substance)	Min. 99.8 %
Evaporation residue	Max. 3 ppm
Water	Max. 30 ppm

Cat. No.	Pk	Pack type
83684.230	250 ml	Glass bottle with septum cap
83684.290	1 l	Glass bottle

Pyridine, dehydrated (max. 0.01% H_2O) AnalaR NORMAPUR® analytical reagent

Danger

CAS 110-86-1 **UN:** 1282
C_5H_5N **M.W.** 79.1 g/mol
Boiling Pt: 115 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,983 g/cm³ (20 °C)
Storage Temperature: Ambient

Appearance	Clear colourless liquid	Assay (calculated on anhydrous)	Min. 99.5 %
Acidity or alkalinity	Max. 0.002 meq/g	Water (K.F.)	Max. 0.0100 %
Residue on evaporation	Max. 0.0010 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
27197.295	1 l	Glass bottle

Pyridine, anhydrous AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent, for Karl Fischer titration

Danger

CAS 110-86-1 **UN:** 1282
C_5H_5N **M.W.** 79.1 g/mol
Boiling Pt: 115 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,983 g/cm³ (20 °C)
Storage Temperature: Ambient

Appearance	Clear colourless liquid	Assay (GC)	Min. 99.7 %
Acidity or alkalinity	Max. 0.200 meq/g	Water	Max. 0.0200 %
Evaporation residue	Max. 0.0020 %	Reducing substances	Max. 0.0005 %
Piperidine	Max. 0.0100 %	2-Methylpyridine	Max. 0.20 %
NH_4 (Ammonium)	Max. 0.0010 %	Cl (Chloride)	Max. 0.0005 %
SO_4 (Sulphate)	Max. 0.0005 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.05 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.01 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.05 ppm

Cat. No.	Pk	Pack type
27198.298	1 l	Glass bottle

Pyridine AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 110-86-1 **UN:** 1282
C_5H_5N **M.W.** 79.1 g/mol
Boiling Pt: 115 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,983 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.7 %	IR Spectrum	Passes test
Solubility in water	Passes test ACS	Acidity or alkalinity	Max. 0.2 meq/g
Boiling point	114 - 116 °C	Colouration	Max. 10 APHA
Density (20/4)	0.981 - 0.983	Evaporation residue	Max. 20 ppm
Substances reducing $KMnO_4$ (as O)	Max. 5 ppm	alpha-Picoline	Max. 0.2 %
Piperidine	Max. 100 ppm	Water	Max. 0.1 %
Cl (Chloride)	Max. 5 ppm	NH_3 (Ammonia)	Max. 20 ppm
SO_4 (Sulphate)	Max. 5 ppm	Al (Aluminium)	Max. 0.05 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.02 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.05 ppm	Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.2 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.01 ppm	Na (Sodium)	Max. 1 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Sr (Strontium)	Max. 0.02 ppm
Zn (Zinc)	Max. 0.05 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
27199.268	500 ml	Glass bottle
27199.292	1 l	Glass bottle
27199.326	2,5 l	Glass bottle

Pyridine GPR RECTAPUR®

Danger

CAS 110-86-1 **UN:** 1282
C_5H_5N **M.W.** 79.1 g/mol
Boiling Pt: 115 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,983 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Evaporation residue	Max. 20 ppm
Water	Max. 0.5 %

Cat. No.	Pk	Pack type
8226.2500	2,5 l	Glass bottle

Pyridine TECHNICAL

Danger

CAS 110-86-1 **UN:** 1282
C_5H_5N **M.W.** 79.1 g/mol
Boiling Pt: 115 °C (1013 hPa) **Melting Pt:** -44 °C **Density:** 0,983 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
27194.295	1 l	Glass bottle

Pyrogallic acid

See Pyrogallol p.382

Pyrogallol AnalaR NORMAPUR® analytical reagent

Warning

CAS 87-66-1 **UN:** 2811
$C_6H_6O_3$ **M.W.** 126.11 g/mol
Boiling Pt: 309 °C (1013 hPa) **Melting Pt:** 130-132 °C **Density:** 1,453 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Acidity	Max. 0.005 meq/g
Melting point	131 - 134 °C	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 50 ppm	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27206.231	250 g	Glass bottle for solids

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Pyrogallol GPR RECTAPUR®

Warning

CAS 87-66-1 **UN:** 2811

$C_6H_6O_3$ **M.W.** 126.11 g/mol

Boiling Pt: 309 °C (1013 hPa) **Melting Pt:** 130-132 °C **Density:** 1,453 g/cm³ (20 °C)

Storage Temperature: Ambient

IR Spectrum	Passes test
Melting point	131 - 133 °C
Ignition residue (SO_4)	Max. 0.1 %
Water	Max. 1 %

Cat. No.	Pk	Pack type
20647.237	250 g	Glass bottle for solids

Pyronin G, ultrapure

CAS 92-32-0

$C_{17}H_{19}ClN_2O$ **M.W.** 302.8 g/mol

Melting Pt: 250 - 260 °C

Storage Temperature: Ambient

Used in Unna-Pappenheim stain to demonstrate RNA (red) in contrast to DNA (green). Also used for bacteria staining.

Lambda max (0.1 g/500 ml then 1:100, Water)	543 - 553 nm

Cat. No.	Pk	Pack type
0207-10G	10 g	Glass bottle

Pyruvic acid sodium salt

See Sodium pyruvate p.433

Quinaldine red 0.1% in methanol Reag. Ph. Eur. 1073801

Danger

CAS 117-92-0 **UN:** 1230

H_3COH **M.W.** 430.33 g/mol

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87923.180	100 ml	Plastic bottle

Quinhydrone AnalaR NORMAPUR® analytical reagent

Danger

CAS 106-34-3 **UN:** 2811

$C_6H_4(OH)_2 \cdot C_6H_4O_2$ **M.W.** 218.21 g/mol

Melting Pt: 168-171 °C **Density:** 1,35 g/cm³ (20 °C)

Storage Temperature: Ambient

IR Spectrum	Passes test	p-Benzoquinone	48 - 52 %
Hydroquinone	48.3 - 52 %	Ignition residue (SO_4)	Max. 0.1 %
Insolubility in ethanol	Max. 0.02 %	SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm		

Cat. No.	Pk	Pack type
27230.187	100 g	Glass bottle

(-)-Quinine sulphate dihydrate TECHNICAL

CAS 6119-70-6

$C_{40}H_{50}N_4O_8S \cdot 2H_2O$ **M.W.** 782.96 g/mol

Melting Pt: 219 °C **Density:** 1,36 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
27250.120	10 g	Plastic bottle for solids

Quinol

See Hydroquinone p.207

Quinoline TECHNICAL

Danger

CAS 91-22-5 **UN:** 2656

C_9H_7N **M.W.** 129.16 g/mol

Boiling Pt: 238 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 1,095 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 96 %
IR Spectrum	Passes test

Cat. No.	Pk	Pack type
27341.294	1 l	Glass bottle

8-Quinolinol AnalaR NORMAPUR® analytical reagent

Warning

CAS 148-24-3

C_9H_7NO **M.W.** 145.16 g/mol

Boiling Pt: 267 °C (1013 hPa) **Melting Pt:** 71,2 °C **Density:** 1,03 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	Melting point	72.5 - 74.0 °C
Ignition residue (SO_4)	Max. 0.02 %	Insolubility in acetone	Max. 50 ppm
Insolubility in HCl 2 N	Max. 100 ppm	Insolubility in NaOH 1 N (± 80°C)	Max. 100 ppm
Cl (Chloride)	Max. 20 ppm	SO_4 (Sulphate)	Max. 0.02 %

Cat. No.	Pk	Pack type
26123.237	250 g	Glass bottle

D(+)-Raffinose pentahydrate, ultrapure

CAS 17629-30-0

$C_{18}H_{32}O_{16} \cdot 5H_2O$ **M.W.** 594.52 g/mol

Melting Pt: 80 °C **Density:** 1,516 g/cm³ (20 °C)

Storage Temperature: Ambient

Arsenic	< 0.00005 %
Heavy Metals	<0.001 %
Iron	<0.0005 %
Purity (HPLC)	98.0 %
Residue on Ignition	0.1 %
Solubility (10%, Water)	PASS
Specific Rotation (10%, Water)	+103 to +107 °
Water Content (KF)	13.0 - 17.0 %

Cat. No.	Pk	Pack type
J392-100G	100 g	Plastic bottle for solids
J392-500G	500 g	Plastic bottle for solids

Rambach agar

See Microbiology

Rappaport vassiliadis broth

See Microbiology

Rare earth

Ammonium cerium (IV) nitrate GPR RECTAPUR® p.31
Ammonium cerium (IV) sulphate dihydrate GPR RECTAPUR® p.31
Cerium (IV) sulphate tetrahydrate analytical reagent p.81
di-Yttrium trioxide GPR RECTAPUR® p.523
Holmium (III) oxide GPR RECTAPUR® p.191
Lanthanum (III) chloride heptahydrate GPR RECTAPUR® p.236
Lanthanum (III) nitrate hexahydrate GPR RECTAPUR® p.236
Lanthanum (III) oxide GPR RECTAPUR® p.236
Yttrium (III) chloride hexahydrate GPR RECTAPUR® p.523

RBC Agar

See Microbiology

Ansell

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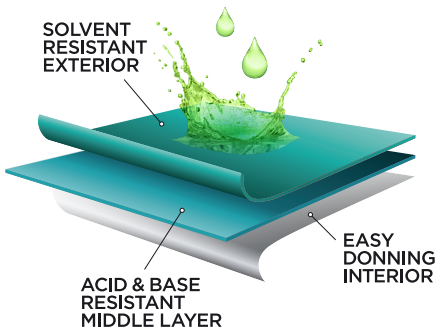

MICROFLEX® 93-260: THE THINNEST CHEMICAL RESISTANT DISPOSABLE GLOVE

Meet the new glove that's changing the face of chemical hand protection. With an innovative three layer design, Microflex 93-260 offers the reliable protection workers need when handling chemicals. And because it's the thinnest chemical resistant disposable glove available – it goes beyond protection to offer the comfort, dexterity and tactility workers need to be their most productive.

Microflex 93-260. Beyond Protection.

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* The method used to produce this three layer glove is patent pending.

Chemical reagents according to Reag.Ph.Eur

Description	Page	Pk	Cat. No.
Acetic acid 30% Reag. Ph. Eur. 1000401	4, 385	1 l	87758.290
Acetic acid 12% Reag. Ph. Eur. 1000402	4, 385	1 l	87759.290
Acetic anhydride 25% in pyridine Reag. Ph. Eur. 1000501	6, 385	1 l	87760.290
Acetylacetone solution Reag. Ph. Eur. 1000901	13, 385	100 ml	87761.180
Alizarin S solution Reag. Ph. Eur. 1002601	22, 385	100 ml	87763.180
Aluminium chloride solution Reag. Ph. Eur. 1002701	23, 385	100 ml	87764.180
Aluminium chloride reagent Reag. Ph. Eur. 1002702	23, 385	1 l	87765.290
Ammonia 17% Reag. Ph. Eur. 1004701	28, 385	100 ml	87707.180
Ammonia 6 mol/l (6 N) Reag. Ph. Eur. 1004702	29, 385	1 l	87682.290
Ammonia 2 mol/l (2 N) Reag. Ph. Eur. 1004703	29, 385	1 l	87766.290
Ammonia 0.1 mol/l (0.1 N) Reag. Ph. Eur. 1004704	29, 385	1 l	87767.290
Standard solution (250 ppm NH_4) for the preparation of Ammonium standard solution (2.5 ppm NH_4) Reag.Ph.Eur.; 5000301	29, 385	100 ml	88084.180
Ammonium carbonate 1 mol/l in aqueous solution Reag. Ph. Eur. 1005201	31, 385	1 l	87768.290
Ammonium chloride 2 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1005301	32, 385	1 l	87769.290
Ammonium chloride buffer solution pH 10.0 Reag. Ph. Eur. 4007300	32, 385	1 l	85739.290
Ammonium heptamolybdate 10% in aqueous solution Reag. Ph. Eur. 1005702	34, 385	1 l	87770.290
Ammonium heptamolybdate 10% in aqueous solution Reag. Ph. Eur. 1005703	34, 385	1 l	87771.290
Ammonium heptamolybdate 0.04 mol/l in sulphuric acid 50% Reag. Ph. Eur. 1086500	34, 385	100 ml	87947.180
Ammonium heptamolybdate 0.004 mol/l in sulphuric acid 96% Reag. Ph. Eur. 1086400	34, 385	100 ml	87946.180
Ammonium heptamolybdate 4% and ammonium metavanadate 0.1% in nitric acid 20% Reag. Ph. Eur. 1056700	35, 385	100 ml	87872.180
Ammonium molybdate solution R3 Reag. Ph. Eur. 1005704	37, 385	1 l	87772.290
Ammonium molybdate solution R4 Reag. Ph. Eur. 1005705	37, 385	500 ml	87773.260
Ammonium oxalate solution Reag. Ph. Eur. 1005901	37, 385	1 l	87774.290
Ammonium thiocyanate 1 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1006701	40, 385	1 l	87775.290
Ammonium vanadate solution Reag. Ph. Eur. 1006801	40, 385	1 l	87776.290
Anisaldehyde solution Reag. Ph. Eur. 1007301	48, 385	100 ml	87777.180
Antimony trichloride solution Reag. Ph. Eur. 1007701	48, 385	100 ml	87779.180
Antimony (III) chloride solution R1 Reag. Ph. Eur. 1007702	49, 385	100 ml	87780.180
Arsenite solution Reag. Ph. Eur. 1008301	50, 385	100 ml	87781.180
L(+)-Ascorbic acid Reag. Ph. Eur. 1008401	51, 385	100 ml	87782.180
Barium chloride 0.25 mol/l (0.5 N) in aqueous solution Reag. Ph. Eur. 1009301	53, 385	1 l	87783.290
Barium chloride 0.15 mol/l (0.3 N) in aqueous solution Reag. Ph. Eur. 1009302	53, 385	1 l	87784.290
Barium hydroxide 0.15 mol/l (0.3 N) in aqueous solution Reag. Ph. Eur. 1009401	54, 385	1 l	87785.290
Bis(ethylenediamine)copper dihydroxide 21% in aqueous solution Reag. Ph. Eur. 3008700	59, 385	1 l	87712.290
Bismuth subnitrate solution Reag. Ph. Eur. 1011502	60, 385	500 ml	87786.260
Biuret reagent solution Reag. Ph. Eur.	60, 385	1 l	87787.290
Borate solution Reag. Ph. Eur. 1033601	61, 385	1 l	87826.290
Bromophenol blue solution R1 Reag. Ph. Eur. 1012802	65, 385	100 ml	87795.180
Bromothymol blue 1% in DMF Reag. Ph. Eur. 1012902	65, 385	100 ml	87797.180
Standard solution (1000 ppm Ca) for the preparation of calcium standard solution (100 ppm Ca), alcoholic Reag.Ph.Eur.; 5000802	74, 385	100 ml	88085.180
Calcium chloride 0.5 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1014601	76, 385	1 l	87800.290
Calcium chloride 0.02 mol/l (0.04 N) in aqueous solution Reag. Ph. Eur. 1014603	76, 385	1 l	87802.290
Calcium chloride 0.01 mol/l (0.02 N) in aqueous solution Reag. Ph. Eur. 1014602	76, 385	1 l	87801.290
Calcium sulphate saturated solution in water Reag. Ph. Eur. 1015201	78, 385	1 l	87803.290
Chloral hydrate 80% in aqueous solution Reag. Ph. Eur. 1017901	84, 385	100 ml	87804.180
Copper edetate solution Reag. Ph. Eur. 1022300	98, 385	1 l	87807.290
Copper (II) sulphate 0.5 mol/l Reag. Ph. Eur. 1022501	100, 385	1 l	87808.290
Copper tetramine complex in aqueous solution (Copper (II) hydroxide 10% in ammonia solution 20%) Reag. Ph. Eur. 1022600	100, 385	100 ml	87809.180
Crystal violet solution Reag. Ph. Eur. 1022901	101, 385	100 ml	87811.180
Cupri-citric solution Reag. Ph. Eur. 1023100	101, 385	1 l	87812.290
Cupri-citric solution R1 Reag. Ph. Eur. 1023200	101, 385	1 l	87813.290
Cupri-tartaric solution R4 Reag. Ph. Eur. 1023304	101, 385	1 l	87815.290
Destaining solution Reag. Ph. Eur. 1012202	106, 385	1 l	87788.290
Dichloromethane, acidified with 1% hydrochloric acid Reag. Ph. Eur. 1055901	112, 385	100 ml	87871.180
Dimethylaminobenzaldehyde solution R6 Reag. Ph. Eur. 1029803	118, 385	100 ml	87816.180
Dinitrobenzoic acid solution Reag. Ph. Eur. 1031301	123, 385	1 l	87819.290
1,4-Dioxane 0.1% in aqueous solution Reag. Ph. Eur. 1032001	124, 385	100 ml	87820.180
1,4-Dioxane 0.05% in aqueous solution Reag. Ph. Eur. 1032002	124, 385	100 ml	87821.180
Diphenylamine 1% in sulphuric acid 96% Reag. Ph. Eur. 1032102	124, 385	1 l	87823.290
Dithizone solution R2 Reag. Ph. Eur. 1033903	126, 385	100 ml	87827.180
Eriochrome Black T triturate 1% in sodium chloride Reag. Ph. Eur. 1056801	144, 385	100 g	87873.180
Ethyl acetate Reag. Ph. Eur. 1035301	154, 385	1 l	87829.290
Fehling's reagent (kit, contains solution I and II) Reag. Ph. Eur. 1023300 for qualitative determination of reducing sugars	157, 385	1 l	87814.290
Ferric ammonium sulphate solution R2 Reag. Ph. Eur. 1037702	158, 385	1 l	87830.290
Ferric ammonium sulphate solution R5 Reag. Ph. Eur. 1037704	158, 385	100 ml	87831.180
Ferric ammonium sulphate solution R6 Reag. Ph. Eur. 1037705	158, 385	100 ml	87832.180
Ferric chloride solution R3 Reag. Ph. Eur. 1037803	158, 385	100 ml	87835.180
Ferric chloride-sulfamic acid reagent Reag. Ph. Eur. 1037804	159, 385	1 l	87836.290
Ferroin (1,10-Phenanthroline-ferrous sulphate-complex) 0.025 mol/l in aqueous solution Reag. Ph. Eur. 1038100 redox indicator	159, 385	100 ml	87702.180
Fixing solution (0.02% formaldehyde and 0.01% citric acid in aqueous solution) Reag. Ph. Eur. 1122500	159, 385	500 ml	87969.260
Fixing solution (0.02% formaldehyde in methanol 50% (v/v)) Reag. Ph. Eur. 1122600	160, 385	500 ml	87970.260
Fixing solution for isoelectric focusing in polyacrylamide gel Reag. Ph. Eur. 1138700	160, 385	500 ml	87972.260
Formaldehyde 35% stabilised Reag. Ph. Eur. 1039101	162, 385	100 ml	87837.180
Formaldehyde 0.4% in sulphuric acid 95% Reag. Ph. Eur. 1086805	164, 385	100 ml	87951.180
Formamide, treated Reag. Ph. Eur. 1039201	165, 385	100 ml	87838.180
Fuchsin solution, decolourised Reag. Ph. Eur. 1039401	167, 385	100 ml	87839.180
Fuchsin solution, decolourised R1 Reag. Ph. Eur. 1039402	167, 385	100 ml	87840.180
Holmium perchlorate solution Reag. Ph. Eur. 1043101	191, 385	1 l	87841.290
Hydrochloric acid 25% Reag. Ph. Eur. 1043501	200, 385	1 l	87842.290
Hydrochloric acid 1% Reag. Ph. Eur.	201, 385	1 l	87684.290

Description	Page	Pk	Cat. No.
Hydrochloric acid 2 mol/l (2 N) Reag. Ph. Eur. 1043503	201, 386	1 l	85848.290
Hydrochloric acid dilute 0.03 mol/l (0.03 N) R2, 1043505 Reag. Ph. Eur.	203, 386	1 l	87843.290
Hydrochloric acid 0.01 mol/l (0.01 N) Reag. Ph. Eur. 1043504	203, 386	1 l	85849.290
Hydrochloric acid 0.25% in methanol Reag. Ph. Eur. 1053203	204, 386	100 ml	87868.180
Hydrochloric acid, brominated Reag. Ph. Eur. 1043507	204, 386	1 l	87845.290
Hydroxylamine solution, alcoholic Reag. Ph. Eur. 1044301	208, 386	100 ml	87847.180
Hydroxylamine solution, alkaline Reag. Ph. Eur. 1044302	208, 386	1 l	87848.290
Hydroxylamine solution, alkaline R1 Reag. Ph. Eur. 1044303	208, 386	200 ml	87849.220
Hydroxylamine hydrochloride solution R2 Reag. Ph. Eur. 1044304	209, 386	100 ml	87850.180
Hypophosphorous reagent Reag. Ph. Eur. 1045200	209, 386	100 ml	87851.180
Mixed indicator methyl orange - bromocresol green in aqueous solution Reag. Ph. Eur. 1054801	214, 386	100 ml	87870.180
Indigo carmine 0.4% in dil. sulphuric acid (~2%) Reag. Ph. Eur. 1045602	219, 386	1 l	87853.290
Indigo carmine 0,4% in mixture of sulphuric acid 20% and hydrochloric acid 1% Reag. Ph. Eur.	219, 386	1 l	87852.290
Iodine solution R4 Reag. Ph. Eur. 1045806	221, 386	1 l	87856.290
Iodine 5 g/l in chloroform Reag. Ph. Eur. 1045805	221, 386	1 l	87855.290
Iodine monobromide 20 g/l in acetic acid 99% Reag. Ph. Eur. 1045901	221, 386	100 ml	87714.180
Iodoplatinate reagent Reag. Ph. Eur. 1046300	221, 386	1 l	87857.290
Standard solution (200 ppm Fe) for the preparation of iron standard solution (20 ppm Fe) Reag. Ph. Eur.; 5001600	223, 386	100 ml	88086.180
Ferric chloride 105 g/l in aqueous solution Reag. Ph. Eur. 1037801	158, 386	1 l	87833.290
Ferric chloride 13 g/l in aqueous solution Reag. Ph. Eur. 1037802	158, 386	1 l	87834.290
Iron salicylate solution Reag. Ph. Eur. 1046700	225, 386	500 ml	87858.260
Lanthanum nitrate solution Reag. Ph. Eur. 1048001	236, 386	1 l	87859.290
Lead standard solution (0.1% Pb) Reag. Ph. Eur. 5001700	238, 386	100 ml	88087.180
Lead acetate solution Reag. Ph. Eur. 1048103	238, 386	1 l	87860.290
Lead acetate cotton Reag. Ph. Eur. 1048101	238, 386	10 g	85868.130
Lead nitrate solution Reag. Ph. Eur. 1048301	239, 386	1 l	87861.290
Magnesium nitrate solution Reag. Ph. Eur. 1049801	247, 386	1 l	87862.290
Malachite green solution Reag. Ph. Eur. 1050501	248, 386	1 l	87863.290
Mercuric acetate solution Reag. Ph. Eur. 1052001	252, 386	100 ml	87864.180
Mercuric bromide paper Reag. Ph. Eur. 1052101 for the determination of arsenic	252, 386	50	85875.150
Mercuric chloride solution Reag. Ph. Eur. 1052201	252, 386	1 l	87865.290
Mercury (II) nitrate 70% in aqueous solution Reag. Ph. Eur. 1052801	254, 386	100 ml	87867.180
Mercury (II) sulphate 50 g/l in sulphuric acid 24% Reag. Ph. Eur. 1052600	254, 386	100 ml	87866.180
1-Naphtholbenzeine 0.2% in acetic acid Reag. Ph. Eur. 1057601	313, 386	100 ml	87874.180
Ninhydrin solution R2 Reag. Ph. Eur. 1058305	316, 386	100 ml	87878.180
Ninhydrin and stannous chloride reagent Reag. Ph. Eur. 1058301	316, 386	100 ml	87875.180
Ninhydrin solution R3 Reag. Ph. Eur. 1058306	316, 386	100 ml	87879.180
Ninhydrin solution Reag. Ph. Eur. 1058303	316, 386	100 ml	87713.180
Ninhydrin reagent kit (Ninhydrin and stannous chloride reagent R1) Reag. Ph. Eur. 1058302	316, 386	100 ml	87876.180
Nitrate standard solution (1000 ppm NO_3^-) for the preparation of nitrate standard solution (100 ppm NO_3^-) Reag.Ph.Eur.; 5002100	317, 386	100 ml	88088.180
Nitric acid 20% Reag. Ph. Eur. 1058402	320, 386	100 ml	87880.180
Nitrochromic reagent Reag. Ph. Eur. 1059100	321, 386	100 ml	87881.180
Orthoperiodic acid 0.002 mol/l in acetic acid Reag. Ph. Eur. 1063000	323, 386	100 ml	87887.180
Orthophosphoric acid 10% Reag. Ph. Eur. 1065101	325, 386	100 ml	87895.180
Oxalic acid 0.5% in sulphuric acid 50% (v/v) Reag. Ph. Eur. 1061401	326, 386	1 l	87883.290
Palladium (II) chloride 0.4% in hydrochloric acid 13.5% Reag. Ph. Eur. 1061501	327, 386	100 ml	87884.180
Pararosaniline solution, decolourised Reag. Ph. Eur. 1062201	328, 386	100 ml	87885.180
Perchloric acid 0.1 mol/l (0.1 N) in aqueous solution Reag. Ph. Eur. 1062901	340, 386	100 ml	87886.180
pH-Indicator paper congo red Reag. Ph. Eur. 1022002	343, 386	50 Tests	87806.600
pH-Indicator paper phenolphthalein Reag. Ph. Eur. 1063704	343, 386	50 Tests	87891.150
Phenol red 0.002% and ammonium sulphate 0.01% aqueous solution, buffered pH 4.7 Reag. Ph. Eur. 1063604	350, 386	500 ml	87890.260
Phenol red 0.002% and ammonium sulphate 0.005% aqueous solution, buffered pH 4.7 Reag. Ph. Eur. 1063603	350, 386	500 ml	87889.260
Phenylhydrazinium chloride 0.36% in hydrochloric acid 5% Reag. Ph. Eur. 1064501	351, 386	250 ml	87892.230
Standard solution (500 ppm PO_4) for the preparation of phosphate standard solution (5 ppm PO_4) Reag.Ph.Eur. 5002200	352, 386	100 ml	88089.180
Phosphomolybdotungstic reagent dilute Reag. Ph. Eur. 1065001	352, 386	100 ml	87894.180
Phosphomolybdotungstic reagent Reag. Ph. Eur. 1065000	352, 386	100 ml	87893.180
Phosphotungstic acid 22% in orthophosphoric acid 11% Reag. Ph. Eur. 1065200	353, 386	100 ml	87896.180
Picric acid 10 g/l in aqueous solution Reag. Ph. Eur. 1065801	354, 386	100 ml	87897.180
Potassium chloride 0.1 mol/l (0.1 N) in aqueous solution Reag. Ph. Eur. 1069101	361, 386	1 l	87898.290
Potassium chromate 5% in aqueous solution Reag. Ph. Eur. 1069201	361, 386	1 l	87899.290
Potassium dichromate 0.5% in aqueous solution Reag. Ph. Eur. 1069502	362, 386	1 l	87900.290
Potassium dichromate 0.36 mol/l (106 g/l) in aqueous solution Reag. Ph. Eur. 1069501	362, 386	500 ml	87716.260
Potassium dihydrogen phosphate 0.2 mol/l in aqueous solution Reag. Ph. Eur. 1069601	364, 386	1 l	87901.290
Potassium ferriperiodate solution Reag. Ph. Eur. 1070801	364, 386	50 ml	87917.130
Potassium heptaiodobismuthate 8% with potassium iodide in aqueous L(+)-tartaric acid solution Reag. Ph. Eur. 1070602	364, 386	100 ml	87914.180
Potassium heptaiodobismuthate 6.1% with potassium iodide in dil. acetic acid Reag. Ph. Eur. 1070600	364, 386	100 ml	87912.180
Potassium heptaiodobismuthate 6.1% with potassium iodide in aqueous L(+)-tartaric acid solution Reag. Ph. Eur. 1070601	364, 386	600 ml	87913.270
Potassium heptaiodobismuthate 0.5% with potassium iodide in aqueous L(+)-tartaric acid solution Reag. Ph. Eur. 1070603	365, 386	500 ml	87915.260
Potassium heptaiodobismuthate 0.5% with barium chloride and potassium iodide in dil. acetic acid Reag. Ph. Eur. 1070605	365, 386	100 ml	87916.180
Potassium hexacyanoferrate (II) trihydrate 5.3% (w/v) in aqueous solution Reag. Ph. Eur. 1069801	365, 386	100 ml	87902.180
Potassium hexahydroxoantimonate 0.05 mol/l in potassium hydroxide solution 1.6% Reag. Ph. Eur. 1071301	366, 386	100 ml	87725.180
Potassium hydrogen phthalate 0.2 mol/l in aqueous solution Reag. Ph. Eur. 1070001	367, 386	1 l	87903.290
Potassium iodide 1 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1070502	370, 386	1 l	87909.290
Potassium iodide saturated solution in water Reag. Ph. Eur. 1070504	371, 386	100 ml	87911.180
Iodinated potassium iodide solution (mixture of 40 g/l potassium iodide and 20 g/l iodine in aqueous solution) Reag. Ph. Eur. 1070503	371, 386	100 ml	87910.180
Potassium iodide and starch solution Reag. Ph. Eur. 1070501	371, 386	100 ml	87908.200
Potassium iodo mercurate (II) reagent, solution B (sodium hydroxide 20% aqueous solution) Reag. Ph. Eur. 1071600 for determination of ammonia and ammonium salts	371, 386	100 ml	87710.180
Potassium permanganate 3% in aqueous solution Reag. Ph. Eur. 1070902	372, 386	1 l	87919.290
Potassium permanganate 30 g/l in ortho-phosphoric acid 22% Reag. Ph. Eur. 1070901	373, 386	100 ml	87918.180

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Description	Page	Pk	Cat. No.
Potassium plumbite solution Reag. Ph. Eur. 1071200	373, 387	100 ml	87920.180
Potassium tetraiodomercurate solution Reag. Ph. Eur. 1071500	375, 387	100 ml	87921.180
Potassium thiocyanate 1 mol/l (1 N) in aqueous solution Reag. Ph. Eur. 1071801	375, 387	1 l	87922.290
Quinaldine red 0.1% in methanol Reag. Ph. Eur. 1073801	383, 387	100 ml	87923.180
Silver nitrate 0.25 mol/l (0.25 N) in aqueous solution Reag. Ph. Eur. 1078301	387, 404	1 l	87924.290
Silver nitrate 0.1 mol/l (0.1 N) in aqueous solution Reag. Ph. Eur. 1078302	387, 404	1 l	87925.290
Silver nitrate solution in pyridine Reag. Ph. Eur. 1078304	387, 405	100 ml	87926.180
Silver nitrate reagent Reag. Ph. Eur. 1078305	387, 405	100 ml	87927.180
Sodium carbonate 4% (40 g/l) in sodium hydroxide solution 0.2 mol/l Reag. Ph. Eur. 1079303	387, 411	1 l	87930.290
Sodium carbonate 2% (20 g/l) in sodium hydroxide solution 0.1 mol/l Reag. Ph. Eur. 1079302	387, 411	1 l	87929.290
Sodium carbonate 1 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1079301	387, 411	1 l	87928.290
Sodium chloride 20% in aqueous solution Reag. Ph. Eur. 1079502	387, 413	1 l	87931.290
Sodium hydrogen carbonate 0.5 mol/l in aqueous solution Reag. Ph. Eur. 1081301	387, 419	1 l	87932.290
di-Sodium hydrogen phosphate dodecahydrate 9% in aqueous solution Reag. Ph. Eur. 1033301	387, 421	1 l	87825.290
Sodium hydroxide 50% in aqueous solution Reag. Ph. Eur. 1081406 carbonate free	387, 422	1 l	87938.290
Sodium hydroxide 20% in aqueous solution Reag. Ph. Eur. 1081401	387, 424	1 l	87933.290
Sodium hydroxide 10 mol/l (10 N) in aqueous solution Reag. Ph. Eur. 1081404	387, 425	1 l	87936.290
Sodium hydroxide 2 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1081402	387, 425	1 l	87934.290
Sodium hydroxide 0.005 mol/l (0.005 N) in methanol 50% Reag. Ph. Eur. 1081405	387, 427	100 ml	87937.180
Sodium hydroxide 0.001 mol/l (0.001 N) in methanol 50% Reag. Ph. Eur. 1081403	387, 427	100 ml	87935.180
Sodium hypochlorite 2.5% Cl_2 in aqueous solution Reag. Ph. Eur. 1081600	387, 428	1 l	87939.290
Sodium picrate 13 g/l in aqueous solution Reag. Ph. Eur. 1065802	387, 433	100 ml	87715.180
di-Sodium sulphide 0.5 mol/l in glycerine 35% Reag. Ph. Eur. 1083901	387, 435	100 ml	87940.180
Starch 1% aqueous solution stabilised Reag. Ph. Eur. 1085103	387, 464	100 ml	85964.180
Sulphanilic acid 0.02 mol/l in acetic acid 25% Reag. Ph. Eur. 1086203	387, 468	100 ml	87945.180
Sulphanilic acid 0.02 mol/l in acetic acid 6% Reag. Ph. Eur. 1086201	387, 468	100 ml	87944.180
Standard solution (1000 ppm SO_4) for the preparation of sulphate standard solution (10 ppm SO_4) R1 Reag.Ph.Eur. 5002801	387, 469	100 ml	88091.180
Standard solution (1000 ppm SO_4) for the preparation of sulphate standard solution (100 ppm SO_4) Reag.Ph.Eur. 5002802	387, 469	100 ml	88090.180
Sulphuric acid 1 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1086804	387, 474	1 l	85973.290
Thioacetamide 4% in aqueous solution Reag. Ph. Eur. 1089602	387, 486	100 ml	85975.180
Thioacetamide 4% in aqueous solution Reag. Ph. Eur. 1089602	387, 486	500 ml	85975.260
Thioacetamide 4% in aqueous solution Reag. Ph. Eur. 1089602	387, 486	1 l	85975.290
Thioacetamide Reagent I + II Reag. Ph. Eur. 1089601	387, 486	1 l	85976.290
Tin (II) chloride 30% in hydrochloric acid 20% Reag. Ph. Eur. 1085001	387, 489	100 ml	87941.180
Titan yellow 0.05% aqueous solution Reag. Ph. Eur. 1090902	387, 489	100 ml	87955.180
Titan yellow paper Reag. Ph. Eur. 1090901	387, 489	50 Tests	87954.150
Titanium trichloride solution Reag. Ph. Eur. 1091201	387, 489	100 ml	87708.180
Titanium trichloride - sulphuric acid reagent Reag. Ph. Eur. 1091202	387, 490	100 ml	87711.180
o-Tolidine 0.03% with 0.2% potassium iodide in acetic acid 6% Reag. Ph. Eur. 1123001	387, 491	500 ml	87971.260
Trichloroacetic acid (glacial) 4% in aqueous solution Reag. Ph. Eur.	387, 494	100 ml	87956.180
di-Vanadium pentoxide solution in sulphuric acid Reag. Ph. Eur. 1034001	387, 508	100 ml	87828.180
Vanadomolybdate reagent Reag. Ph. Eur. 1060100	387, 508	200 ml	87882.220
Water Reag. Ph. Eur. 1095502 carbon dioxide free	387, 513	1 l	87959.290
Water Reag. Ph. Eur. 1095500	387, 513	5 l	87957.360
Water Reag. Ph. Eur. 1095501 ammonium free	387, 513	1 l	87958.290
Water Reag. Ph. Eur. 1095503 for chromatography	387, 513	1 l	87960.290
Water Reag. Ph. Eur. 1095506 nitrate free	387, 513	1 l	87961.290
Water Reag. Ph. Eur. 1095507 particle free	387, 513	1 l	87962.290
Xylenol orange triturate 1% in potassium nitrate Reag. Ph. Eur. 1096301	387, 522	50 g	87963.150
Zinc acetate, 0.25 mol/l, buffered with ammonium acetate, pH 6.4 Reag. Ph. Eur. 1102301	387, 525	1 l	87967.290
Zinc chloride-formic acid solution Reag. Ph. Eur. 1096601	387, 525	1 l	87965.290
Zinc iodide and starch solution Reag. Ph. Eur. 1096502	387, 525	100 ml	87964.180
Zinc iodine chloride in aqueous solution Reag. Ph. Eur. 1096602	387, 526	100 ml	87726.180
Zirconyl nitrate 0.1% in hydrochloric acid 22% Reag. Ph. Eur. 1097201	387, 527	100 ml	87966.180

Primary colour solutions, Reag. Ph. Eur.

Ordering information: Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Description	Page	Pk	Cat. No.
Primary opalescence suspension (hydrazinium sulphate 0.5% and hexamethylenetetramine 5% in aqueous suspension) Reag. Ph. Eur.	387	100 ml	85679.180
Primary solution yellow (1 ml solution contains 45.0 mg $FeCl_3 6\ H_2O$) Reag. Ph. Eur.	387	100 ml	85744.180
Primary solution red (1 ml solution contains 59.5 mg $CoCl_2 6\ H_2O$) Reag. Ph. Eur.	387	100 ml	85745.180
Primary solution blue (1 ml solution contains 62.4 mg $CuSO_4 5\ H_2O$) Reag. Ph. Eur.	387	100 ml	85746.180
Primary solution yellow (1 ml solution contains 45.0 mg $FeCl_3 6\ H_2O$) Reag. Ph. Eur.	387	500 ml	85744.260
Primary solution red (1 ml solution contains 59.5 mg $CoCl_2 6\ H_2O$) Reag. Ph. Eur.	387	500 ml	85745.260
Primary solution blue (1 ml solution contains 62.4 mg $CuSO_4 5\ H_2O$) Reag. Ph. Eur.	387	500 ml	85746.260

Colour standard solutions, Reag. Ph. Eur.

Ready to use colour solutions according to Reag. Ph.Eur.

- Ready to use solutions
- Comprehensive Certificates of Analysis for all batches
- Labelled with minimum shelf life/batch number

Ordering information: Normally manufactured to order. Please check with customer services.

Description	Pk	Cat. No.	Pack type
Colour Reference Solution B (brown) for testing the colour intensity acc. to Ph. Eur. B1-B9 Reag. Ph. Eur.	125 ml	87169.180	Plastic bottle
Colour Reference Solution BY (brownish yellow) for testing the colour intensity acc. to Ph. Eur. BY1-BY7 Reag. Ph. Eur.	125 ml	85748.180	Plastic bottle
Colour Reference Solution GY (greenish yellow) for testing the colour intensity acc. to Ph. Eur. GY1-GY7 Reag. Ph. Eur.	125 ml	85750.180	Plastic bottle
Colour Reference Solution R (red) for testing the colour intensity acc. to Ph. Eur. R1-R7 Reag. Ph. Eur.	125 ml	85751.180	Plastic bottle
Colour Reference Solution R (red) for testing the colour intensity acc. to Ph. Eur. R1-R7 Reag. Ph. Eur.	500 ml	85751.260	Plastic bottle
Colour Reference Solution Y (yellow) for testing the colour intensity acc. to Ph. Eur. Y1-Y7 Reag. Ph. Eur.	125 ml	85749.180	Plastic bottle

Regeneration salt TECHNICAL for water softening

CAS 7647-14-5
NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
99062.4000	4 kg	Bucket (Plastic)

Resazurin, tablets for milk analysis

CAS 62758-13-8
$C_{12}H_6NNaO_4$ **M.W.** 251.17 g/mol
Storage Temperature: Ambient
A standard solution of resazurin is prepared by dissolving one tablet in 50ml of sterile glass-distilled water. One ml of this solution should be added to 10ml of milk for each test. Solutions must be made freshly each day.

During incubation with milk resazurin undergoes reduction and the colour changes from blue to pink to colourless. The rate of colour change is an indication of the number of microbial organisms in the sample.

Appearance ..... Red to purple tablets
Shape ..... Round biconvex
Average tablet weight ..... 240 - 260 mg
Diameter ..... 7.50 - 8.00 mm
Solubility in water (2 tablets/100 ml) ..... Max. 4.0 min

Cat. No.	Pk	Pack type
330884Y	100 Tab.	Aluminium tube

Residual solvent standards

See Standards for residual solvents p.461

Resorcinol AnalaR NORMAPUR® analytical reagent

Warning

CAS 108-46-3 **UN:** 2876
$C_6H_6O_2$ **M.W.** 110.11 g/mol
Boiling Pt: 281 °C (1013 hPa) **Melting Pt:** 109-111 °C **Density:** 1,272 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 99.0 - 100.5 %
Melting point ..... 109 - 112 °C
Insolubility in water ..... Max. 50 ppm
Phenol ..... Max. 50 ppm
Acidity or alkalinity ..... Max. 0.005 meq/g
Ignition residue (SO_4) ..... Max. 0.02 %
Insolubility in methanol ..... Max. 50 ppm
Pyrocatechol ..... Max. 100 ppm

Cat. No.	Pk	Pack type
27378.234	250 g	Plastic bottle for solids

Resorcinol Ph. Eur.

Warning

CAS 108-46-3 **UN:** 2876
$C_6H_6O_2$ **M.W.** 110.11 g/mol
Boiling Pt: 281 °C (1013 hPa) **Melting Pt:** 109-111 °C **Density:** 1,272 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance) ..... 98.5 - 101.0 %
Appearance ..... Conforms (see CoA/CoS)
Identification B ..... Passes test
Identification C ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Acidity or alkalinity ..... Passes test
Melting point ..... 109 - 112 °C
Related substances ..... Max. 0.5 %
Pyrocatechol ..... Passes test
Loss on drying ..... Max. 1.0 %
Sulphated ash ..... Max. 0.1 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
27379.294	1 kg	Plastic bottle for solids

NEW Resorcinol in hydrochloric acid USP test solutions (TS)

$C_6H_4(OH)_2$
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85369.180	100 ml	Glass bottle
85369.260	500 ml	Glass bottle

NEW Rhenium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Rhenium	1000 ppm	H_2O/tr HNO_3	Plastic bottle	100 ml	457404N
Rhenium	10 ppm	H_2O/tr HNO_3	Plastic bottle	100 ml	85591.180

Rhenium standard solution, 10,000 mg/l Re in water with nitric acid (max. 1%) (from Re) ARISTAR® standard for ICP

Re in H_2O tr. HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455872R	100 ml	Plastic bottle

Rhenium standard solution, 1,000 mg/l Re in water with nitric acid (max. 1%) (from Re) ARISTAR® standard for ICP

Re in H_2O tr. HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455862P	100 ml	Plastic bottle
455864R	500 ml	Plastic bottle

Rhenium standard solution, 1,000 mg/l Re in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86703.180	100 ml	Plastic bottle
86703.260	500 ml	Plastic bottle

Rhodoviol®

See Polyvinyl alcohol, polymer with vinyl acetate, 25/140 ..... p.357

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Rhodium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Rhodium	1000 ppm	10% HCl	Plastic bottle	100 ml	456862T
Rhodium	10 ppm	2% HCl	Plastic bottle	100 ml	85592.180

Rhodium standard solution, 1,000 mg/l Rh in 10% hydrochloric acid (from $RhCl_3$) ARISTAR® standard for ICP

$RhCl_3.3H_2O$ in HCl 10%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455882T	100 ml	Plastic bottle
455884V	500 ml	Plastic bottle

Rhodium standard solution, 1,000 mg/l Rh in 5% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86704.180	100 ml	Plastic bottle
86704.260	500 ml	Plastic bottle

(-)-Riboflavin

See Riboflavine (Vitamin B2) p.389

VWR LIFE SCIENCE Riboflavine (Vitamin B2), high purity

CAS 83-88-5

$C_{17}H_{20}N_4O_6$ **M.W.** 376.37 g/mol

Melting Pt: 280 °C

Storage Temperature: Ambient

Ash	< = 0.3 %
Loss on Drying	<= 1.5 %
Lumiflavin (O.D.)	<= 0.025
Purity	>= 98 %
Specific Rotation	(-135°) -(-115°)

Cat. No.	Pk	Pack type
0744-250G	250 g	Plastic bottle

Riboflavine (Vitamin B2) TECHNICAL

CAS 83-88-5

$C_{17}H_{20}N_4O_6$ **M.W.** 376.37 g/mol

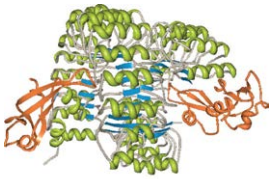
Melting Pt: 280 °C

Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
27414.137	25 g	Glass bottle

Ribonuclease inhibitor (RNase inhibitor) (from human placenta) for biotechnology



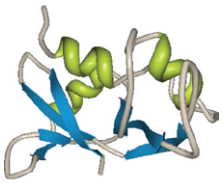
Structure of ribonuclease inhibitor-angiogenin complex. PDB 1A4Y. Papageorgiou, A.C., Shapiro, R., and Acharya, K.R. (1997) *EMBO J.* **16,** 5162–5177.

Human placental source, 40 KU/ml. RNase inhibitor is used to inhibit the activity of RNases in reaction mixtures for cDNA synthesis and *in vitro* transcription, as well as for long-term storage of valuable RNA samples. A unit of this protein will inhibit 50% of the activity of 5 ng of RNase A.

Activity @25 °C: 10 U/ul
DNase (endonuclease): NONE
DNase (exonuclease): NONE

Cat. No.	Pk	Pack type
E633-2KU	2 KU	Plastic tube

Ribonuclease A (RNase A), from Bovine Pancreas, high purity grade



Structure of Ribonuclease A. PDB 2AAS. Santoro, J., Gonzalez, C., Bruix, M., Neira, J.L., Nieto, J.L., Herranz, J., Rico, M., (1993) *J. Mol. Biol.* 229: 722–734.

Lyophilized powder (Bovine Pancrease); activity >60 U/mg. One unit inhibits 50% of activity of 5 ng of RNase A.

Cat. No.	Pk	Pack type
0675-250MG	250 mg	Glass bottle
0675-500MG	500 mg	Glass bottle
0675-1G	1 g	Glass bottle

VWR LIFE SCIENCE Ribonuclease A (RNase A) 10 mg/ml aqueous solution for biotechnology

Ribonuclease A is an endoribonuclease that efficiently hydrolyses RNA from tissue or bacterial cell cultures.

Cat. No.	Pk	Pack type
E866-1ML	1 ml	Plastic tube
E866-5ML	5 ml	Plastic bottle

VWR LIFE SCIENCE D(-)-Ribose, high purity

CAS 50-69-1

$C_5H_{10}O_5$ **M.W.** 150.13 g/mol

Boiling Pt: 331 °C (1013 hPa) **Melting Pt:** 90 - 95 °C **Density:** 0.8 g/cm³ (20 °C)

Storage Temperature: Ambient

Arsenic	< 0.0002 %
Ash	0.2 %
Heavy Metals (as Pb)	<0.001 %
Loss on Drying	3.0 %
Purity	98.0 %
Specific Rotation (4%, Water)	-21.5 to -19.7 °

Cat. No.	Pk	Pack type
0671-100G	100 g	Plastic bottle for solids

Ricinus oil, sulphated

See Turkey Red Oil p.504

Ricinus oil

See Oil of castor p.322

Ringer's solution (quarter strength), tablets for milk analysis

Storage Temperature: Ambient

These tablets are prepared according to the formula given in the British Ministry of Health's Memo 139/Foods. One tablet dissolved in 500 ml of glass-distilled water yields quarter strength Ringer's solution.

Appearance	White tablets
Ashes	Round biconvex
Average tablet weight	Max. 1306 MG
Tablet weight	1120 to 1368 mg
Diameter	14.0 - 14.5 mm
Average hardness (kp)	Min. 4
Calcium (per tablet)	9.7 - 11.0 mg
Chloride (per tablet)	700 - 750 mg
pH (1 tablet; 500 ml)	7.0 - 8.0

Cat. No.	Pk	Pack type
330902Q	100 Tab.	Aluminium tube

RIPA Lysis Buffer, pH 7.5

Lysis buffer for cultured mammalian cells containing SDS and deoxycholate for solubilisation of proteins from cytoplasm, membranes, and nuclei. Compatible with reporter assays, protein assays, immunoassays, and protein purification.

Cat. No.	Pk	Pack type
N653-100ML	100 ml	Plastic bottle

RIBOZOL™ for RNA extraction, for biotechnology

Danger

UN: 2821

Storage Temperature: Ambient

Ribozol™ RNA Extraction Reagent is a single phase phenol solution optimised for the isolation of total RNA from a variety of cell and tissue types. Homogenisation or disruption directly in Ribozol™ RNA Extraction Reagent inhibits RNase activity to substantially minimise degradation of all classes of RNA. The simple and effective procedure for isolation in Ribozol™ RNA Extraction Reagent includes homogenisation, phase separation, RNA precipitation, RNA wash and solubilisation.

Abs.@ Lambda Max	1.50 - 2.70
DNase (P/F)	None
Electrophoresis (P/F) (P/F)	None
Lambda Max (nm)	530 - 534
Percent OD260/280 (%)	95
Percent Yield (%)	80
pH @25C	3.8 - 4.2
RNase (P/F)	None
Specific Gravity @20C	1.0824 - 1.1124
Water Content (KF) (%)	36 - 42

Cat. No.	Pk	Pack type
N580-100ML	100 ml	Glass bottle
N580-200ML	200 ml	Glass bottle

Rosaniline hydrochloride

See Dyes and Stains p.290

Rose Bengal Chloramphenical Agar

See Microbiology

NEW Rubidium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Rubidium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457415P
Rubidium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85590.180

Rubidium standard solution, 10,000 mg/l Rb in dil. nitric acid (from $RbNO_3$) ARISTAR® standard for ICP

$RbNO_3$ in HNO_3 2 - 5%
Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455912Y	100 ml	Plastic bottle

Rubidium standard solution, 1,000 mg/l Rb in dil. nitric acid (from $RbNO_3$) ARISTAR® standard for ICP

$RbNO_3$ in HNO_3 2 - 5%
Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455902G	100 ml	Plastic bottle

Rubidium standard solution, 1,000 mg/l Rb in dil. nitric acid AVS TITRINORM® standard for AAS

Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86702.180	100 ml	Plastic bottle
86702.260	500 ml	Plastic bottle

NEW Ruthenium standard solutions for ICP-MS, ARISTAR®

Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Ruthenium	1000 ppm	10% HCl	Plastic bottle	100 ml	457426Q
Ruthenium	10 ppm	2% HCl	Plastic bottle	100 ml	85593.180

Ruthenium standard solution, 10,000 mg/l Ru in 10% hydrochloric acid (from $RuCl_3$) ARISTAR® standard for ICP

$RhCl_3.3H_2O$ in HCl 10%
Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455932M	100 ml	Plastic bottle

Ruthenium standard solution, 1,000 mg/l Ru in 10% hydrochloric acid (from $RuCl_3$) ARISTAR® standard for ICP

$RhCl_3.3H_2O$ in HCl 10%
Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455922K	100 ml	Plastic bottle
455924M	500 ml	Plastic bottle

Ruthenium standard solution, 1,000 mg/l Ru in 5% hydrochloric acid AVS TITRINORM® standard for AAS

Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86705.180	100 ml	Plastic bottle
86705.260	500 ml	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Sabouraud broth

See Microbiology

Sabouraud media

See Microbiology

D(+)-Saccharose

See D(+)-Sucrose p.466

Safemount Q Path®

Safemount Q Path® is a mounting medium, supplied in an PET bottle, which is compatible with Safesolv. It glues the coverglass to the slide and fixes the probe in position after staining.

- Amber bottle
- Easily spreadable
- Easy to sponge away

Description	Pk	Cat. No.
Safemount mounting media Q Path®	500 ml	00647520.

Safety bottle containers, Safepak®

Made of HDPE.

- Contains bottle spillages
- For safe storage and transportation of chemicals
- Good temperature resistance

For the safe transport and storage of hazardous chemicals. These vessels contain chemical spillages and being translucent they allow the examination of the condition and contents of the inner container without opening. Safepak® are designed to be used with BDH branded glass and Safebreak bottles.

For	Pk	Cat. No.
100 ml bottle	6	332491D
500 ml bottle	3	332493F
1000 ml bottle	3	332497J

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Bottle carrier

Glass bottles are designed to contain liquids, but when they break, hazardous liquids potentially mix with broken glass. This bottle carrier protects people and properties from glass shards and limits exposure to flammable or corrosive liquids.

- Minimises spills and breakage
- Easy opening and closing mechanism
- Environmentally friendly: Durable and liquid resistant handle construction

Description	Pk	Cat. No.
Safety jar with safe handle	1	215-3582

Q Path® Safesolv, xylene, toluene, and methylecyclohexane substitute

Q Path® Safesolv is a non hazardous replacement for xylene or toluene. It is compatible with the Q Path® Safemount mounting medium reference 00647520. It is used in place of xylene, toluene, methylecyclohexane or other solvents in the course of the dehydration stages of histological specimens and during the stages of staining and lamella mounting.

- Practical bag-in-box (Cubitainer) packaging for an easy and safe use
- Biodegradable

Description	Pk	Cat. No.
Safesolv Q Path®	5 l	00699464.

Saffron Powder Q Path®

CAS 84604-17-1

Dye which can be used for HES histological staining. This product is not IVD registered.

Cat. No.	Pk	Pack type
11507737.	10 g	Plastic bag

Saffron, powder TECHNICAL

CAS 84604-17-1

Identification ..... Passes test

Cat. No.	Pk	Pack type
27481.105	5 g	Glass bottle

Saffron strands Q Path®

CAS 84604-17-1

Dye which can be used for HES histological staining. This product is not IVD registered.

Cat. No.	Pk	Pack type
11507736.	10 g	Plastic bottle

Saffron alcoholic solution Q Path® for microscopy

Danger

IVD

UN: 1170

Storage Temperature: Ambient

Ready to use Saffon solution for HES histological staining in easy to use and safe pouch.

Appearance ..... Clear liquid
Colour of solution ..... Orange
Density (20/4) ..... 0,8 - 0,81
pH (20°C) ..... 7,2 - 7,6
Absorbance (0.5 %) ..... 440 - 443 nm

Cat. No.	Pk	Pack type
10047028.	450 ml	Pouch

Salicylic acid AnalaR NORMAPUR® analytical reagent

Danger

CAS 69-72-7

$(HO)C_6H_4CO_2H$ **M.W.** 138.12 g/mol
Boiling Pt: 336 °C (1013 hPa) **Melting Pt:** 157-159 °C **Density:** 1,443 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.5 %
Melting point ..... 158 - 161 °C
Ignition residue (SO_4) ..... Max. 0.05 %
Insolubility in NH_3 4 N ..... Max. 50 ppm
Fe (Iron) ..... Max. 2 ppm
Substances coloured by H_2SO_4 ..... Passes test
Heavy metals (as Pb) ..... Max. 10 ppm
Insolubility in methanol ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 0.025 %
Water ..... Max. 0.15 %

Cat. No.	Pk	Pack type
20657.232	250 g	Plastic bottle for solids

Salicylic acid, powder Ph. Eur.

Danger

CAS 69-72-7

$(HO)C_6H_4CO_2H$ **M.W.** 138.12 g/mol
Boiling Pt: 336 °C (1013 hPa) **Melting Pt:** 157-159 °C **Density:** 1,443 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance) ..... 99.0 - 100.5 %
Appearance ..... White crystalline powder
Identification B ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Melting point ..... 158 - 161 °C
Impurity A ..... Max. 0.1 %
Impurity B ..... Max. 0.05 %
Impurity C ..... Max. 0.02 %
Any other impurity ..... Max. 0.05 %
Total impurities ..... Max. 0.2 %
Cl (Chloride) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 200 ppm
Heavy metals (as Pb) ..... Max. 20 ppm
Loss on drying ..... Max. 0.5 %
Sulphated ash ..... Max. 0.1 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
20662.296	1 kg	Plastic bottle for solids
20662.467	25 kg	Bucket (Plastic)

Salicylic acid GPR RECTAPUR®

Danger

CAS 69-72-7

$(HO)C_6H_4CO_2H$ **M.W.** 138.12 g/mol
Boiling Pt: 336 °C (1013 hPa) **Melting Pt:** 157-159 °C **Density:** 1,443 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
Melting point ..... 158 - 161 °C
Heavy metals (as Pb) ..... Max. 50 ppm
Ignition residue (SO_4) ..... Max. 0.1 %

Cat. No.	Pk	Pack type
20655.292	1 kg	Plastic bottle for solids

Salicylic acid TECHNICAL

Danger

CAS 69-72-7

$(HO)C_6H_4CO_2H$ **M.W.** 138.12 g/mol
Boiling Pt: 336 °C (1013 hPa) **Melting Pt:** 157-159 °C **Density:** 1,443 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
20659.295	1 kg	Plastic bottle for solids

Salt Solution acc. BS2011 part 2.1 kb (artificial sea water)

Composition:
Sodium Chloride 26.5 g
Magnesium Chloride Anhy. 2.4 g
Magnesium Sulphate $7H_2O$ 6.75 g
Calcium Chloride $2H_2O$ 1.46 g
Potassium Chloride 0.73 g
Sodium Bicarbonate 0.2 g
Sodium Bromide 0.28 g
Deionised water to 1 litre

Cat. No.	Pk	Pack type
79789LH	20 l	Plastic drum

NEW Samarium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Samarium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457437R
Samarium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85599.180

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Samarium standard solution, 1,000 mg/l Sm in dil. nitric acid (from Sm_2O_3) ARISTAR® standard for ICP

Sm_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455942X	100 ml	Plastic bottle
455944Q	500 ml	Plastic bottle

Samarium standard solution, 1,000 mg/l Sm in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86711.180	100 ml	Plastic bottle
86711.260	500 ml	Plastic bottle

Sand, Fontainebleau TECHNICAL

CAS 7631-86-9

SiO_2 **M.W.** 60.08 g/mol
Boiling Pt: 2230 °C (1013 hPa)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
27460.295	1 kg	Plastic bottle for solids
27460.364	5 kg	Bucket (Plastic)
27460.460	25 kg	Bucket (Plastic)

Sand (sea sand) TECHNICAL, washed with sulphuric acid

CAS 7631-86-9

SiO_2 **M.W.** 60.08 g/mol
Boiling Pt: 2230 °C (1013 hPa) **Melting Pt:** 1710 °C **Density:** 2,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Solubility in acid ..... Max. 1 %

Cat. No.	Pk	Pack type
27461.298	1 kg	Plastic bottle for solids
27461.360	5 kg	Bucket (Plastic)
27461.460	25 kg	Bucket (Plastic)

Saponin GPR RECTAPUR®

CAS 8047-15-2

Density: 1,015-1,02g/cm³ (20 °C)

Storage Temperature: Ambient

Foam test (5 %; water) ..... 2 - 6 cm
Ignition residue (SO_4) ..... Max. 10 %
Insolubility in water ..... Max. 0.5 %

Cat. No.	Pk	Pack type
27534.187	100 g	Plastic bottle for solids

Saponin, white for haemolysis

CAS 8047-15-2

Density: 1,015-1,02g/cm³ (20 °C)

Storage Temperature: Ambient

Assay of sapogenin (on dried material) ..... Min 9 %
Loss on drying (150 °C) ..... Max 10 %

Cat. No.	Pk	Pack type
436504N	500 g	Plastic bottle

Saponin

CAS 8047-15-2

Density: 1,015-1,02g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test
pH (5 %) ..... 4 - 7
Surface tension (20°C; 0,1%; water) ..... 30 - 60 mN/m

Cat. No.	Pk	Pack type
440914Y	500 g	Plastic bottle for solids
44091NE	5 kg	Bucket (Plastic)

NEW Scandium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Scandium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456872V
Scandium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85596.180

Scandium standard solution, 10,000 mg/l Sc in dil. nitric acid (from Sc_2O_3) ARISTAR® standard for ICP

Sc_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455972U	100 ml	Plastic bottle
455974W	500 ml	Plastic bottle

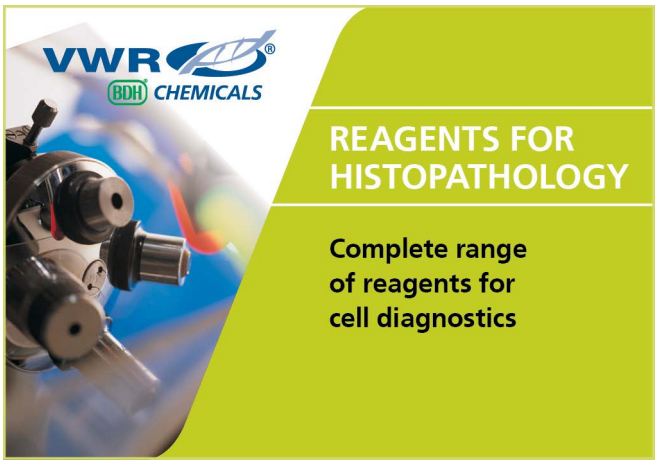
Scandium standard solution, 1,000 mg/l Sc in dil. nitric acid (from Sc_2O_3) ARISTAR® standard for ICP

Sc_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455962S	100 ml	Plastic bottle
455964U	500 ml	Plastic bottle



Scandium standard solution, 1,000 mg/l Sc in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86708.180	100 ml	Plastic bottle
86708.260	500 ml	Plastic bottle

Schiff's reagent (Feulgen stain) for analysis of aldehydes

Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Remark: In the particular case of formaldehyde, use an ethyl alcohol solution so that the final solution contains about 50% of ethyl alcohol.

Sensitivity ..... Passes test
Density (20/4) ..... 1.005 - 1.015

Cat. No.	Pk	Pack type
30969.261	500 ml	Glass bottle

Shorr staining solution Q Path® for microscopy

Danger

IVD

UN: 1170

Storage Temperature: Ambient

Ready to use solution for specific staining Harris-Shorr in easy to use and safe pouch.

Appearance ..... Clear liquid
Colour of solution ..... Purplish black
Density (20/4) ..... 0,89 - 0,914
pH (20°C) ..... 3,1 - 3,8
Absorbance (0.1 %) ..... 500 - 503 nm

Cat. No.	Pk	Pack type
10047013.	450 ml	Pouch
10047113.	2,5 l	Plastic bottle

Schweitzer's reagent (Tetraamminecopper(II) dihydroxide solution, Shirley's solution) for cellulose dissolution

Warning

CAS 17500-49-1 **UN:** 3266

$CuH_{14}N_4O_2$ **M.W.** 165.68 g/mol

Cat. No.	Pk	Pack type
31115.267	500 ml	Glass bottle

Scintillation Cocktail

See FluoranSafe 2 Scintran® p.160

SDS

See Sodium dodecyl sulphate (SDS) p.416

Sea sand

See Sand (sea sand) p.393

Sebacic acid di(2-ethylhexyl) ester

See Bis(2-ethylhexyl) sebacate p.59

Selenite cystimer broth

See Microbiology

NEW Selenium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Selenium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456882A
Selenium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85597.180

Selenium standard solution, 10,000 mg/l Se in dil. nitric acid (from Se) ARISTAR® standard for ICP

Se in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455992B	100 ml	Plastic bottle

Selenium standard solution, 1,000 mg/l Se in dil. nitric acid (from Se) ARISTAR® standard for ICP

Se in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
455982W	100 ml	Plastic bottle
455984B	500 ml	Plastic bottle

Selenium standard solution, 1,000 mg/l Se in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86709.180	100 ml	Plastic bottle
86709.260	500 ml	Plastic bottle

Selenium dioxide GPR RECTAPUR®, sublimated

Danger

CAS 7446-08-4 **UN:** 3283

SeO_2 **M.W.** 110.96 g/mol

Melting Pt: 315 °C **Density:** 3.95 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 10 ppm
Ignition residue (SO_4) ..... Max. 0.05 %
Cl (Chloride) ..... Max. 100 ppm
SO_4 (Sulphate) ..... Max. 50 ppm
Fe (Iron) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
21414.230	250 g	Plastic bottle for solids

Serva Blue G

See Coomassie® Brilliant Blue G-250 ..... p.96

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Serva Blue R

See Coomassie® Brilliant Blue R-250 ..... p.96

Shirley's reagent

See Schweitzer's reagent (Tetraamminecopper(II) dihydroxide solution, Shirley's solution) p.394

Silica Analyser Solution No. 1 (metabisulphite/metol) for Kent Model EIL 58F Silica Analyser and Silica Monitor Reduction solution for Seres FG 504B Silicameter

Warning

Silica on reagent ..... Max. 0.01 ppm

Cat. No.	Pk	Pack type
160563U	5 l	Plastic container

Silica monitor reagent (sodium molybdate) for Seres FG 504B Silicameter

CAS 7631-95-0

Na_2MoO_4 **M.W.** 205.92 g/mol

Contents per litre: 63 g Sodium molybdate AnalaR NORMAPUR

Cat. No.	Pk	Pack type
161277V	5 l	Plastic container

Silica gel 40-63 µm for flash chromatography

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Boiling Pt: 2230 °C (1013 hPa) **Melting Pt:** > 1600 °C

Storage Temperature: Ambient

pH (20°C; 5 %) ..... 6.0 - 7.6
Particle size (< 40 µm) ..... Max. 10 %
Particle size (> 63 µm) ..... Max. 10 %

Cat. No.	Pk	Pack type
154425P	1 kg	Plastic bottle for solids

NEW Silica gel irregular 40-63 µm for flash chromatography

CAS 7631-86-9

M.W. 60.08 g/mol

Boiling Pt: 2230 °C **Melting Pt:** >1600 °C

REACh: 01-2119379499-16

Bulk density (tapped) ..... 460 - 550 g/l
pH (5 %) ..... 6.5 - 7.5
Loss on drying (160°C; 15 min) ..... 2.0 - 4.0 %
Particle size (< 40 µm) ..... Max. 10 %
Particle size (> 63 µm) ..... Max. 10 %

Cat. No.	Pk	Pack type
84894.230	250 g	Plastic bottle for solids
84894.290	1 kg	Plastic bottle for solids
84894.320	2,5 kg	Plastic bottle for solids
84894.360	5 kg	Bucket (Plastic)

NEW Silica gel irregular 60-200 µm for flash chromatography

CAS 7631-86-9

M.W. 60.08 g/mol

Boiling Pt: 2230 °C **Melting Pt:** >1600 °C

REACh: 01-2119379499-16

Bulk density (tapped) ..... 460 - 550 g/l
pH (5 %) ..... 6.5 - 7.5
Loss on drying (160°C; 15 min) ..... 2.0 - 4.0 %
Particle size (< 63 µm) ..... Max. 5 %
Particle size (> 200 µm) ..... Max. 5 %

Cat. No.	Pk	Pack type
84893.290	1 kg	Plastic bottle for solids
84893.320	2,5 kg	Plastic bottle for solids
84893.360	5 kg	Bucket (Plastic)
84893.460	25 kg	Plastic bottle

Silica gel NORMASIL 60® 40-63 µm

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Boiling Pt: 2230 °C (1013 hPa) **Melting Pt:** > 1600 °C

Storage Temperature: Ambient

pH (20°C; 10 %) ..... 6.5 - 7.5
Loss on drying (150°C) ..... Max. 12 %
Particle size d10 ..... 25 to 45 µm
Particle size d50 ..... 50 to 70 µm
Particle size d90 ..... 90 to 115 µm

Cat. No.	Pk	Pack type
27623.323	2,5 kg	Bucket (Plastic)
27623.460	25 kg	Bucket (Plastic)

Silica gel, powder TECHNICAL

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Boiling Pt: 2230 °C (1013 hPa) **Melting Pt:** > 1600 °C

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
24973.297	1 kg	Bucket (Plastic)

Silica gel, granules TECHNICAL

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Boiling Pt: 2230 °C (1013 hPa) **Melting Pt:** > 1600 °C

Storage Temperature: Ambient

Moisture absorber, neutral, not deliquescing, not corrosive. It can be regenerated by heating at about 150 °C

Loss on drying (140°C; 4 h) ..... Max. 3 %
Water-absorption capacity (40 % RH) ..... Min. 22 %

Cat. No.	Pk	Pack type
27613.294	1 kg	Plastic bottle for solids

Silica gel Davison 923 suitable for use in the testing of petroleum products by IP and ASTM methods

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Boiling Pt: 2230 °C (1013 hPa) **Melting Pt:** > 1600 °C

Storage Temperature: Ambient

BET surface area ..... 430 - 530 m^2/g
pH (5 %) ..... 5.5 - 7.0
Volatile matter ..... Max. 10.0 %
Fe (Iron) ..... Max. 50 ppm
Particle size (> 60 mesh) ..... Max. 5.0 %
Particle size (> 80 mesh) ..... Max. 1.2 %
Particle size (> 100 mesh) ..... Max. 5.0 %
Particle size (< 200 mesh) ..... Max. 15.0 %

Cat. No.	Pk	Pack type
15173LX	1 kg	Plastic bottle for solids

Silica gel, granules Chameleon® C 2,5-6 mm drying agent

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Storage Temperature: Ambient

Non toxic dessicants, for adsorbing moisture from the atmosphere and gas streams, which contain iron salts as a colour indicator. The dry material has an intense orange colour and changes to a pale beige/white colour on adsorption of water.

- Water adsorption capacity at 50% RH is a minimum of 23%
- Loss on drying at 145 °C is less than 2%
- At concentration of 10% in water, pH is from 1,5 to 5
- Regeneration can be achieved by heating to 150 °C in a drying oven

Colour change ..... Passes test
Particle size ..... 2 - 6 mm
pH (20°C; 5 %) ..... 2 - 5
Loss on drying (140°C) ..... Max. 2 %
Water-adsorption capacity (23°C;50 % RH) ..... Min. 23 %

Cat. No.	Pk	Pack type
83000.290	1 kg	Plastic bottle for solids
83000.360	5 kg	Bucket (Plastic)

Silica gel, granules Chameleon® C 2-6 mm drying agent in sachets

CAS 63231-67-4

SiO_2 **M.W.** 60.08 g/mol

Storage Temperature: Ambient

This product adsorbs water vapour so maintaining a dry environment for your products. When the gel's adsorption capacity is exhausted the colour changes from orange to colourless.

The product can be regenerated back to an orange colour by heating in a drying oven at 120 - 140 °C for approximately 3 hours and then re-used. It is suitable for numerous drying applications although it is not recommended for strongly acidic or strongly alkaline compounds.

Colour change ..... Passes test
Particle size ..... 2.0 - 6.0 mm
pH (20°C; 5 %) ..... 2.0 - 5.0
Loss on drying (140°C) ..... Max. 2.0 %
Water-adsorption capacity (23°C;50 % RH) ..... Min. 23.0 %

Cat. No.	Pk	Pack type
87185.2500	500	sachets

Silica gel, granules Chameleon® C 1-3 mm drying agent

CAS 7631-86-9

SiO_2 **M.W.** 60.08 g/mol

Storage Temperature: Ambient

Non toxic dessicants, for adsorbing moisture from the atmosphere and gas streams, which contain iron salts as a colour indicator. The dry material has an intense orange colour and changes to a pale beige/white colour on adsorption of water.

- Water adsorption capacity at 50% RH is a minimum of 23%
- Loss on drying at 145 °C is less than 2%
- At concentration of 10% in water, pH is from 1,5 to 5
- Regeneration can be achieved by heating to 150 °C in a drying oven

Colour change ..... Passes test
Particle size ..... 1 - 3 mm
pH (20°C; 5 %) ..... 2 - 5
Loss on drying (140°C) ..... Max. 2 %
Water-adsorption capacity (23°C;50 % RH) ..... Min. 23 %

Cat. No.	Pk	Pack type
83001.260	500 g	Plastic bottle for solids
83001.290	1 kg	Plastic bottle for solids
83001.360	5 kg	Bucket (Plastic)

Silica wool

Description	Pk	Cat. No.
Silica wool, technical	50 g	24950.152

NEW Silicate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84992.180	100 ml	Plastic bottle

Silicic acid sodium salt

See Sodium silicate p.434

Silicium dioxide

See Silica wool p.396

Silicium (IV) oxide

See Silica wool p.396

NEW Silicon standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Silicon	1000 ppm	H_2O/tr HF	Plastic bottle	100 ml	457448S
Silicon	10 ppm	H_2O/tr HF	Plastic bottle	100 ml	85598.180

Silicon standard solution, 10,000 mg/l Si in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2SiF_6$) ARISTAR® standard for ICP

$(NH_4)_2$ SiF_6 in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456012Y	100 ml	Plastic bottle

Silicon standard solution, 1,000 mg/l Si in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2SiF_6$) ARISTAR® standard for ICP

$(NH_4)_2$ SiF_6 in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456002G	100 ml	Plastic bottle
456004Y	500 ml	Plastic bottle

Silicon standard solution, 1,000 mg/l Si in water AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86710.180	100 ml	Plastic bottle
86710.260	500 ml	Plastic bottle

Silicon carbide

See Carborundum p.79

Silicon dioxide

See Silica wool p.396

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Silicone - Fluids DOW CORNING®

Silicone fluids consist of long chain dimethyl siloxanes, methyl phenyl siloxanes or fluorosilicones. They are available in viscosities ranging from 0.65 to 1,000,000 centistokes. Most of these fluids exhibit many desirable properties such as heat stability, oxidation resistance, little change in viscosity with temperature and high flash points. They are soluble in many organic solvents. By virtue of these and many other properties they find widespread application.

FEATURES :

- Water-clear
- Inert
- Excellent water repellency
- Good dielectric properties
- Low surface tension
- Low toxicity
- Low vapour pressure
- Essentially odourless
- Soluble in a wide range of solvents

APPLICATIONS :

- Heat transfer fluids for oil baths
- Dielectric fluids
- Lubricants
- Release agents
- Polish/cosmetic additives
- Mechanical fluid
- Foam preventative
- Plastic additive
- Surface-active material

Silicone fluids, XIAMETER® PMX-200

A range of silicone fluids recommended for use in baths. Such fluids possess excellent heat transfer characteristics and cover a large range, up to +288 °C. Low in toxicity, inert and long lasting due to their low volatility temperature range from -10 °C.

- Non corrosive
- High flash point
- Long service life
- Low evaporation

Fluids possess excellent heat transfer characteristics and cover a large temperature range from –40 to +200 °C. Low in toxicity, inert and long lasting due to their low volatility.

1 cS = 1 mm^2/s

Note: Harmful vapours may be given off at elevated temperatures. It is advisable to use this material in a fume cupboard at temperatures greater than 140 °C.

Description	Temp. range	Viscosity	Colour	Pk	Cat. No.
Dow Corning® XIAMETER® PMX-200/10 cS silicone fluid	–40...+200 °C	10 mm^2/s	Clear	400 g	630044R
Dow Corning® XIAMETER® PMX-200/10 cS silicone fluid	–40...+200 °C	10 mm^2/s	Clear	4 kg	630046T
Dow Corning® XIAMETER® PMX-200/10 cS silicone fluid	–40...+200 °C	10 mm^2/s	Clear	20 kg	630047U
Dow Corning® XIAMETER® PMX-200/20 cS silicone fluid	–40...+200 °C	20 mm^2/s	Clear	500 g	630054T
Dow Corning® XIAMETER® PMX-200/20 cS silicone fluid	–40...+200 °C	20 mm^2/s	Clear	5 kg	630056V
Dow Corning® XIAMETER® PMX-200/20 cS silicone fluid	–40...+200 °C	20 mm^2/s	Clear	20 kg	630057W
Dow Corning® XIAMETER® PMX-200/50 cS silicone fluid	–40...+200 °C	50 mm^2/s	Clear	5 kg	630066A
Dow Corning® XIAMETER® PMX-200/50 cS silicone fluid	–40...+200 °C	50 mm^2/s	Clear	20 kg	630067B
Dow Corning® XIAMETER® PMX-200/100 cS silicone fluid	–40...+200 °C	100 mm^2/s	Clear	500 g	630074A
Dow Corning® XIAMETER® PMX-200/100 cS silicone fluid	–40...+200 °C	100 mm^2/s	Clear	5 kg	630076C
Dow Corning® XIAMETER® PMX-200/100 cS silicone fluid	–40...+200 °C	100 mm^2/s	Clear	25 kg	630077D
Dow Corning® XIAMETER® PMX-200/350 cS silicone fluid	–40...+200 °C	350 mm^2/s	Clear	500 g	630094E
Dow Corning® XIAMETER® PMX-200/350 cS silicone fluid	–40...+200 °C	350 mm^2/s	Clear	5 kg	630096G
Dow Corning® XIAMETER® PMX-200/350 cS silicone fluid	–40...+200 °C	350 mm^2/s	Clear	25 kg	630097H
Dow Corning® XIAMETER® PMX-200/12500 cS silicone fluid	–40...+200 °C	12500 mm^2/s	Clear	5 kg	630126S
Dow Corning® XIAMETER® PMX-200/12500 cS silicone fluid	–40...+200 °C	12500 mm^2/s	Clear	25 kg	630127T

Silicone fluids, Rhodorsil® Oils 47

Rhodorsil® Oils 47 are polydimethylsiloxane oils, consisting of linear molecular chains of varying lengths whose groups comprise alternating silicone and oxygen atoms (the Si-O-Si siloxane bond). The silicone atoms are saturated by methyl groups – CH3

- Heat transfer and dielectric fluids
- Demolding or release agents
- Foam control agents
- Lubricants
- Active components in maintenance product formulations

The oils display low and high temperature resistance, resistance to oxidation and hydrolysis, lack of ageing by atmospheric agents (oxygen-ozone-water-light-UV) and are chemically inert (no risk of corrosion).

Description	Temp. range	Viscosity	Pk	Cat. No.
47 V 50 Rhodorsil®	-40...+200 °C	50 mm^2/s	1 l	6678.1000
47 V 350 Rhodorsil®	-40...+200 °C	350 mm^2/s	1 l	83851.290
47 V 350 Rhodorsil®	-40...+200 °C	350 mm^2/s	5 l	83851.360
47 V 1000 Rhodorsil®	-40...+200 °C	1000 mm^2/s	250 ml	27263.237

Silicone - Fluids

Silicone oil 20 cSt (25°C, Polydimethylsiloxane)

CAS 63148-62-9

Density: 0,95 g/cm³ (20 °C)

Storage Temperature: Ambient

Viscosity (25°C) ..... 18 - 22 cSt
Volatile matter (150°C; 1 h) ..... Max. 10.0 %

Cat. No.	Pk	Pack type
84543.290	1 l	Plastic bottle
84543.360	5 l	Plastic bottle

Silicone oil 47 V 100

CAS 63148-62-9

Density: 0,965 g/cm³ (20 °C)

Storage Temperature: Ambient

Recommended working temperature ..... -5 to +200°C
Viscosity (25°C) ..... 92 - 108 cSt

Cat. No.	Pk	Pack type
84542.290	1 l	Plastic bottle
84542.460	25 l	Plastic drum

Silicone oil 500 cSt (25°C, Polydimethylsiloxane)

CAS 63148-62-9

Density: 0,97 g/cm³ (20 °C)

Storage Temperature: Ambient

Viscosity (25°C) ..... 450 - 550 cSt
Volatile matter ..... Max. 1.0 %

Cat. No.	Pk	Pack type
84539.290	1 l	Plastic bottle

Silicone oil TECHNICAL for oil baths

Density: 0,96 g/cm³ (20 °C)

Storage Temperature: Ambient

Usable between 100 and 200 °C

Identification ..... Passes test

Cat. No.	Pk	Pack type
24610.363	5 l	Plastic container

Silicone oil BRB 550 FLUID

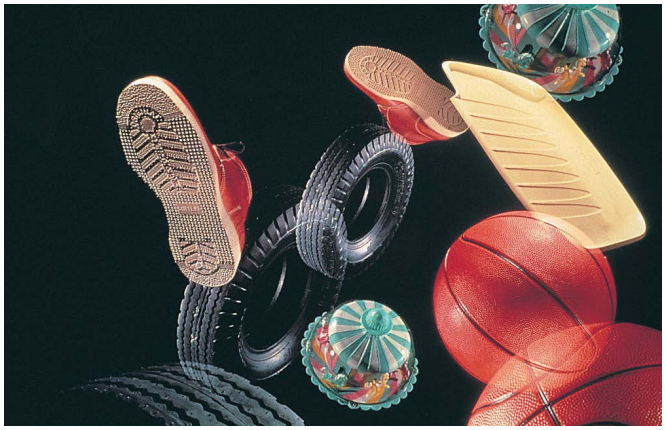
Density: 0,9-1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Viscosity (25°C) ..... 142 - 158 cSt

Cat. No.	Pk	Pack type
84540.290	1 l	Plastic bottle

Silicone - release agents DOW CORNING



Silicone release agents are inert low toxicity products that provide durable parting films which effectively release and lubricate plastics, adhesives, elastomers and other difficult to release products. They are available in the form of emulsions, compounds or solutions to suit almost every application.

Features :

- Excellent release properties
- Heat stable
- Produce good surface finish
- Chemically inert
- Non-carbonising
- Suitable for plastics and rubbers
- No build-up of mould

Applications :

- Plastics and rubber moulding
- Metal casting
- Prevention of adhesive build-up
- Releases residues from cutting tools
- Conveyor belts handling sticky materials

Dow Corning® 7 Release compound long lasting, heat stable release agent

Storage Temperature: Ambient

Dimethyl silicone compound for a variety of lubrication and protection applications

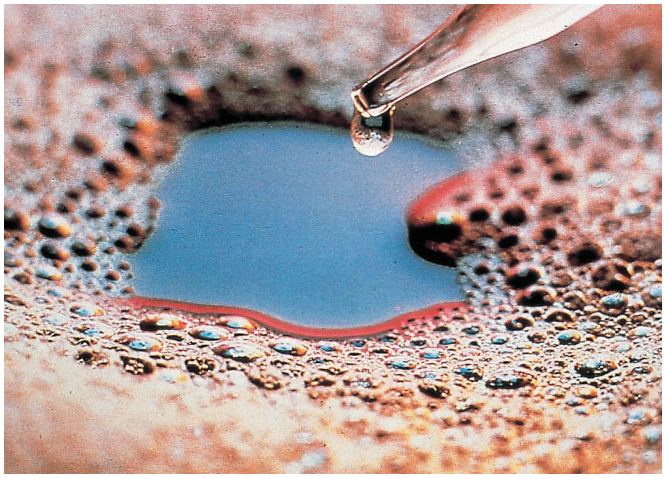
Used for a variety of applications including plastics, rubbers and adhesives.

Light grey translucent jelly-like, silica-filled polydimethylsiloxane

Cat. No.	Pk	Pack type
632021S	100 g	Aluminium tube

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Silicone - Antifoams DOW CORNING®



Silicone antifoams, available in the form of fluids, emulsions or compounds, can be used to control even resistant foams without significantly altering or contaminating products. They can be used in both aqueous and non-aqueous situations throughout industry.

FEATURES :

- Heat stable
- Effective at low levels
- Low toxicity
- Odourless and tasteless
- Inert to micro-organisms
- Fast acting

Antifoam compound, XIAMETER® ACP-1500 (EU)

Formerly known as Dow Corning Antifoam 1500, this 100% active silicone fluid containing a suspension of finely powdered silica to enhance its defoaming efficiency is:

- Odourless and tasteless
- Effective in hot or cold processes
- Sterilisable
- Performs at low concentrations
- Free of raw materials derived from animals

Description	Pk	Cat. No.
XIAMETER® ACP-1500 (EU) silicone anti-foam	500 g	632484W

Antifoam silicone (10% active compound) XIAMETER® 1510 for use in aqueous, textile, chemical and industrial foam control

Density: 1 g/cm³ (20 °C)

Storage Temperature: Ambient

10% emulsion of a polydimethylsiloxane fluid, silica filler and non-ionic emulsifier formerly known as Dow Corning® 1510

Easy to use foam control agent that is effective in hot or cold systems

Cat. No.	Pk	Pack type
632156J	5 kg	Plastic bottle
632157K	25 kg	Plastic container

Antifoam XIAMETER® AFE-0400 (previously Dow Corning RD emulsion)

Non-ionic, water based 10% active textile emulsion.

- Immediate foam knockdown
- Long-term foam inhibition
- Low addition levels
- Rapid dispersion in aqueous foaming systems
- Stable in textile processes at pH 4 - 11
- Foam control up to 100 °C
- Good compatibility with dye stuffs, surfactants and textile auxiliaries

Cat. No.	Pk	Pack type
632134D	500 g	Plastic bottle
632136F	5 kg	Plastic bottle
632137G	25 kg	Plastic container

Antifoam silicone (30% active compound) Snapsil RE20 for use in aqueous, textile, chemical and industrial foam control

Storage Temperature: Ambient

Active matter content	29.0 - 33.0 %
Density (25/4)	0.950 - 1.100
pH (20°C)	5.0 - 9.0

Cat. No.	Pk	Pack type
84538.290	1 l	Plastic bottle

Antifoam silicone (15% active compound) Snapsil FD10 for use in aqueous, textile, chemical and industrial foam control

Storage Temperature: Ambient

Active matter content	14.0 - 17.0 %
Density (25/4)	0.950 - 1.100
pH (20°C)	4.5 - 8.5

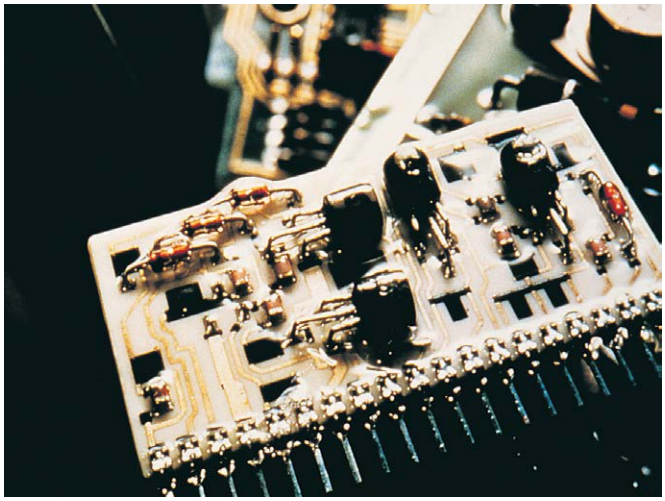
Cat. No.	Pk	Pack type
84537.290	1 l	Plastic bottle

VWR BDH CHEMICALS

HiPerSolv CHROMANORM®

- Complete range of LC-MS solvents, mixes and additives
- High purity solvents for HPLC applications
- Designed to meet your requirements in analysis and quality control

Silicone - Electrical products DOW CORNING®



Electrical products form a diverse group that can impart water repellency, electrical insulation and thermal conductivity depending upon the requirements. The group includes gels, resins and greases. They can be used in applications such as coating electric coils.

FEATURES :

- Water repellent
- Wide usable temperature range
- Compatible with most surfaces
- Long service life
- Good dielectric properties

APPLICATIONS :

- Waterproofing
- Electrical insulation
- Corrosion protection
- Abrasion protection
- Heat dissipation

Dow Corning® 4 Compound dielectric insulator

Storage Temperature: Ambient
Grey translucent silicone compound

Extremely versatile heat and moisture resistant compound for use in electronics, telecommunications and transportation including road, rail and aircraft.

Cat. No.	Pk	Pack type
632222C	100 g	Aluminium tube

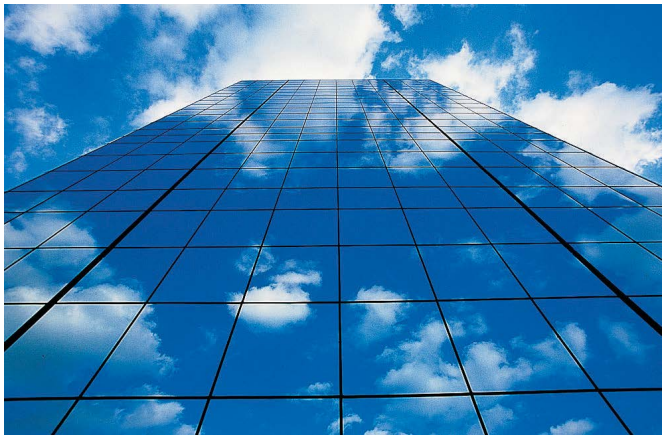
Dow Corning® 1-2577 Conformal Coating

UN: 1993
Storage Temperature: Ambient

Transparant straw colour resin of 75% silicone in toluene, providing a tack free, protective, thin film coating in 15 minutes at room temperature.
Offers thick film circuitry and remains flexible between -65°C to 200°C with typical applications for PCB's and porous ceramics.
Viscosity approx. 1000 cS.

Cat. No.	Pk	Pack type
632364P	500 g	Plastic bottle

Silicone - One part elastomers



One part silicone rubbers cure on exposure to moist air at room temperature to form strong durable rubbers that have hundreds of applications in all industries whenever encapsulation, sealing or adhesive properties are required.

FEATURES :

- Room temperature cure
- Wide usable temperature range
- Water repellen
- Will not harden
- Adheres to most surfaces
- Good dielectric properties
- Easy to repair

APPLICATIONS :

- Sealing equipment
- Waterproofing
- Forming gaskets
- Repairing cracks
- Seating electrodes
- Sealing pipelines
- Potting electrical equipment

Dow Corning® 734 Flowable adhesive sealant white

Warning

Storage Temperature: Ambient

Free flowing. Cures at room temperature by reaction with atmospheric moisture, giving off acetic acid. Adheres to most surfaces. Serviceable from -65° to 232°C

Cat. No.	Pk	Pack type
634282W	90 ml	Aluminium tube

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Dow Corning® 3145 Mil-A-46146 Adhesive Sealant Clear

Non-slump sealant. Cures at room temperature by reaction with atmospheric moisture without corrosive by-products. Adheres to most surfaces. Serviceable from -65° to 250°C

Cat. No.	Pk	Pack type
634323X	90 ml	Aluminium tube

Silicone - Two part elastomers DOW CORNING®

FEATURES :
- Wide usable temperature range
- High strength
- No shrinkage on cure
- Deep section cure
- Can be heat accelerated
- Long pot life
- Excellent release characteristics

APPLICATIONS :
- Flexible moulds
- Damping and mounting blocks
- Fabric and belt coating
- Insulation
- Encapsulation
- Caulking and sealing
- Coating electronic components

SYLGARD® 184 Elastomer Kit general purpose encapsulant

Storage Temperature: Ambient
Two components forming a clear colourless flexible silicone elastomer at room temperature.

- Serviceable temperature between -55°C to 200°C
- Viscosity at 25°C: Approx. 5000 mPa·s

Cat. No.	Pk	Pack type
634165S	1,1 kg	Plastic bottle

Silicone - Water repellent treatments DOW CORNING®

Water repellents can be used in many applications where resistance to or repulsion of water is required. Additionally these treatments can make powders flow more easily and delay the solubility of others.

FEATURES :
- High water repellency
- Can be diluted
- Air drying or heat curable
- Long lasting
- Low toxicity films formed

APPLICATIONS :
- Glassware and ceramics
- Textiles
- Plastics
- Permeablility
- Delayed solubility
- Powder coating
- Production of non-stick surfaces

Dow Corning® Repelcote VS water repellent

Warning

UN: 1993

Storage Temperature: Ambient
10% emulsion of a polydimethylsiloxane fluid, silica filler and non-ionic emulsifier

This material becomes crystalline below 18°C and may require warming prior to use.

Functionality..... Passes test

Cat. No.	Pk	Pack type
632474U	500 ml	Glass bottle

Dow Corning® 1107 water repellent and powder treatment

CAS 63148-57-2
Boiling Pt: >140 °C (0,003hPa) **Melting Pt:** -55 °C **Density:** 0,971 g/cm³ (25 °C)
Storage Temperature: Ambient
Clear methylhydrogenpolysiloxane fluid

Cat. No.	Pk	Pack type
632196R	5 kg	Plastic bottle

Silicone - Grease

A range of silicones and non-silicones that can be used to maintain and lubricate all types of glass, plastic, rubber and metal components under even the most demanding conditions.
FEATURES :
- Wide temperature range
- Inert
- Long life
- Resistant to corrosive chemicals
- Do not effect rubber or plastics
- Resistant to oxidation

APPLICATIONS :
- Lubrication of plastic parts
- Lubrication of taps and 'o' rings
- Corrosion protection
- Lubricants/sealants for vacuum systems
- Lubrication in high or low temperature environments
- Bearings exposed to corrosive chemicals

Dow Corning® High Vacuum Grease

Storage Temperature: Ambient
Light grey translucent non melting silicone. Serviceable from -40°C to +260°C

Cat. No.	Pk	Pack type
291-0039	50 g	Plastic bottle

MOLYKOTE® 44 high temperature bearing grease, medium

Storage Temperature: Ambient

Wide temperature range lubricant for rolling element bearings. Gives extended service intervals. Brown. NLGI No. 2. Serviceable from -40°C to +200°C.

Cat. No.	Pk	Pack type
636022M	100 g	Plastic bottle

MOLYKOTE® 111 compound

Storage Temperature: Ambient

Lubricates and seals valves. Ideal O ring lubricant. FDA and Water Research Centre approved. White in colour. Tacky, stiff consistency. Serviceable from -40°C to 200°C.

Cat. No.	Pk	Pack type
636052S	100 g	Plastic bottle

Silicone grease TECHNICAL

CAS 63148-62-9
Storage Temperature: Ambient
Identification ..... Passes test

Cat. No.	Pk	Pack type
6674.0050	50 g	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Silver (reagents for the analysis of)

Chromotropic acid disodium salt dihydrate analytical reagent p.90
Dithizone analytical reagent..... p.126

NEW Silver standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Silver	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456892C
Silver	10 ppm	2% HNO_3	Plastic bottle	100 ml	85547.180

Silver standard solution, 10,000 mg/l Ag in dil. nitric acid (from $AgNO_3$) ARISTAR® standard for ICP

$AgNO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456032M	100 ml	Plastic bottle

Silver standard solution, 1,000 mg/l Ag in dil. nitric acid (from $AgNO_3$) ARISTAR® standard for ICP

$AgNO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456022K	100 ml	Plastic bottle
456024M	500 ml	Plastic bottle

Silver standard solution, 1,000 mg/l Ag in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86659.180	100 ml	Plastic bottle
86659.260	500 ml	Plastic bottle

Silver chloride TECHNICAL

CAS 7783-90-6
AgCl **M.W.** 143.32 g/mol
Boiling Pt: 1554 °C (1013 hPa) **Melting Pt:** 455 °C **Density:** 5,56 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 99 %

Cat. No.	Pk	Pack type
21553.137	25 g	Glass bottle

Silver diethyldithiocarbamate analytical reagent

Warning

CAS 1470-61-7 **UN:** 3077
$(C_2H_5)_2NCSSAg$ **M.W.** 256.14 g/mol
Melting Pt: 176-178,5 °C
Storage Temperature: Ambient

Identification..... Passes test

Cat. No.	Pk	Pack type
21563.108	5 g	Plastic bottle for solids

Silver nitrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7761-88-8 **UN:** 1493
$AgNO_3$ **M.W.** 169.87 g/mol
Boiling Pt: 444 °C (1013 hPa) **Melting Pt:** 210 °C **Density:** 4,35 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119513705-43

Assay..... 99.8 - 100.5 %
Identification (NO_3)..... Passes test Ph.Eur.
Solution in water..... Passes test
Acidity or alkalinity..... Passes test Ph.Eur.
Aluminium, lead, copper and bismuth... Passes test Ph.Eur.
Not precipitated by HCl (as SO_4)..... Max. 100 ppm
SO_4 (Sulphate)..... Max. 20 ppm
Cd (Cadmium)..... Max. 1 ppm
Fe (Iron)..... Max. 2 ppm
Mg (Magnesium)..... Max. 5 ppm
Ni (Nickel)..... Max. 5 ppm
Zn (Zinc)..... Max. 1 ppm
Identification (Ag)..... Passes test Ph.Eur.
Solution S..... Passes test Ph.Eur.
Appearance of solution..... Passes test Ph.Eur.
Foreign salts..... Passes test Ph.Eur.
Insolubility in water..... Max. 50 ppm
Cl (Chloride)..... Max. 5 ppm
Ca (Calcium)..... Max. 10 ppm
Cu (Copper)..... Max. 2 ppm
K (Potassium)..... Max. 50 ppm
Mn (Manganese)..... Max. 5 ppm
Pb (Lead)..... Max. 10 ppm
Conforms to Reag. Ph.Eur..... Passes test

Cat. No.	Pk	Pack type
21572.133	25 g	Plastic bottle for solids
21572.188	100 g	Plastic bottle for solids
21572.235	250 g	Plastic bottle for solids
21572.292	1 kg	Plastic bottle for solids

Silver nitrate Ph. Eur.

Danger

CAS 7761-88-8 **UN:** 1493
$AgNO_3$ **M.W.** 169.87 g/mol
Boiling Pt: 444 °C (1013 hPa) **Melting Pt:** 210 °C **Density:** 4,35 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119513705-43

Assay..... 99 - 100.5 %
Appearance..... Colourless crystals
Identification A..... Passes test
Identification B..... Passes test
Solution S..... Passes test
Appearance of solution..... Passes test
Acidity or alkalinity..... Passes test
Foreign salts..... Max. 0.3 %
Aluminium, lead, copper and bismuth..... Passes test
Residual solvents..... Passes test

Cat. No.	Pk	Pack type
83517.180	100 g	Plastic bottle for solids

Silver nitrate GPR RECTAPUR®

Danger

CAS 7761-88-8 **UN:** 1493
$AgNO_3$
M.W. 169.87 g/mol
Boiling Pt: 444 °C (1013 hPa) **Melting Pt:** 210 °C **Density:** 4,35 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119513705-43

Assay ..... Min. 99.5 %
Foreign heavy metals (as Pb) ..... Max. 20 ppm
Not precipitated by HCl (as SO_4) ..... Max. 100 ppm
Cl (Chloride) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Fe (Iron) ..... Max. 10 ppm
Pb (Lead) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
21570.136	25 g	Plastic bottle for solids
21570.182	100 g	Plastic bottle for solids
21570.238	250 g	Plastic bottle for solids
21570.295	1 kg	Plastic bottle for solids

Silver nitrate, proteomics grade

Danger

CAS 7761-88-8 **UN:** 1493
$AgNO_3$
M.W. 169.87 g/mol
Boiling Pt: 444 °C (1013 hPa) **Melting Pt:** 210 °C **Density:** 4,35 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119513705-43

Staining protein after electrophoretic separation. Also used to determine chloride ions in solution.

Chloride ..... < 0.0005%
Clarity of Solution ..... Pass
Copper ..... <= 0.0002 %
Free Acid Test ..... Pass
Iron ..... < = 0.0002 %
Lead ..... < = 0.001 %
Purity ..... > = 99 %
Substances not Precipitated by HCl ..... < 0.01 %
Sulphate ..... <= 0.002 %

Cat. No.	Pk	Pack type
M122-25G	25 g	Glass bottle
M122-100G	100 g	Glass bottle

Silver nitrate 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 7761-88-8 **UN:** 3264
$AgNO_3$
Storage Temperature: Ambient

Titer (20°C) ..... 0.0995 to 0.1005 mol/l
Conforms to BDH 18041 ..... Passes test

Cat. No.	Pk	Pack type
32056.602	60 ml	Plastic ampoule

Silver nitrate 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7761-88-8 **UN:** 3264
$AgNO_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30471.237	250 ml	Glass bottle
30471.294	1 l	Glass bottle

Silver nitrate 0.25 mol/l (0.25 N) in aqueous solution Reag. Ph. Eur. 1078301

Danger

CAS 7761-88-8 **UN:** 3264
$AgNO_3$
Density: 1,033 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Performance test ..... Passes test

Cat. No.	Pk	Pack type
87924.290	1 l	Plastic bottle

Silver nitrate 0.164 mol/l (0.164 N; 27.9 g/l; 1 ml = 5.8 mg Cl) in aqueous solution VOLUSOL® for hydrotimetry

Warning

CAS 7761-88-8 **UN:** 3082
$AgNO_3$
Storage Temperature: Ambient

Appearance ..... Clear colourless liquid
Identification ..... Passes test

Cat. No.	Pk	Pack type
30489.262	500 ml	Glass bottle

Silver nitrate 0.1 mol/l (0.1 N) in aqueous solution Reag. Ph. Eur. 1078302

Warning

CAS 7761-88-8 **UN:** 3264
$AgNO_3$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87925.290	1 l	Plastic bottle

Silver nitrate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP volumetric solution

Warning

CAS 7761-88-8 **UN:** 3264
$AgNO_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
Conforms to Reag. Ph.Eur. ..... Passes test
Conforms to USP ..... Passes test
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30472.297	1 l	Glass bottle
30472.322	2,5 l	Glass bottle
30472.402	10 l	Bag-in-box (Cubitainer)

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Silver nitrate (0,1 N) in aqueous solution USP test solutions (TS)

Warning

CAS 7761-88-8 **UN:** 3264
$AgNO_3$
Storage Temperature: Ambient
Ready to use solution.

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85370.180	100 ml	Glass bottle
85370.260	500 ml	Glass bottle

Silver nitrate 0.0855 mol/l (0.0855 N; 14.52 g/l; 1 ml = 5 mg NaCl) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7761-88-8 **UN:** 3082
$AgNO_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.08533 - 0.08567 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30488.292	1 l	Glass bottle

Silver nitrate 0.05 mol/l (0.05 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7761-88-8 **UN:** 3082
$AgNO_3$
Density: 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30475.297	1 l	Glass bottle
30475.322	2,5 l	Glass bottle

Silver nitrate 0.02 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7761-88-8 **UN:** 3082
$AgNO_3$
Density: 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0198 - 0.0202 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
191265J	2,5 l	Glass bottle

Silver nitrate 0.01 mol/l (0.01 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7761-88-8 **UN:** 3082
$AgNO_3$
Density: 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

NIST traceable..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 0.00998 - 0.01002 mol/l

Cat. No.	Pk	Pack type
30476.291	1 l	Glass bottle

Silver nitrate solution in pyridine Reag. Ph. Eur. 1078304

CAS 7761-88-8 **UN:** 1993
$AgNO_3$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87926.180	100 ml	Plastic bottle

Silver nitrate reagent Reag. Ph. Eur. 1078305

Danger

UN: 3262

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87927.180	100 ml	Plastic bottle

di-Silver oxide TECHNICAL

Danger

CAS 20667-12-3 **UN:** 1479
Ag_2O
M.W. 231.74 g/mol
Melting Pt: 800-830 °C **Density:** 7,14 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay..... Min. 99 %

Cat. No.	Pk	Pack type
21584.134	25 g	Plastic bottle for solids

Silver sulphate AnalaR NORMAPUR® analytical reagent

Danger

CAS 10294-26-5 **UN:** 3077
Ag_2SO_4
M.W. 311.8 g/mol
Boiling Pt: 1085 °C (1013 hPa) **Melting Pt:** 655 °C **Density:** 5,45 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 98.5 %
Foreign heavy metals (as Pb)..... Max. 20 ppm
Substances not precipitated by HCl .... Max. 0.03 %
Cu (Copper)..... Max. 5 ppm
Pb (Lead)..... Max. 10 ppm
Solution in water..... Passes test
Insolubility in water ..... Max. 0.02 %
Cl (Chloride) ..... Max. 20 ppm
Fe (Iron)..... Max. 10 ppm

Cat. No.	Pk	Pack type
21592.154	50 g	Plastic bottle for solids
21592.234	250 g	Plastic bottle for solids

Silver sulphate TECHNICAL

Danger

CAS 10294-26-5 **UN:** 3077
Ag_2SO_4
M.W. 311.8 g/mol
Boiling Pt: 1085 °C (1013 hPa) **Melting Pt:** 655 °C **Density:** 5,45 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
21589.153	50 g	Plastic bottle for solids
21589.233	250 g	Plastic bottle for solids

Silver sulphate 10 g/l in sulphuric acid AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard

Danger

CAS 10294-26-5 **UN:** 1830

Ag_2SO_4

Chemical oxygen demand (COD)..... Passes test
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30491.247	1 l	Glass bottle SAFEBREAK
30491.420	2,5 l	Glass bottle SAFEBREAK

Silver sulphate 6.6 g/l in sulphuric acid AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard

Danger

CAS 10294-26-5 **UN:** 1830

Ag_2SO_4

Chemical oxygen demand (COD)..... Passes test
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30492.241	1 l	Glass bottle SAFEBREAK
30492.423	2,5 l	Glass bottle SAFEBREAK

Simazine (2-Chloro-4,6-bis(ethylamino)-1,3,5-triazine) ≥99.5%

Warning

CAS 122-34-9 **UN:** 3077

$C_7H_{12}ClN_5$ **M.W.** 201.66 g/mol

Melting Pt: 219 °C

Cat. No.	Pk	Pack type
124502D	10 mg	Glass ampoule

Sioetch® MT 06/01 VLSI Selectipur® for the electronics industry

Danger

UN: 1790

Boiling Pt: >100 °C (1013hPa) **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
50489106.	2,5 l	Glass bottle
56322135.	218 kg	Plastic drum

Sioetch® MT 25/01 VLSI Selectipur® for the electronics industry

UN: 2922

Product from BASF

Cat. No.	Pk	Pack type
51152461.	2,5 l	Glass bottle

Skim milk for microbiology, pre-weighed

See Microbiology

Slaked lime

See Calcium hydroxide p.77

SOC media

S.O.C. Medium is used in the final step of bacterial cell transformation to obtain maximal transformation efficiency of E. coli. S.O.C.

- Ready to use

Description	Volume	Pk	Cat. No.
SOC media	5 ml	1 KIT	N549-6X5ML

Soda lime with indicator AnalaR NORMAPUR® analytical reagent

Danger

CAS 8006-28-8 **UN:** 1907
Storage Temperature: Ambient
For absorbtion of acidic gas (CO_2)

This soda lime contains a new, more efficient saturation indicator. It changes from white to purple when saturated by CO_2

Identification ..... Passes test
Absorption capacity (as CO_2) ..... Min. 25 %
Particle size (2 - 5 mm) ..... About 95 %
Loss on drying (105°C) ..... 13 - 18 %

Cat. No.	Pk	Pack type
22666.293	1 kg	Plastic bottle for solids
22666.362	5 kg	Bucket (Plastic)
22666.555	180 kg	Plastic drum

Soda lime with indicator, granules Carbosorb® 1,0-2,5 mm (6-16 mesh), non-deliquescent

Danger

CAS 8006-28-8 **UN:** 1907
Storage Temperature: Ambient
Caustic alkali less than 4%

Identity..... Passes test
Absorption capacity for CO_2 (acc. to NF)..... Min. 25 %
Caustic alkalis..... Max. 4.0 %

Cat. No.	Pk	Pack type
33115AX	5 kg	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Sodium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Sodium	10 ppm	2-5% HNO_3	Plastic bottle	100 ml	85581.180
Sodium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456902K
Sodium	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457132T

Sodium standard solution, 10,000 mg/l Na in dil. nitric acid (from $NaNO_3$) ARISTAR® standard for ICP

$NaNO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456052Q	100 ml	Plastic bottle
456054S	500 ml	Plastic bottle

Sodium standard solution, 1,000 mg/l Na in dil. nitric acid (from Na) ARISTAR® standard for ion chromatography

Na in H_2O tr.HNO_3

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458232D	100 ml	Plastic bottle

Sodium standard solution, 1,000 mg/l Na in dil. nitric acid (from $NaNO_3$) ARISTAR® standard for ICP

$NaNO_3$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456042X	100 ml	Plastic bottle
456044Q	500 ml	Plastic bottle

Sodium standard solution, 1,000 mg/l Na in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86693.180	100 ml	Plastic bottle
86693.260	500 ml	Plastic bottle

NEW Sodium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84993.180	100 ml	Plastic bottle
84993.260	500 ml	Plastic bottle

Sodium acetate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 127-09-3

$H_3CCOONa$ **M.W.** 82.03 g/mol
Boiling Pt: 881,4 °C (1013 hPa) **Melting Pt:** 324 °C **Density:** 1,528 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119485123-42

Assay	Min. 99.0 %	Identification	Passes test
IR Spectrum	Passes test	pH (25°C; 5 %)	7.0 - 9.2
Heavy metals (as Pb)	Max. 10 ppm	Insolubility in water	Max. 100 ppm
Loss on drying (120°C)	Max. 1.0 %	Cl (Chloride)	Max. 20 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 30 ppm
Al (Aluminium)	Max. 10 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 3 ppm	Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 0.05 %	Mg (Magnesium)	Max. 20 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
27653.235	250 g	Plastic bottle for solids
27653.260	500 g	Plastic bottle for solids
27653.292	1 kg	Plastic bottle for solids

Sodium acetate GPR RECTAPUR®

CAS 127-09-3

$H_3CCOONa$ **M.W.** 82.03 g/mol
Boiling Pt: 881,4 °C (1013 hPa) **Melting Pt:** 324 °C **Density:** 1,528 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119485123-42

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27650.292	1 kg	Plastic bottle for solids
27650.361	5 kg	Bucket (Plastic)

Sodium acetate Electran® Molecular biology grade

CAS 127-09-3

$H_3CCOONa$ **M.W.** 82.03 g/mol
Boiling Pt: 881,4 °C (1013 hPa) **Melting Pt:** 324 °C **Density:** 1,528 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119485123-42

Cat. No.	Pk	Pack type
443894K	500 g	Plastic bottle

NEW Sodium acetate in aqueous solution USP test solutions (TS) 34

CAS 127-09-3
$H_3CCOONa$
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85371.180	100 ml	Plastic bottle
85371.260	500 ml	Plastic bottle

Sodium acetate trihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 6131-90-4
$H_3CCOONa·3H_2O$ **M.W.** 136.08 g/mol
Boiling Pt: 120-123 °C (1013 hPa) **Melting Pt:** 58 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.5 - 101.0 %	Appearance of solution	Passes test Ph.Eur.
Identification A	Passes test	Identification B	Passes test
IR Spectrum	Passes test	Solution in water	Passes test
Solution S	Passes test Ph.Eur.	Acidity or alkalinity	Max. 0.25 meq/g
pH (25°C; 5 %)	7.5 - 9.0	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Loss on drying (130°C)	39.0 - 40.5 %
Substances reducing $KMnO_4$ (as HCOOH)	Max. 50 ppm	Cl (Chloride)	Max. 10 ppm
PO_4 (Phosphate)	Max. 2 ppm	SO_4 (Sulphate)	Max. 20 ppm
Total N (Nitrogen)	Max. 10 ppm	Al (Aluminium)	Max. 5 ppm
As (Arsenic)	Max. 2 ppm	Ca (Calcium)	Max. 10 ppm
Ca + Mg (as Ca)	Max. 50 ppm	Cu (Copper)	Max. 2 ppm
Fe (Iron)	Max. 2 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 5 ppm	Pb (Lead)	Max. 5 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
27652.232	250 g	Plastic bottle for solids
27652.260	500 g	Plastic bottle for solids
27652.298	1 kg	Plastic bottle for solids
27652.367	5 kg	Plastic bottle for solids
27652.460	25 kg	Bucket (Plastic)

Sodium acetate trihydrate Ph. Eur.

CAS 6131-90-4
$H_3CCOONa·3H_2O$ **M.W.** 136.08 g/mol
Boiling Pt: 120-123 °C (1013 hPa) **Melting Pt:** 58 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (dried substance)	99.0 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (5 %)	7.5 - 9.0
Reducing substances	Passes test
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 200 ppm
As (Arsenic)	Max. 2 ppm
Calcium and magnesium (as Ca)	Max. 50 ppm
Heavy metals (as Pb)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm
Loss on drying (130°C)	39.0 - 40.5 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27649.297	1 kg	Plastic bottle for solids
27649.468	25 kg	Bucket (Plastic)

Sodium acetate trihydrate GPR RECTAPUR®

CAS 6131-90-4
$H_3CCOONa·3H_2O$ **M.W.** 136.08 g/mol
Boiling Pt: 120-123 °C (1013 hPa) **Melting Pt:** 58 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27648.294	1 kg	Plastic bottle for solids
27648.363	5 kg	Bucket (Plastic)

Sodium acetate trihydrate TECHNICAL

CAS 6131-90-4
$H_3CCOONa·3H_2O$ **M.W.** 136.08 g/mol
Boiling Pt: 120-123 °C (1013 hPa) **Melting Pt:** 58 °C **Density:** 1,4 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %

Cat. No.	Pk	Pack type
27641.360	5 kg	Bucket (Plastic)

VWR LIFE SCIENCE Sodium acetate buffer solution pH 5.2 (3 mol/l) for biotechnology, sterile

Cat. No.	Pk	Pack type
E498-100ML	100 ml	Plastic bottle
E498-200ML	200 ml	Plastic bottle

VWR LIFE SCIENCE Sodium acetate buffer 3.0 M solution, pH 5.2

Cat. No.	Pk	Pack type
E521-100ML	100 ml	Plastic bottle

Sodium alginate TECHNICAL

CAS 9005-38-3
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
27660.296	1 kg	Plastic bottle for solids

Sodium aluminate, coarse powder TECHNICAL

Danger

CAS 1302-42-7 **UN:** 2812
$NaAlO_2$ **M.W.** 81.97 g/mol
Melting Pt: 1800 °C **Density:** 1,5 g/cm³ (20 °C)

Assay (calculated as Al_2O_3)	50 - 56 %
Identification	Passes test

Cat. No.	Pk	Pack type
27663.290	1 kg	Plastic bottle for solids

Sodium aluminum oxide

See Sodium aluminate p.408

Sodium 1-amino-2,4-dihydroxy-9,10-dihydro-9,10-dioxoanthracene-3-sulphonate

See Nuclear Fast Red p.321

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Sodium L(+)-ascorbate USP

CAS 134-03-2
$C_6H_7NaO_6$

M.W. 198.11 g/mol
Melting Pt: 219 °C **Density:** 1,799 g/cm³ (20 °C)
Storage Temperature: Ambient
Product is tested to USP Specifications

Heavy Metals	< = 0.002 %
Loss on Drying	<= 0.25 %
pH (10%, Water) @25°C	7 - 8
Purity	99 % - 101 %
Specific Rotation	103 °- 108°

Cat. No.	Pk	Pack type
0561-100G	100 g	Glass bottle

Sodium L(+)-ascorbate TECHNICAL

CAS 134-03-2
$C_6H_7NaO_6$

M.W. 198.11 g/mol
Melting Pt: 219 °C **Density:** 1,799 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99 %

Cat. No.	Pk	Pack type
27688.235	250 g	Plastic bottle for solids
27688.292	1 kg	Plastic bottle for solids

Sodium azide AnalaR NORMAPUR® analytical reagent

Danger

CAS 26628-22-8 **UN:** 1687
NaN_3

M.W. 65.01 g/mol
Melting Pt: 275 °C **Density:** 1,85 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Appearance	White crystalline powder
Identification	Passes test	Free alkalinity	Max. 0.05 meq/g
Insolubility in water	Max. 0.015 %	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Cr (Chromium)	Max. 20 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm
Pb (Lead)	Max. 10 ppm		

Cat. No.	Pk	Pack type
103692K	100 g	Plastic bottle for solids
103694M	500 g	Plastic bottle for solids
10369AS	5 kg	Plastic bottle for solids

Sodium benzoate AnalaR NORMAPUR® analytical reagent

CAS 532-32-1
C_6H_5COONa

M.W. 144.11 g/mol
Melting Pt: 410-430 °C **Density:** 1,44 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119460683-35

Assay (calculated on dried substance)	Min. 99.5 %	pH (20°C; 5 %)	7.0 - 9.0
Insolubility in water	Max. 50 ppm	Loss on drying (100°C)	Max. 1.0 %
Total Cl (Chlorine)	Max. 0.03 %	Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm	Ca (Calcium)	Max. 100 ppm
Cu (Copper)	Max. 1 ppm	Fe (Iron)	Max. 1 ppm
K (Potassium)	Max. 0.05 %	Mg (Magnesium)	Max. 50 ppm
Pb (Lead)	Max. 5 ppm		

Cat. No.	Pk	Pack type
103974R	500 g	Plastic bottle for solids

Sodium benzoate Ph. Eur.

CAS 532-32-1
C_6H_5COONa

M.W. 144.11 g/mol
Melting Pt: 410-430 °C **Density:** 1,44 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119460683-35

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Halogenated compounds	Passes test
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C)	Max. 2 %
Statement of original manufacturer	(*)
Benzene (*)	Max. 2 ppm
Toluene (*)	Max. 890 ppm
Other residual solvents (*)	Unlikely by manuf.process

Cat. No.	Pk	Pack type
83551.290	1 kg	Plastic bottle for solids
83551.360	5 kg	Bucket (Plastic)

Sodium benzoate, purified

CAS 532-32-1
C_6H_5COONa

M.W. 144.11 g/mol
Melting Pt: 410-430 °C **Density:** 1,44 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119460683-35

Assay (calculated on anhydrous)	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Loss on drying (100°C)	Max. 1.0 %
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.03 %

Cat. No.	Pk	Pack type
27694.293	1 kg	Plastic bottle for solids
27694.362	5 kg	Bucket (Plastic)
27694.460	25 kg	Bucket (Plastic)

Sodium bicarbonate

See Sodium hydrogen carbonate p.418

Sodium borohydride

See Sodium tetrahydroborate p.436

Sodium bromide AnalaR NORMAPUR® analytical reagent

CAS 7647-15-6
NaBr

M.W. 102.89 g/mol
Boiling Pt: 1396 °C (1013 hPa) **Melting Pt:** 753 °C **Density:** 3,2 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490106-41

Assay (calculated on dried substance)	Min. 99 %	Acidity	Max. 0.002 meq/g
Alkalinity	Max. 0.004 meq/g	Heavy metals (as Pb)	Max. 10 ppm
Insolubility in water	Max. 50 ppm	Loss on drying (150°C)	Max. 2 %
BrO_3 (Bromate)	Max. 5 ppm	Cl (Chloride)	Max. 0.3 %
NH_4 (Ammonium)	Max. 20 ppm	SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 2 ppm	Ca (Calcium)	Max. 0.02 %
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 0.1 %
Mg (Magnesium)	Max. 20 ppm		

Cat. No.	Pk	Pack type
27739.298	1 kg	Plastic bottle for solids

Sodium bromide GPR RECTAPUR®

CAS 7647-15-6
NaBr

M.W. 102.89 g/mol
Boiling Pt: 1396 °C (1013 hPa) **Melting Pt:** 753 °C **Density:** 3,2 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490106-41

Assay (calculated on dried substance)	Min. 98 %
Heavy metals (as Pb)	Max. 50 ppm
Loss on drying (150°C)	Max. 2 %
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
27742.290	1 kg	Plastic bottle for solids

Sodium carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 497-19-8

Na_2CO_3 **M.W.** 105.99 g/mol

Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 854 °C **Density:** 2,53 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119485498-19

Assay (calculated on dried substance)	Min. 99.9 %	Heavy metals (as Pb)	Max. 5 ppm
Insoluble substances	Max. 100 ppm	Loss on drying (300 °C)	Max. 1 %
Total N (Nitrogen)	Max. 10 ppm	Total S (as SO_4)	Max. 30 ppm
Cl (Chloride)	Max. 10 ppm	PO_4 (Phosphate)	Max. 10 ppm
SiO_4 (as SiO_2)	Max. 20 ppm	Al (Aluminium)	Max. 10 ppm
Ca (Calcium)	Max. 50 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 50 ppm	Mg (Magnesium)	Max. 50 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
27771.233	250 g	Plastic bottle for solids
27771.260	500 g	Plastic bottle for solids
27771.290	1 kg	Plastic bottle for solids
27771.360	5 kg	Plastic bottle for solids

Sodium carbonate, anhydrous Ph. Eur.

Warning

CAS 497-19-8

Na_2CO_3 **M.W.** 105.99 g/mol

Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 854 °C **Density:** 2,53 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119485498-19

Assay (calc. on dried substance)	99.5 - 100.5 %	Appearance	Conforms (see CoA/CoS)
Identification A	Passes test	Identification B	Passes test
Identification C	Passes test	Solution S	Passes test
Appearance of solution	Passes test	Alkali hydroxides and bicarbonates	Passes test
Cl (Chloride)	Max. 125 ppm	SO_4 (Sulphate)	Max. 250 ppm
As (Arsenic)	Max. 5 ppm	Fe (Iron)	Max. 50 ppm
Heavy metals (as Pb)	Max. 50 ppm	Loss on drying (300 °C)	Max. 1 %
Residual solvents	Unlikely by manuf.process		

Cat. No.	Pk	Pack type
27767.295	1 kg	Plastic bottle for solids
27767.466	25 kg	Bucket (Plastic)

Sodium carbonate, proteomics grade

Warning

CAS 497-19-8

Na_2CO_3 **M.W.** 105.99 g/mol

Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 854 °C **Density:** 2,53 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119485498-19

Ammonium Hydroxide Precipitate	< 0.01%	Calcium	< 0.03 %
Chloride	< 0.001 %	Heavy Metals (as Pb)	< 0.0005 %
Insolubles	< 0.01 %	Iron	< 0.0005 %
Loss on Heating	< 1 %	Magnesium	< 0.005 %
Nitrogen Compounds	< 0.001 %	Phosphate	< 0.001 %
Potassium	< 0.005 %	Purity	> 99.5 %
Silica	<0.005%	Sulphur Compounds	<0.003%

Cat. No.	Pk	Pack type
M138-500G	500 g	Plastic bottle for solids
M138-1KG	1 kg	Plastic bottle for solids

Sodium carbonate GPR RECTAPUR®

Warning

CAS 497-19-8

Na_2CO_3 **M.W.** 105.99 g/mol

Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 854 °C **Density:** 2,53 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119485498-19

Assay (on anhydrous substance)	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27766.292	1 kg	Plastic bottle for solids
27766.361	5 kg	Bucket (Plastic)
27766.463	25 kg	Bucket (Plastic)

Sodium carbonate, purified

Warning

CAS 497-19-8

Na_2CO_3 **M.W.** 105.99 g/mol

Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 854 °C **Density:** 2,53 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119485498-19

Assay (on anhydrous substance)	Min. 98 %
Heavy metals (as Pb)	Max. 50 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
27762.367	5 kg	Bucket (Plastic)

Sodium carbonate TECHNICAL

Warning

CAS 497-19-8

Na_2CO_3 **M.W.** 105.99 g/mol

Boiling Pt: 1600 °C (1013 hPa) **Melting Pt:** 854 °C **Density:** 2,53 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119485498-19

Assay (on anhydrous substance)	Min. 97 %

Cat. No.	Pk	Pack type
27754.360	5 kg	Bucket (Plastic)
27754.460	25 kg	Bucket (Plastic)

Sodium carbonate decahydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 6132-02-1

$Na_2CO_3 \cdot 10H_2O$ **M.W.** 286.14 g/mol

Melting Pt: 33 °C **Density:** 1,46 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	99.0 - 102.0 %	Alkali hydroxides and bicarbonates	Passes test
Solution in water	Passes test	Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 5 ppm	Total S (as SO_4)	Max. 30 ppm
Cl (Chloride)	Max. 10 ppm	$PO_4 + SiO_4$ (as SiO_2)	Max. 20 ppm
Al (Aluminium)	Max. 5 ppm	As (Arsenic)	Max. 5 ppm
Ca (Calcium)	Max. 20 ppm	Fe (Iron)	Max. 2 ppm
K (Potassium)	Max. 50 ppm	Mg (Magnesium)	Max. 3 ppm

Cat. No.	Pk	Pack type
27768.298	1 kg	Plastic bottle for solids

Sodium carbonate decahydrate Ph. Eur.

Warning

CAS 6132-02-1

$Na_2CO_3 \cdot 10H_2O$ **M.W.** 286.14 g/mol

Melting Pt: 33 °C **Density:** 1,46 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (Na_2CO_3)	36.7 - 40.0 %	Appearance	Conforms (see CoA/CoS)
Identification A	Passes test	Identification B	Passes test
Identification C	Passes test	Solution S	Passes test
Appearance of solution	Passes test	Alkali hydroxides and bicarbonates	Passes test
Cl (Chloride)	Max. 50 ppm	SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 2 ppm	Fe (Iron)	Max. 20 ppm
Heavy metals (as Pb)	Max. 20 ppm	Residual solvents	Passes test

Cat. No.	Pk	Pack type
27761.295	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Sodium carbonate 0.05 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

CAS 497-19-8
$NaCO_3$
Storage Temperature: Ambient

Titer (20°C) ..... 0.04975 - 0.05025 mol/l

Cat. No.	Pk	Pack type
32063.606	60 ml	Plastic ampoule

Sodium carbonate 4% (40 g/l) in sodium hydroxide solution 0.2 mol/l Reag. Ph. Eur. 1079303

CAS 497-19-8
$NaCO_3$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87930.290	1 l	Plastic bottle

Sodium carbonate 2% (20 g/l) in sodium hydroxide solution 0.1 mol/l Reag. Ph. Eur. 1079302

CAS 497-19-8
$NaCO_3$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87929.290	1 l	Plastic bottle

Sodium carbonate 1 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1079301

CAS 497-19-8
$NaCO_3$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87928.290	1 l	Plastic bottle

Sodium carbonate 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 497-19-8
$NaCO_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31524.294	1 l	Plastic bottle

Sodium chloride HiPerSolv CHROMANORM® for HPLC

CAS 7647-14-5
NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (argentometric, after ignition) ..... Min. 99.9 %
Identity ..... Passes test
pH-value (5 %; water) ..... 5.0 - 8.0
Transmission (206 nm; 1 mol/L; 1 cm) ..... Min. 10 %
Transmission (254 nm; 1 mol/L; 1 cm) ..... Min. 95 %
Br (Bromide) ..... Max. 0.005 %
I (Iodide) ..... Max. 0.001 %
PO_4 (Phosphate) ..... Max. 0.0005 %
SO_4 (Sulphate) ..... Max. 0.001 %
Fe (Iron) ..... Max. 0.0001 %
K (Potassium) ..... Max. 0.005 %
Pb (Lead) ..... Max. 0.0002 %

Cat. No.	Pk	Pack type
153274V	500 g	Plastic bottle

NEW Sodium chloride ASTM B117 and ISO 9227 for corrosion testing

CAS 7647-14-5
NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99.8 %
Anti-caking agent ..... None added
Acidity or alkalinity ..... Max. 0.0005 meq/g
pH (25°C; 5 %) ..... 5.0 - 7.0
Heavy metals (as Pb) ..... Max. 2 ppm
Insolubility in water ..... Max. 50 ppm
Loss on drying (105°C) ..... Max. 0.1 %
Total N (Nitrogen) ..... Max. 5 ppm
Br (Bromide) ..... Max. 50 ppm
F (Fluoride) ..... Max. 0.1 %
I (Iodide) ..... Max. 0.1 %
PO_4 (Phosphate) ..... Max. 5 ppm
SO_4 (Sulphate) ..... Max. 40 ppm
As (Arsenic) ..... Max. 0.4 ppm
Ba (Barium) ..... Max. 10 ppm
Ca (Calcium) ..... Max. 5 ppm
Cu (Copper) ..... Max. 0.3 ppm
Fe (Iron) ..... Max. 1 ppm
K (Potassium) ..... Max. 10 ppm
Mg (Magnesium) ..... Max. 2 ppm
Ni (Nickel) ..... Max. 1 ppm

Cat. No.	Pk	Pack type
85139.290	1 kg	Plastic bottle for solids
85139.360	5 kg	Plastic bottle for solids
85139.460	25 kg	Bucket (Plastic)

Sodium chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7647-14-5
NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 99.5 - 100.5 %
Identification A ..... Passes test Ph.Eur.
NO_2 (Nitrite) ..... Passes test Ph.Eur.
Solution S ..... Passes test Ph.Eur.
pH (25°C; 5 %) ..... 5.0 - 9.0
Hexacyanoferrates (as $Fe(CN)_6$) ..... Max. 1 ppm
Loss on drying (105°C) ..... Max. 0.5 %
Total N (Nitrogen) ..... Max. 5 ppm
ClO_3 + NO_3 (as NO_3) ..... Max. 30 ppm
PO_4 (Phosphate) ..... Max. 5 ppm
As (Arsenic) ..... Max. 0.4 ppm
Ca (Calcium) ..... Max. 20 ppm
Fe (Iron) ..... Max. 1 ppm
Mg (Magnesium) ..... Max. 10 ppm
Conforms to ACS ..... Passes test
Appearance of solution S ..... Passes test Ph.Eur.
Identification B ..... Passes test Ph.Eur.
Solution in water ..... Passes test
Acidity or alkalinity ..... Max. 0.0005 meq/g
Heavy metals (as Pb) ..... Max. 2 ppm
Insolubility in water ..... Max. 50 ppm
Magnesium and alkaline earth metals Max. 100 ppm
Br (Bromide) ..... Max. 50 ppm
I (Iodide) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 40 ppm
Ba (Barium) ..... Max. 10 ppm
Cu (Copper) ..... Max. 2 ppm
K (Potassium) ..... Max. 50 ppm
Ni (Nickel) ..... Max. 10 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
27810.262	500 g	Plastic bottle for solids
27810.295	1 kg	Plastic bottle for solids
27810.364	5 kg	Plastic bottle for solids
27810.460	25 kg	Cardboard carton

Sodium chloride Ph. Eur.

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Br (Bromide)	Max. 100 ppm
Ferrocyanides	Passes test
I (Iodide)	Passes test
NO_2 (Nitrite)	Passes test
PO_4 (Phosphate)	Max. 25 ppm
SO_4 (Sulphate)	Max. 200 ppm
As (Arsenic)	Max. 1 ppm
Ba (Barium)	Passes test
Fe (Iron)	Max. 2 ppm
Mg and alkaline-earth metals (as Ca)	Max. 100 ppm
Heavy metals (as Pb)	Max. 5 ppm
Loss on drying (105°C)	Max. 0.5 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27808.297	1 kg	Plastic bottle for solids
27808.366	5 kg	Plastic bottle for solids
27808.468	25 kg	Bucket (Plastic)

Sodium chloride GPR RECTAPUR®

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Hexacyanoferrates (as $K_4[Fe(CN)_6]$)	Max. 15 ppm
Heavy metals (as Pb)	Max. 10 ppm
Br (Bromide)	Max. 0.02 %
I (Iodide)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27800.291	1 kg	Plastic bottle for solids
27800.360	5 kg	Plastic bottle for solids
27800.460	25 kg	Bucket (Plastic)

Sodium chloride Gen-Apex® Molecular biology grade

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %
Colouration (1 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 2 ppm
Transmittance (230 nm)	Min. 90 %
Transmittance (260 nm)	Min. 95 %
Transmittance (280 nm)	Min. 97 %
Transmittance (320 nm)	Min. 99 %

Cat. No.	Pk	Pack type
33614.265	500 g	Plastic bottle for solids

Sodium chloride Electran® Molecular biology grade

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %
Appearance	White crystalline powder
DNases (exo- and endonucleases)	Not detected
RNases	Not detected
Proteases	Not detected
pH (5 %)	5.0 - 8.0
Absorbance (260 nm) (0.1 mol/l)	Max. 0.01
Absorbance (280 nm) (0.1 mol/l)	0.01
Heavy metals (as Pb)	Max. 0.001 %
PO_4 (Phosphate)	Max. 0.001 %
SO_4 (Sulphate)	Max. 0.01 %
Ba (Barium)	Max. 0.001 %
Br (Bromide)	Max. 0.005 %
Ca (Calcium)	Max. 0.002 %
Fe (Iron)	Max. 0.0001 %
I (Iodide)	Max. 0.001 %
K (Potassium)	Max. 0.005 %
Mg (Magnesium)	Max. 0.001 %
Pb (Lead)	Max. 0.0005 %

Cat. No.	Pk	Pack type
443824T	500 g	Plastic bottle
443827W	5 kg	Plastic bottle

VWR LIFE SCIENCE Sodium chloride for biotechnology

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Common source of salts for media propagation of many organisms.

Calcium	< = 0.005%
DNase	none detected
Heavy Metals	<= 0.0005%
Iodide	<= 0.002%
Iron	<= 0.0002%
Loss on Drying	<= 0.5%
Magnesium	<= 0.005%
Nitrogen Compounds	<= 0.001%
pH (5%, Water) @25°C	5 - 9
Phosphate	<= 0.0005%
Potassium	<= 0.005%
Protease	none detected
Purity	>= 99.9%
RNase	none detected
Sulphate	<= 0.0004%

Cat. No.	Pk	Pack type
0241-500G	500 g	Plastic bottle for solids
0241-1KG	1 kg	Plastic bottle for solids
0241-2.5KG	2,5 kg	Plastic bottle for solids
0241-5KG	5 kg	Plastic bottle for solids
0241-10KG	10 kg	Bucket (Plastic)
0241-50KG	50 kg	Plastic drum

Sodium chloride TECHNICAL

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Appearance	Colourless crystals

Cat. No.	Pk	Pack type
27788.297	1 kg	Plastic bottle for solids
27788.366	5 kg	Bucket (Plastic)
27788.460	25 kg	Bucket (Plastic)

BROXO salt, tablets

CAS 7647-14-5

NaCl **M.W.** 58.44 g/mol
Boiling Pt: 1413 °C (1013 hPa) **Melting Pt:** 801 °C **Density:** 2,16 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
5254.9025	25 kg	Plastic bag

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Sodium chloride 20% in aqueous solution Reag. Ph. Eur. 1079502

CAS 7647-14-5
NaCl

Density: 1-1,2 g/cm³ (20°C)

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87931.290	1 l	Plastic bottle

Sodium chloride 180 g/l in aqueous solution

CAS 7647-14-5
NaCl

Density: 1,2 g/cm³ (20 °C)

Storage Temperature: Ambient
Concentrated saline solution for preparing isotonic (0.9% w/v) solution

Assay (W/V) ..... 17.9 - 18.1 %
pH (20°C) ..... 5.5 - 8.5

Cat. No.	Pk	Pack type
230386M	2,5 l	Glass bottle

Sodium chloride 9 g/l in aqueous solution

CAS 7647-14-5
NaCl
Storage Temperature: Ambient

Assay (W/V) ..... 0.891 to 0.909 %
Appearance ..... Clear colourless liquid
Raw materials ..... Passes test Ph. Eur.

Cat. No.	Pk	Pack type
5929.1000	1 l	Plastic bottle

Sodium chloride 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

CAS 7647-14-5
NaCl
Storage Temperature: Ambient

Titer (20°C) ..... 0.0995 - 0.1005 mol/l

Cat. No.	Pk	Pack type
32064.600	60 ml	Plastic ampoule

NEW Sodium chloride in aqueous solution USP test solutions (TS)

CAS 7647-14-5
NaCl
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85372.180	100 ml	Plastic bottle
85372.260	500 ml	Plastic bottle

Sodium chloride 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7647-14-5
NaCl
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31535.292	1 l	Glass bottle

tri-Sodium citrate dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 6132-04-3
$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$

M.W. 294.1 g/mol
Melting Pt: 150 °C
Density: 1,76 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119457027-40

Assay (calculated on anhydrous) ..... 99.0 - 101.0 %
Appearance of solution ..... Passes test Ph.Eur.
Identification B ..... Passes test Ph.Eur.
Readily carbonisable substances ..... Passes test Ph.Eur.
pH (25°C; 5 %) ..... 7.5 - 9.0
Insolubility in water ..... Max. 50 ppm
Total N (Nitrogen) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 10 ppm
PO_4 (Phosphate) ..... Max. 20 ppm
As (Arsenic) ..... Max. 1 ppm
Cu (Copper) ..... Max. 5 ppm
Li (Lithium) ..... Max. 5 ppm
Conforms to ACS ..... Passes test

Acidity or alkalinity ..... Passes test Ph.Eur.
Identification A ..... Passes test Ph.Eur.
Solution S ..... Passes test Ph.Eur.
Tartaric acid ..... Passes test
Heavy metals (as Pb) ..... Max. 5 ppm
Oxalic acid ..... Max. 100 ppm
Water ..... 11.0 - 13.0 %
NH_3 (Ammonia) ..... Max. 30 ppm
SO_4 (Sulphate) ..... Max. 40 ppm
Ca (Calcium) ..... Max. 50 ppm
Fe (Iron) ..... Max. 5 ppm
Pb (Lead) ..... Max. 5 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
27833.237	250 g	Plastic bottle for solids
27833.260	500 g	Plastic bottle for solids
27833.294	1 kg	Plastic bottle for solids
27833.363	5 kg	Plastic bottle for solids
27833.460	25 kg	Cardboard carton

tri-Sodium citrate dihydrate, crystallised Ph. Eur.

CAS 6132-04-3
$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$

M.W. 294.1 g/mol
Melting Pt: 150 °C
Density: 1,76 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119457027-40

Assay (calculated on anhydrous) ..... 99.0 - 101.0 %
Appearance ..... Conforms (see CoA/CoS)
Identification A ..... Passes test
Identification B ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Acidity or alkalinity ..... Passes test
Readily carbonisable substances ..... Passes test
Cl (Chloride) ..... Max. 50 ppm
C_2O_4 (Oxalate) ..... Max. 300 ppm
SO_4 (Sulphate) ..... Max. 150 ppm
Heavy metals (as Pb) ..... Max. 10 ppm
Water ..... 11.0 - 13.0 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
27831.297	1 kg	Plastic bottle for solids
27831.366	5 kg	Plastic bottle for solids
27831.468	25 kg	Bucket (Plastic)

tri-Sodium citrate dihydrate GPR RECTAPUR®

CAS 6132-04-3
$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$
M.W. 294.1 g/mol
Melting Pt: 150 °C
Density: 1,76 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119457027-40

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 50 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27830.294	1 kg	Plastic bottle for solids
27830.363	5 kg	Plastic bottle for solids
27830.460	25 kg	Bucket (Plastic)

tri-Sodium citrate dihydrate Gen-Apex® Molecular biology grade

CAS 6132-04-3
$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$
M.W. 294.1 g/mol
Melting Pt: 150 °C
Density: 1,76 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119457027-40

Assay	Min. 99 %
Colouration (0,1 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 2 ppm
Transmittance (260 nm)	Min. 98 %
Transmittance (280 nm)	Min. 98 %

Cat. No.	Pk	Pack type
33615.268	500 g	Plastic bottle for solids

tri-Sodium citrate dihydrate Electran® Molecular biology grade

CAS 6132-04-3
$HOC(COONa)(CH_2COONa)_2 \cdot 2H_2O$
M.W. 294.1 g/mol
Melting Pt: 150 °C
Density: 1,76 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119457027-40

Assay	Min. 99.50 %	DNases	Not detected
RNases	Not detected	Proteases	Not detected
Absorbance (260 nm) (0.1 mol/l)	Max. 0.010	Absorbance (280 nm) (0.1 mol/l)	Max. 0.010
Heavy metals (as Pb)	Max. 0.001 %	pH (20°C; 5 %)	7.50 - 9.000
Cl (Chloride)	Max. 0.001 %	PO_4 (Phosphate)	Max. 0.002 %
SO_4 (Sulphate)	Max. 0.005 %	As (Arsenic)	Max. 0.00001 %
Ca (Calcium)	Max. 0.001 %	Cd (Cadmium)	Max. 0.0005 %
Cr (Chromium)	Max. 0.0005 %	Cu (Copper)	Max. 0.0005 %
Fe (Iron)	Max. 0.0005 %	Mn (Manganese)	Max. 0.0005 %
Ni (Nickel)	Max. 0.0005 %	Pb (Lead)	Max. 0.0005 %
Zn (Zinc)	Max. 0.0005 %		

Cat. No.	Pk	Pack type
436072K	100 g	Glass bottle for solids
436075N	1 kg	Glass bottle for solids

Sodium citrate tribasic dihydrate

See tri-Sodium citrate dihydrate p.413

Sodium deoxycholate TECHNICAL

Warning

CAS 302-95-4
$C_{24}H_{39}NaO_4$
M.W. 414.56 g/mol
Melting Pt: 357-365 °C
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
27836.135	25 g	Plastic bottle for solids

Sodium dichromate dihydrate GPR RECTAPUR®

Danger

CAS 7789-12-0
UN: 3087
$Na_2Cr_2O_7 \cdot 2H_2O$
M.W. 298 g/mol
Melting Pt: 356,7 °C
Density: 2,35 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
Cl (Chloride)	Max. 0.1 %
SO_4 (Sulphate)	Max. 0.5 %

Cat. No.	Pk	Pack type
27821.260	500 g	Plastic bottle for solids
27821.293	1 kg	Plastic bottle for solids

Sodium diethyldithiocarbamate trihydrate analytical reagent

Warning

CAS 20624-25-3
UN: 3077
$(C_2H_5)_2NCSSNa \cdot 3H_2O$
M.W. 225.31 g/mol
Melting Pt: 95-98,5 °C
Density: 1,1 g/cm³ (20 °C)

Assay	Min. 97 %
Ignition residue (SO_4)	30.0 - 35.0 %
Suited for copper reagent	Passes test

Cat. No.	Pk	Pack type
83864.180	100 g	Plastic bottle for solids

Sodium dihydrogen phosphate, reagent grade

CAS 7558-80-7
NaH_2PO_4
M.W. 119.98 g/mol
Melting Pt: ~ 650 °C
Density: 0,9996 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119489796-13

Heavy Metals (as Pb)	< 0.001%
Insolubles	<= 0.03%
Moisture (KF)	<= 0.3%
pH (1%, Water) @25°C	4.4 - 4.7
Purity	>= 99.5%

Cat. No.	Pk	Pack type
0571-500G	500 g	Plastic bottle
0571-1KG	1 kg	Plastic bottle

Sodium dihydrogen phosphate GPR RECTAPUR®

CAS 7558-80-7
NaH_2PO_4
M.W. 119.98 g/mol
Melting Pt: ~ 650 °C
Density: 0,9996 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119489796-13

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
28013.264	500 g	Plastic bottle for solids
28013.366	5 kg	Plastic bottle for solids

Sodium dihydrogen phosphate monohydrate AnalaR NORMAPUR® analytical reagent

CAS 10049-21-5
$NaH_2PO_4 \cdot H_2O$
M.W. 137.99 g/mol
Melting Pt: 100 °C
Density: 2,04 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 102.0 %	Solution in water	Passes test
pH (5 %)	4.1 - 4.5	Cl (Chloride)	Max. 0.0005 %
SO_4 (Sulphate)	Max. 0.005 %	Total N (Nitrogen)	Max. 0.001 %
Heavy metals (as Pb)	Max. 0.0005 %	As (Arsenic)	Max. 0.00005 %
Ca (Calcium)	Max. 0.005 %	Cu (Copper)	Max. 0.0002 %
Fe (Iron)	Max. 0.0005 %	K (Potassium)	Max. 0.005 %
Pb (Lead)	Max. 0.0005 %		

Cat. No.	Pk	Pack type
102454R	500 g	Plastic bottle
102455S	1 kg	Plastic bottle

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Sodium dihydrogen phosphate monohydrate Electran® Molecular biology grade

CAS 10049-21-5
$NaH_2PO_4 \cdot H_2O$
M.W. 137.99 g/mol
Melting Pt: 100 °C
Density: 2,04 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
444435X	1 kg	Plastic bottle

Sodium dihydrogen phosphate dihydrate AnalaR NORMAPUR® analytical reagent

CAS 13472-35-0
$NaH_2PO_4 \cdot 2H_2O$
M.W. 156.01 g/mol
Boiling Pt: < 650 °C (1013 hPa) **Melting Pt:** 60 °C
Density: 1,91 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119489796-13

Assay	Min. 99.0 %	pH (20°C; 5 %)	4.2 - 4.5
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Total N (Nitrogen)	Max. 20 ppm	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 100 ppm	As (Arsenic)	Max. 0.5 ppm
Fe (Iron)	Max. 5 ppm		

Cat. No.	Pk	Pack type
28015.261	500 g	Plastic bottle for solids
28015.294	1 kg	Plastic bottle for solids

Sodium dihydrogen phosphate dihydrate Ph. Eur.

CAS 13472-35-0
$NaH_2PO_4 \cdot 2H_2O$
M.W. 156.01 g/mol
Boiling Pt: < 650 °C (1013 hPa) **Melting Pt:** 60 °C
Density: 1,91 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119489796-13

Assay (calculated on dried substance)	98.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (5 %)	4.2 - 4.5
Reducing substances	Passes test
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 300 ppm
As (Arsenic)	Max. 2 ppm
Heavy metals (as Pb)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm
Loss on drying (130°C)	21.5 - 24.0 %
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
28014.291	1 kg	Plastic bottle for solids
28014.360	5 kg	Plastic bottle for solids

Sodium dihydrogen phosphate dihydrate GPR RECTAPUR®

CAS 13472-35-0
$NaH_2PO_4 \cdot 2H_2O$
M.W. 156.01 g/mol
Boiling Pt: < 650 °C (1013 hPa) **Melting Pt:** 60 °C
Density: 1,91 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119489796-13

Assay	Min. 98.0 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
28011.260	500 g	Plastic bottle for solids
28011.291	1 kg	Plastic bottle for solids
28011.360	5 kg	Plastic bottle for solids
28011.460	25 kg	Bucket (Plastic)

Sodium dihydrogen phosphate buffer solution (Sodium dihydrogen orthophosphate/ Phosphoric acid) for chlorine determination in water monitors

pH value	pH accuracy	pH buffer type	Colour	Pk	Cat. No.
2,30	±0,05	Phosphate	Colourless	25 l	160918E

Sodium 3α,12α-dihydroxy-5β-cholanoate

See Sodium deoxycholate p.414

Sodium dioxoarsenate

See Sodium metaarsenite p.429

tetra-Sodium diphosphate decahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 13472-36-1
$Na_4P_2O_7 \cdot 10H_2O$
M.W. 446.06 g/mol
Melting Pt: 990 °C
Density: 1,82 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	99.0 - 103.0 %	pH (25°C; 5 %)	9.5 - 10.5
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Nitrogen compounds (as N)	Max. 10 ppm	Orthophosphates (as PO_4)	Max. 0.5 %
Cl (Chloride)	Max. 20 ppm	NH_4 (Ammonium)	Max. 10 ppm
NO_3 (Nitrate)	Max. 20 ppm	SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 1 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 100 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
28055.292	1 kg	Plastic bottle for solids

tetra-Sodium diphosphate decahydrate GPR RECTAPUR®

Warning

CAS 13472-36-1
$Na_4P_2O_7 \cdot 10H_2O$
M.W. 446.06 g/mol
Melting Pt: 990 °C
Density: 1,82 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
28053.295	1 kg	Plastic bottle for solids

Sodium disulphite

See Sodium metabisulphite p.429

Sodium dithionite TECHNICAL

Danger

CAS 7775-14-6
$Na_2S_2O_4$
UN: 1384
M.W. 174.11 g/mol
Melting Pt: 100 °C
Density: 2,19 g/cm³ (20 °C)
Storage Temperature: Ambient
REACh: 01-2119520510-57

Identification	Passes test

Cat. No.	Pk	Pack type
27888.293	1 kg	Plastic bottle for solids

Sodium dodecyl sulphate (SDS) AnalaR NORMAPUR® analytical reagent

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

A general biochemical reagent often used as a detergent for electrophoresis

Assay (calculated on anhydrous)	Min. 99 %	Assay (C_{12} compounds)(calc.on anhydrous)	Min. 99 %
IR Spectrum	Passes test	Insolubility in water	Max. 30 ppm
Loss on drying (100°C)	Max. 1.5 %	Cl (Chloride)	Max. 100 ppm
PO_4 (Phosphate)	Max. 10 ppm	Cu (Copper)	Max. 1 ppm
Fe (Iron)	Max. 2 ppm	Pb (Lead)	Max. 5 ppm
Absorbance (220-350 nm) (3 %)	Max. 0.1		

Cat. No.	Pk	Pack type
108073J	100 g	Plastic bottle for solids

Sodium dodecyl sulphate (SDS) GPR RECTAPUR®

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Assay (calculated on anhydrous)	Min. 98 %
Cl (Chloride)	Max. 0.1 %
PO_4 (Phosphate)	Max. 10 ppm

Cat. No.	Pk	Pack type
27926.238	250 g	Plastic bottle for solids
27926.295	1 kg	Plastic bottle for solids

Sodium dodecyl sulphate (SDS) Gen-Apex® Molecular biology grade

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Assay (calculated on anhydrous)	Min. 98.5 %
Colouration (0,2 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 10 ppm
Transmittance (230 nm) (0,2 mol/l)	Min. 68 %
Transmittance (260 nm) (0,2 mol/l)	Min. 80 %
Transmittance (280 nm) (0.2 mol/l)	Min. 90 %
Transmittance (320 nm) (0.2 mol/l)	Min. 95 %

Cat. No.	Pk	Pack type
33629.266	500 g	Plastic bottle for solids

Sodium dodecyl sulphate (SDS), specially pure

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Assay (calculated on anhydrous)	Min. 98.0 %
Assay (C_{12} compounds)(calc.on anhydrous)	Min. 98.0 %
IR Spectrum	Passes test
Acidity or alkalinity	Max. 0.05 meq/g
Loss on drying (100°C)	Max. 1.5 %
Cl (Chloride)	Max. 0.03 %
PO_4 (Phosphate)	Max. 10 ppm
Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 2 ppm
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
442442F	100 g	Plastic bottle for solids
442444H	500 g	Plastic bottle for solids

Sodium dodecyl sulphate (SDS) for biochemistry, specially purified

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Assay (calculated on anhydrous)	Min. 99.0 %
Assay (C_{12} compounds)(calc.on anhydrous)	Min. 98.5 %
IR Spectrum	Passes test
Cl (Chloride)	Max. 0.03 %
PO_4 (Phosphate)	Max. 1 ppm
Pb (Lead)	Max. 2 ppm
Absorbance (220-350 nm) (3 %)	Max. 0.1

Cat. No.	Pk	Pack type
44215HN	1 kg	Plastic bottle for solids

Sodium dodecyl sulphate (SDS), proteomics grade

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Anionic detergent. Strong detergent utilised in lysis buffers for the complete disruption of membranes and denaturation of proteins.

Abs.@260nm (3%, Water)	0.1
Abs.@280nm (3%, Water)	0.1
Chloride	0.1 %
Copper	0.0005 %
DNase	NONE
Heavy Metals (as Pb)	0.0005 %
Identification	NONE
Iron	0.0001 %
Phosphate	0.0005 %
Protease	NONE
Purity	99.0 %
RNase	NONE
Solubility (10%, Water)	PASS

Cat. No.	Pk	Pack type
M107-100G	100 g	Plastic bottle for solids
M107-250G	250 g	Plastic bottle for solids
M107-500G	500 g	Plastic bottle for solids
M107-1KG	1 kg	Plastic bottle for solids

Sodium dodecyl sulphate (SDS) for biotechnology

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Abs.@260nm (3%, Water)	< 0.1
Abs.@280nm (3%, Water)	<= 0.1
Chloride	<= 0.1%
Copper	<= 0.0005%
DNase	none detected
Heavy Metals (as Pb)	<= 0.0005%
Iron	<= 0.0001%
Phosphate	<= 0.0005%
Protease	none detected
Purity	>= 99%
RNase	none detected
Solubility (10%, Water)	Pass

Cat. No.	Pk	Pack type
0227-100G	100 g	Plastic bottle for solids
0227-250G	250 g	Plastic bottle for solids
0227-500G	500 g	Plastic bottle for solids
0227-1KG	1 kg	Plastic bottle for solids
0227-5KG	5 kg	Bucket (Plastic)

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Sodium dodecyl sulphate (SDS) Molecular biology grade

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Assay	Min. 99.00 %
Assay (C_{10} compounds)	Max. 1.0 %
Assay (C_{12} compounds)	Min. 98.0 %
Assay (C_{14} compounds)	Max. 1 %
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Absorbance (260 nm) (0.1 mol/l)	Max. 0.050
Absorbance (280 nm) (0.1 mol/l)	Max. 0.050
Heavy metals (as Pb)	Max. 0.0005 %
pH (10 %)	6.00 - 7.50
Solubility in ethanol	Passes test
Water	Max. 1.0 %
Cl (Chloride)	Max. 0.005 %
PO_4 (Phosphate)	Max. 0.0001 %
Pb (Lead)	Max. 0.0001 %

Cat. No.	Pk	Pack type
444462R	50 g	Glass bottle for solids
444464T	500 g	Glass bottle for solids

Sodium dodecyl sulphate (SDS) TECHNICAL

Danger

CAS 151-21-3 **UN:** 1325
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Melting Pt: 204-207 °C **Density:** 1,1 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489461-32

Assay	Min. 95 %
Sodium chloride	Max. 1.0 %
Sodium sulphate	Max. 2.5 %

Cat. No.	Pk	Pack type
83886.290	1 kg	Plastic bottle for solids

Sodium dodecyl sulphate (SDS) 200 g/l in aqueous solution, proteomics grade

Danger

CAS 151-21-3
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Density: 1-1,1 g/cm³ (20°C)

Storage Temperature: Ambient
Strong detergent utilised in lysis buffers for the complete disruption of membranes and denaturation of proteins.

DNase	NONE
pH @25 °C	5.0 - 8.0
Protease	NONE
RNase	NONE

Cat. No.	Pk	Pack type
M112-200ML	200 ml	Plastic bottle
M112-500ML	500 ml	Plastic bottle

Sodium dodecyl sulphate (SDS) 200 g/l in aqueous solution for biotechnology

Danger

CAS 151-21-3
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Density: 1-1,1 g/cm³ (20°C)

Storage Temperature: Ambient

Conductivity	2 2800 umhos - 27600 umhos
pH @25°C	5 - 8

Cat. No.	Pk	Pack type
0837-200ML	200 ml	Plastic bottle
0837-500ML	500 ml	Plastic bottle

Sodium dodecyl sulphate (SDS) 100 g/l in aqueous solution Electran® for electrophoresis

Danger

CAS 151-21-3
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Density: 1-1,1 g/cm³ (20°C)

Storage Temperature: Ambient
Prepared from 10807 SDS AnalaR NORMAPUR®

Assay (W/V) (at preparation)	9.8 - 10.2 %

Cat. No.	Pk	Pack type
444062F	100 ml	Glass bottle

Sodium dodecyl sulphate (SDS) 100 g/l in aqueous solution, ultrapure

Danger

CAS 151-21-3
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Density: 1-1,1 g/cm³ (20°C)

Storage Temperature: Ambient

Color (APHA)	< 5

Cat. No.	Pk	Pack type
E719-100ML	100 ml	Plastic bottle

Sodium dodecyl sulphate (SDS) 100 g/l in aqueous solution, proteomics grade

Danger

CAS 151-21-3
$CH_3(CH_2)_{11}OSO_3Na$ **M.W.** 288.38 g/mol
Density: 1-1,1 g/cm³ (20°C)

Storage Temperature: Ambient
Strong detergent utilised in lysis buffers for the complete disruption of membranes and denaturation of proteins.

Colour (APHA)	5
DNase	NONE
Protease	NONE
RNase	NONE

Cat. No.	Pk	Pack type
M111-100ML	100 ml	Plastic bottle

Sodium ethanedioate

See di-Sodium oxalate p.431

Sodium feredetate

See EDTA ferric monosodium salt p.131

Sodium fluoride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 7681-49-4 **UN:** 1690
NaF **M.W.** 41.99 g/mol
Boiling Pt: 1700 °C (1013 hPa) **Melting Pt:** 993 °C **Density:** 2,8 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calc. on dried substance)	99.0 - 100.5 %	Appearance of solution	Passes test Ph.Eur.
Identification A	Passes test Ph.Eur.	Identification B	Passes test Ph.Eur.
Identification C	Passes test Ph.Eur.	Solution S	Passes test Ph.Eur.
Acidity	Max. 0.03 meq/g	Alkalinity	Max. 0.01 meq/g
Heavy metals (as Pb)	Max. 10 ppm	Insolubility in water	Max. 100 ppm
Loss on drying (150°C)	Max. 0.2 %	Sodium fluosilicate (Na_2SiF_6)	Max. 0.1 %
Cl (Chloride)	Max. 30 ppm	SO_3 (Sulphite)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm	Fe (Iron)	Max. 20 ppm
K (Potassium)	Max. 0.02 %	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
27860.231	250 g	Plastic bottle for solids
27860.297	1 kg	Plastic bottle for solids

Sodium fluoride Ph. Eur.

Danger

CAS 7681-49-4 **UN:** 1690

NaF **M.W.** 41.99 g/mol

Boiling Pt: 1700 °C (1013 hPa) **Melting Pt:** 993 °C **Density:** 2,8 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated on dried substance)	98.5 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Acidity or alkalinity	Passes test
Cl (Chloride)	Max. 200 ppm
Fluorosilicates	Passes test
SO_4 (Sulphate)	Max. 200 ppm
Loss on drying (130°C)	Max. 0.5 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27859.293	1 kg	Plastic bottle for solids
27859.464	25 kg	Bucket (Plastic)

Sodium fluoride, purified

Danger

CAS 7681-49-4 **UN:** 1690

NaF **M.W.** 41.99 g/mol

Boiling Pt: 1700 °C (1013 hPa) **Melting Pt:** 993 °C **Density:** 2,8 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
27858.290	1 kg	Plastic bottle for solids

Sodium formate AnalaR NORMAPUR®

CAS 141-53-7

HCO_2Na **M.W.** 68.01 g/mol

Melting Pt: 257,31 °C **Density:** 1,919 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119486468-21

Assay	Min. 99 %	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 10 ppm
SO_4 (Sulphate)	Max. 10 ppm	Ca (Calcium)	Max. 50 ppm
Fe (Iron)	Max. 5 ppm		

Cat. No.	Pk	Pack type
84850.260	500 g	Plastic bottle for solids

Sodium formate GPR RECTAPUR®

CAS 141-53-7

HCO_2Na **M.W.** 68.01 g/mol

Melting Pt: 257,31 °C **Density:** 1,919 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119486468-21

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 5 ppm
Cl (Chloride)	Max. 20 ppm
NH_4 (Ammonium)	Max. 20 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
27869.297	1 kg	Plastic bottle for solids

Sodium D-gluconate TECHNICAL

CAS 527-07-1

$HOH_2C(CH(OH))_4COONa$ **M.W.** 218.14 g/mol

Melting Pt: 170-175 °C

Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
27871.295	1 kg	Plastic bottle for solids

Sodium-L(+)-glutamate monohydrate TECHNICAL

CAS 6106-04-3

$C_5H_8NNaO_4 \cdot H_2O$ **M.W.** 187.13 g/mol

Melting Pt: 225-240 °C

Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
27872.298	1 kg	Plastic bottle for solids

di-Sodium β-glycerophosphate pentahydrate GPR RECTAPUR®

CAS 13408-09-8

$C_3H_7Na_2O_6P \cdot 5H_2O$ **M.W.** 306.11 g/mol

Assay (calculated on anhydrous)	Min. 98 %
Alkalinity	Max. 0.15 meq/g
Heavy metals (as Pb)	Max. 20 ppm
Water	25 - 35 %
PO_4 (Phosphate)	Max. 0.1 %

Cat. No.	Pk	Pack type
27874.295	1 kg	Plastic bottle for solids

Sodium 1-heptanesulphonate

See 1-Heptanesulphonic acid sodium salt p.186

Sodium hexametaphosphate, flake GPR RECTAPUR®

CAS 10124-56-8

$Na_2P_6O_{18}$ **M.W.** 611.77 g/mol

Melting Pt: 610 °C **Density:** 1,25 g/cm³ (20 °C)

Substances insoluble in water	Max. 0.1 %
pH range	6.2 - 7.4
Hg (Mercury)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
301475H	2,5 kg	Glass bottle

Sodium 1-hexanesulphonate

See 1-Hexanesulphonic acid sodium salt p.189

Sodium hydrogen carbonate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 144-55-8

$NaHCO_3$ **M.W.** 84.01 g/mol

Melting Pt: 270 °C **Density:** 2,159 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calc. on dried substance)	99.7 - 100.3 %	Appearance of solution	Passes test Ph.Eur.
Carbonates	Passes test Ph.Eur.	Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.	Identification C	Passes test Ph.Eur.
Solution S	Passes test Ph.Eur.	Heavy metals (as Pb)	Max. 5 ppm
Insolubility in water	Max. 0.015 %	Loss on drying	Max. 0.2 %
Reducing substances (as I)	Max. 65 ppm	Total N (Nitrogen)	Max. 5 ppm
Total S (as SO_4)	Max. 30 ppm	Cl (Chloride)	Max. 30 ppm
NH_4 (Ammonium)	Max. 5 ppm	PO_4 (Phosphate)	Max. 10 ppm
SO_4 (Sulphate)	Max. 20 ppm	As (Arsenic)	Max. 2 ppm
Ca (Calcium)	Max. 100 ppm	Cu (Copper)	Max. 2 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 50 ppm	Pb (Lead)	Max. 5 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
27778.236	250 g	Plastic bottle for solids
27778.260	500 g	Plastic bottle for solids
27778.293	1 kg	Plastic bottle for solids
27778.360	5 kg	Plastic bottle for solids
27778.460	25 kg	Cardboard carton

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Sodium hydrogen carbonate Ph. Eur.

CAS 144-55-8
$NaHCO_3$ **M.W.** 84.01 g/mol
Melting Pt: 270 °C **Density:** 2,159 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 101.0 %
Appearance	White crystalline powder
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
CO_3 (Carbonate)	Passes test
Cl (Chloride)	Max. 150 ppm
SO_4 (Sulphate)	Max. 150 ppm
NH_4 (Ammonium)	Max. 20 ppm
As (Arsenic)	Max. 2 ppm
Ca (Calcium)	Max. 100 ppm
Fe (Iron)	Max. 20 ppm
Heavy metals (as Pb)	Max. 10 ppm
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
27775.293	1 kg	Plastic bottle for solids
27775.362	5 kg	Plastic bottle for solids
27775.464	25 kg	Bucket (Plastic)

Sodium hydrogen carbonate GPR RECTAPUR®

CAS 144-55-8
$NaHCO_3$ **M.W.** 84.01 g/mol
Melting Pt: 270 °C **Density:** 2,159 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27776.296	1 kg	Plastic bottle for solids
27776.365	5 kg	Plastic bottle for solids
27776.460	25 kg	Bucket (Plastic)

Sodium hydrogen carbonate TECHNICAL

CAS 144-55-8
$NaHCO_3$ **M.W.** 84.01 g/mol
Melting Pt: 270 °C **Density:** 2,159 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
27780.291	1 kg	Plastic bottle for solids
27780.360	5 kg	Bucket (Plastic)

Sodium hydrogen carbonate 0.35% in aqueous solution AVS TITRINORM® volumetric solution

CAS 144-55-8
$NaHCO_3$
Storage Temperature: Ambient

Assay	0.3 - 0.4 %

Cat. No.	Pk	Pack type
307212.2500	2,5 l	Plastic bottle

Sodium hydrogen carbonate 0.5 mol/l in aqueous solution Reag. Ph. Eur. 1081301

CAS 144-55-8
$NaHCO_3$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87932.290	1 l	Plastic bottle

di-Sodium hydrogen phosphate, anhydrous AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

CAS 7558-79-4
Na_2HPO_4 **M.W.** 141.96 g/mol
Melting Pt: 250 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489797-11

Assay	Min. 99.0 %	pH (25°C; 5 %)	8.7 - 9.3
Heavy metals (as Pb)	Max. 10 ppm	Insolubility in water	Max. 100 ppm
Loss on drying (105°C)	Max. 0.2 %	Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 50 ppm	Cu (Copper)	Max. 3 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 100 ppm
Pb (Lead)	Max. 10 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
102494C	500 g	Plastic bottle for solids
102495D	2,5 kg	Plastic bottle for solids
10249LT	25 kg	Cardboard carton

di-Sodium hydrogen phosphate GPR RECTAPUR®

CAS 7558-79-4
Na_2HPO_4 **M.W.** 141.96 g/mol
Melting Pt: 250 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489797-11

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
As (Arsenic)	Max. 2 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
28026.260	500 g	Plastic bottle for solids
28026.292	1 kg	Plastic bottle for solids
28026.361	5 kg	Plastic bottle for solids
28026.460	25 kg	Bucket (Plastic)

di-Sodium hydrogen phosphate, anhydrous Electran® Molecular biology grade

CAS 7558-79-4
Na_2HPO_4 **M.W.** 141.96 g/mol
Melting Pt: 250 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119489797-11

Appearance	White powder
Assay (acidimetric)	Min. 99.5 %
Cl (Chloride)	Max. 0.005 %
Heavy metals (as Pb)	Max. 0.001 %
Absorbance (260 nm) (0.1 mol/l)	Max. 0.05
Absorbance (280 nm) (0.1 mol/l)	Max. 0.05
DNases (exo- and endonucleases)	Not detected
RNases	Not detected
Proteases	Not detected

Cat. No.	Pk	Pack type
444423K	250 g	Plastic bottle for solids
444425M	1 kg	Glass bottle for solids

di-Sodium hydrogen phosphate dihydrate AnalaR NORMAPUR® analytical reagent

CAS 10028-24-7
$Na_2HPO_4 \cdot 2H_2O$
M.W. 177.99 g/mol
Melting Pt: 92,5 °C
Density: 2,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Identification	Passes test
Solution in water	Passes test	pH (20°C; 5 %)	9.0 - 9.2
Heavy metals (as Pb)	Max. 10 ppm	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 20 ppm	SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 0.5 ppm	Cu (Copper)	Max. 3 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 50 ppm
Pb (Lead)	Max. 10 ppm		

Cat. No.	Pk	Pack type
28029.235	250 g	Plastic bottle for solids
28029.260	500 g	Plastic bottle for solids
28029.292	1 kg	Plastic bottle for solids
28029.320	2,5 kg	Plastic bottle for solids
28029.460	25 kg	Cardboard carton

di-Sodium hydrogen phosphate dihydrate Ph. Eur., USP

CAS 10028-24-7
$Na_2HPO_4 \cdot 2H_2O$
M.W. 177.99 g/mol
Melting Pt: 92,5 °C
Density: 2,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	98.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test Ph.Eur.
Identification (Na)	Passes test
Identification B	Passes test Ph.Eur.
Identification (PO_4)	Passes test
Solution S	Passes test Ph.Eur.
Appearance of solution	Passes test Ph.Eur.
Insoluble substances	Max. 0.4 %
Reducing substances	Passes test Ph.Eur.
Monosodium phosphate	Max. 2.5 %
Cl (Chloride)	Max. 400 ppm
SO_4 (Sulphate)	Max. 0.1 %
As (Arsenic)	Max. 4 ppm
Fe (Iron)	Max. 40 ppm
Heavy metals (as Pb)	Max. 20 ppm
Loss on drying (130°C)	19.5 - 21 %
Metal catalysts	Unlikely by manuf.process
Residual solvents	Unlikely by manuf.process
Conforms to Ph.Eur.	Passes test
Conforms to USP	Passes test

Cat. No.	Pk	Pack type
87010.290	1 kg	Plastic bottle for solids
87010.360	5 kg	Bucket (Plastic)
87010.460	25 kg	Bucket (Plastic)

di-Sodium hydrogen phosphate dihydrate GPR RECTAPUR®

CAS 10028-24-7
$Na_2HPO_4 \cdot 2H_2O$
M.W. 177.99 g/mol
Melting Pt: 92,5 °C
Density: 2,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.05 %
As (Arsenic)	Max. 2 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
28040.291	1 kg	Plastic bottle for solids

di-Sodium hydrogen phosphate dodecahydrate AnalaR NORMAPUR® analytical reagent

CAS 10039-32-4
$Na_2HPO_4 \cdot 12H_2O$
M.W. 358.14 g/mol
Melting Pt: 35 °C
Density: 1,52 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 99.0 %	pH (20°C; 5 %)	9.0 - 9.4
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 0.2 %
Loss on drying (120°C)	50.0 - 60.5 %	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 5 ppm	SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 0.5 ppm	Cu (Copper)	Max. 2 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 100 ppm
Pb (Lead)	Max. 5 ppm	Zn (Zinc)	Max. 1 ppm

Cat. No.	Pk	Pack type
28028.260	500 g	Plastic bottle for solids
28028.298	1 kg	Plastic bottle for solids
28028.367	5 kg	Plastic bottle for solids

di-Sodium hydrogen phosphate dodecahydrate Ph. Eur.

CAS 10039-32-4
$Na_2HPO_4 \cdot 12H_2O$
M.W. 358.14 g/mol
Melting Pt: 35 °C
Density: 1,52 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	98.5 - 102.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification C	Passes test
Identification D	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Reducing substances	Passes test
Monosodium phosphate	Max. 2.5 %
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 500 ppm
As (Arsenic)	Max. 2 ppm
Fe (Iron)	Max. 20 ppm
Heavy metals (as Pb)	Max. 10 ppm
Water	57.0 - 61.0 %
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
28035.293	1 kg	Plastic bottle for solids
28035.362	5 kg	Plastic bottle for solids

di-Sodium hydrogen phosphate dodecahydrate, purified

CAS 10039-32-4
$Na_2HPO_4 \cdot 12H_2O$
M.W. 358.14 g/mol
Melting Pt: 35 °C
Density: 1,52 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
28020.292	1 kg	Plastic bottle for solids
28020.361	5 kg	Plastic bottle for solids
28020.460	25 kg	Bucket (Plastic)

di-Sodium hydrogen phosphate dodecahydrate Gen-Apex® Molecular biology grade

CAS 10039-32-4
$Na_2HPO_4 \cdot 12H_2O$
M.W. 358.14 g/mol
Melting Pt: 35 °C
Density: 1,52 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Colouration (0,1 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 5 ppm
Transmittance (230 nm)	Min. 90 %
Transmittance (260 nm)	Min. 95 %
Transmittance (280 nm)	Min. 97 %
Transmittance (320 nm)	Min. 99 %

Cat. No.	Pk	Pack type
33617.265	500 g	Plastic bottle for solids

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di-Sodium hydrogen phosphate dodecahydrate 9% in aqueous solution Reag. Ph. Eur. 1033301

CAS 10039-32-4
$Na_2HPO_4 \cdot 12H_2O$ **M.W.** 358.14 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87825.290	1 l	Plastic bottle

Sodium hydrogen sulphate monohydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 10034-88-5 **UN:** 3260
$NaHSO_4 \cdot H_2O$ **M.W.** 138.08 g/mol
Melting Pt: 183 °C **Density:** 2,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %	Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 10 ppm	Cl (Chloride)	Max. 10 ppm
PO_4 (Phosphate)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
28120.231	250 g	Plastic bottle for solids
28120.297	1 kg	Plastic bottle for solids

Sodium hydrogen sulphite, reagent grade

Danger

CAS 7631-90-5 **UN:** 2693
$HNaO_3S$ **M.W.** 104.06 g/mol
Melting Pt: 300 °C **Density:** 2,476 g/cm³ (20 °C)
Storage Temperature: Ambient

Chloride Content	< 0.02%
Heavy Metals (as Pb)	< 0.001 %
Insoluble Matter	< 0.005 %
Iron	< 0.002 %
Titration by Na2SO3 (%SO2)	> 58.5 %

Cat. No.	Pk	Pack type
N822-500G	500 g	Glass bottle for solids

Sodium hydrogen sulphite 50% (w/v) in aqueous solution TECHNICAL

Warning

CAS 7631-90-5 **UN:** 2693
$NaHSO_3$

Assay (W/V)	Min. 50 %
Ionised chlorine	Max. 0.05 %

Cat. No.	Pk	Pack type
28132.298	1 l	Glass bottle
28132.367	5 l	Plastic bottle

Sodium hydroxide, pellets AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 1310-73-2 **UN:** 1823
NaOH **M.W.** 40 g/mol
Boiling Pt: 1390 °C (1013 hPa) **Melting Pt:** 323 °C **Density:** 2,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457892-27

Assay	98.5 - 100.5 %	Appearance	White pastilles
Appearance of solution	Passes test Ph.Eur.	Identification B	Passes test Ph.Eur.
Solution in water	Passes test	Solution S	Passes test Ph.Eur.
pH (20°C; 0.01 %)	Min. 11.0	Heavy metals (as Ag)	Max. 20 ppm
Heavy metals (as Pb)	Max. 5 ppm	Total N (Nitrogen)	Max. 3 ppm
CO_3 (as Na_2CO_3)	Max. 1.0 %	Cl (Chloride)	Max. 50 ppm
PO_4 (Phosphate)	Max. 5 ppm	SiO_4 (as SiO_2)	Max. 10 ppm
SO_4 (Sulphate)	Max. 5 ppm	As (Arsenic)	Max. 1 ppm
Al (Aluminium)	Max. 5 ppm	Ca (Calcium)	Max. 5 ppm
Cu (Copper)	Max. 2 ppm	Fe (Iron)	Max. 5 ppm
Hg (Mercury)	Max. 0.1 ppm	K (Potassium)	Max. 0.02 %
Mg (Magnesium)	Max. 5 ppm	Ni (Nickel)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm	Zn (Zinc)	Max. 10 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
28244.262	500 g	Plastic bottle for solids
28244.295	1 kg	Plastic bottle for solids
28244.364	5 kg	Plastic bottle for solids
28244.466	25 kg	Bucket (Plastic)

Sodium hydroxide, pellets AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent (max. 0.0002% K)

Danger

CAS 1310-73-2 **UN:** 1823
NaOH **M.W.** 40 g/mol
Boiling Pt: 1390 °C (1013 hPa) **Melting Pt:** 323 °C **Density:** 2,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457892-27

Assay	Min. 98.5 %	Total N (Nitrogen)	Max. 3 ppm
Cl (Chloride)	Max. 5 ppm	CO_3 (as Na_2CO_3)	Max. 1 %
PO_4 (Phosphate)	Max. 1 ppm	SiO_4 (as SiO_2)	Max. 5 ppm
SO_4 (Sulphate)	Max. 5 ppm	Al (Aluminium)	Max. 2 ppm
Ca (Calcium)	Max. 5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Cu (Copper)	Max. 0.5 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 2 ppm	Mg (Magnesium)	Max. 20 ppm
Mn (Manganese)	Max. 0.1 ppm	Ni (Nickel)	Max. 1 ppm
Pb (Lead)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.2 ppm

Cat. No.	Pk	Pack type
1737.1000	1 kg	Plastic bottle for solids

Sodium hydroxide, pellets Ph. Eur.

Danger

CAS 1310-73-2 **UN:** 1823
NaOH **M.W.** 40 g/mol
Boiling Pt: 1390 °C (1013 hPa) **Melting Pt:** 323 °C **Density:** 2,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457892-27

Assay (calculated as NaOH)	97.0- 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (20°C; 0,01 %)"	Min. 11.0
CO_3 (as Na_2CO_3)	Max. 2.0 %
Cl (Chloride)	Max. 200 ppm
SO_4 (Sulphate)	Max. 200 ppm
Fe (Iron)	Max. 10 ppm
Heavy metals (as Pb)	Max. 20 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
28248.298	1 kg	Plastic bottle for solids
28248.367	5 kg	Plastic bottle for solids
28248.460	25 kg	Bucket (Plastic)

Sodium hydroxide, pellets GPR RECTAPUR®

Danger

CAS 1310-73-2 **UN:** 1823
NaOH
M.W. 40 g/mol
Boiling Pt: 1390 °C (1013 hPa) **Melting Pt:** 323 °C **Density:** 2,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457892-27

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 5 ppm
Total N (Nitrogen)	Max. 5 ppm
CO_3 (as Na_2CO_3)	Max. 1.0 %
Cl (Chloride)	Max. 50 ppm
PO_4 (Phosphate)	Max. 20 ppm
SiO_4 (as SiO_2)	Max. 100 ppm
SO_4 (Sulphate)	Max. 50 ppm
Al (Aluminium)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm
K (Potassium)	Max. 0.1 %
Pb (Lead)	Max. 5 ppm

Cat. No.	Pk	Pack type
28245.265	500 g	Plastic bottle for solids
28245.298	1 kg	Plastic bottle for solids
28245.320	2,5 kg	Plastic bottle for solids
28245.367	5 kg	Plastic bottle for solids
28245.460	25 kg	Bucket (Plastic)

Sodium hydroxide, pellets, proteomics grade

Danger

CAS 1310-73-2 **UN:** 1823
NaOH
M.W. 40 g/mol
Boiling Pt: 1390 °C (1013 hPa) **Melting Pt:** 323 °C **Density:** 2,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457892-27

Chloride	< 0.005%
DNase	none detected
Heavy Metals	< 0.002 %
Iron	< = 0.001 %
Mercury	< = 0.1 ppm
Nickel	< = 0.001 %
Nitrogen Compounds	<= 0.001 %
Phosphate	< = 0.001 %
Potassium	<= 0.02 %
Protease	none
Purity	> = 97 %
RNase	none detected
Sodium Carbonate	< = 1 %
Sulphate	<= 0.003%

Cat. No.	Pk	Pack type
M137-500G	500 g	Plastic bottle for solids
M137-1KG	1 kg	Plastic bottle for solids

Sodium hydroxide, shots TECHNICAL

Danger

CAS 1310-73-2 **UN:** 1823
NaOH
M.W. 40 g/mol
Boiling Pt: 1390 °C (1013 hPa) **Melting Pt:** 323 °C **Density:** 2,13 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119457892-27

Assay	Min. 97.0 %
Sodium carbonate	Max. 1.5 %

Cat. No.	Pk	Pack type
28240.292	1 kg	Plastic bottle for solids
28240.361	5 kg	Bucket (Plastic)
28240.460	25 kg	Bucket (Plastic)

Sodium hydroxide 50% in aqueous solution Reag. Ph. Eur. 1081406 carbonate free

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87938.290	1 l	Plastic bottle

Sodium hydroxide 50% in aqueous solution GPR RECTAPUR®

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	47 - 51 %
Sodium carbonate	Max. 0.5 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
84522.320	2,5 l	Plastic bottle

Sodium hydroxide 50% in aqueous solution TECHNICAL

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	47 - 51 %

Cat. No.	Pk	Pack type
28265.322	2,5 l	Plastic bottle
28265.366	5 l	Plastic bottle
28265.446	20 l	Plastic drum

Sodium hydroxide 50% (w/v) in aqueous solution GPR RECTAPUR®

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,39 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (W/V)	48.0 - 50.5 %

Cat. No.	Pk	Pack type
191543M	1 l	Plastic bottle
191546P	5 l	Plastic container

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Sodium hydroxide 35% in aqueous solution GPR RECTAPUR®

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	34 - 36 %
Density (20/4)	1.370 - 1.390
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
28224.296	1 l	Plastic bottle
28224.365	5 l	Plastic bottle

Sodium hydroxide 35% in aqueous solution TECHNICAL

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 34 %
Heavy metals (as Pb)	Max. 50 ppm
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
28221.296	1 l	Plastic bottle
28221.365	5 l	Plastic bottle
28221.445	20 l	Plastic drum
28221.558	200 l	Plastic drum

Sodium hydroxide 32% in aqueous solution AnalaR NORMAPUR® analytical reagent, for nitrogen analysis

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,35 g/cm³ (20°C)
Storage Temperature: Ambient

Assay	Min. 32 %	Heavy metals (as Pb)	Max. 10 ppm
Total N (Nitrogen)	Max. 1 ppm	Cl (Chloride)	Max. 20 ppm
CO_3 (as Na_2CO_3)	Max. 1.0 %	SiO_4 (as SiO_2)	Max. 50 ppm
SO_4 (Sulphate)	Max. 30 ppm	Al (Aluminium)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm		

Cat. No.	Pk	Pack type
28225.290	1 l	Plastic bottle
28225.324	2,5 l	Plastic bottle
28225.360	5 l	Plastic bottle
28225.415	10 l	Plastic drum

Sodium hydroxide 32% in aqueous solution GPR RECTAPUR®, pure for nitrogen analysis

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,35 g/cm³ (20°C)
Storage Temperature: Ambient

Assay	Min. 32 %
Total N (Nitrogen)	Max. 5 ppm

Cat. No.	Pk	Pack type
9913.5000	5 l	Plastic container
9913.9010	10 l	Plastic drum

Sodium hydroxide 30% w/w in aqueous solution AnalaR NORMAPUR® analytical reagent

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,33 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	30 - 31 %	Total alkalies	30.0 to 31.0 %
Density (20/4)	1.32 - 1.34	Heavy metals (as Pb)	Max. 2 ppm
Silica	Max. 5 ppm	Total N (Nitrogen)	Max. 10 ppm
Cl (Chloride)	Max. 15 ppm	CO_3 (as Na_2CO_3)	Max. 1 %
PO_4 (Phosphate)	Max. 1 ppm	SO_4 (Sulphate)	Max. 10 ppm
Al (Aluminium)	Max. 2 ppm	Ba (Barium)	Max. 2 ppm
Ca (Calcium)	Max. 2 ppm	Cd (Cadmium)	Max. 0.1 ppm
Co (Cobalt)	Max. 0.3 ppm	Cr (Chromium)	Max. 2 ppm
Cu (Copper)	Max. 0.3 ppm	Fe (Iron)	Max. 2 ppm
Hg (Mercury)	Max. 0.02 ppm	K (Potassium)	Max. 50 ppm
Mg (Magnesium)	Max. 2 ppm	Mn (Manganese)	Max. 0.1 ppm
Ni (Nickel)	Max. 0.6 ppm	Pb (Lead)	Max. 0.1 ppm
Zn (Zinc)	Max. 0.3 ppm		

Cat. No.	Pk	Pack type
28226.293	1 l	Plastic bottle
28226.327	2,5 l	Plastic bottle
28226.362	5 l	Plastic bottle
28226.442	20 l	Plastic drum

Sodium hydroxide 30% in aqueous solution GPR RECTAPUR®

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 29 %
Density (20/4)	1.317 - 1.340
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
28222.290	1 l	Plastic bottle
28222.368	5 l	Plastic bottle
28222.448	20 l	Plastic drum

Sodium hydroxide 30% (w/w; 40% w/v) in aqueous solution GPR RECTAPUR® low in nitrogen

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient
A polyethylene tap (product 33269 2K) can be fitted to the 5 litre pack.

Assay (W/V) ..... 38.6 - 41.7 %
Appearance ..... Clear colourless liquid
Identification (Na) ..... Passes test
CO_3 (as Na_2CO_3) ..... Max. 0.2 %
Total N (Nitrogen) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
191533K	1 l	Plastic bottle
191536N	5 l	Plastic bottle
191537X	10 l	Bag-in-box (Cubitainer)
19153LF	25 l	Plastic drum
19153EB	155 l	Metal drum

Sodium hydroxide 30% in aqueous solution TECHNICAL

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 29 %
Heavy metals (as Pb) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
28217.292	1 l	Plastic bottle
28217.361	5 l	Plastic bottle
28217.441	20 l	Plastic drum
28217.554	200 l	Plastic drum

NEW Sodium hydroxide 25% in aqueous solution for biopharmaceutical production

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Density: 1,274 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Assay (calculated as NaOH) ..... 24,8 - 25,2 %
Appearance ..... Passes test
CO_3 (as Na_2CO_3) ..... Max. 1 %
Heavy metals (as Pb) ..... Max. 5 ppm
Cl (Chloride) ..... Max. 5 ppm
SO_4 (Sulphate) ..... Max. 30 ppm
Fe (Iron) ..... Max. 3 ppm
Residual metal catalysts ..... Unlikely to be present
Residual solvents (ICH Q3C) ..... Excl.by manufact. process
Endotoxin (IU/ml) ..... Max. 2
Filtered at 0.2 µm ..... Confirmed

Cat. No.	Pk	Pack type
85523.320	2,5 l	Plastic bottle
85523.460	25 l	Plastic drum

Sodium hydroxide 20% in aqueous solution Reag. Ph. Eur. 1081401

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 119-135 °C (1013hPa) **Melting Pt:** 9-10 °C **Density:** 1,53 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87933.290	1 l	Plastic bottle

Sodium hydroxide 5 mol/l 5N concentrated aqueous solution CLININORM®

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,327 g/cm³ (20 °C)
Storage Temperature: Ambient
CREUTZFELD-JAKOB disease

Dilute 1 volume in 4 volumes of water

Contains Bromothymol blue indicator

Titer ..... 4.95 - 5.05 mol/l
Identification ..... Passes test
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31625.293	1 l	Plastic bottle
31625.362	5 l	Plastic bottle

Sodium hydroxide 1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,327 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C) ..... 0.995 to 1.005 mol/l
Conforms to BDH 18042 ..... Passes test

Cat. No.	Pk	Pack type
32066.606	170 ml	Plastic ampoule

Sodium hydroxide 0.5 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,327 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.4998 to 0.5002 mol/l

Cat. No.	Pk	Pack type
84597.600	210 ml	Plastic ampoule

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Sodium hydroxide 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,327 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C) ..... 0.0995 to 0.1005 mol/l
Conforms to BDH 18043 ..... Passes test

Cat. No.	Pk	Pack type
32067.600	60 ml	Plastic ampoule

Sodium hydroxide 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,327 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.00998 - 0.01002 mol/l

Cat. No.	Pk	Pack type
84596.600	60 ml	Plastic ampoule

Sodium hydroxide 10 mol/l (10 N) in aqueous solution Reag. Ph. Eur. 1081404

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** <1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87936.290	1 l	Plastic bottle

Sodium hydroxide 10 mol/l (10 N) in aqueous solution VOLUSOL® volumetric solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** <1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 9,98 to 10,02 mol/l

Cat. No.	Pk	Pack type
310933.1000	1 l	Plastic bottle

Sodium hydroxide 5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** 1,186 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 4.99 - 5.01 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31624.290	1 l	Plastic bottle
31624.320	2,5 l	Plastic bottle

Sodium hydroxide 4 mol/l (4 N) in aqueous solution AVS TITRINORM® volumetric solution low in carbonate

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** <1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 3.992 - 4.008 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
191373M	1 l	Plastic bottle

Sodium hydroxide 4 mol/l (4 N) in aqueous solution VOLUSOL® volumetric solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** <1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 3.992 - 4.008 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
306452.2500	2,5 l	Plastic bottle

Sodium hydroxide 2 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1081402

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** <1,11 g/cm³ (20 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87934.290	1 l	Plastic bottle

Sodium hydroxide 2 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: 109 °C (1013 hPa) **Density:** 1,078 g/cm³ (20 °C)
Storage Temperature: Ambient

NIST traceable ..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 1.996 - 2.004 mol/l

Cat. No.	Pk	Pack type
98108.290	1 l	Plastic bottle
98108.360	5 l	Plastic bottle
98108.400	10 l	Bag-in-box (Cubitainer)

Sodium hydroxide 1.2 mol/l (1.2 N) in aqueous solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Density: 1,04 g/cm³ (25 °C)
Storage Temperature: Ambient

Titer ..... 1.185 - 1.215 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
5329.6025	25 l	Plastic drum

Sodium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH

Density: 1,04 g/cm³ (25 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
Conforms to BDH 19139 ..... Passes test

Cat. No.	Pk	Pack type
31627.290	1 l	Plastic bottle
31627.368	5 l	Plastic bottle
31627.404	10 l	Bag-in-box (Cubitainer)

NEW Sodium hydroxide 1.0 N in aqueous solution USP test solutions (TS)

Danger

CAS 1310-73-2 **UN:** 1824
NaOH
Storage Temperature: Ambient
Ready to use solutions.

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85373.180	100 ml	Plastic bottle
85373.260	500 ml	Plastic bottle

NEW Sodium hydroxide 0.714 mol/l (0.714 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 1310-73-2 **UN:** 1824
NaOH

Density: 1,030 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C;actual value 0,2 % accuracy) ..... 0,7125 - 0,7155 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30028.400	10 l	Bag-in-box (Cubitainer)

Sodium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur. volumetric solution

Warning

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

NIST traceable ..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l

Cat. No.	Pk	Pack type
31951.290	1 l	Plastic bottle
31951.370	5 l	Bag-in-box (Cubitainer)
31951.404	10 l	Bag-in-box (Cubitainer)

Sodium hydroxide 0.25 mol/l (0.25 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,02 g/cm³ (25 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.2495 - 0.2505 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31956.296	1 l	Plastic bottle
31956.410	10 l	Plastic drum

NEW Sodium hydroxide 0.205 mol/l (0.205 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,008 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.2046 - 0.2054 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30036.400	10 l	Bag-in-box (Cubitainer)

Sodium hydroxide 0.2 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 1310-73-2 **UN:** 1824
NaOH
Boiling Pt: >105 °C (1013hPa) **Density:** 1,02 g/cm³ (25 °C)
Storage Temperature: Ambient

NIST traceable ..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 0.1996 - 0.2004 mol/l

Cat. No.	Pk	Pack type
31952.293	1 l	Plastic bottle

Sodium hydroxide 0.111 mol/l (0.111 N) in aqueous solution AVS TITRINORM® volumetric solution, for milk acidity analysis according to Dornic

CAS 1310-73-2 **UN:** 1824
NaOH

Density: 1 g/cm³ (25 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.1108 - 0.1112 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31760.290	1 l	Plastic bottle
31760.368	5 l	Plastic container

Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 1310-73-2 **UN:** 1824
NaOH

Density: 1,003 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 to 0.1002 mol/l
Conforms to BDH 19145 ..... Passes test

Cat. No.	Pk	Pack type
31770.294	1 l	Plastic bottle
31770.363	5 l	Plastic bottle
31770.374	5 l	Bag-in-box (Cubitainer)
31770.408	10 l	Bag-in-box (Cubitainer)
31770.443	20 l	Plastic drum

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Sodium hydroxide 0.05 mol/l (0.05 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 1310-73-2 **UN:** 1824
NaOH
Density: 1 g/cm³ (25 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l

Cat. No.	Pk	Pack type
31630.303	2 l	Plastic bottle

Sodium hydroxide 0.04 mol/l (0.04 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 1310-73-2 **UN:** 1824
NaOH
Density: 1 g/cm³ (25 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.03992 - 0.04008 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
31769.290	1 l	Plastic bottle

Sodium hydroxide 0.1 mol/l (0.1 N) in ethanol AVS TITRINORM®

Danger

CAS 1310-73-2 **UN:** 2924
NaOH
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l

Cat. No.	Pk	Pack type
83891.260	500 ml	Glass bottle

Sodium hydroxide 0.005 mol/l (0.005 N) in methanol 50% Reag. Ph. Eur. 1081405

Danger

CAS 1310-73-2 **UN:** 3286
NaOH
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87937.180	100 ml	Plastic bottle

Sodium hydroxide 0.001 mol/l (0.001 N) in methanol 50% Reag. Ph. Eur. 1081403

Danger

CAS 1310-73-2 **UN:** 3286
NaOH
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87935.180	100 ml	Plastic bottle

Sodium 3-hydroxy-4-(2-hydroxy-1-naphthylazo)-7-nitro-1-naphthalenesulphonate

See Eriochrome Black T p.144

Sodium hypochlorite 14% Cl_2 in aqueous solution GPR RECTAPUR®

Danger

CAS 7681-52-9 **UN:** 1791
NaOCl
Boiling Pt: 111 °C (1013 hPa) **Melting Pt:** (-30)-(-20) °C **Density:** 1,22 g/cm³ (20 °C)
Storage Temperature: Ambient
Not being stabilised, this product normally loses strength during storage.

Assay (Active chlorine)(at filling) ..... Min. 14 %
Alkalinity ..... Max. 0.5 meq/g
Chlororometric degrees (Fr;at packaging) ..... Min. 42 °
Hg (Mercury) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
27900.296	1 l	Plastic bottle
27900.365	5 l	Plastic bottle
27900.445	20 l	Plastic drum

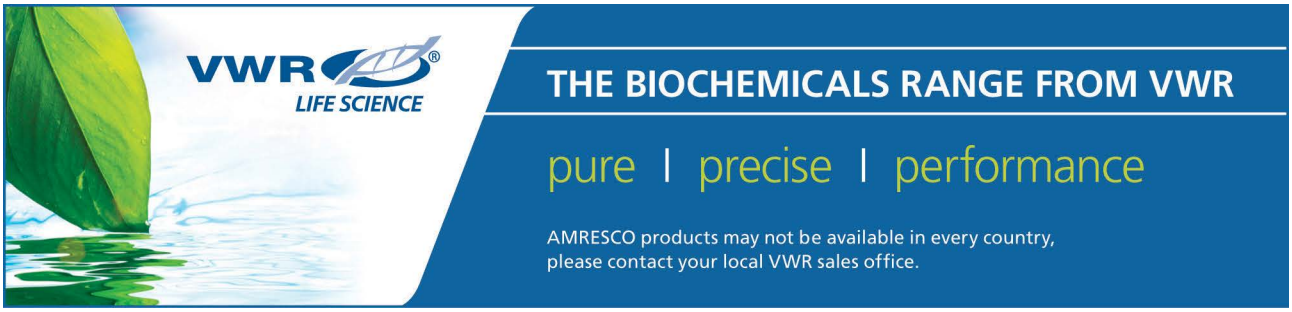
Sodium hypochlorite 14% Cl_2 in aqueous solution TECHNICAL

Danger

CAS 7681-52-9 **UN:** 1791
NaOCl
Boiling Pt: 111 °C (1013 hPa) **Melting Pt:** (-30)-(-20) °C **Density:** 1,22 g/cm³ (20 °C)
Storage Temperature: Ambient
Not being stabilised, this product normally loses strength during storage.

Assay (Active chlorine)(W/V)(at filling) ..... Min. 12.3 %
Identification ..... Passes test

Cat. No.	Pk	Pack type
90350.5000	5 l	Plastic container
90350.9025	25 l	Plastic drum



Sodium hypochlorite 12% Cl_2 in aqueous solution GPR RECTAPUR®

Danger

CAS 7681-52-9 **UN:** 1791
NaOCl
Boiling Pt: 111 °C (1013 hPa) **Melting Pt:** (-30)-(-20) °C **Density:** 1,22 g/cm³ (20 °C)
Storage Temperature: Ambient
Not being stabilised, this product normally loses strength during storage.

Assay (Active chlorine)(W/V)(at filling)	Min. 12 %
Alkalinity	Max. 0.50 meq/g
Hg (Mercury)	Max. 10 ppm

Cat. No.	Pk	Pack type
301696S	2,5 l	Plastic bottle

Sodium hypochlorite 3.5% Cl_2 in aqueous solution. GPR RECTAPUR®

CAS 7681-52-9
NaOCl
Storage Temperature: Refrigerator
Not being stabilised, this product normally loses strength during storage.

Assay (Active chlorine)(at filling)	3.5 - 5.0 %
Alkalinity	Max. 0.05 meq/g
Chlorometric degrees (Fr;at packaging)	10.5 - 15.0 °

Cat. No.	Pk	Pack type
27896.291	1 l	Plastic bottle
27896.360	5 l	Plastic container

Sodium hypochlorite 2.5% Cl_2 in aqueous solution Reag. Ph. Eur. 1081600

CAS 7681-52-9
NaOCl
Storage Temperature: Refrigerator

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87939.290	1 l	Plastic bottle

Sodium hypochlorite 1 mol/l in 0.1 mol/l sodium hydroxide aqueous solution low in bromine

Danger

CAS 7681-52-9 **UN:** 1791
NaOCl
Density: 1 g/cm³ (20 °C)

Titer (NaOCl) (at filling)	0.9 - 1.1 mol/l
Titer (NaOH)	0.9 - 1.1 mol/l
Bromine	Max. 20 ppm

Cat. No.	Pk	Pack type
230393L	250 ml	Glass bottle
230395N	1 l	Glass bottle

Sodium hypophosphite monohydrate

See Sodium phosphinate monohydrate p.433

Sodium iodide AnalaR NORMAPUR® ACS analytical reagent

Warning

CAS 7681-82-5 **UN:** 3077
NaI **M.W.** 149.89 g/mol
Boiling Pt: 1300 °C (1013 hPa) **Melting Pt:** 662 °C **Density:** 3,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	pH (25°C; 5 %)	6.0 - 9.0
Heavy metals (as Pb)	Max. 5 ppm	Insoluble matter	Max. 100 ppm
Loss on drying (100-105°C)	Max. 0.5 %	Total N (Nitrogen)	Max. 20 ppm
Cl + Br (as Cl)	Max. 100 ppm	IO_3 (Iodate)	Max. 3 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ba (Barium)	Max. 20 ppm	Ca (Calcium)	Max. 20 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 100 ppm	Mg (Magnesium)	Max. 10 ppm
Ni (Nickel)	Max. 1 ppm	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
27913.234	250 g	Plastic bottle for solids
27913.260	500 g	Plastic bottle for solids

Sodium iodide Ph. Eur.

Warning

CAS 7681-82-5 **UN:** 3077
NaI **M.W.** 149.89 g/mol
Boiling Pt: 1300 °C (1013 hPa) **Melting Pt:** 662 °C **Density:** 3,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Alkalinity	Passes test
IO_3 (Iodate)	Passes test
SO_4 (Sulphate)	Max. 150 ppm
S_2O_3 (Thiosulphate)	Passes test
Fe (Iron)	Max. 20 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C)	Max. 3 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27916.291	1 kg	Plastic bottle for solids
27916.360	5 kg	Plastic bottle for solids
27916.462	25 kg	Bucket (Plastic)

Sodium iodide GPR RECTAPUR®

Warning

CAS 7681-82-5 **UN:** 3077
NaI **M.W.** 149.89 g/mol
Boiling Pt: 1300 °C (1013 hPa) **Melting Pt:** 662 °C **Density:** 3,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Cl + Br (as Cl)	Max. 0.05 %
SO_4 (Sulphate)	Max. 0.015 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27915.231	250 g	Plastic bottle for solids
27915.297	1 kg	Plastic bottle for solids

DL-Sodium lactate 60% in aqueous solution, purified

CAS 72-17-3
$H_3CCH(OH)COONa$
Density: 1,27-1,32 g/cm³ (20°C)
Storage Temperature: Ambient

Assay	59.5 - 61.5 %
Heavy metals (as Pb)	Max. 10 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
27925.292	1 l	Glass bottle

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DL-Sodium lactate 50 % in aqueous solution Ph. Eur.

CAS 72-17-3
$H_3CCH(OH)COONa$

Density: 1,263 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (Sodium 2-hydroxypropanoate)	48.0 - 52.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH	6.5 - 9.0
Reducing sugars and sucrose	Passes test
Chlorides (calc. ref. to Na lactate)	Max. 50 ppm
Oxalates and phosphates	Passes test
Sulphates (calc. ref. to Na lactate)	Max. 100 ppm
Ba (Barium)	Passes test
Iron (calc. ref. to Na lactate)	Max. 10 ppm
Heavy metals (calc. ref. to Na lactate)	Max. 10 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27927.298	1 l	Plastic bottle

Sodium lauryl sulphate

See Sodium dodecyl sulphate (SDS) p.416

Sodium mercaptoacetate (Sodium thioglycolate), reagent grade

Warning

CAS 367-51-1 **UN:** 3335
$HSCH_2COONa$ **M.W.** 114.1 g/mol
Storage Temperature: Freezer

Melting Range	< = 300 °C
Purity	>= 80 %

Cat. No.	Pk	Pack type
0265-100G	100 g	Glass bottle

Sodium metaarsenite GPR RECTAPUR®

Danger

CAS 7784-46-5 **UN:** 2027
$NaAsO_2$ **M.W.** 129.91 g/mol
Melting Pt: 615 °C **Density:** 1,87 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (Iodometric)	Min. 98 %
Cl (Chloride)	Max. 0.04 %
SO_4 (Sulphate)	Max. 0.4 %
Fe (Iron)	Max. 0.022 %

Cat. No.	Pk	Pack type
27687.265	500 g	Plastic bottle for solids

Sodium metabisulphite AnalaR NORMAPUR® analytical reagent

Danger

CAS 7681-57-4
$Na_2S_2O_5$ **M.W.** 190.11 g/mol
Melting Pt: 150 °C **Density:** 1,48 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119531326-45

Assay	Min. 98.0 %	Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 100 ppm	As (Arsenic)	Max. 0.5 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 5 ppm
Zn (Zinc)	Max. 10 ppm		

Cat. No.	Pk	Pack type
27920.295	1 kg	Plastic bottle for solids

Sodium metabisulphite GPR RECTAPUR®

Danger

CAS 7681-57-4
$Na_2S_2O_5$ **M.W.** 190.11 g/mol
Melting Pt: 150 °C **Density:** 1,48 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119531326-45

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 50 ppm
Cl (Chloride)	Max. 0.02 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27921.298	1 kg	Plastic bottle for solids
27921.367	5 kg	Plastic bottle for solids

Sodium metaperiodate

See Sodium periodate p.431

Sodium metaphosphate GPR RECTAPUR®

CAS 10361-03-2
$NaPO_3$ **M.W.** 101.96 g/mol
Melting Pt: 625 °C **Density:** 2,54 g/cm³ (20 °C)

di-Phosphorus pentoxide	Min. 60 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 50 ppm

Cat. No.	Pk	Pack type
27930.290	1 kg	Plastic bottle for solids

Sodium metaphosphate TECHNICAL

CAS 10361-03-2
$NaPO_3$ **M.W.** 101.96 g/mol
Melting Pt: 625 °C **Density:** 2,54 g/cm³ (20 °C)

di-Phosphorus pentoxide	Min. 60 %

Cat. No.	Pk	Pack type
27880.296	1 kg	Plastic bottle for solids

di-Sodium metasilicate pentahydrate TECHNICAL

Danger

CAS 10213-79-3 **UN:** 3253
$Na_2SiO_3 \cdot 5H_2O$ **M.W.** 212.14 g/mol
Melting Pt: 72,2 °C **Density:** 1,749 g/cm³ (20 °C)

Identification	Passes test

Cat. No.	Pk	Pack type
28092.290	1 kg	Plastic bottle for solids

Sodium molybdate(VI) dihydrate AnalaR NORMAPUR® analytical reagent

CAS 10102-40-6
$Na_2MoO_4 \cdot 2H_2O$ **M.W.** 241.95 g/mol
Melting Pt: 687 °C **Density:** 3,28 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	pH (20°C; 5 %)	7 - 10
Cl (Chloride)	Max. 50 ppm	NH_4 (Ammonium)	Max. 10 ppm
NO_3 (Nitrate)	Max. 100 ppm	PO_4 + AsO_4 + SiO_4 (as PO_4)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Fe (Iron)	Max. 10 ppm
Pb (Lead)	Max. 10 ppm		

Cat. No.	Pk	Pack type
27937.236	250 g	Plastic bottle for solids

Sodium molybdate(VI) dihydrate GPR RECTAPUR®

CAS 10102-40-6
$Na_2MoO_4 \cdot 2H_2O$ **M.W.** 241.95 g/mol
Melting Pt: 687 °C **Density:** 3,28 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
NH_4 (Ammonium)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.05 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27936.233	250 g	Plastic bottle for solids
27936.290	1 kg	Plastic bottle for solids

Sodium molybdenum oxide dihydrate

See Sodium molybdate(VI) dihydrate p.429

Sodium monohydrogen phosphate dihydrate

See di-Sodium hydrogen phosphate dihydrate p.420

Sodium monohydrogen phosphate dodecahydrate

See di-Sodium hydrogen phosphate dodecahydrate p.420

Sodium monohydrogen phosphate

See di-Sodium hydrogen phosphate p.419

Sodium nitrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 7631-99-4 **UN:** 1498
$NaNO_3$ **M.W.** 84.99 g/mol
Boiling Pt: 380 °C (1013 hPa) **Melting Pt:** 308 °C **Density:** 2,26 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488221-41

Assay	Min. 99.5 %	pH (25°C; 5 %)	5.5 - 8.3
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	IO_3 (Iodate)	Max. 5 ppm
NH_4 (Ammonium)	Max. 20 ppm	NO_2 (Nitrite)	Max. 10 ppm
PO_4 (Phosphate)	Max. 5 ppm	SO_4 (Sulphate)	Max. 30 ppm
Ca (Calcium)	Max. 20 ppm	Fe (Iron)	Max. 3 ppm
Mg (Magnesium)	Max. 20 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
27955.238	250 g	Plastic bottle for solids
27955.295	1 kg	Plastic bottle for solids

Sodium nitrate GPR RECTAPUR®

Warning

CAS 7631-99-4 **UN:** 1498
$NaNO_3$ **M.W.** 84.99 g/mol
Boiling Pt: 380 °C (1013 hPa) **Melting Pt:** 308 °C **Density:** 2,26 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488221-41

Assay (calculated on dried substance)	Min. 99 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm
SO_4 (Sulphate)	Max. 0.02 %

Cat. No.	Pk	Pack type
27950.298	1 kg	Plastic bottle for solids
27950.367	5 kg	Plastic bottle for solids

Sodium nitrite AnalaR NORMAPUR® analytical reagent

Danger

CAS 7632-00-0 **UN:** 1500
$NaNO_2$ **M.W.** 69 g/mol
Boiling Pt: 320 °C (1013 hPa) **Melting Pt:** 284 °C **Density:** 2,168 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Heavy metals (as Pb)	Max. 10 ppm
Insolubility in water	Max. 100 ppm	Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 50 ppm	Ca (Calcium)	Max. 20 ppm
Fe (Iron)	Max. 10 ppm	K (Potassium)	Max. 20 ppm

Cat. No.	Pk	Pack type
27960.236	250 g	Plastic bottle for solids
27960.293	1 kg	Plastic bottle for solids
27960.360	5 kg	Plastic bottle for solids

Sodium nitrite GPR RECTAPUR®

Danger

CAS 7632-00-0 **UN:** 1500
$NaNO_2$ **M.W.** 69 g/mol
Boiling Pt: 320 °C (1013 hPa) **Melting Pt:** 284 °C **Density:** 2,168 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27959.298	1 kg	Plastic bottle for solids
27959.367	5 kg	Plastic bottle for solids
27959.460	25 kg	Bucket (Plastic)

Sodium nitroferricyanide dihydrate

See Sodium nitroprusside dihydrate p.430

di-Sodium 4-nitrophenyl phosphate hexahydrate analytical reagent

CAS 4264-83-9
$O_2NC_6H_4OP(O)(ONa)_2 \cdot 6H_2O$ **M.W.** 371.15 g/mol
Melting Pt: > 300 °C
Storage Temperature: Freezer

Assay	Min. 98 %
4-Nitrophenol	Max. 0.2 %
Water	Max. 30 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27963.101	5 g	Plastic bottle for solids

Sodium nitroprusside dihydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 13755-38-9 **UN:** 1588
$Na_2[Fe(CN)_5NO] \cdot 2H_2O$ **M.W.** 297.95 g/mol
Density: 1,72 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 102.0 %	Hexacyanoferrate (II) (as $Fe(CN)_6$)	Max. 0.02 %
Hexacyanoferrate (III) (as $Fe(CN)_6$)	Max. 0.02 %	Insolubility in methanol	Max. 0.5 %
Insoluble matter	Max. 100 ppm	Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 100 ppm		

Cat. No.	Pk	Pack type
27966.180	100 g	Plastic bottle for solids

Sodium nitrosopentacyanoferrate (III) dihydrate

See Sodium nitroprusside dihydrate p.430

Sodium 1-octansulphonate

See 1-Octanesulphonic acid sodium salt p.322

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Sodium orthophosphate dodecahydrate

See tri-Sodium phosphate dodecahydrate p.432

di-Sodium oxalate AnalaR NORMAPUR® analytical reagent

Warning

CAS 62-76-0
$Na_2C_2O_4$

M.W. 134 g/mol
Melting Pt: 250-270 °C **Density:** 2,27 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.8 %	pH (20°C; 3 %)	7.5 - 8.5
Heavy metals (as Pb)	Max. 10 ppm	Loss on drying (105°C)	Max. 0.05 %
Total N (Nitrogen)	Max. 10 ppm	Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 20 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 50 ppm		

Cat. No.	Pk	Pack type
27978.237	250 g	Plastic bottle for solids
27978.294	1 kg	Plastic bottle for solids

di-Sodium oxalate GPR RECTAPUR®

Warning

CAS 62-76-0
$Na_2C_2O_4$

M.W. 134 g/mol
Melting Pt: 250-270 °C **Density:** 2,27 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 100 ppm

Cat. No.	Pk	Pack type
27977.267	500 g	Plastic bottle for solids

Sodium 1-pentanesulphonate

See 1-Pentanesulphonic acid sodium salt..... p.337

Sodium perborate tetrahydrate GPR RECTAPUR®

Danger

CAS 13517-20-9
$NaH_2BO_4 \cdot 4H_2O$

M.W. 171.87 g/mol
Melting Pt: 60 °C **Density:** 1,73 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
SO_4 (Sulphate)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27987.295	1 kg	Plastic bottle for solids

Sodium perchlorate monohydrate HiPerSolv CHROMANORM® for HPLC

Danger

CAS 7791-07-3 **UN:** 1502
$NaClO_4 \cdot H_2O$

M.W. 140.46 g/mol
Melting Pt: 130 °C **Density:** 2,02 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay (argentometric, as monohydrate)	Min. 99.0 %
Transmittance (254 nm) (1 mol/l)	Min. 96 %
Chloride, chlorate (as Cl)	Max. 0.002 %
SO_4 (Sulphate)	Max. 0.002 %
Ca (Calcium)	Max. 0.002 %
Fe (Iron)	Max. 0.0003 %
K (Potassium)	Max. 0.005 %
Pb (Lead)	Max. 0.0005 %

Cat. No.	Pk	Pack type
153233M	250 g	Plastic bottle for solids

Sodium perchlorate monohydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7791-07-3 **UN:** 1502
$NaClO_4 \cdot H_2O$

M.W. 140.46 g/mol
Melting Pt: 130 °C **Density:** 2,02 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (20°C; 5 %)	4.5 - 7.0
Heavy metals (as Pb)	Max. 5 ppm	Total N (Nitrogen)	Max. 5 ppm
Cl (Chloride)	Max. 30 ppm	SO_4 (Sulphate)	Max. 20 ppm
Ca (Calcium)	Max. 20 ppm	Fe (Iron)	Max. 3 ppm
K (Potassium)	Max. 50 ppm		

Cat. No.	Pk	Pack type
27988.232	250 g	Plastic bottle for solids

Sodium periodate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 7790-28-5 **UN:** 1479
$NaIO_4$

M.W. 213.89 g/mol
Boiling Pt: 300 °C (1013 hPa) **Melting Pt:** 175 °C **Density:** 3,87 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %	Cl + ClO_3 + Br + BrO_3 (as Cl)	Max. 100 ppm
SO_4 (Sulphate)	Max. 50 ppm	Mn (Manganese)	Max. 1 ppm
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
27985.185	100 g	Plastic bottle for solids

Sodium periodate TECHNICAL

Danger

CAS 7790-28-5 **UN:** 1479
$NaIO_4$

M.W. 213.89 g/mol
Boiling Pt: 300 °C (1013 hPa) **Melting Pt:** 175 °C **Density:** 3,87 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99 %

Cat. No.	Pk	Pack type
27986.235	250 g	Plastic bottle for solids

Sodium peroxide, powder AnalaR NORMAPUR® analytical reagent

Danger

CAS 1313-60-6 **UN:** 1504
Na_2O_2

M.W. 77.98 g/mol
Melting Pt: 660 °C **Density:** 2,805 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 95.0 %	Heavy metals (as Pb)	Max. 20 ppm
Total N (Nitrogen)	Max. 20 ppm	Cl (Chloride)	Max. 40 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 50 ppm
Al (Aluminium)	Max. 10 ppm	Ca (Calcium)	Max. 0.05 %
Fe (Iron)	Max. 20 ppm		

Cat. No.	Pk	Pack type
27996.230	250 g	Plastic bottle for solids
27996.296	1 kg	Plastic bottle for solids

Sodium peroxide, granules AnalaR NORMAPUR® analytical reagent

Danger

CAS 1313-60-6 **UN:** 1504

Na_2O_2 **M.W.** 77.98 g/mol

Melting Pt: 660 °C **Density:** 2,805 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 95.0 %	Identification	Passes test
Mean diameter	0.3 to 2.0 mm	Heavy metals (as Pb)	Max. 20 ppm
Total N (Nitrogen)	Max. 20 ppm	Cl (Chloride)	Max. 20 ppm
PO_4 (Phosphate)	Max. 5 ppm	$SiO_2 + Al_2O_3 + Fe_2O_3$	Max. 0.025 %
SO_4 (Sulphate)	Max. 10 ppm	Al (Aluminium)	Max. 10 ppm
Ca (Calcium)	Max. 0.05 %	Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27995.260	500 g	Plastic bottle for solids
27995.293	1 kg	Plastic bottle for solids

di-Sodium peroxide

See Sodium peroxide p.431

Sodium peroxodisulphate AnalaR NORMAPUR® analytical reagent

Danger

CAS 7775-27-1 **UN:** 1505

$Na_2S_2O_8$ **M.W.** 238.11 g/mol

Melting Pt: 100 °C **Density:** 2,4 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119495975-15

Assay	Min. 99.0 %	Acidity or alkalinity	Max. 0.01 meq/g
Heavy metals (as Pb)	Max. 10 ppm	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	NH_4 (Ammonium)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm	Mn (Manganese)	Max. 2 ppm

Cat. No.	Pk	Pack type
28000.236	250 g	Plastic bottle for solids
28000.293	1 kg	Plastic bottle for solids

Sodium peroxodisulphate, purified

Danger

CAS 7775-27-1 **UN:** 1505

$Na_2S_2O_8$ **M.W.** 238.11 g/mol

Melting Pt: 100 °C **Density:** 2,4 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119495975-15

Assay	Min. 97 %
Heavy metals (as Pb)	Max. 20 ppm
Fe (Iron)	Max. 50 ppm
Fixed origin of raw material	Passes test

Cat. No.	Pk	Pack type
27997.368	5 kg	Bucket (Plastic)

Sodium peroxodisulphate 1 mol/l in aqueous solution AVS TITRINORM® volumetric solution, for TOC

Danger

CAS 7775-27-1 **UN:** 3216

$Na_2S_2O_8$

NIST traceable	Confirmed
Assay (at preparation)	230 - 245 g/l

Cat. No.	Pk	Pack type
306448.2500	2,5 l	Plastic bottle

Sodium peroxometaborate tetrahydrate

See Sodium perborate tetrahydrate p.431

Sodium persulphate

See Sodium peroxodisulphate p.432

Sodium phosphate dibasic dihydrate

See di-Sodium hydrogen phosphate dihydrate p.420

Sodium phosphate dibasic dodecahydrate

See di-Sodium hydrogen phosphate dodecahydrate p.420

Sodium phosphate dibasic

See di-Sodium hydrogen phosphate p.419

tri-Sodium phosphate dodecahydrate GPR RECTAPUR®

Warning

CAS 10101-89-0 **UN:** 3262

$Na_3PO_4 \cdot 12H_2O$ **M.W.** 380.12 g/mol

Melting Pt: ~ 75 °C **Density:** 1,62 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Identification	Passes test
Free alkali	Max. 0.7 meq/g
Total N (Nitrogen)	Max. 100 ppm
Cl (Chloride)	Max. 25 ppm
SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 1 ppm
Cu (Copper)	Max. 25 ppm
Fe (Iron)	Max. 10 ppm
Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
28033.296	1 kg	Plastic bottle for solids
28033.365	5 kg	Plastic bottle for solids

tri-Sodium phosphate dodecahydrate TECHNICAL

Warning

CAS 10101-89-0 **UN:** 3262

$Na_3PO_4 \cdot 12H_2O$ **M.W.** 380.12 g/mol

Melting Pt: ~ 75 °C **Density:** 1,62 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %

Cat. No.	Pk	Pack type
28032.293	1 kg	Plastic bottle for solids
28032.362	5 kg	Bucket (Plastic)
28032.460	25 kg	Bucket (Plastic)

Sodium phosphate dodecahydrate

See tri-Sodium phosphate dodecahydrate p.432

Sodium phosphate monobasic dihydrate

See Sodium dihydrogen phosphate dihydrate p.415

Sodium phosphate monobasic monohydrate

See Sodium dihydrogen phosphate monohydrate p.414

Sodium phosphate monobasic

See Sodium dihydrogen phosphate p.414

Sodium phosphate tribasic dodecahydrate

See tri-Sodium phosphate dodecahydrate p.432

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Sodium phosphinate monohydrate GPR RECTAPUR®

CAS 10039-56-2
$NaH_2PO_2 \cdot H_2O$

M.W. 105.99 g/mol
Melting Pt: 90 °C **Density:** 0,8 g/cm³ (20 °C)

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 10 ppm
Cl (Chloride)	Max. 0.02 %
SO_4 (Sulphate)	Max. 0.1 %
Ca (Calcium)	Max. 0.05 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27898.297	1 kg	Plastic bottle for solids

Sodium picrate 13 g/l in aqueous solution Reag. Ph. Eur. 1065802

CAS 3324-58-1
$C_6H_2(NO_2)_3ONa$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87715.180	100 ml	Plastic bottle

tetra-Sodium pyrophosphate decahydrate

See tetra-Sodium diphosphate decahydrate p.415

Sodium pyrophosphate decahydrate

See tetra-Sodium diphosphate decahydrate p.415

Sodium pyrosulphite

See Sodium metabisulphite p.429

Sodium pyruvate Electran® Molecular biology grade

CAS 113-24-6
$CH_3COCOONa$

M.W. 110.04 g/mol
Melting Pt: 220-230 °C **Density:** 1,718 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
Identity (IR)	Passes test
Insoluble substances	Passes test
Loss on drying	Max. 0.50 %
pH (10 %)	5.50 - 6.50
Suitable as enzyme substrate	tested with LDH
Heavy metals (as Pb)	Max. 0.001 %
Cl (Chloride)	Max. 0.002 %
SO_4 (Sulphate)	Max. 0.002 %

Cat. No.	Pk	Pack type
440943N	100 g	Plastic bottle

VWR LIFE SCIENCE Sodium pyruvate, reagent grade

CAS 113-24-6
$CH_3COCOONa$

M.W. 110.04 g/mol
Melting Pt: 220-230 °C **Density:** 1,718 g/cm³ (20 °C)
Storage Temperature: Ambient

Free Acid	< = 1
Heavy Metals (as Pb)	<= 0.01 %
Water Content	< 1 %
Purity	>= 99 %

Cat. No.	Pk	Pack type
0342-100G	100 g	Plastic bottle for solids
0342-250G	250 g	Plastic bottle for solids

Sodium salicylate AnalaR NORMAPUR® analytical reagent

Warning

CAS 54-21-7
HOC_6H_4COONa

M.W. 160.1 g/mol
Melting Pt: 200 °C **Density:** 0,32 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99.5 %	Heavy metals (as Pb)	Max. 10 ppm
Water	Max. 0.2 %	Cl (Chloride)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.02 %	Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
28065.230	250 g	Plastic bottle for solids

Sodium salicylate, crystallised GPR RECTAPUR®

Warning

CAS 54-21-7
HOC_6H_4COONa

M.W. 160.1 g/mol
Melting Pt: 200 °C **Density:** 0,32 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance)	Min. 99.5 %
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (110°C)	Max. 0.5 %
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.06 %

Cat. No.	Pk	Pack type
28068.296	1 kg	Plastic bottle for solids
28068.460	25 kg	Bucket (Plastic)

Sodium selenate decahydrate GPR RECTAPUR®

Danger

CAS 10102-23-5 **UN:** 2630
$Na_2SeO_4 \cdot 10H_2O$

M.W. 369.09 g/mol
Melting Pt: 35 °C **Density:** 1,584 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97.0 %
Metal impurities	Max. 0.02 %
Insolubility in water	Max. 0.03 %

Cat. No.	Pk	Pack type
302113L	100 g	Plastic bottle

VWR LIFE SCIENCE Sodium selenate, high purity

Danger

CAS 13410-01-0 **UN:** 2630
Na_2O_4Se

M.W. 188.94 g/mol
Density: 3.098 g/cm³ (20 °C)
Storage Temperature: Ambient

Purity	Min 99.0%
Copper	Max. 0.02%
Magnesium	Max. 0.002%

Cat. No.	Pk	Pack type
94107-100G	100 g	Amber Glass

Sodium selenite TECHNICAL

Danger

CAS 10102-18-8 **UN:** 2630
Na_2SeO_3

M.W. 172.94 g/mol
Melting Pt: 710 °C **Density:** 3,1 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
28074.231	250 g	Plastic bottle for solids

Sodium silicate TECHNICAL

Warning

CAS 1344-09-8

Density: 1,39 g/cm³ (25 °C)

Silica ..... 61.7 - 66.1 %
Sodium oxide ..... 18.0 - 20.3 %

Cat. No.	Pk	Pack type
28087.361	5 kg	Bucket (Plastic)

Sodium silicate in aqueous solution TECHNICAL

CAS 1344-09-8 **UN:** 3266

Density: 1,45 g/cm³ (20 °C)

Silica ..... 25.6 - 27.6 %
Sodium oxide ..... 7.5 - 8.5 %

Cat. No.	Pk	Pack type
28079.320	2,5 l	Plastic bottle
28079.363	5 l	Plastic bottle
28079.460	25 l	Plastic drum

di-Sodium succinate hexahydrate, reagent grade

CAS 6106-21-4

$NaOOCCH_2CH_2COONa{\cdot}6H_2O$ **M.W.** 270.14 g/mol

Melting Pt: 300 °C **Density:** 1,529 g/cm³ (20 °C)

Storage Temperature: Ambient

Purity ..... >= 99 %
Sulphate ..... <= 0.02 %

Cat. No.	Pk	Pack type
0477-100G	100 g	Plastic bottle for solids

Sodium sulphate PESTINORM® for pesticide residue analysis

CAS 7757-82-6

Na_2SO_4 **M.W.** 142.04 g/mol

Boiling Pt: 1429 °C (1013 hPa) **Melting Pt:** 888 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.5 %
Absence for pesticide residues ..... Passes test
pH (20°C; 5 %) ..... 5.0 - 8.0
Heavy metals (as Pb) ..... Max. 5 ppm
Insolubility in water ..... Max. 50 ppm
Loss on drying (130°C) ..... Max. 0.5 %
Loss on ignition (600°C) ..... Max. 0.5 %
Total N (Nitrogen) ..... Max. 10 ppm
Cl (Chloride) ..... Max. 10 ppm
PO_4 (Phosphate) ..... Max. 20 ppm
As (Arsenic) ..... Max. 1 ppm
Ca + Mg (as Ca) ..... Max. 100 ppm
Fe (Iron) ..... Max. 2 ppm
K (Potassium) ..... Max. 100 ppm

Cat. No.	Pk	Pack type
28116.293	1 kg	Glass bottle for solids

Sodium sulphate, anhydrous AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

CAS 7757-82-6

Na_2SO_4 **M.W.** 142.04 g/mol

Boiling Pt: 1429 °C (1013 hPa) **Melting Pt:** 888 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (dried substance) ..... 98.5 - 101.0 %
Appearance of solution ..... Passes test
Identification (Na) ..... Passes test
pH (25°C; 5 %) ..... 5.2 - 8.0
Insolubility in water ..... Max. 100 ppm
Loss on ignition (800°C) ..... Max. 0.5 %
PO_4 (Phosphate) ..... Max. 10 ppm
As (Arsenic) ..... Max. 1 ppm
Fe (Iron) ..... Max. 5 ppm
Mg (Magnesium) ..... Max. 25 ppm
Acidity or alkalinity ..... Passes test
Identification (SO_4) ..... Passes test
Solution S ..... Passes test
Heavy metals (as Pb) ..... Max. 5 ppm
Loss on drying (130°C) ..... Max. 0.5 %
Cl (Chloride) ..... Max. 100 ppm
Total N (Nitrogen) ..... Max. 5 ppm
Ca (Calcium) ..... Max. 50 ppm
K (Potassium) ..... Max. 50 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
28114.230	250 g	Plastic bottle for solids
28114.260	500 g	Plastic bottle for solids
28114.296	1 kg	Plastic bottle for solids
28114.365	5 kg	Plastic bottle for solids
28114.460	25 kg	Bucket (Plastic)

Sodium sulphate, anhydrous, fine powder Ph. Eur.

CAS 7757-82-6

Na_2SO_4 **M.W.** 142.04 g/mol

Boiling Pt: 1429 °C (1013 hPa) **Melting Pt:** 888 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (dried substance) ..... 98.5 - 101.0 %
Appearance ..... Conforms (see CoA/CoS)
Identification (SO_4) ..... Passes test
Identification (Na) ..... Passes test
Solution S ..... Passes test
Appearance of solution ..... Passes test
Acidity or alkalinity ..... Passes test
Cl (Chloride) ..... Max. 200 ppm
Heavy metals (as Pb) ..... Max. 10 ppm
Loss on drying (130°C) ..... Max. 0.5 %
Residues of metal catalysts or reagents ..... Unlikely by manuf.process
Residual solvents ..... Unlikely by manuf.process

Cat. No.	Pk	Pack type
28105.295	1 kg	Plastic bottle for solids
28105.364	5 kg	Plastic bottle for solids
28105.466	25 kg	Bucket (Plastic)

Sodium sulphate GPR RECTAPUR®

CAS 7757-82-6

Na_2SO_4 **M.W.** 142.04 g/mol

Boiling Pt: 1429 °C (1013 hPa) **Melting Pt:** 888 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99 %
Heavy metals (as Pb) ..... Max. 20 ppm
Fe (Iron) ..... Max. 20 ppm
Sodium chloride ..... Max. 0.25 %

Cat. No.	Pk	Pack type
28111.260	500 g	Plastic bottle for solids
28111.296	1 kg	Plastic bottle for solids
28111.365	5 kg	Plastic bottle for solids

Sodium sulphate TECHNICAL

CAS 7757-82-6

Na_2SO_4 **M.W.** 142.04 g/mol

Boiling Pt: 1429 °C (1013 hPa) **Melting Pt:** 888 °C **Density:** 2,7 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
28104.292	1 kg	Plastic bottle for solids
28104.361	5 kg	Bucket (Plastic)
28104.460	25 kg	Bucket (Plastic)

Sodium sulphate decahydrate AnalaR NORMAPUR®

CAS 7727-73-3

$Na_2SO_4{\cdot}10H_2O$ **M.W.** 322.2 g/mol

Boiling Pt: 1429 °C (1013 hPa) **Melting Pt:** 32,4 °C **Density:** 1,464 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.0 %
Heavy metals (as Pb) ..... Max. 3 ppm
Cl (Chloride) ..... Max. 5 ppm
Ca (Calcium) ..... Max. 50 ppm
K (Potassium) ..... Max. 50 ppm
pH (5 %) ..... 5.2 - 9.2
Insolubility in water ..... Max. 100 ppm
PO_4 (Phosphate) ..... Max. 5 ppm
Fe (Iron) ..... Max. 5 ppm
Mg (Magnesium) ..... Max. 30 ppm

Cat. No.	Pk	Pack type
84851.290	1 kg	Plastic bottle for solids

di-Sodium sulphide hydrate AnalaR NORMAPUR® analytical reagent

Danger

CAS 27610-45-3 **UN:** 1849

$Na_2S{\cdot}1H_2O$ **M.W.** 96.06 g/mol

Boiling Pt: ~920 °C (1013 hPa) **Melting Pt:** 50 °C **Density:** ~1,43 g/cm³ (20 °C)

Storage Temperature: Refrigerator **REACh:** 01-2119513694-38

Assay ..... 58.0 - 64.0 %
SO_3 (Sulphite) ..... Max. 0.6 %
Total N (Nitrogen) ..... Max. 50 ppm
S_2O_3 (Thiosulphate) ..... Max. 0.5 %

Cat. No.	Pk	Pack type
83756.230	250 g	Plastic bottle for solids
83756.290	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

di-Sodium sulphide hydrate GPR RECTAPUR®

Danger

CAS 27610-45-3 **UN:** 1849

$Na_2S \cdot 1H_2O$ **M.W.** 96.06 g/mol

Boiling Pt: ~920 °C (1013 hPa) **Melting Pt:** 50 °C **Density:** ~1,43 g/cm³ (20 °C)

Storage Temperature: Refrigerator **REACh:** 01-2119513694-38

Assay	58 - 64 %
SO_3 (Sulphite)	Max. 0.6 %
S_2O_3 (Thiosulphate)	Max. 0.5 %

Cat. No.	Pk	Pack type
83757.290	1 kg	Plastic bottle for solids

di-Sodium sulphide 0.5 mol/l in glycerine 35% Reag. Ph. Eur. 1083901

Warning

CAS 1313-82-2 **UN:** 3266

Na_2S **M.W.** 78.05 g/mol

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87940.180	100 ml	Plastic bottle

Sodium sulphite AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

CAS 7757-83-7

Na_2SO_3 **M.W.** 126.04 g/mol

Melting Pt: > 500 °C **Density:** 2,63 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119537420-49

Assay (at filling)	95.0 - 100.5 %	Appearance of solution	Passes test Ph.Eur.
Identification A	Passes test Ph.Eur.	Identification B	Passes test Ph.Eur.
Identification C	Passes test Ph.Eur.	Solution S	Passes test Ph.Eur.
Solution S1	Passes test Ph.Eur.	Colouration (10 %; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 10 ppm	S_2O_3 (Thiosulphate)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm	Se (Selenium)	Max. 10 ppm
Zn (Zinc)	Max. 25 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
28130.260	500 g	Plastic bottle for solids
28130.292	1 kg	Plastic bottle for solids

Sodium sulphite, anhydrous Ph. Eur.

CAS 7757-83-7

Na_2SO_3 **M.W.** 126.04 g/mol

Melting Pt: > 500 °C **Density:** 2,63 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119537420-49

Assay (at filling)	95.0 - 100.5 %
Appearance	White/almost white powder
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Solution S1	Passes test
Appearance of solution	Passes test
S_2O_3 (Thiosulphate)	Max. 0.1 %
Fe (Iron)	Max. 10 ppm
Se (Selenium)	Max. 10 ppm
Zn (Zinc)	Max. 25 ppm
Heavy metals (as Pb)	Max. 10 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
28125.294	1 kg	Plastic bottle for solids
28125.363	5 kg	Plastic bottle for solids
28125.465	25 kg	Bucket (Plastic)

Sodium sulphite, purified

CAS 7757-83-7

Na_2SO_3 **M.W.** 126.04 g/mol

Melting Pt: > 500 °C **Density:** 2,63 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119537420-49

Assay (at filling)	95.0 - 100.5 %
Heavy metals (as Pb)	Max. 50 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
28126.297	1 kg	Plastic bottle for solids
28126.366	5 kg	Bucket (Plastic)
28126.460	25 kg	Bucket (Plastic)

L(+)-Sodium tartrate dibasic dihydrate

See di-Sodium L(+)-tartrate dihydrate p.435

di-Sodium L(+)-tartrate dihydrate GPR RECTAPUR®

CAS 6106-24-7

$NaOOC(CHOH)_2COONa \cdot 2H_2O$ **M.W.** 230.08 g/mol

Melting Pt: 57 °C **Density:** 1,818 g/cm³ (20 °C)

Assay (calculated on anhydrous)	Min. 99 %
Loss on drying (150°C)	Max. 17.0 %
C_2O_4 (Oxalate)	Max. 0.05 %
Cl (Chloride)	Max. 50 ppm
As (Arsenic)	Max. 2 ppm
Cu (Copper)	Max. 10 ppm
Fe (Iron)	Max. 100 ppm
Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 10 ppm

Cat. No.	Pk	Pack type
28174.260	500 g	Plastic bottle for solids

VWR LIFE SCIENCE di-Sodium tetraborate, ultrapure buffer substance

Danger

CAS 1330-43-4

$Na_2B_4O_7$ **M.W.** 201.22 g/mol

Boiling Pt: 1575 °C (1013 hPa) **Melting Pt:** 742 °C **Density:** 2,38 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490790-32

Appearance	PASS
Conductivity (0.5%, Water)	REPORT
DNase	NONE
pH (0.5%, Water)	8.30 - 8.70
RNase	NONE
Solubility	PASS

Cat. No.	Pk	Pack type
1B1117-100G	100 g	Plastic bottle for solids
1B1117-500G	500 g	Plastic bottle for solids
1B1117-1KG	1 kg	Plastic bottle for solids

di-Sodium tetraborate, anhydrous TECHNICAL

Danger

CAS 1330-43-4

$Na_2B_4O_7$ **M.W.** 201.22 g/mol

Boiling Pt: 1575 °C (1013 hPa) **Melting Pt:** 742 °C **Density:** 2,38 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119490790-32

Assay	Min. 98 %

Cat. No.	Pk	Pack type
27716.290	1 kg	Plastic bottle for solids
27716.368	5 kg	Bucket (Plastic)

di-Sodium tetraborate decahydrate AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent

Danger

CAS 1303-96-4
$Na_2B_4O_7 \cdot 10H_2O$ **M.W.** 381.37 g/mol
Boiling Pt: 320 °C (1013 hPa) **Melting Pt:** 75 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490790-32

Assay	99.0 - 103.0 %	Appearance of solution	Passes test Ph.Eur.
CO_3 (Carbonate)	Passes test	Identification A	Passes test Ph.Eur.
Identification B	Passes test Ph.Eur.	Identification C	Passes test Ph.Eur.
Solution S	Passes test Ph.Eur.	pH (20°C; 4 %)	9.0 - 9.6
Heavy metals (as Pb)	Max. 5 ppm	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	NH_4 (Ammonium)	Max. 10 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 20 ppm
As (Arsenic)	Max. 2 ppm	Ca (Calcium)	Max. 100 ppm
Fe (Iron)	Max. 5 ppm	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
27727.231	250 g	Plastic bottle for solids
27727.297	1 kg	Plastic bottle for solids
27727.460	25 kg	Bucket (Plastic)

di-Sodium tetraborate decahydrate Ph. Eur.

Danger

CAS 1303-96-4
$Na_2B_4O_7 \cdot 10H_2O$ **M.W.** 381.37 g/mol
Boiling Pt: 320 °C (1013 hPa) **Melting Pt:** 75 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490790-32

Assay	99.0 - 103.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Identification C	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (4 %)	9.0 - 9.6
SO_4 (Sulphate)	Max. 50 ppm
NH_4 (Ammonium)	Max. 10 ppm
As (Arsenic)	Max. 5 ppm
Ca (Calcium)	Max. 100 ppm
Heavy metals (as Pb)	Max. 25 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
83555.290	1 kg	Plastic bottle for solids
83555.460	25 kg	Bucket (Plastic)

di-Sodium tetraborate decahydrate, purified

Danger

CAS 1303-96-4
$Na_2B_4O_7 \cdot 10H_2O$ **M.W.** 381.37 g/mol
Boiling Pt: 320 °C (1013 hPa) **Melting Pt:** 75 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490790-32

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27721.366	5 kg	Bucket (Plastic)

di-Sodium tetraborate decahydrate, powder TECHNICAL

Danger

CAS 1303-96-4
$Na_2B_4O_7 \cdot 10H_2O$ **M.W.** 381.37 g/mol
Boiling Pt: 320 °C (1013 hPa) **Melting Pt:** 75 °C **Density:** 1,73 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119490790-32

Assay	Min. 97 %

Cat. No.	Pk	Pack type
27705.361	5 kg	Bucket (Plastic)
27705.460	25 kg	Bucket (Plastic)

Sodium tetrachloroaurate dihydrate TECHNICAL

Warning

CAS 13874-02-7 **UN:** 3260
$NaAuCl_4 \cdot 2H_2O$ **M.W.** 397.8 g/mol

Identification	Passes test

Cat. No.	Pk	Pack type
26069.081	1 g	Glass bottle
26069.126	10 g	Glass bottle

Sodium tetrahydridoborate

See Sodium tetrahydroborate p.436

Sodium tetrahydroborate TECHNICAL

Danger

CAS 16940-66-2 **UN:** 1426
$NaBH_4$ **M.W.** 37.83 g/mol
Melting Pt: 400 °C **Density:** 1,07 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
27885.134	25 g	Plastic bottle for solids

Sodium tetraphenylborate analytical reagent

Danger

CAS 143-66-8 **UN:** 2811
$(C_6H_5)_4BNa$ **M.W.** 342.22 g/mol
Melting Pt: > 400 °C **Density:** 1,15 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %
Loss on drying (100°C)	Max. 0.5 %

Cat. No.	Pk	Pack type
28187.138	25 g	Plastic bottle for solids

Sodium thiosulphate, anhydrous GPR RECTAPUR®

CAS 7772-98-7
$Na_2S_2O_3$ **M.W.** 158.11 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 48 °C **Density:** 1,66 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
pH (20°C; 5 %)	6.0 - 8.5
S (Sulphide)	Max. 50 ppm
Ca (Calcium)	Max. 50 ppm
Cd (Cadmium)	Max. 50 ppm
Co (Cobalt)	Max. 50 ppm
Cu (Copper)	Max. 50 ppm
Fe (Iron)	Max. 50 ppm
K (Potassium)	Max. 100 ppm
Ni (Nickel)	Max. 50 ppm
Pb (Lead)	Max. 50 ppm
Zn (Zinc)	Max. 50 ppm

Cat. No.	Pk	Pack type
84852.230	250 g	Plastic bottle for solids
84852.290	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Sodium thiosulphate pentahydrate AnalaR NORMAPUR® ACS analytical reagent

CAS 10102-17-7
$Na_2S_2O_3.5H_2O$
M.W. 248.19 g/mol
Melting Pt: 48 °C
Density: 1,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.5 - 100.5 %	pH (25°C; 5 %)	6.0 - 8.4
Insolubility in water	Max. 50 ppm	Total N (Nitrogen)	Max. 20 ppm
Cl (Chloride)	Max. 80 ppm	S (Sulphide)	Max. 1 ppm
SO_4 + SO_3 (as SO_4)	Max. 0.1 %	Ca (Calcium)	Max. 20 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 50 ppm	Mg (Magnesium)	Max. 10 ppm
Pb (Lead)	Max. 5 ppm	Conforms to ACS	Passes test

Cat. No.	Pk	Pack type
27910.260	500 g	Plastic bottle for solids
27910.291	1 kg	Plastic bottle for solids

Sodium thiosulphate pentahydrate GPR RECTAPUR®

CAS 10102-17-7
$Na_2S_2O_3$
M.W. 248.19 g/mol
Melting Pt: 48 °C
Density: 1,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Cl (Chloride)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
27909.296	1 kg	Plastic bottle for solids
27909.365	5 kg	Plastic bottle for solids
27909.460	25 kg	Bucket (Plastic)

Sodium thiosulphate pentahydrate, purified

CAS 10102-17-7
$Na_2S_2O_3$
M.W. 248.19 g/mol
Melting Pt: 48 °C
Density: 1,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Heavy metals (as Pb)	Max. 20 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
27905.293	1 kg	Plastic bottle for solids
27905.362	5 kg	Bucket (Plastic)

VWR LIFE SCIENCE Sodium thiosulphate pentahydrate, proteomics grade

CAS 10102-17-7
$Na_2S_2O_3$
M.W. 248.19 g/mol
Melting Pt: 48 °C
Density: 1,67 g/cm³ (20 °C)
Storage Temperature: Ambient

Insolubles	< 0.005%
pH (5%, Water) @25°C	6 - 8.4
Protease	none detected
Purity	> 99 %
Sulphate & Sulphite	< 0.1 %
Sulphide	< 0.0001 %

Cat. No.	Pk	Pack type
M132-500G	500 g	Plastic bottle for solids

Sodium thiosulphate 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient

Titer (20°C)	0.0995 - 0.1005 mol/l

Cat. No.	Pk	Pack type
32065.603	60 ml	Plastic ampoule

Sodium thiosulphate 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.00998 - 0.01020 mol/l

Cat. No.	Pk	Pack type
84598.600	60 ml	Plastic ampoule

Sodium thiosulphate 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.998 - 1.002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
31547.293	1 l	Plastic bottle

Sodium thiosulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy)	0.0998 - 0.1002 mol/l
NIST traceable	Confirmed

Cat. No.	Pk	Pack type
31553.294	1 l	Plastic bottle
31553.363	5 l	Plastic bottle
31553.408	10 l	Bag-in-box (Cubitainer)

NEW Sodium thiosulphate 0.1 mol/l (0.1 N) in aqueous solution USP test solutions (TS)

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient
Ready to use test solutions (TS)

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85374.180	100 ml	Plastic bottle
85374.260	500 ml	Plastic bottle

Sodium thiosulphate 0.01 mol/l (0.01 N) in aqueous solution VOLUSOL® volumetric solution

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient

NIST traceable	Confirmed
Titer (20°C; real value 0.2 % accuracy)	0.00998 - 0.01002 mol/l

Cat. No.	Pk	Pack type
309337.1000	1 l	Plastic bottle

NEW Sodium thiosulphate 0.1% in aqueous solution for microbiology

CAS 7772-98-7
$Na_2S_2O_3$
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
AX011168	50	Glass bottle

Sodium triazide

See Sodium azide p.409

Sodium tungstate dihydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 10213-10-2
$Na_2WO_4 \cdot 2H_2O$
M.W. 329.85 g/mol
Melting Pt: 100 °C
Density: 3,23 g/cm³ (20 °C)
Storage Temperature: Ambient
This product is not suitable for the Colin reaction.

Assay	Min. 99 %	Cl (Chloride)	Max. 30 ppm
SO_4 (Sulphate)	Max. 100 ppm	Fe (Iron)	Max. 5 ppm
Mo (Molybdenum)	Max. 50 ppm	Pb (Lead)	Max. 10 ppm

Cat. No.	Pk	Pack type
28195.238	250 g	Plastic bottle for solids
28195.460	25 kg	Bucket (Plastic)

Soerensen's buffer substances

See di-Sodium oxalate p.431

Solochrome Black T

See Eriochrome Black T p.144

Solution for anionic surfactant determination (formerly known as Dimidium bromide-disulphine blue indicator stock solution)

For use in the two-phase method for anionic surfactants.

Suitability as indicator ..... Passes test

Cat. No.	Pk	Pack type
191892H	100 ml	Glass bottle

Solvent ASTM D 664, Toluene/2-Propanol-mixture (50/50 v/v), TAN solvent VOLUSOL®

Danger

UN: 1993
Storage Temperature: Ambient

Assay (Toluene) (V/V)	47.5 - 52.5 %
Assay (Propan-2-ol) (V/V)	47 - 52 %
Water (V/V)	0.4 - 0.6 %

Cat. No.	Pk	Pack type
5138.2500	2,5 l	Glass bottle
5138.5000	5 l	Fluorinated plastic bottle
5138.9025	25 l	Metal drum

Solvent ASTM D2896, Chlorobenzene/Acetic acid-mixture (2/1 v/v), TBN solvent VOLUSOL®

Danger

UN: 3265
Boiling Pt: >118 °C (1013hPa)
Density: 1,08 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (Acetic acid)	31.5 - 33.5 %
Density (20/4)	1.07 - 1.09

Cat. No.	Pk	Pack type
5154.2500	2,5 l	Glass bottle

Solvent ASTM D2896, Chlorobenzene/Acetic acid-mixture (2/1 v/v), TBN solvent VOLUSOL®

Danger

UN: 3265
Boiling Pt: >118 °C (1013hPa)
Density: 1,08 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (Acetic acid) (V/V)	33.08 - 33.58 %(V)
Assay (Chlorobenzene) (V/V)	66.41 - 66.91 %(V)

Cat. No.	Pk	Pack type
799306A	2,5 l	Glass bottle

Solvent ASTM 4739 , Toluol, 2-Propanol, Dichlormethan, Chloroform, H_2O, (10/10/10/0.3 v/v) VOLUSOL®

Danger

UN: 1993
Toluene, Propan-2-ol, Dichloromethane, Chloroform, water (10/10/10/0.3 v/v) for BN titrations.

Identification	Passes test
Density (20/4)	1.03 - 1.046

Cat. No.	Pk	Pack type
5740.2500	2,5 l	Glass bottle

Solvent Red 43

See Dyes and Stains 290

Solvent ASTM D235 Type 1 (white spirit BSS 245) suitable for use in the testing of petroleum products by ASTM methods

Danger

UN: 1300
Boiling Pt: 135-220 °C (1013hPa) **Melting Pt:** -15 °C
Density: 0,79 g/cm³ (20 °C)
White spirit (BSS 245) Type A 1976

Density (15/4)	0.770 - 0.790

Cat. No.	Pk	Pack type
306946X	2,5 l	Glass bottle

Solvent acetic acid mixture for ASTM method D2710 B / D1159 VOLUSOL®

Danger

UN: 2920
Storage Temperature: Ambient
Acetic acid/ methanol/ dichloromethane/ sulphuric acid/ water used in the measurement of unsaturated hydrocarbons in petroleum distillates (71.4/13.5/13.5/0.3/1.6 v/v).

Density (20/4)	1.05 - 1.07
Identification	Passes test

Cat. No.	Pk	Pack type
5203.2500	2,5 l	Glass bottle

Solvent PERTENE® D6 for degreasing

Warning

UN: 1897

Assay (+ stabilising agent)	Min. 99.95 %
Alkalinity	Max. 0.02 meq/g
Boiling point	118 - 122 °C
Density (20/4)	1.612 - 1.624
pH of the aqueous extract (20°C)	7 - 9
Evaporation residue	Max. 100 ppm
Water	Max. 60 ppm

Cat. No.	Pk	Pack type
28228.290	1 l	Glass bottle

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Sorbic acid potassium salt

See Potassium sorbate p.374

Sorbic acid TECHNICAL

Warning

CAS 110-44-1

$CH_3CH=CHCH=CHCOOH$ **M.W.** 112.13 g/mol
Boiling Pt: 228 °C (1013 hPa) **Melting Pt:** 132-135 °C **Density:** 1,204 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %

Cat. No.	Pk	Pack type
20664.293	1 kg	Plastic bottle for solids

D(-)-Sorbitol GPR RECTAPUR®

CAS 50-70-4

$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 295 °C (1013 hPa) **Melting Pt:** 94-98 °C **Density:** 1,524 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous) ..... 97.0- 100.5 %
Appearance of solution (10 %; water) ..... Passes test
Identification ..... Passes test
Spec. opt. rot.(10 %; borate; anhydrous) ..... 4.0 - 7.0 °
Reducing sugars (calculated as $C_6H_{12}O_6$) ..... Max. 0.2 %
Ignition residue (SO_4) ..... Max. 0.1 %
Water ..... Max. 1.5 %
Cl (Chloride) ..... Max. 50 ppm
SO_4 (Sulphate) ..... Max. 100 ppm
Ni (Nickel) ..... Max. 1 ppm
Pb (Lead) ..... Max. 0.5 ppm

Cat. No.	Pk	Pack type
302424A	500 g	Plastic bottle for solids
302425B	2,5 kg	Plastic bottle for solids

D(-)-Sorbitol TECHNICAL

CAS 50-70-4

$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 295 °C (1013 hPa) **Melting Pt:** 94-98 °C **Density:** 1,524 g/cm³ (20 °C)
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
28210.298	1 kg	Plastic bottle for solids
28210.367	5 kg	Bucket (Plastic)

VWR LIFE SCIENCE D(-)-Sorbitol, high purity

CAS 50-70-4

$HOH_2C(CH(OH))_4CH_2OH$ **M.W.** 182.17 g/mol
Boiling Pt: 295 °C (1013 hPa) **Melting Pt:** 94-98 °C **Density:** 1,524 g/cm³ (20 °C)
Storage Temperature: Ambient

Arsenic ..... < 0.0003 %
Chloride ..... < 0.005 %
Heavy Metals ..... < 0.001 %
Moisture (KF) ..... <= 1 %
Purity (Anhydrous) ..... >= 96 %
Residue after Ignition ..... < 0.1 %
Sulphate ..... < 0.01 %

Cat. No.	Pk	Pack type
0691-500G	500 g	Plastic bottle

Sorensen's salt

See di-Sodium hydrogen phosphate dihydrate p.420

VWR BDH CHEMICALS

FIRST FOR TRACE ANALYSIS

From the most exacting sample preparation with NORMATOM® high purity acids to ARISTAR® ICP/ICP-MS and AVS® TITRINORM® AAS standards, VWR are able to offer a comprehensive trace analysis package.

All backed by our extensive Certificates of Analysis for specific batch results – not typical analyses.

If you don't see what you want then we also have a customised standard production service available in many countries too. Contact your local VWR sales office or distibutor for details and to request our trace analysis brochure.

Solvents for spectroscopy, SPECTRONORM®

UV/VIS spectroscopy is a reliable and accurate method used extensively in modern analytical laboratories. In spectroscopy the identification of unknown substances and the determination of concentrations of known substances are very important. In both cases accurate analytical results depend on the use of very pure solvents for sample preparation.
SPECTRONORM® solvents are specially designed for spectroscopy applications that demand the highest spectral purity. To ensure consistent product quality, SPECTRONORM® solvents are made from premium grade raw materials and are subjected to stringent purification procedures. These processes ensure reproducible results and significantly reduce the risk of errors arising from the presence of UV or fluorescence contaminating material.

SPECTRONORM® solvents have extensive specifications to meet the highly demanding requirements of UV applications

- Guaranteed UV transmission specifications
- Evaporation residue less than 5 ppm for the majority of SPECTRONORM® solvents
- Batch to batch reproducibility

Purified from selected raw materials under ISO 9001 conditions, these solvents are also

- Filtered at 0.2 µm and bottled under nitrogen
- Fitted with caps with PTFE liners to prevent comtamination
- Packed in 2.5 L and 1 L glass bottles with DIN 45 closures

Description	Page	Pk	Cat. No.
Acetone SPECTRONORM® for spectroscopy	6, 440	1 l	84700.290
Acetone SPECTRONORM® for spectroscopy	6, 440	2,5 l	84700.320
Acetonitrile SPECTRONORM® for spectroscopy	11, 440	2,5 l	84701.320
1-Butanol ≥99.8% SPECTRONORM® for spectroscopy	70, 440	1 l	84709.290
Chloroform stabilised SPECTRONORM® for spectroscopy	86, 440	1 l	22715.293
Cyclohexane SPECTRONORM® for spectroscopy	101, 440	1 l	23225.296
N,N-Dimethylformamide SPECTRONORM® for spectroscopy	119, 440	1 l	84710.290
N,N-Dimethylformamide SPECTRONORM® for spectroscopy	119, 440	2,5 l	84710.320
1,4-Dioxane unstabilised SPECTRONORM® for spectroscopy	123, 440	1 l	84715.290
Ethanol 95-97% (v/v) SPECTRONORM® for spectroscopy	147, 440	1 l	20822.290
Dichloromethane stabilised SPECTRONORM® for spectroscopy	110, 440	1 l	84702.290
n-Heptane SPECTRONORM® for spectroscopy	185, 440	2,5 l	84712.320
n-Hexane ≥98.5% SPECTRONORM® for spectroscopy	188, 440	2,5 l	140096E
Methanol SPECTRONORM® for spectroscopy	256, 440	2,5 l	84705.320
n-Pentane SPECTRONORM® for spectroscopy	337, 440	1 l	84714.290
n-Pentane SPECTRONORM® for spectroscopy	337, 440	2,5 l	84714.320
2-Propanol SPECTRONORM® for spectroscopy	377, 440	2,5 l	84706.320
Tetrachloroethylene SPECTRONORM® for spectroscopy	440, 482	1 l	83950.290
Tetrahydrofuran unstabilised SPECTRONORM® for spectroscopy	440, 483	1 l	84707.290
Toluene SPECTRONORM® for spectroscopy	440, 491	1 l	84708.290
Toluene SPECTRONORM® for spectroscopy	440, 491	2,5 l	84708.320
2,2,4-Trimethylpentane SPECTRONORM® for spectroscopy	440, 497	1 l	28776.293
2,2,4-Trimethylpentane SPECTRONORM® for spectroscopy	440, 497	2,5 l	28776.320

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Spillage absorption granules

The coarse granules are easy to use and when applied to liquid spillages will absorb up to 80% of their own weight.

- Bulk density 50 g/100 ml
- Rapid absorption of low viscosity liquids
- Granular, size typically 1 to 3,15 mm (95 % more than 1,0 mm), generates little dust

The granules are suitable for absorbing acids, alkalis, other aqueous solutions and organic liquids.

Mercury is not absorbed.

Description	Pk	Cat. No.
Spillage absorption granules, typically 1 - 3,15 mm	2,5 kg	332377C

ALGOSOL N spillage granules, acid neutralizer

Algosol is a unique natural product made from seaweed and is suitable for the neutralisation of acids, such as hydrochloric, sulphuric, nitric and hydrofluoric. It absorbs spills immediately without breaking up and can be used to extinguish fires.

- Biodegradable, non toxic, non flammable and dust-free
- Can be swept up easily
- Stable, chemically inert and non polluting

1 kg of Algosol neutralises 180 ml 95% sulphuric acid or 530 ml of 36% hydrochloric acid or 400 ml of 70% nitric acid or 260 ml of 40% hydrofluoric acid.

Pk	Cat. No.
10 kg	99910.414

Spill kits, mobile, SPILL-X®

Developed to economically treat small spills, such as those that can occur in a laboratory environment. Provides easy access to the appropriate control agent for a particular type of chemical spill.

- Treats hazardous spills rather than just repackaging them
- Safe, easy to use, with the highest per volume absorption capacity
- Neutralises and solidifies acids and caustics for easy waste disposal (SPILL-X-A®, SPILL-X-C®)
- Absorbs solvents and raises the flash point above 60 °C, without producing toxic by-products (SPILL-X-S®)
- SPILL-X® case comes with portable, semi-portable or permanent mounting options

PP containers allow for both types of agent application namely pouring or shaking. Each bottle can treat a spillage up to 1,9 litres (1,4 to 1,9 m^2). Convert caustics and acids into non hazardous compounds that meet EPA specifications for non hazardous waste. Can be used effectively to deal with accidental spills or release of acids (SPILL X A®, also suitable for hydrofluoric acid HF), caustics (SPILL X C®), solvents (SPILL X S®) and formaldehyde (SPILL X FP®) at the workplace.

SPILL-X® kit case W×D×H: 470×145×550 mm (closed)

Ordering information: Each kit comprises of 6 bottles of individual agents, 1× pack of eye and hand protective accessories (1× safety goggles, 1× nitrile gloves, 2× clean up pans, 1× scraper, 6× waste bags, 1× treatment guide leaflet), a graphic instruction card, wall-mount screws and anchors. Everything is supplied in a plastic portable case. Please order refill bottles of SPILL-X® agents and extra packs of eye and hand protecting accessories separately.

Description	Pk	Cat. No.
Multipurpose SPILL-X®	1	121-0006
Acid SPILL-X-A®, 6×1.13 kg bottles	1	121-0007
Formaldehyde SPILL-X-FP®, 6 shakers	1	121-0008
Eye and hand protection accessories kit	1 KIT	121-0014

* Multipurpose SPILL-X® kit contains 2× SPILL-X-A® acid, 2× SPILL-X-C® caustic and 2× SPILL-X-S® solvent agents.

** Formaldehyde SPILL-X® kit includes 3× SPILL-X-FP® formaldehyde and 3× SPILL-S® solvent agents.

Refill sets, SPILL-X®

These refill sets can be used with five types of SPILL-X® treatment kits. They are available in different formats.

Ordering information: Each set contains 6 bottles.

Description	Pk	Cat. No.
Multipurpose refill, SPILL-X®	1 Set	121-0009
Solvent refill, SPILL-X®, 6 bottle set	1 Set	121-0012
Formaldehyde refill, SPILL-X-FP®, 6 bottle set	1 Set	121-0013
Acid refill, SPILL-X®, 6 bottle set	1 Set	121-0010
Caustic refill, SPILL-X®, 6 bottle set	1 Set	121-0011

Spinetch® D VLSI Selectipur® for the electronics industry

UN: 2922

Product from BASF

Cat. No.	Pk	Pack type
51153309.	2,5 l	Glass bottle

Spinetch® D VLSI Selectipur® for the electronics industry

Product from BASF

Cat. No.	Pk	Pack type
50438060.	276 kg	Metal drum lined

Spinetch® E Selectipur® for the electronics industry

Danger

UN: 2922

Storage Temperature: Ambient

Product from BASF

Cat. No.	Pk	Pack type
56996346.	320 kg	Metal drum lined

Spirit, Methylated industrial or mineralised

See Ethanol denatured

Spirit

See Ethanol absolute p.145

SSC buffer, 20X, ultrapure

SSC buffer is a hybridisation buffer for Northern and Southern blots.

Description	Pk Info	Pk	Cat. No.	Pack type
SSC buffer, Ready-Pack™, each pack prepares 1 litre of 20X concentrate	2×Ready-Pack™	2	0794-2PK	Set of items
SSC buffer, 20X liquid concentrate	-	4 l	0804-4L	Bag-in-box (Cubitainer)

SSPE, hybrisation buffer, 20X solution, ultra pure grade

A hybridisation buffer for Northern and Southern blots. This 1x solution of SSPE buffer contains 150 mM sodium chloride, 10 mM sodium phosphate, and 1 mM EDTA. Each litre prepares 20 L of 1x saline-sodium phosphate-EDTA buffer.

Cat. No.	Pk	Pack type
0810-4L	4 l	Cubitainer

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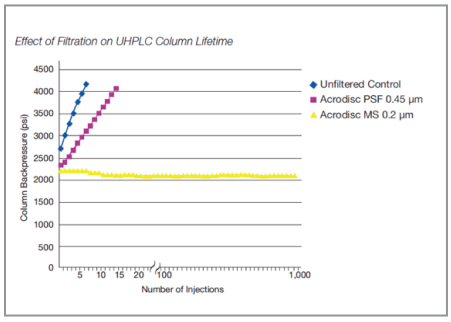
LC-MS MADE A BIT EASIER WITH VWR!



Effect of filtration on UHPLC column lifetime.

LC-MS certified Acrodisc® syringe filter – Pall Laboratory

LC-MS certified – Minimise interference in your LC-MS results with the Acrodisc® MS syringe filter. The first LC-MS certified filter with extremely low levels of extractables. Each box is supplied with a certificate containing Total Ion Current (TIC) chromatograms detailing all detected peaks relative to an Internal Standard.

Low ion suppression/enhancement – Reduce the need for re-testing. The Acrodisc® MS syringe filters will not contribute extractables that will interfere with the ionisation process resulting in more reliable and accurate results.

Protective packaging design – Save money and prevent downtime due to accidental contamination. Acrodisc® MS syringe filters are packed into separate tubes to protect them from external sources of extractables. While one tube is in use, the others are kept sealed.

Excellent chemical resistance – Use this universal filter for all your LC-MS samples. The WWPTFE (water wettable polytetrafluoroethylene) membrane can be used with both organic and aqueous solvents. When coupled with the HDPE housing, the membrane offers excellent chemical resistance.

Low protein binding – Get accurate and confident quantitative results. There is minimal protein adsorption with the Acrodisc® MS syringe filters.

Particulate retention – Using Acrodisc® MS syringe filters will protect your columns and instrument from particulate build-up, making your columns last longer and your LC-MS perform more consistently.

0,2 µm WWPTFE membrane, Ø (mm)	Effective filtration area (cm²)	Typical sample volume (ml)	Pk	Cat. No.
13	1	≤10	60	514-0627
25	3,9	≤150	50	514-0287

AAS Standards, AVS TITRINORM®

This classic range of AAS standards comprises 66 elements with a concentration of 1000 mg/ l

- Accurate to ±0.3% of actual value stated on label and/or C of A
- Traceable to NIST
- Delivered with certificate of analysis

Produced and tested in a facility with ISO Guide 34 and ISO17025 accreditation

Safety note: These standards are in acid solution, for full details of hazards and specification, please see vwr.com and the links to the Safety Data Sheets (SDS) and certificates of analysis.

Ordering Information: VWR has the capability to supply 'customised solutions'. For details please contact your local VWR sales office.

Description	Page	Pk	Cat. No.
Aluminium standard solution, 1,000 mg/l Al in 5% hydrochloric acid	23, 444	100 ml	86660.180
Aluminium standard solution, 1,000 mg/l Al in 5% hydrochloric acid	23, 444	500 ml	86660.260
Antimony standard solution, 1,000 mg/l Sb in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	48, 444	100 ml	86707.180
Antimony standard solution, 1,000 mg/l Sb in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	48, 444	500 ml	86707.260
Arsenic standard solution, 1,000 mg/l As in dil. nitric acid AVS TITRINORM® standard for AAS	50, 444	100 ml	86661.180
Arsenic standard solution, 1,000 mg/l As in dil. nitric acid AVS TITRINORM® standard for AAS	50, 444	500 ml	86661.260
Barium standard solution, 1,000 mg/l Ba in dil. nitric acid AVS TITRINORM® standard for AAS	52, 444	100 ml	86664.180
Barium standard solution, 1,000 mg/l Ba in dil. nitric acid AVS TITRINORM® standard for AAS	52, 444	500 ml	86664.260
Beryllium standard solution, 1,000 mg/l Be in 2% hydrochloric acid AVS TITRINORM® standard for AAS	57, 444	100 ml	86665.180
Beryllium standard solution, 1,000 mg/l Be in 2% hydrochloric acid AVS TITRINORM® standard for AAS	57, 444	500 ml	86665.260
Bismuth standard solution, 1,000 mg/l Bi in 10% nitric acid AVS TITRINORM® standard for AAS	59, 444	100 ml	86666.180
Bismuth standard solution, 1,000 mg/l Bi in 10% nitric acid AVS TITRINORM® standard for AAS	59, 444	500 ml	86666.260
Boron standard solution, 1,000 mg/l B in water AVS TITRINORM® standard for AAS	63, 444	100 ml	86663.180
Boron standard solution, 1,000 mg/l B in water AVS TITRINORM® standard for AAS	63, 444	500 ml	86663.260
Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid AVS TITRINORM® standard for AAS	73, 444	100 ml	86668.180
Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid AVS TITRINORM® standard for AAS	73, 444	500 ml	86668.260
Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid (from $Ca(NO_3)_2$) AVS TITRINORM® standard for AAS	74, 444	100 ml	86667.180
Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid (from $Ca(NO_3)_2$) AVS TITRINORM® standard for AAS	74, 444	500 ml	86667.260
Cerium standard solution, 1,000 mg/l Ce in dil. nitric acid AVS TITRINORM® standard for AAS	81, 444	100 ml	86669.180
Cerium standard solution, 1,000 mg/l Ce in dil. nitric acid AVS TITRINORM® standard for AAS	81, 444	500 ml	86669.260
Cesium standard solution, 1,000 mg/l Cs in dil. nitric acid AVS TITRINORM® standard for AAS	82, 444	100 ml	86672.180
Cesium standard solution, 1,000 mg/l Cs in dil. nitric acid AVS TITRINORM® standard for AAS	82, 444	500 ml	86672.260
Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid AVS TITRINORM® standard for AAS	90, 444	100 ml	86671.180
Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid AVS TITRINORM® standard for AAS	90, 444	500 ml	86671.260
Cobalt standard solution, 1,000 mg/l Co in dil. nitric acid AVS TITRINORM® standard for AAS	93, 444	100 ml	86670.180
Cobalt standard solution, 1,000 mg/l Co in dil. nitric acid AVS TITRINORM® standard for AAS	93, 444	500 ml	86670.260
Copper standard solution, 1,000 mg/l Cu in dil. nitric acid AVS TITRINORM® standard for AAS	97, 444	100 ml	86673.180
Copper standard solution, 1,000 mg/l Cu in dil. nitric acid AVS TITRINORM® standard for AAS	97, 444	500 ml	86673.260
Dysprosium standard solution, 1,000 mg/l Dy in dil. nitric acid AVS TITRINORM® standard for AAS	128, 444	100 ml	86674.180
Dysprosium standard solution, 1,000 mg/l Dy in dil. nitric acid AVS TITRINORM® standard for AAS	128, 444	500 ml	86674.260
Erbium standard solution, 1,000 mg/l Er in dil. nitric acid AVS TITRINORM® standard for AAS	144, 444	100 ml	86675.180
Erbium standard solution, 1,000 mg/l Er in dil. nitric acid AVS TITRINORM® standard for AAS	144, 444	500 ml	86675.260
Europium standard solution, 1,000 mg/l Eu in dil. nitric acid AVS TITRINORM® standard for AAS	156, 444	100 ml	86676.180
Europium standard solution, 1,000 mg/l Eu in dil. nitric acid AVS TITRINORM® standard for AAS	156, 444	500 ml	86676.260
Gadolinium standard solution, 1,000 mg/l Gd in dil. nitric acid AVS TITRINORM® standard for AAS	168, 444	100 ml	86679.180
Gadolinium standard solution, 1,000 mg/l Gd in dil. nitric acid AVS TITRINORM® standard for AAS	168, 444	500 ml	86679.260
Gallium standard solution, 1,000 mg/l Ga in dil. nitric acid AVS TITRINORM® standard for AAS	169, 444	100 ml	86678.180
Gallium standard solution, 1,000 mg/l Ga in dil. nitric acid AVS TITRINORM® standard for AAS	169, 444	500 ml	86678.260
Germanium standard solution, 1,000 mg/l Ge in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	172, 444	100 ml	86680.180
Germanium standard solution, 1,000 mg/l Ge in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	172, 444	500 ml	86680.260
Gold standard solution, 1,000 mg/l Au in 5% hydrochloric acid AVS TITRINORM® standard for AAS	178, 444	100 ml	86662.180
Gold standard solution, 1,000 mg/l Au in 5% hydrochloric acid AVS TITRINORM® standard for AAS	178, 444	500 ml	86662.260
Hafnium standard solution, 1,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	183, 444	100 ml	86681.180
Hafnium standard solution, 1,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	183, 444	500 ml	86681.260
Holmium standard solution, 1,000 mg/l Ho in dil. nitric acid AVS TITRINORM® standard for AAS	191, 444	100 ml	86683.180
Holmium standard solution, 1,000 mg/l Ho in dil. nitric acid AVS TITRINORM® standard for AAS	191, 444	500 ml	86683.260
Indium standard solution, 1,000 mg/l In in dil. nitric acid AVS TITRINORM® standard for AAS	219, 444	100 ml	86684.180
Indium standard solution, 1,000 mg/l In in dil. nitric acid AVS TITRINORM® standard for AAS	219, 444	500 ml	86684.260
Iridium standard solution, 1,000 mg/l Ir in 10% hydrochloric acid AVS TITRINORM® standard for AAS	222, 444	100 ml	86685.180
Iridium standard solution, 1,000 mg/l Ir in 10% hydrochloric acid AVS TITRINORM® standard for AAS	222, 444	500 ml	86685.260
Iron standard solution, 1,000 mg/l Fe in 2% hydrochloric acid AVS TITRINORM® standard for AAS	223, 444	100 ml	86677.180
Iron standard solution, 1,000 mg/l Fe in 2% hydrochloric acid AVS TITRINORM® standard for AAS	223, 444	500 ml	86677.260
Lanthanum standard solution, 1,000 mg/l La in dil. nitric acid AVS TITRINORM® standard for AAS	236, 444	100 ml	86687.180
Lanthanum standard solution, 1,000 mg/l La in dil. nitric acid AVS TITRINORM® standard for AAS	236, 444	500 ml	86687.260
Lead standard solution, 1,000 mg/l Pb in dil. nitric acid AVS TITRINORM® standard for AAS	237, 444	100 ml	86699.180
Lead standard solution, 1,000 mg/l Pb in dil. nitric acid AVS TITRINORM® standard for AAS	237, 444	500 ml	86699.260
Lithium standard solution, 1,000 mg/l Li in dil. nitric acid AVS TITRINORM® standard for AAS	240, 444	100 ml	86688.180

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Description	Page	Pk	Cat. No.
Lithium standard solution, 1,000 mg/l Li in dil. nitric acid AVS TITRINORM® standard for AAS	240, 445	500 ml	86688.260
Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid AVS TITRINORM® standard for AAS	245, 445	100 ml	86690.180
Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid AVS TITRINORM® standard for AAS	245, 445	500 ml	86690.260
Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid AVS TITRINORM® standard for AAS	250, 445	100 ml	86691.180
Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid AVS TITRINORM® standard for AAS	250, 445	500 ml	86691.260
Mercury standard solution, 1,000 mg/l Hg in 10% nitric acid AVS TITRINORM® standard for AAS	253, 445	100 ml	86682.180
Mercury standard solution, 1,000 mg/l Hg in 10% nitric acid AVS TITRINORM® standard for AAS	253, 445	500 ml	86682.260
Molybdenum standard solution, 1,000 mg/l Mo in water AVS TITRINORM® standard for AAS	310, 445	100 ml	86692.180
Molybdenum standard solution, 1,000 mg/l Mo in water AVS TITRINORM® standard for AAS	310, 445	500 ml	86692.260
Neodymium standard solution, 1,000 mg/l Nd in dil. nitric acid AVS TITRINORM® standard for AAS	314, 445	100 ml	86695.180
Neodymium standard solution, 1,000 mg/l Nd in dil. nitric acid AVS TITRINORM® standard for AAS	314, 445	500 ml	86695.260
Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid AVS TITRINORM® standard for AAS	314, 445	100 ml	86696.180
Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid AVS TITRINORM® standard for AAS	314, 445	500 ml	86696.260
Niobium standard solution, 1,000 mg/l Nb in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	317, 445	100 ml	86694.180
Niobium standard solution, 1,000 mg/l Nb in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	317, 445	500 ml	86694.260
Palladium standard solution, 1,000 mg/l Pd in 5% hydrochloric acid AVS TITRINORM® standard for AAS	327, 445	100 ml	86700.180
Palladium standard solution, 1,000 mg/l Pd in 5% hydrochloric acid AVS TITRINORM® standard for AAS	327, 445	500 ml	86700.260
Phosphorus standard solution, 1,000 mg/l P in water AVS TITRINORM® standard for AAS	353, 445	100 ml	86698.180
Phosphorus standard solution, 1,000 mg/l P in water AVS TITRINORM® standard for AAS	353, 445	500 ml	86698.260
Platinum standard solution, 1,000 mg/l Pt in 10% hydrochloric acid AVS TITRINORM® standard for AAS	355, 445	100 ml	86701.180
Platinum standard solution, 1,000 mg/l Pt in 10% hydrochloric acid AVS TITRINORM® standard for AAS	355, 445	500 ml	86701.260
Potassium standard solution, 1,000 mg/l K in dil. nitric acid AVS TITRINORM® standard for AAS	358, 445	100 ml	86686.180
Potassium standard solution, 1,000 mg/l K in dil. nitric acid AVS TITRINORM® standard for AAS	358, 445	500 ml	86686.260
Rhenium standard solution, 1,000 mg/l Re in dil. nitric acid AVS TITRINORM® standard for AAS	388, 445	100 ml	86703.180
Rhenium standard solution, 1,000 mg/l Re in dil. nitric acid AVS TITRINORM® standard for AAS	388, 445	500 ml	86703.260
Rhodium standard solution, 1,000 mg/l Rh in 5% hydrochloric acid AVS TITRINORM® standard for AAS	389, 445	100 ml	86704.180
Rhodium standard solution, 1,000 mg/l Rh in 5% hydrochloric acid AVS TITRINORM® standard for AAS	389, 445	500 ml	86704.260
Rubidium standard solution, 1,000 mg/l Rb in dil. nitric acid AVS TITRINORM® standard for AAS	390, 445	100 ml	86702.180
Rubidium standard solution, 1,000 mg/l Rb in dil. nitric acid AVS TITRINORM® standard for AAS	390, 445	500 ml	86702.260
Ruthenium standard solution, 1,000 mg/l Ru in 5% hydrochloric acid AVS TITRINORM® standard for AAS	390, 445	100 ml	86705.180
Ruthenium standard solution, 1,000 mg/l Ru in 5% hydrochloric acid AVS TITRINORM® standard for AAS	390, 445	500 ml	86705.260
Samarium standard solution, 1,000 mg/l Sm in dil. nitric acid AVS TITRINORM® standard for AAS	393, 445	100 ml	86711.180
Samarium standard solution, 1,000 mg/l Sm in dil. nitric acid AVS TITRINORM® standard for AAS	393, 445	500 ml	86711.260
Scandium standard solution, 1,000 mg/l Sc in dil. nitric acid AVS TITRINORM® standard for AAS	394, 445	100 ml	86708.180
Scandium standard solution, 1,000 mg/l Sc in dil. nitric acid AVS TITRINORM® standard for AAS	394, 445	500 ml	86708.260
Selenium standard solution, 1,000 mg/l Se in dil. nitric acid AVS TITRINORM® standard for AAS	394, 445	100 ml	86709.180
Selenium standard solution, 1,000 mg/l Se in dil. nitric acid AVS TITRINORM® standard for AAS	394, 445	500 ml	86709.260
Silicon standard solution, 1,000 mg/l Si in water AVS TITRINORM® standard for AAS	396, 445	100 ml	86710.180
Silicon standard solution, 1,000 mg/l Si in water AVS TITRINORM® standard for AAS	396, 445	500 ml	86710.260
Silver standard solution, 1,000 mg/l Ag in dil. nitric acid AVS TITRINORM® standard for AAS	403, 445	100 ml	86659.180
Silver standard solution, 1,000 mg/l Ag in dil. nitric acid AVS TITRINORM® standard for AAS	403, 445	500 ml	86659.260
Sodium standard solution, 1,000 mg/l Na in dil. nitric acid AVS TITRINORM® standard for AAS	407, 445	100 ml	86693.180
Sodium standard solution, 1,000 mg/l Na in dil. nitric acid AVS TITRINORM® standard for AAS	407, 445	500 ml	86693.260
Strontium standard solution, 1,000 mg/l Sr in dil. nitric acid AVS TITRINORM® standard for AAS	445, 466	100 ml	86713.180
Strontium standard solution, 1,000 mg/l Sr in dil. nitric acid AVS TITRINORM® standard for AAS	445, 466	500 ml	86713.260
Sulphur standard solution, 1,000 mg/l S in water AVS TITRINORM® standard for AAS	445, 470	100 ml	86706.180
Sulphur standard solution, 1,000 mg/l S in water AVS TITRINORM® standard for AAS	445, 470	500 ml	86706.260
Tantalum standard solution, 1,000 mg/l Ta in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	445, 477	100 ml	86714.180
Tantalum standard solution, 1,000 mg/l Ta in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	445, 477	500 ml	86714.260
Tellurium standard solution, 1,000 mg/l Te in 10% nitric acid AVS TITRINORM® standard for AAS	445, 480	100 ml	86715.180
Tellurium standard solution, 1,000 mg/l Te in 10% nitric acid AVS TITRINORM® standard for AAS	445, 480	500 ml	86715.260
Thallium standard solution, 1,000 mg/l Tl in dil. nitric acid AVS TITRINORM® standard for AAS	445, 485	100 ml	86718.180
Thallium standard solution, 1,000 mg/l Tl in dil. nitric acid AVS TITRINORM® standard for AAS	445, 485	500 ml	86718.260
Thulium standard solution, 1,000 mg/l Tm in dil. nitric acid AVS TITRINORM® standard for AAS	445, 487	100 ml	86719.180
Thulium standard solution, 1,000 mg/l Tm in dil. nitric acid AVS TITRINORM® standard for AAS	445, 487	500 ml	86719.260
Tin standard solution, 1,000 mg/l Sn in 20% hydrochloric acid AVS TITRINORM® standard for AAS	445, 488	100 ml	86712.180
Tin standard solution, 1,000 mg/l Sn in 20% hydrochloric acid AVS TITRINORM® standard for AAS	445, 488	500 ml	86712.260
Titanium standard solution, 1,000 mg/l Ti in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	445, 489	100 ml	86717.180
Titanium standard solution, 1,000 mg/l Ti in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	445, 489	500 ml	86717.260
Tungsten standard solution, 1,000 mg/l W in nitric acid with hydrofluoric acid (each max. 1%) AVS TITRINORM® standard for AAS	445, 504	100 ml	86722.180
Tungsten standard solution, 1,000 mg/l W in nitric acid with hydrofluoric acid (each max. 1%) AVS TITRINORM® standard for AAS	445, 504	500 ml	86722.260
Vanadium standard solution, 1,000 mg/l V in 2% sulphuric acid AVS TITRINORM® standard for AAS	445, 508	100 ml	86721.180
Vanadium standard solution, 1,000 mg/l V in 2% sulphuric acid AVS TITRINORM® standard for AAS	445, 508	500 ml	86721.260
Ytterbium standard solution, 1,000 mg/l Yb in dil. nitric acid AVS TITRINORM® standard for AAS	445, 523	100 ml	86724.180
Ytterbium standard solution, 1,000 mg/l Yb in dil. nitric acid AVS TITRINORM® standard for AAS	445, 523	500 ml	86724.260
Yttrium standard solution, 1,000 mg/l Y in dil. nitric acid AVS TITRINORM® standard for AAS	445, 523	100 ml	86723.180
Yttrium standard solution, 1,000 mg/l Y in dil. nitric acid AVS TITRINORM® standard for AAS	445, 523	500 ml	86723.260
Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid AVS TITRINORM® standard for AAS	445, 524	100 ml	86725.180
Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid AVS TITRINORM® standard for AAS	445, 524	500 ml	86725.260
Zirconium standard solution, 1,000 mg/l Zr in 5% hydrochloric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	445, 527	100 ml	86726.180
Zirconium standard solution, 1,000 mg/l Zr in 5% hydrochloric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS	445, 527	500 ml	86726.260

Density standards referenced at 15 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6960 - 3.1140 g/ml) at 15 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6960 g/ml at 15 °C	100 ml	85140.180
Density standard, 0.7073 g/ml at 15 °C	100 ml	85141.180
Density standard, 0.7184 g/ml at 15 °C	100 ml	85142.180
Density standard, 0.7298 g/ml at 15 °C	100 ml	85143.180
Density standard, 0.7411 g/ml at 15 °C	100 ml	85144.180
Density standard, 0.7524 g/ml at 15 °C	100 ml	85145.180
Density standard, 0.7721 g/ml at 15 °C	100 ml	85146.180
Density standard, 0.7933 g/ml at 15 °C	100 ml	85147.180
Density standard, 0.8168 g/ml at 15 °C	100 ml	85148.180
Density standard, 0.8428 g/ml at 15 °C	100 ml	85149.180
Density standard, 0.8715 g/ml at 15 °C	100 ml	85150.180
Density standard, 0.9135 g/ml at 15 °C	100 ml	85151.180
Density standard, 0.9514 g/ml at 15 °C	100 ml	85152.180
Density standard, 1.0040 g/ml at 15 °C	100 ml	85153.180
Density standard, 1.0337 g/ml at 15 °C	100 ml	85154.180
Density standard, 1.0828 g/ml at 15 °C	100 ml	85155.180
Density standard, 1.1661 g/ml at 15 °C	100 ml	85156.180
Density standard, 1.2498 g/ml at 15 °C	100 ml	85157.180
Density standard, 1.3318 g/ml at 15 °C	100 ml	85158.180
Density standard, 1.4152 g/ml at 15 °C	100 ml	85159.180
Density standard, 1.5820 g/ml at 15 °C	100 ml	85160.180
Density standard, 1.7495 g/ml at 15 °C	100 ml	85161.180
Density standard, 1.9171 g/ml at 15 °C	100 ml	85162.180
Density standard, 2.0846 g/ml at 15 °C	100 ml	85163.180
Density standard, 2.2568 g/ml at 15 °C	100 ml	85164.180
Density standard, 2.4261 g/ml at 15 °C	100 ml	85165.180
Density standard, 2.6055 g/ml at 15 °C	100 ml	85166.180
Density standard, 2.7588 g/ml at 15 °C	100 ml	85167.180
Density standard, 2.9418 g/ml at 15 °C	100 ml	85168.180
Density standard, 3.1140 g/ml at 15 °C	100 ml	85169.180

Density standards referenced at 20 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6619 - 3.1096 g/ml) at 20 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6919 g/ml at 20 °C	100 ml	85170.180
Density standard, 0.7033 g/ml at 20 °C	100 ml	85171.180
Density standard, 0.7148 g/ml at 20 °C	100 ml	85172.180
Density standard, 0.7261 g/ml at 20 °C	100 ml	85173.180
Density standard, 0.7374 g/ml at 20 °C	100 ml	85174.180
Density standard, 0.7488 g/ml at 20 °C	100 ml	85175.180
Density standard, 0.7683 g/ml at 20 °C	100 ml	85176.180
Density standard, 0.7893 g/ml at 20 °C	100 ml	85177.180
Density standard, 0.8126 g/ml at 20 °C	100 ml	85178.180
Density standard, 0.8384 g/ml at 20 °C	100 ml	85179.180
Density standard, 0.8668 g/ml at 20 °C	100 ml	85180.180
Density standard, 0.9098 g/ml at 20 °C	100 ml	85181.180
Density standard, 0.9476 g/ml at 20 °C	100 ml	85182.180
Density standard, 1.0005 g/ml at 20 °C	100 ml	85183.180
Density standard, 1.0301 g/ml at 20 °C	100 ml	85184.180
Density standard, 1.0792 g/ml at 20 °C	100 ml	85185.180
Density standard, 1.1651 g/ml at 20 °C	100 ml	85186.180
Density standard, 1.2486 g/ml at 20 °C	100 ml	85187.180
Density standard, 1.3304 g/ml at 20 °C	100 ml	85188.180
Density standard, 1.4136 g/ml at 20 °C	100 ml	85189.180
Density standard, 1.5799 g/ml at 20 °C	100 ml	85190.180
Density standard, 1.7470 g/ml at 20 °C	100 ml	85191.180
Density standard, 1.9141 g/ml at 20 °C	100 ml	85192.180

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Description	Pk	Cat. No.
Density standard, 2.0812 g/ml at 20 °C	100 ml	85193.180
Density standard, 2.2531 g/ml at 20 °C	100 ml	85194.180
Density standard, 2.4219 g/ml at 20 °C	100 ml	85195.180
Density standard, 2.6011 g/ml at 20 °C	100 ml	85196.180
Density standard, 2.7542 g/ml at 20 °C	100 ml	85197.180
Density standard, 2.9370 g/ml at 20 °C	100 ml	85198.180
Density standard, 3.1096 g/ml at 20 °C	100 ml	85199.180

Density standards referenced at 25 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6878 - 3.1043 g/ml) at 25 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6878 g/ml at 25 °C	100 ml	85200.180
Density standard, 0.6993 g/ml at 25 °C	100 ml	85201.180
Density standard, 0.7111 g/ml at 25 °C	100 ml	85202.180
Density standard, 0.7223 g/ml at 25 °C	100 ml	85203.180
Density standard, 0.7337 g/ml at 25 °C	100 ml	85204.180
Density standard, 0.7452 g/ml at 25 °C	100 ml	85205.180
Density standard, 0.7645 g/ml at 25 °C	100 ml	85206.180
Density standard, 0.7853 g/ml at 25 °C	100 ml	85207.180
Density standard, 0.8084 g/ml at 25 °C	100 ml	85208.180
Density standard, 0.8340 g/ml at 25 °C	100 ml	85209.180
Density standard, 0.8622 g/ml at 25 °C	100 ml	85210.180
Density standard, 0.9060 g/ml at 25 °C	100 ml	85211.180
Density standard, 0.9438 g/ml at 25 °C	100 ml	85212.180
Density standard, 0.9969 g/ml at 25 °C	100 ml	85213.180
Density standard, 1.0265 g/ml at 25 °C	100 ml	85214.180
Density standard, 1.0755 g/ml at 25 °C	100 ml	85215.180
Density standard, 1.1639 g/ml at 25 °C	100 ml	85216.180
Density standard, 1.2471 g/ml at 25 °C	100 ml	85217.180
Density standard, 1.3287 g/ml at 25 °C	100 ml	85218.180
Density standard, 1.4117 g/ml at 25 °C	100 ml	85219.180
Density standard, 1.5775 g/ml at 25 °C	100 ml	85220.180
Density standard, 1.7441 g/ml at 25 °C	100 ml	85221.180
Density standard, 1.9108 g/ml at 25 °C	100 ml	85222.180
Density standard, 2.0775 g/ml at 25 °C	100 ml	85223.180
Density standard, 2.2490 g/ml at 25 °C	100 ml	85224.180
Density standard, 2.4175 g/ml at 25 °C	100 ml	85225.180
Density standard, 2.5964 g/ml at 25 °C	100 ml	85226.180
Density standard, 2.7493 g/ml at 25 °C	100 ml	85227.180
Density standard, 2.9319 g/ml at 25 °C	100 ml	85228.180
Density standard, 3.1043 g/ml at 25 °C	100 ml	85229.180

Density standards referenced at 40 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6752 - 3.0852 g/ml) at 40 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6752 g/ml at 40 °C	100 ml	85230.180
Density standard, 0.6872 g/ml at 40 °C	100 ml	85231.180
Density standard, 0.6997 g/ml at 40 °C	100 ml	85232.180
Density standard, 0.7109 g/ml at 40 °C	100 ml	85233.180
Density standard, 0.7226 g/ml at 40 °C	100 ml	85234.180
Density standard, 0.7343 g/ml at 40 °C	100 ml	85235.180
Density standard, 0.7531 g/ml at 40 °C	100 ml	85236.180
Density standard, 0.7733 g/ml at 40 °C	100 ml	85237.180
Density standard, 0.7958 g/ml at 40 °C	100 ml	85238.180
Density standard, 0.8207 g/ml at 40 °C	100 ml	85239.180
Density standard, 0.8482 g/ml at 40 °C	100 ml	85240.180
Density standard, 0.8945 g/ml at 40 °C	100 ml	85241.180
Density standard, 0.9323 g/ml at 40 °C	100 ml	85242.180
Density standard, 0.9857 g/ml at 40 °C	100 ml	85243.180
Density standard, 1.0152 g/ml at 40 °C	100 ml	85244.180
Density standard, 1.0642 g/ml at 40 °C	100 ml	85245.180
Density standard, 1.1581 g/ml at 40 °C	100 ml	85246.180
Density standard, 1.2408 g/ml at 40 °C	100 ml	85247.180
Density standard, 1.3217 g/ml at 40 °C	100 ml	85248.180
Density standard, 1.4039 g/ml at 40 °C	100 ml	85249.180
Density standard, 1.5685 g/ml at 40 °C	100 ml	85250.180
Density standard, 1.7339 g/ml at 40 °C	100 ml	85251.180
Density standard, 1.8994 g/ml at 40 °C	100 ml	85252.180
Density standard, 2.0649 g/ml at 40 °C	100 ml	85253.180
Density standard, 2.2352 g/ml at 40 °C	100 ml	85254.180
Density standard, 2.4028 g/ml at 40 °C	100 ml	85255.180
Density standard, 2.5807 g/ml at 40 °C	100 ml	85256.180
Density standard, 2.7329 g/ml at 40 °C	100 ml	85257.180
Density standard, 2.9132 g/ml at 40 °C	100 ml	85258.180
Density standard, 3.0852 g/ml at 40 °C	100 ml	85259.180

Density standards referenced at 50 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6668 - 3.0721 g/ml) at 50 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6668 g/ml at 50 °C	100 ml	85260.180
Density standard, 0.6791 g/ml at 50 °C	100 ml	85261.180
Density standard, 0.6917 g/ml at 50 °C	100 ml	85262.180
Density standard, 0.7033 g/ml at 50 °C	100 ml	85263.180
Density standard, 0.7151 g/ml at 50 °C	100 ml	85264.180
Density standard, 0.7269 g/ml at 50 °C	100 ml	85265.180
Density standard, 0.7454 g/ml at 50 °C	100 ml	85266.180
Density standard, 0.7653 g/ml at 50 °C	100 ml	85267.180
Density standard, 0.7873 g/ml at 50 °C	100 ml	85268.180
Density standard, 0.8118 g/ml at 50 °C	100 ml	85269.180
Density standard, 0.8387 g/ml at 50 °C	100 ml	85270.180
Density standard, 0.8868 g/ml at 50 °C	100 ml	85271.180
Density standard, 0.9245 g/ml at 50 °C	100 ml	85272.180
Density standard, 0.9777 g/ml at 50 °C	100 ml	85273.180
Density standard, 1.0073 g/ml at 50 °C	100 ml	85274.180
Density standard, 1.0562 g/ml at 50 °C	100 ml	85275.180
Density standard, 1.1512 g/ml at 50 °C	100 ml	85276.180
Density standard, 1.2346 g/ml at 50 °C	100 ml	85277.180
Density standard, 1.3138 g/ml at 50 °C	100 ml	85278.180
Density standard, 1.3973 g/ml at 50 °C	100 ml	85279.180
Density standard, 1.5609 g/ml at 50 °C	100 ml	85280.180

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Description	Pk	Cat. No.
Density standard, 1.7257 g/ml at 50 °C	100 ml	85281.180
Density standard, 1.8904 g/ml at 50 °C	100 ml	85282.180
Density standard, 2.0551 g/ml at 50 °C	100 ml	85283.180
Density standard, 2.2247 g/ml at 50 °C	100 ml	85284.180
Density standard, 2.3916 g/ml at 50 °C	100 ml	85285.180
Density standard, 2.5689 g/ml at 50 °C	100 ml	85286.180
Density standard, 2.7207 g/ml at 50 °C	100 ml	85287.180
Density standard, 2.9005 g/ml at 50 °C	100 ml	85288.180
Density standard, 3.0721 g/ml at 50 °C	100 ml	85289.180

Density standards referenced at 60 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6582 - 1.0478 g/ml) at 60 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6582 g/ml at 60 °C	100 ml	85290.180
Density standard, 0.6708 g/ml at 60 °C	100 ml	85291.180
Density standard, 0.6835 g/ml at 60 °C	100 ml	85292.180
Density standard, 0.6955 g/ml at 60 °C	100 ml	85293.180
Density standard, 0.7076 g/ml at 60 °C	100 ml	85294.180
Density standard, 0.7196 g/ml at 60 °C	100 ml	85295.180
Density standard, 0.7376 g/ml at 60 °C	100 ml	85296.180
Density standard, 0.7572 g/ml at 60 °C	100 ml	85297.180
Density standard, 0.7788 g/ml at 60 °C	100 ml	85298.180
Density standard, 0.8027 g/ml at 60 °C	100 ml	85299.180
Density standard, 0.8292 g/ml at 60 °C	100 ml	85300.180
Density standard, 0.8790 g/ml at 60 °C	100 ml	85301.180
Density standard, 0.9166 g/ml at 60 °C	100 ml	85302.180
Density standard, 0.9695 g/ml at 60 °C	100 ml	85303.180
Density standard, 0.9990 g/ml at 60 °C	100 ml	85304.180
Density standard, 1.0478 g/ml at 60 °C	100 ml	85305.180

Density standards referenced at 80 °C

These products can be used as calibration standards for density measurements by pycnometric, vibrational or hydrometer based techniques.

- High accuracy across an extensive density range (0.6407 - 1.0302 g/ml) at 80 °C
- No toxic heavy metals used in any formulation
- Can be used with any brand or type of density measuring instrument
- Presented in a high quality, tamper proof amber glass bottle

These standards are prepared gravimetrically (solute and solvent) using OIML traceable weights. The density of the standards are established using fully calibrated reference pycnometers.

In accordance with ASTM D1480-12 for testing of density or relative density. A certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Pk	Cat. No.
Density standard, 0.6407 g/ml at 80°C	100 ml	85306.180
Density standard, 0.6538 g/ml at 80°C	100 ml	85307.180
Density standard, 0.6661 g/ml at 80°C	100 ml	85308.180
Density standard, 0.6798 g/ml at 80°C	100 ml	85309.180
Density standard, 0.6923 g/ml at 80°C	100 ml	85310.180
Density standard, 0.7047 g/ml at 80°C	100 ml	85311.180
Density standard, 0.7220 g/ml at 80°C	100 ml	85312.180
Density standard, 0.7407 g/ml at 80°C	100 ml	85313.180
Density standard, 0.7614 g/ml at 80°C	100 ml	85314.180
Density standard, 0.7844 g/ml at 80°C	100 ml	85315.180
Density standard, 0.8098 g/ml at 80°C	100 ml	85316.180
Density standard, 0.8629 g/ml at 80°C	100 ml	85317.180
Density standard, 0.9006 g/ml at 80°C	100 ml	85318.180
Density standard, 0.9520 g/ml at 80°C	100 ml	85319.180
Density standard, 0.9815 g/ml at 80°C	100 ml	85320.180
Density standard, 1.0302 g/ml at 80°C	100 ml	85321.180

ICP standards, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms and salts 99,999%
- Solution assayed by titration
- Final concentration verified against ICP standards from NIST
- Total maximum uncertainty: ±1%
- Delivered with complete certificate of analysis (CoA)

Manufactured and tested in ISO Guide 34 and ISO 17025 accredited facilities.

Description	Page	Pk	Cat. No.
Aluminium standard solution, 10,000 mg/l Al in dil. nitric acid (from $Al(NO_3)_3$) ARISTAR® standard for ICP	23, 450	100 ml	455012E
Aluminium standard solution, 10,000 mg/l Al in dil. nitric acid (from $Al(NO_3)_3$) ARISTAR® standard for ICP	23, 450	500 ml	455014G
Aluminium standard solution, 1,000 mg/l Al in dil. nitric acid (from $Al(NO_3)_3.9H_2O$) ARISTAR® standard for ICP	23, 450	100 ml	455002C
Aluminium standard solution, 1,000 mg/l Al in dil. nitric acid (from $Al(NO_3)_3.9H_2O$) ARISTAR® standard for ICP	23, 450	500 ml	455004E
Antimony standard solution, 1,000 mg/l Sb in dil. nitric acid with tartaric acid (max. 1%) (from Sb) ARISTAR® standard for ICP	48, 450	100 ml	455022G
Arsenic standard solution, 10,000 mg/l As in dil. nitric acid (from As) ARISTAR® standard for ICP	50, 450	100 ml	455052M
Arsenic standard solution, 1,000 mg/l As in dil. nitric acid (from As) ARISTAR® standard for ICP	50, 450	100 ml	455042K
Arsenic standard solution, 1,000 mg/l As in dil. nitric acid (from As) ARISTAR® standard for ICP	50, 450	500 ml	455044M
Barium standard solution, 10,000 mg/l Ba in dil. nitric acid (from $Ba(NO_3)_2$) ARISTAR® standard for ICP	52, 450	100 ml	455072Q
Barium standard solution, 1,000 mg/l Ba in dil. nitric acid (from $Ba(NO_3)_2$) ARISTAR® standard for ICP	52, 450	100 ml	455062X
Barium standard solution, 1,000 mg/l Ba in dil. nitric acid (from $Ba(NO_3)_2$) ARISTAR® standard for ICP	52, 450	500 ml	455064Q
Beryllium standard solution, 10,000 mg/l Be in dil. nitric acid (from $BeO.(Be(OAc)_2)_3$) ARISTAR® standard for ICP	57, 450	100 ml	455092U
Beryllium standard solution, 1,000 mg/l Be in dil. nitric acid (from $BeO.(Be(OAc)_2)_3$) ARISTAR® standard for ICP	57, 450	100 ml	455082S
Beryllium standard solution, 1,000 mg/l Be in dil. nitric acid (from $BeO.(Be(OAc)_2)_3$) ARISTAR® standard for ICP	57, 450	500 ml	455084U
Bismuth standard solution, 10,000 mg/l Bi in dil. nitric acid (from Bi) ARISTAR® standard for ICP	59, 450	500 ml	455114J
Bismuth standard solution, 1,000 mg/l Bi in dil. nitric acid (from Bi) ARISTAR® standard for ICP	59, 450	100 ml	455102F
Bismuth standard solution, 1,000 mg/l Bi in dil. nitric acid (from Bi) ARISTAR® standard for ICP	59, 450	500 ml	455104H
Boron standard solution, 10,000 mg/l B in ammonium hydroxide solution (max. 1%) (from $B(OH_3)$) ARISTAR® standard for ICP	62, 450	100 ml	455132L
Boron standard solution, 10,000 mg/l B in ammonium hydroxide solution (max. 1%) (from $B(OH_3)$) ARISTAR® standard for ICP	62, 450	500 ml	455134N
Boron standard solution, 1,000 mg/l B in ammonium hydroxide solution (max. 1%) (from $B(OH_3)$) ARISTAR® standard for ICP	63, 450	100 ml	455122J
Boron standard solution, 1,000 mg/l B in ammonium hydroxide solution (max. 1%) (from $B(OH_3)$) ARISTAR® standard for ICP	63, 450	500 ml	455124L
Cadmium standard solution, 10,000 mg/l Cd in dil. nitric acid (from Cd) ARISTAR® standard for ICP	73, 450	100 ml	455152P
Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid (from Cd) ARISTAR® standard for ICP	73, 450	100 ml	455142N
Cadmium standard solution, 1,000 mg/l Cd in dil. nitric acid (from Cd) ARISTAR® standard for ICP	73, 450	500 ml	455144P
Calcium standard solution, 10,000 mg/l Ca in dil. nitric acid (from $CaCO_3$) ARISTAR® standard for ICP	74, 450	100 ml	455172T
Calcium standard solution, 10,000 mg/l Ca in dil. nitric acid (from $CaCO_3$) ARISTAR® standard for ICP	74, 450	500 ml	455174V
Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid (from $CaCO_3$) ARISTAR® standard for ICP	74, 450	100 ml	455162R
Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid (from $CaCO_3$) ARISTAR® standard for ICP	74, 450	500 ml	455164T
Cerium standard solution, 10,000 mg/l Ce in dil. nitric acid (from $(NH_4)_2Ce(NO_3)_6$) ARISTAR® standard for ICP	81, 450	100 ml	455192A
Cerium standard solution, 1,000 mg/l Ce in dil. nitric acid (from $(NH_4)_2Ce(NO_3)_6$) ARISTAR® standard for ICP	81, 450	100 ml	455182V
Cerium standard solution, 1,000 mg/l Ce in dil. nitric acid (from $(NH_4)_2Ce(NO_3)_6$) ARISTAR® standard for ICP	81, 450	500 ml	455184A
Cesium standard solution, 10,000 mg/l Cs in dil. nitric acid (from $CsNO_3$) ARISTAR® standard for ICP	82, 450	100 ml	455212K
Cesium standard solution, 10,000 mg/l Cs in dil. nitric acid (from $CsNO_3$) ARISTAR® standard for ICP	82, 450	500 ml	455214M
Cesium standard solution, 1,000 mg/l Cs in dil. nitric acid (from $CsNO_3$) ARISTAR® standard for ICP	82, 450	100 ml	455202Y
Cesium standard solution, 1,000 mg/l Cs in dil. nitric acid (from $CsNO_3$) ARISTAR® standard for ICP	82, 450	500 ml	455204K
Chromium standard solution, 10,000 mg/l Cr in 10% hydrochloric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	89, 450	100 ml	455252S
Chromium standard solution, 10,000 mg/l Cr in 10% hydrochloric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	89, 450	500 ml	455254U
Chromium standard solution, 10,000 mg/l Cr in dil. nitric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	89, 450	100 ml	455232X
Chromium standard solution, 10,000 mg/l Cr in dil. nitric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	89, 450	500 ml	455234Q
Chromium standard solution, 1,000 mg/l Cr in 10% hydrochloric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	89, 450	100 ml	455242Q
Chromium standard solution, 1,000 mg/l Cr in 10% hydrochloric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	89, 450	500 ml	455244S
Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	90, 450	100 ml	455222M
Chromium standard solution, 1,000 mg/l Cr in dil. nitric acid (from $(NH_4)_2Cr_2O_7$) ARISTAR® standard for ICP	90, 450	500 ml	455224X
Cobalt standard solution, 10,000 mg/l Co in dil. nitric acid (from Co) ARISTAR® standard for ICP	93, 450	100 ml	455272W
Cobalt standard solution, 1,000 mg/l Co in dil. nitric acid (from Co) ARISTAR® standard for ICP	93, 450	100 ml	455262U
Copper standard solution, 10,000 mg/l Cu in dil. nitric acid (from Cu) ARISTAR® standard for ICP	97, 450	100 ml	455292D
Copper standard solution, 10,000 mg/l Cu in dil. nitric acid (from Cu) ARISTAR® standard for ICP	97, 450	500 ml	455294F
Copper standard solution, 1,000 mg/l Cu in dil. nitric acid (from Cu) ARISTAR® standard for ICP	97, 450	100 ml	455282B
Copper standard solution, 1,000 mg/l Cu in dil. nitric acid (from Cu) ARISTAR® standard for ICP	97, 450	500 ml	455284D
Dysprosium standard solution, 1,000 mg/l Dy in dil. nitric acid (from Dy_2O_3) ARISTAR® standard for ICP	128, 450	100 ml	455302L
Dysprosium standard solution, 1,000 mg/l Dy in dil. nitric acid (from Dy_2O_3) ARISTAR® standard for ICP	128, 450	500 ml	455304N
Erbium standard solution, 1,000 mg/l Er in dil. nitric acid (from Er_2O_3) ARISTAR® standard for ICP	144, 450	500 ml	455324R
Europium standard solution, 1,000 mg/l Eu in dil. nitric acid (from Eu_2O_3) ARISTAR® standard for ICP	156, 450	100 ml	455342T
Europium standard solution, 1,000 mg/l Eu in dil. nitric acid (from Eu_2O_3) ARISTAR® standard for ICP	156, 450	500 ml	455344V
Gadolinium standard solution, 1,000 mg/l Gd in dil. nitric acid (de Gd_2O_3) ARISTAR® standard for ICP	168, 450	100 ml	455362A
Gadolinium standard solution, 1,000 mg/l Gd in dil. nitric acid (de Gd_2O_3) ARISTAR® standard for ICP	168, 450	500 ml	455364C
Gallium standard solution, 10,000 mg/l Ga in dil. nitric acid (from Ga) ARISTAR® standard for ICP	169, 450	100 ml	455392G
Gallium standard solution, 1,000 mg/l Ga in dil. nitric acid (from Ga) ARISTAR® standard for ICP	169, 450	100 ml	455382E
Gallium standard solution, 1,000 mg/l Ga in dil. nitric acid (from Ga) ARISTAR® standard for ICP	169, 450	500 ml	455384G
Germanium standard solution, 10,000 mg/l Ge in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2GeF_6$) ARISTAR® standard for ICP	172, 450	100 ml	455412Q
Germanium standard solution, 1,000 mg/l Ge in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2GeF_6$) ARISTAR® standard for ICP	172, 450	100 ml	455402X
Gold standard solution, 10,000 mg/l Au in 10% hydrochloric acid (from Au) ARISTAR® standard for ICP	178, 450	100 ml	455432U
Gold standard solution, 10,000 mg/l Au in 10% hydrochloric acid (from Au) ARISTAR® standard for ICP	178, 450	500 ml	455434W

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Gold standard solution, 1,000 mg/l Au in 10% hydrochloric acid (from Au) ARISTAR® standard for ICP	178, 451	100 ml	455422S
Gold standard solution, 1,000 mg/l Au in 10% hydrochloric acid (from Au) ARISTAR® standard for ICP	178, 451	500 ml	455424U
Hafnium standard solution, 1,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) (from HfO_2) ARISTAR® standard for ICP	183, 451	100 ml	455442W
Hafnium standard solution, 1,000 mg/l Hf in dil. nitric acid with hydrofluoric acid (max. 1%) (from HfO_2) ARISTAR® standard for ICP	183, 451	500 ml	455444B
Holmium standard solution, 1,000 mg/l Ho in dil. nitric acid (de Ho_2O_3) ARISTAR® standard for ICP	191, 451	100 ml	455462D
Holmium standard solution, 1,000 mg/l Ho in dil. nitric acid (de Ho_2O_3) ARISTAR® standard for ICP	191, 451	500 ml	455464F
Indium standard solution, 10,000 mg/l In in dil. nitric acid (from In) ARISTAR® standard for ICP	219, 451	100 ml	455492J
Indium standard solution, 1,000 mg/l In in dil. nitric acid (from In) ARISTAR® standard for ICP	219, 451	100 ml	455482H
Indium standard solution, 1,000 mg/l In in dil. nitric acid (from In) ARISTAR® standard for ICP	219, 451	500 ml	455484J
Iridium standard solution, 1,000 mg/l Ir in 10% hydrochloric acid (from $IrCl_3$) ARISTAR® standard for ICP	222, 451	100 ml	455502R
Iridium standard solution, 1,000 mg/l Ir in 10% hydrochloric acid (from $IrCl_3$) ARISTAR® standard for ICP	222, 451	500 ml	455504T
Iron standard solution, 10,000 mg/l Fe in dil. nitric acid (from Fe) ARISTAR® standard for ICP	223, 451	100 ml	455532A
Iron standard solution, 10,000 mg/l Fe in dil. nitric acid (from Fe) ARISTAR® standard for ICP	223, 451	500 ml	455534C
Iron standard solution, 1,000 mg/l Fe in dil. nitric acid (from Fe) ARISTAR® standard for ICP	223, 451	100 ml	455522V
Iron standard solution, 1,000 mg/l Fe in dil. nitric acid (from Fe) ARISTAR® standard for ICP	223, 451	500 ml	455524A
Lanthanum standard solution, 10,000 mg/l La in dil. nitric acid (from La_2O_3) ARISTAR® standard for ICP	236, 451	500 ml	455554G
Lanthanum standard solution, 1,000 mg/l La in dil. nitric acid (from La_2O_3) ARISTAR® standard for ICP	236, 451	100 ml	455542C
Lanthanum standard solution, 1,000 mg/l La in dil. nitric acid (from La_2O_3) ARISTAR® standard for ICP	236, 451	500 ml	455544E
Lead standard solution, 10,000 mg/l Pb in dil. nitric acid (from $Pb(NO_3)_2$) ARISTAR® standard for ICP	237, 451	100 ml	455572Y
Lead standard solution, 10,000 mg/l Pb in dil. nitric acid (from $Pb(NO_3)_2$) ARISTAR® standard for ICP	237, 451	500 ml	455574K
Lead standard solution, 1,000 mg/l Pb in dil. nitric acid (from $Pb(NO_3)_2$) ARISTAR® standard for ICP	237, 451	100 ml	455562G
Lead standard solution, 1,000 mg/l Pb in dil. nitric acid (from $Pb(NO_3)_2$) ARISTAR® standard for ICP	237, 451	500 ml	455564Y
Lithium standard solution, 10,000 mg/l Li in dil. nitric acid (from Li_2CO_3) ARISTAR® standard for ICP	240, 451	500 ml	455594X
Lithium standard solution, 1,000 mg/l Li in dil. nitric acid (from Li_2CO_3) ARISTAR® standard for ICP	240, 451	100 ml	455582K
Lithium standard solution, 1,000 mg/l Li in dil. nitric acid (from Li_2CO_3) ARISTAR® standard for ICP	240, 451	500 ml	455584M
Lutetium standard solution, 1,000 mg/l Lu in dil. nitric acid (from Lu_2O_3) ARISTAR® standard for ICP	244, 451	100 ml	455602U
Lutetium standard solution, 1,000 mg/l Lu in dil. nitric acid (from Lu_2O_3) ARISTAR® standard for ICP	244, 451	500 ml	455604W
Magnesium standard solution, 10,000 mg/l Mg in dil. nitric acid (from MgO) ARISTAR® standard for ICP	245, 451	100 ml	455632D
Magnesium standard solution, 10,000 mg/l Mg in dil. nitric acid (from MgO) ARISTAR® standard for ICP	245, 451	500 ml	455634F
Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid (from MgO) ARISTAR® standard for ICP	245, 451	100 ml	455622B
Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid (from MgO) ARISTAR® standard for ICP	245, 451	500 ml	455624D
Manganese standard solution, 10,000 mg/l Mn in dil. nitric acid (from $Mn(OAc)_2$) ARISTAR® standard for ICP	249, 451	100 ml	455652H
Manganese standard solution, 10,000 mg/l Mn in dil. nitric acid (from $Mn(OAc)_2$) ARISTAR® standard for ICP	249, 451	500 ml	455654J
Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid (from $Mn(OAc)_2$) ARISTAR® standard for ICP	249, 451	100 ml	455642F
Manganese standard solution, 1,000 mg/l Mn in dil. nitric acid (from $Mn(OAc)_2$) ARISTAR® standard for ICP	249, 451	500 ml	455644H
Mercury standard solution, 10,000 mg/l Hg in dil. nitric acid (from Hg) ARISTAR® standard for ICP	253, 451	100 ml	455672L
Mercury standard solution, 10,000 mg/l Hg in dil. nitric acid (from Hg) ARISTAR® standard for ICP	253, 451	500 ml	455674N
Mercury standard solution, 1,000 mg/l Hg in dil. nitric acid (from Hg) ARISTAR® standard for ICP	253, 451	100 ml	455662J
Mercury standard solution, 1,000 mg/l Hg in dil. nitric acid (from Hg) ARISTAR® standard for ICP	253, 451	500 ml	455664L
Molybdenum standard solution, 10,000 mg/l Mo in ammonium hydroxide solution (max. 1%) (from $(NH_4)_2MoO_4$) ARISTAR® standard for ICP	310, 451	100 ml	455692P
Molybdenum standard solution, 1,000 mg/l Mo in ammonium hydroxide solution (max. 1%) (from $(NH_4)_2MoO_4$) ARISTAR® standard for ICP	310, 451	100 ml	455682N
Molybdenum standard solution, 1,000 mg/l Mo in ammonium hydroxide solution (max. 1%) (from $(NH_4)_2MoO_4$) ARISTAR® standard for ICP	310, 451	500 ml	455684P
Neodymium standard solution, 1,000 mg/l Nd in dil. nitric acid (from Nd_2O_3) ARISTAR® standard for ICP	314, 451	100 ml	455702A
Nickel standard solution, 10,000 mg/l Ni in dil. nitric acid (from Ni) ARISTAR® standard for ICP	314, 451	100 ml	455732G
Nickel standard solution, 10,000 mg/l Ni in dil. nitric acid (from Ni) ARISTAR® standard for ICP	314, 451	500 ml	455734Y
Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid (from Ni) ARISTAR® standard for ICP	314, 451	100 ml	455722E
Nickel standard solution, 1,000 mg/l Ni in dil. nitric acid (from Ni) ARISTAR® standard for ICP	314, 451	500 ml	455724G
Niobium standard solution, 10,000 mg/l Nb in water with hydrofluoric acid (max. 1%) (from Nb_2O_5) ARISTAR® standard for ICP	316, 451	100 ml	455752K
Niobium standard solution, 1,000 mg/l Nb in water with hydrofluoric acid (max. 1%) (from Nb_2O_5) ARISTAR® standard for ICP	317, 451	100 ml	455742Y
Niobium standard solution, 1,000 mg/l Nb in water with hydrofluoric acid (max. 1%) (from Nb_2O_5) ARISTAR® standard for ICP	317, 451	500 ml	455744K
Palladium standard solution, 10,000 mg/l Pd in 10% hydrochloric acid (from Pd) ARISTAR® standard for ICP	327, 451	100 ml	455772X
Palladium standard solution, 1,000 mg/l Pd in 10% hydrochloric acid (from Pd) ARISTAR® standard for ICP	327, 451	100 ml	455762M
Palladium standard solution, 1,000 mg/l Pd in 10% hydrochloric acid (from Pd) ARISTAR® standard for ICP	327, 451	500 ml	455764X
Phosphorus standard solution, 10,000 mg/l P in water (from $(NH_4)PO_4H_2$) ARISTAR® standard for ICP	353, 451	100 ml	455792S
Phosphorus standard solution, 10,000 mg/l P in water (from $(NH_4)PO_4H_2$) ARISTAR® standard for ICP	353, 451	500 ml	455794U
Phosphorus standard solution, 1,000 mg/l P in water (from $(NH_4)PO_4H_2$) ARISTAR® standard for ICP	353, 451	100 ml	455782Q
Phosphorus standard solution, 1,000 mg/l P in water (from $(NH_4)PO_4H_2$) ARISTAR® standard for ICP	353, 451	500 ml	455784S
Platinum standard solution, 1,000 mg/l Pt in 10% hydrochloric acid (from Pt) ARISTAR® standard for ICP	355, 451	100 ml	455802D
Platinum standard solution, 1,000 mg/l Pt in 10% hydrochloric acid (from Pt) ARISTAR® standard for ICP	355, 451	500 ml	455804F
Potassium standard solution, 10,000 mg/l K in dil. nitric acid (from KNO_3) ARISTAR® standard for ICP	358, 451	100 ml	455832J
Potassium standard solution, 10,000 mg/l K in dil. nitric acid (from KNO_3) ARISTAR® standard for ICP	358, 451	500 ml	455834L
Potassium standard solution, 1,000 mg/l K in dil. nitric acid (from KNO_3) ARISTAR® standard for ICP	358, 451	100 ml	455822H
Potassium standard solution, 1,000 mg/l K in dil. nitric acid (from KNO_3) ARISTAR® standard for ICP	358, 451	500 ml	455824J
Praseodymium standard solution, 1,000 mg/l Pr in dil. nitric acid (from Pr_6O_{11}) ARISTAR® standard for ICP	376, 451	100 ml	455842L
Rhenium standard solution, 10,000 mg/l Re in water with nitric acid (max. 1%) (from Re) ARISTAR® standard for ICP	388, 451	100 ml	455872R
Rhenium standard solution, 1,000 mg/l Re in water with nitric acid (max. 1%) (from Re) ARISTAR® standard for ICP	388, 451	100 ml	455862P
Rhenium standard solution, 1,000 mg/l Re in water with nitric acid (max. 1%) (from Re) ARISTAR® standard for ICP	388, 451	500 ml	455864R
Rhodium standard solution, 1,000 mg/l Rh in 10% hydrochloric acid (from $RhCl_3$) ARISTAR® standard for ICP	389, 451	100 ml	455882T
Rhodium standard solution, 1,000 mg/l Rh in 10% hydrochloric acid (from $RhCl_3$) ARISTAR® standard for ICP	389, 451	500 ml	455884V
Rubidium standard solution, 10,000 mg/l Rb in dil. nitric acid (from $RbNO_3$) ARISTAR® standard for ICP	390, 451	100 ml	455912Y
Rubidium standard solution, 1,000 mg/l Rb in dil. nitric acid (from $RbNO_3$) ARISTAR® standard for ICP	390, 451	100 ml	455902G
Ruthenium standard solution, 10,000 mg/l Ru in 10% hydrochloric acid (from $RuCl_3$) ARISTAR® standard for ICP	390, 451	100 ml	455932M
Ruthenium standard solution, 1,000 mg/l Ru in 10% hydrochloric acid (from $RuCl_3$) ARISTAR® standard for ICP	390, 451	100 ml	455922K
Ruthenium standard solution, 1,000 mg/l Ru in 10% hydrochloric acid (from $RuCl_3$) ARISTAR® standard for ICP	390, 451	500 ml	455924M
Samarium standard solution, 1,000 mg/l Sm in dil. nitric acid (from Sm_2O_3) ARISTAR® standard for ICP	393, 451	100 ml	455942X
Samarium standard solution, 1,000 mg/l Sm in dil. nitric acid (from Sm_2O_3) ARISTAR® standard for ICP	393, 451	500 ml	455944Q
Scandium standard solution, 10,000 mg/l Sc in dil. nitric acid (from Sc_2O_3) ARISTAR® standard for ICP	393, 451	100 ml	455972U
Scandium standard solution, 10,000 mg/l Sc in dil. nitric acid (from Sc_2O_3) ARISTAR® standard for ICP	393, 451	500 ml	455974W

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Scandium standard solution, 1,000 mg/l Sc in dil. nitric acid (from Sc_2O_3) ARISTAR® standard for ICP	393, 452	100 ml	455962S
Scandium standard solution, 1,000 mg/l Sc in dil. nitric acid (from Sc_2O_3) ARISTAR® standard for ICP	393, 452	500 ml	455964U
Selenium standard solution, 10,000 mg/l Se in dil. nitric acid (from Se) ARISTAR® standard for ICP	394, 452	100 ml	455992B
Selenium standard solution, 1,000 mg/l Se in dil. nitric acid (from Se) ARISTAR® standard for ICP	394, 452	100 ml	455982W
Selenium standard solution, 1,000 mg/l Se in dil. nitric acid (from Se) ARISTAR® standard for ICP	394, 452	500 ml	455984B
Silicon standard solution, 10,000 mg/l Si in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2SiF_6$) ARISTAR® standard for ICP	396, 452	100 ml	456012Y
Silicon standard solution, 1,000 mg/l Si in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2SiF_6$) ARISTAR® standard for ICP	396, 452	100 ml	456002G
Silicon standard solution, 1,000 mg/l Si in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2SiF_6$) ARISTAR® standard for ICP	396, 452	500 ml	456004Y
Silver standard solution, 10,000 mg/l Ag in dil. nitric acid (from $AgNO_3$) ARISTAR® standard for ICP	403, 452	100 ml	456032M
Silver standard solution, 1,000 mg/l Ag in dil. nitric acid (from $AgNO_3$) ARISTAR® standard for ICP	403, 452	100 ml	456022K
Silver standard solution, 1,000 mg/l Ag in dil. nitric acid (from $AgNO_3$) ARISTAR® standard for ICP	403, 452	500 ml	456024M
Sodium standard solution, 10,000 mg/l Na in dil. nitric acid (from $NaNO_3$) ARISTAR® standard for ICP	407, 452	100 ml	456052Q
Sodium standard solution, 10,000 mg/l Na in dil. nitric acid (from $NaNO_3$) ARISTAR® standard for ICP	407, 452	500 ml	456054S
Sodium standard solution, 1,000 mg/l Na in dil. nitric acid (from $NaNO_3$) ARISTAR® standard for ICP	407, 452	100 ml	456042X
Sodium standard solution, 1,000 mg/l Na in dil. nitric acid (from $NaNO_3$) ARISTAR® standard for ICP	407, 452	500 ml	456044Q
Strontium standard solution, 10,000 mg/l Sr in dil. nitric acid (from $Sr(NO_3)_2$) ARISTAR® standard for ICP	452, 465	100 ml	456072U
Strontium standard solution, 10,000 mg/l Sr in dil. nitric acid (from $Sr(NO_3)_2$) ARISTAR® standard for ICP	452, 465	500 ml	456074W
Strontium standard solution, 1,000 mg/l Sr in dil. nitric acid (from $Sr(NO_3)_2$) ARISTAR® standard for ICP	452, 466	100 ml	456062S
Sulphur standard solution, 10,000 mg/l S in water (from $(NH_4)_2SO_4$) ARISTAR® standard for ICP	452, 470	100 ml	456092B
Sulphur standard solution, 10,000 mg/l S in water (from $(NH_4)_2SO_4$) ARISTAR® standard for ICP	452, 470	500 ml	456094D
Sulphur standard solution, 1,000 mg/l S in water (from $(NH_4)_2SO_4$) ARISTAR® standard for ICP	452, 470	100 ml	456082W
Sulphur standard solution, 1,000 mg/l S in water (from $(NH_4)_2SO_4$) ARISTAR® standard for ICP	452, 470	500 ml	456084B
Tantalum standard solution, 1,000 mg/l Ta in water with hydrofluoric acid (max. 1%) (from Ta) ARISTAR® standard for ICP	452, 477	100 ml	456102J
Tantalum standard solution, 1,000 mg/l Ta in water with hydrofluoric acid (max. 1%) (from Ta) ARISTAR® standard for ICP	452, 477	500 ml	456104L
Tellurium standard solution, 10,000 mg/l Te in 40% hydrochloric acid (from Te) ARISTAR® standard for ICP	452, 480	100 ml	456132P
Tellurium standard solution, 1,000 mg/l Te in 20% hydrochloric acid (from Te) ARISTAR® standard for ICP	452, 480	100 ml	456122N
Tellurium standard solution, 1,000 mg/l Te in 20% hydrochloric acid (from Te) ARISTAR® standard for ICP	452, 480	500 ml	456124P
Terbium standard solution, 1,000 mg/l Tb in dil. nitric acid (from Tb_4O_7) ARISTAR® standard for ICP	452, 481	100 ml	456142R
Terbium standard solution, 1,000 mg/l Tb in dil. nitric acid (from Tb_4O_7) ARISTAR® standard for ICP	452, 481	500 ml	456144T
Thallium standard solution, 10,000 mg/l Tl in dil. nitric acid (from Tl) ARISTAR® standard for ICP	452, 485	100 ml	456172A
Thallium standard solution, 1,000 mg/l Tl in dil. nitric acid (from Tl) ARISTAR® standard for ICP	452, 485	100 ml	456162V
Tin standard solution, 10,000 mg/l Sn in 10% hydrochloric acid (from Sn) ARISTAR® standard for ICP	452, 487	100 ml	456252W
Tin standard solution, 1,000 mg/l Sn in 10% hydrochloric acid (from Sn) ARISTAR® standard for ICP	452, 488	100 ml	456242U
Tin standard solution, 10,000 mg/l Sn in dil. nitric acid with hydrofluoric acid (max. 1%) (from Sn) ARISTAR® standard for ICP	452, 488	100 ml	456232S
Tin standard solution, 1,000 mg/l Sn in dil. nitric acid with hydrofluoric acid (max. 1%) (from Sn) ARISTAR® standard for ICP	452, 488	100 ml	456222Q
Tin standard solution, 1,000 mg/l Sn in dil. nitric acid with hydrofluoric acid (max. 1%) (from Sn) ARISTAR® standard for ICP	452, 488	500 ml	456224S
Titanium standard solution, 1,000 mg/l Ti in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2TiF_6$) ARISTAR® standard for ICP	452, 489	100 ml	456262B
Titanium standard solution, 1,000 mg/l Ti in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2TiF_6$) ARISTAR® standard for ICP	452, 489	500 ml	456264D
Tungsten standard solution, 10,000 mg/l W in water (from W) ARISTAR® standard for ICP	452, 504	100 ml	457172E
Tungsten standard solution, 1,000 mg/l W in water (from W) ARISTAR® standard for ICP	452, 504	100 ml	457182G
Tungsten standard solution, 1,000 mg/l W in water (from W) ARISTAR® standard for ICP	452, 504	500 ml	457184Y
Vanadium standard solution, 10,000 mg/l V in dil. nitric acid (from V2O5) ARISTAR® standard for ICP	452, 507	100 ml	456332V
Vanadium standard solution, 10,000 mg/l V in dil. nitric acid (from V2O5) ARISTAR® standard for ICP	452, 507	500 ml	456334A
Vanadium standard solution, 1,000 mg/l V in dil. nitric acid (from V2O5) ARISTAR® standard for ICP	452, 507	100 ml	456322T
Vanadium standard solution, 1,000 mg/l V in dil. nitric acid (from V2O5) ARISTAR® standard for ICP	452, 507	500 ml	456324V
Ytterbium standard solution, 1,000 mg/l Yb in dil. nitric acid (from Yb2O3) ARISTAR® standard for ICP	452, 523	500 ml	456344C
Yttrium standard solution, 1,000 mg/l Y in dil. nitric acid (from Y2O3) ARISTAR® standard for ICP	452, 523	100 ml	456362E
Yttrium standard solution, 1,000 mg/l Y in dil. nitric acid (from Y2O3) ARISTAR® standard for ICP	452, 523	500 ml	456364G
Yttrium standard solution, 10,000 mg/l Y in dil. nitric acid (from Y2O3) ARISTAR® standard for ICP	452, 523	100 ml	456372G
Yttrium standard solution, 10,000 mg/l Y in dil. nitric acid (from Y2O3) ARISTAR® standard for ICP	452, 523	500 ml	456374Y
Zinc standard solution, 10,000 mg/l Zn in dil. nitric acid (from Zn) ARISTAR® standard for ICP	452, 524	100 ml	456392K
Zinc standard solution, 10,000 mg/l Zn in dil. nitric acid (from Zn) ARISTAR® standard for ICP	452, 524	500 ml	456394M
Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid (from Zn) ARISTAR® standard for ICP	452, 524	100 ml	456382Y
Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid (from Zn) ARISTAR® standard for ICP	452, 524	500 ml	456384K
Zirconium standard solution, 10,000 mg/l Zr in dil. nitric acid (from ZrO(NO3)2) ARISTAR® standard for ICP	452, 527	500 ml	456414W
Zirconium standard solution, 1,000 mg/l Zr in dil. nitric acid (from ZrO(NO3)2) ARISTAR® standard for ICP	452, 527	100 ml	456402S

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ICP and ICP-MS multi-element standards, ARISTAR®

VWR can supply 'customised' multi-element standards. For details please contact your local VWR sales office.

Description	Page	Pk	Cat. No.
ICP Blank, hydrochloric acid, ARISTAR®	210, 453	500 ml	456494P
Nitric acid 5% ARISTAR® for calibration blank in ICP	210, 453	500 ml	456484N
Multi-element calibration standard 1 in dil. nitric acid ARISTAR® for ICP	210, 453	100 ml	456452F
Multi-element calibration standard 2 in dil. nitric acid ARISTAR® for ICP	210, 453	100 ml	456462H
Multi-element calibration standard 3 in dil. nitric acid ARISTAR® for ICP	210, 453	100 ml	456472J
Multi-element quality control standard 2 in dil. nitric acid with a trace of hydrofluoric acid ARISTAR® for ICP	210, 453	100 ml	456432B
Multi-element quality control standard 2 in dil. nitric acid with a trace of hydrofluoric acid ARISTAR® for ICP	210, 453	500 ml	456434D
Multi-element quality control standard 3 in dil. nitric acid ARISTAR® for ICP	210, 453	100 ml	456442D
Multi-element quality control standard 3 in dil. nitric acid ARISTAR® for ICP	210, 453	500 ml	456444F
Multi-element quality control standard 100 mg/l {Au; Ir; Os; Pd; Pt; Rh; Ru; Sn; Te} in hydrochloric acid 10% ARISTAR® for ICP	210, 453	100 ml	84792.180
Multi-element quality control standard in 4% dilute nitric acid , ARISTAR® for ICP	211, 453	100 ml	87629.180
Multi-element quality control standard 100 mg/l {Al; Ag; As; B; Ba; Be; Bi; Ca; Cd; Co; Cr; Cu; Fe; K; Li; Mg; Mn; Mo; Na; Ni; Pb; Sb; Se; Sr; Ti; Tl; V; Zn} in nitric acid 5% ARISTAR® for ICP	211, 453	100 ml	85006.186
Multi-element quality control standard 100 mg/l {Al; As; B; Ca; Cd; Cr; Co; Cu; Fe; K; Mg; Mn; Mo; Na; Ni; Pb; P; Si; S; Ti; Zn} in nitric acid 5% ARISTAR® for ICP	211, 453	100 ml	89166.180
Multi-element quality control standard 100 mg/l {Ag; Al; Ba; Bi; Ca; Cd; Co; Cr; Cu; Fe; Ga; Ge; In; K; Li; Mg; Mn; Mo; Na; Nb; Ni; P; Pb; Re; Sb; Si; Sn; Ta; Ti; V; W; Zn} in nitric acid 5% ARISTAR® for ICP	211, 453	100 ml	89186.180
Multi-element quality control standard 100 mg/l {Be; I; Bi; Li; Cr; Mg; Co; Pb; U} in nitric acid 5% ARISTAR® for ICP-MS	211, 453	250 ml	88175.230
Multi-element quality control standard 10 mg/l {As; Ba; Be; Cd; Co; Cr; Cu; Fe; Al; Mn; Mo; Ni; Pb; Sb; Se; Sn; Ti; Tl; V; U; Te; Zn} in nitric acid 5% ARISTAR® for ICP	211, 453	50 ml	88724.150
Multi-element quality control standard 10 mg/l {Al; Ag; As; B; Ba; Ca; Cd; Ce; Co; Cr; Cu; Dy; Er; Eu; Fe; Gd; Ho; K; La; Li; Lu; Mg; Mn; Na; Nd; Ni; P; Pb; Rb; Se; Sm; Sr; Tl; Tm; V; Zn} in nitric acid 2% ARISTAR® for ICP-MS	211, 453	100 ml	84793.180
Multi-element quality control standard in 5% dilute nitric acid , ARISTAR® for ICP	211, 453	100 ml	84790.180
Multi-element quality control standard 100 mg/l {Al; Ag; As; B; Ba; Be; Bi; Ca; Cd; Cs; Co; Cr; Cu; Fe; In; K; Li; Mg; Mn; Mo; Na; Ni; Nb; Pb; Rb; Sb; Se; Sr; Ti; Tl; V; U; Zn} in nitric acid 5% ARISTAR® for ICP	212, 453	100 ml	84791.180
Multi-element quality control standard 1 mg/l {Al; Ag; As; B; Ba; Be; Bi; Ca; Cd; Co; Cr; Cu; Fe; K; Li; Mg; Mn; Mo; Na; Ni; Pb; Sb; Se; Sr; Ti; Tl; V; Zn} in nitric acid 5% ARISTAR® for ICP	212, 453	100 ml	05200.185
Multi-element quality control standard 100 mg/l {As; Be; Ca; Cd; Co; Cr; Cu; Fe; Li; Mg; Mn; Mo; Ni; P; Pb; Sb; Se; Sn; Sr; Ti; Tl; V; Zn} in nitric acid 2-5% / Hydrofluoric acid < 0.1% ARISTAR® 1 for ICP	212, 453	100 ml	456422W
Multi-element quality control standard 100 mg/l {As; Be; Ca; Cd; Co; Cr; Cu; Fe; Li; Mg; Mn; Mo; Ni; P; Pb; Sb; Se; Sn; Sr; Ti; Tl; V; Zn} in nitric acid 2-5% / Hydrofluoric acid < 0.1% ARISTAR® 1 for ICP	212, 453	500 ml	456424B
Multi-element quality control standard 10 mg/l {Hf; Ge; Mo; Nb; Sb; Si; Sn; Ta; Te; Ti; W; Zr} in nitric acid 2% / Hydrofluoric acid < 0.1% ARISTAR® for ICP-MS	212, 453	100 ml	84794.180
Multi-element calibration standard 1 in dil. nitric acid ARISTAR® for ICP-MS	212, 453	100 ml	456622F
Multi-element calibration standard 2 in dil. nitric acid ARISTAR® for ICP-MS	212, 453	100 ml	456502V
Multi-element calibration standard 3 in hydrochloric acid 10% ARISTAR® for ICP-MS	212, 453	100 ml	456512A
Multi-element calibration standard 4 in water with a trace of hydrofluoric acid ARISTAR® for ICP-MS	212, 453	100 ml	456522C
Multi-element quality control standard 1 in dil. nitric acid ARISTAR® for ICP-MS	212, 453	100 ml	456592Q
Multi-element quality control standard 2 in dil. nitric acid ARISTAR® for ICP-MS	212, 453	100 ml	456602B
Interference check A in dil. nitric acid ARISTAR® for ICP-MS	213, 453	100 ml	456562K
Interference check A in nitric acid 1% ARISTAR® for ICP-MS	213, 453	100 ml	456552Y
Tuning solution 1 in dil. nitric acid ARISTAR® for ICP-MS	213, 453	100 ml	456532E
Tuning solution 2 in dil. nitric acid ARISTAR® for ICP-MS	213, 453	100 ml	456542G

ICP-MS standards, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against ICP standards from NIST
- Total maximum uncertainty: ±1%
- Delivered with complete Certificate of Analysis

Produced by accreditated supplier in compliance with ISO guide 34 and ISO 17025

Element	Concentration	Matrix	Pk	Cat. No.
Aluminum	10 ppm	2-5% HNO_3	100 ml	85548.180
Aluminum	1000 ppm	2-5% HNO_3	100 ml	457202A
Antimony	10 ppm	2% HNO_3/0,5% HF	100 ml	85595.180
Antimony	1000 ppm	2-5% HNO_3	100 ml	456632H
Antimony	10000 ppm	2-5% HNO_3	100 ml	457002K
Arsenic	10 ppm	2-5% HNO_3	100 ml	85549.180
Arsenic	1000 ppm	2-5% HNO_3	100 ml	456642J
Arsenic	10000 ppm	2-5% HNO_3	100 ml	457012M
Barium	10 ppm	2-5% HNO_3	100 ml	85552.180
Barium	1000 ppm	2-5% HNO_3	100 ml	456652L
Beryllium	10 ppm	2-5% HNO_3	100 ml	85553.180
Beryllium	1000 ppm	2-5% HNO_3	100 ml	456662N
Bismuth	10 ppm	2-5% HNO_3	100 ml	85554.180
Bismuth	1000 ppm	2-5% HNO_3	100 ml	456672P
Boron	10 ppm	H_2O/tr.NH_4OH	100 ml	85551.180
Boron	1000 ppm	H_2O/tr.NH_4OH	100 ml	457213B
Cadmium	10 ppm	2-5% HNO_3	100 ml	85556.180
Cadmium	1000 ppm	2-5% HNO_3	100 ml	456682R

Element	Concentration	Matrix	Pk	Cat. No.
Calcium	10 ppm	2-5% HNO_3	100 ml	85555.180
Calcium	1000 ppm	2-5% HNO_3	100 ml	456692T
Calcium	10000 ppm	2-5% HNO_3	100 ml	457042S
Cerium	10 ppm	2% HNO_3	100 ml	85557.180
Cerium	1000 ppm	2-5% HNO_3	100 ml	457224C
Cesium	10 ppm	2-5% HNO_3	100 ml	85560.180
Cesium	1000 ppm	2% HNO_3	100 ml	457235D
Chromium	10 ppm	2% HNO_3	100 ml	85559.180
Chromium	1000 ppm	2-5% HNO_3	100 ml	456702E
Cobalt	10 ppm	2-5% HNO_3	100 ml	85558.180
Cobalt	10000 ppm	2-5% HNO_3	100 ml	457062W
Copper	10 ppm	2-5% HNO_3	100 ml	85561.180
Copper	1000 ppm	2-5% HNO_3	100 ml	456722Y
Dysprosium	10 ppm	2-5% HNO_3	100 ml	85562.180
Dysprosium	1000 ppm	2-5% HNO_3	100 ml	457246F
Erbium	10 ppm	2-5% HNO_3	100 ml	85563.180
Erbium	1000 ppm	2-5% HNO_3	100 ml	457257G
Europium	10 ppm	2-5% HNO_3	100 ml	85564.180
Europium	1000 ppm	2-5% HNO_3	100 ml	457268H
Gadolinium	10 ppm	2-5% HNO_3	100 ml	85567.180
Gadolinium	1000 ppm	2-5% HNO_3	100 ml	457279J
Gallium	10 ppm	2-5% HNO_3	100 ml	85566.180
Gallium	1000 ppm	2-5% HNO_3	100 ml	457281A
Germanium	10 ppm	2% HNO_3/0,2% HF	100 ml	85568.180
Germanium	1000 ppm	H_2O/tr HF	100 ml	456732K
Gold	10 ppm	2% HCl	100 ml	85550.180
Gold	1000 ppm	10% HCl	100 ml	456742M
Hafnium	10 ppm	2% HNO_3/0,5% HF	100 ml	85569.180
Hafnium	1000 ppm	2% HNO_3/0,5% HF	100 ml	457292B
Holmium	10 ppm	2-5% HNO_3	100 ml	85571.180
Holmium	1000 ppm	2-5% HNO_3	100 ml	457303C
Indium	10 ppm	2-5% HNO_3	100 ml	85572.180
Indium	1000 ppm	2-5% HNO_3	100 ml	456752X
Iridium	10 ppm	10% HCl	100 ml	85573.180
Iridium	1000 ppm	10% HCl	100 ml	457314D
Iron	10 ppm	2-5% HNO_3	100 ml	85565.180
Iron	1000 ppm	2-5% HNO_3	100 ml	456762Q
Iron	10000 ppm	2-5% HNO_3	100 ml	457072B
Lanthanum	10 ppm	2-5% HNO_3	100 ml	85575.180
Lanthanum	1000 ppm	2-5% HNO_3	100 ml	457325E
Lead	10 ppm	2-5% HNO_3	100 ml	85586.180
Lead	1000 ppm	2-5% HNO_3	100 ml	456772S
Lithium	10 ppm	2-5% HNO_3	100 ml	85576.180
Lithium	1000 ppm	2-5% HNO_3	100 ml	456782U
Lutetium	10 ppm	2-5% HNO_3	100 ml	85577.180
Lutetium	1000 ppm	2-5% HNO_3	100 ml	457336F
Magnesium	10 ppm	2-5% HNO_3	100 ml	85578.180
Magnesium	1000 ppm	2-5% HNO_3	100 ml	456792W
Magnesium	10000 ppm	2-5% HNO_3	100 ml	457082D
Manganese	10 ppm	2-5% HNO_3	100 ml	85579.180
Manganese	1000 ppm	2-5% HNO_3	100 ml	456802H
Mercury	10 ppm	5% HNO_3	100 ml	85570.180
Mercury	1000 ppm	10% HNO_3	100 ml	456812J
Molybdenum	10 ppm	H_2O/tr HF	100 ml	85580.180
Molybdenum	1000 ppm	H_2O/tr.NH_4OH	100 ml	457347G
Neodymium	10 ppm	2-5% HNO_3	100 ml	85583.180
Neodymium	1000 ppm	2-5% HNO_3	100 ml	457358H
Nickel	10 ppm	2-5% HNO_3	100 ml	85584.180
Nickel	1000 ppm	2-5% HNO_3	100 ml	456832N
Niobium	10 ppm	2% HNO_3/0,5% HF	100 ml	85582.180
Niobium	1000 ppm	H_2O/tr HF	100 ml	457369J
Palladium	10 ppm	2% HNO_3	100 ml	85587.180
Palladium	1000 ppm	10% HCl	100 ml	457371K
Phosphorus	10 ppm	H_2O	100 ml	85585.180
Phosphorus	1000 ppm	H_2O	100 ml	456842P
Phosphorus	10000 ppm	H_2O	100 ml	457112P
Platinum	10 ppm	2% HCl	100 ml	85589.180
Platinum	1000 ppm	10% HCl	100 ml	457382L
Potassium	10 ppm	2-5% HNO_3	100 ml	85574.180
Potassium	1000 ppm	2-5% HNO_3	100 ml	456852R
Potassium	10000 ppm	2-5% HNO_3	100 ml	457122R
Praseodymium	10 ppm	2-5% HNO_3	100 ml	85588.180
Praseodymium	1000 ppm	2-5% HNO_3	100 ml	457393M
Rhenium	10 ppm	H_2O/tr HNO_3	100 ml	85591.180
Rhenium	1000 ppm	H_2O/tr HNO_3	100 ml	457404N
Rhodium	10 ppm	2% HCl	100 ml	85592.180
Rhodium	1000 ppm	10% HCl	100 ml	456862T
Rubidium	10 ppm	2-5% HNO_3	100 ml	85590.180
Rubidium	1000 ppm	2-5% HNO_3	100 ml	457415P
Ruthenium	10 ppm	2% HCl	100 ml	85593.180
Ruthenium	1000 ppm	10% HCl	100 ml	457426Q
Samarium	10 ppm	2% HNO_3	100 ml	85599.180
Samarium	1000 ppm	2-5% HNO_3	100 ml	457437R
Scandium	10 ppm	2% HNO_3	100 ml	85596.180
Scandium	1000 ppm	2-5% HNO_3	100 ml	456872V
Selenium	10 ppm	2% HNO_3	100 ml	85597.180

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Element	Concentration	Matrix	Pk	Cat. No.
Selenium	1000 ppm	2-5% HNO_3	100 ml	456882A
Silicon	10 ppm	H_2O/tr HF	100 ml	85598.180
Silicon	1000 ppm	H_2O/tr HF	100 ml	457448S
Silver	10 ppm	2% HNO_3	100 ml	85547.180
Silver	1000 ppm	2-5% HNO_3	100 ml	456892C
Sodium	10 ppm	2-5% HNO_3	100 ml	85581.180
Sodium	1000 ppm	2-5% HNO_3	100 ml	456902K
Sodium	10000 ppm	2-5% HNO_3	100 ml	457132T
Strontium	10 ppm	2% HNO_3	100 ml	85631.180
Strontium	1000 ppm	2-5% HNO_3	100 ml	456912M
Sulfur	10 ppm	H_2O	100 ml	85594.180
Sulfur	1000 ppm	H_2O	100 ml	456922X
Tantalum	10 ppm	2% HNO_3/0,5% HF	100 ml	85632.180
Tantalum	1000 ppm	H_2O/tr HF	100 ml	457459V
Tellurium	10 ppm	2% HNO_3	100 ml	85634.180
Tellurium	1000 ppm	20% HCl	100 ml	457461A
Terbium	10 ppm	2% HNO_3	100 ml	85633.180
Terbium	1000 ppm	2-5% HNO_3	100 ml	456932Q
Thallium	10 ppm	2% HNO_3	100 ml	85639.180
Thallium	1000 ppm	2-5% HNO_3	100 ml	456942S
Thulium	10 ppm	2% HNO_3	100 ml	85640.180
Tin	10 ppm	1% HNO_3	100 ml	85630.180
Tin	1000 ppm	2% HNO_3/0,5% HF	100 ml	456952U
Titanium	10 ppm	H_2O/tr HF	100 ml	85636.180
Titanium	1000 ppm	H_2O/tr HF	100 ml	456962W
Tungsten	10 ppm	H_2O/tr.NH_4OH	100 ml	85644.180
Tungsten	1000 ppm	H_2O/tr.NH_4OH	100 ml	457494D
Uranium	10 ppm	2% HNO_3	100 ml	85641.180
Vanadium	10 ppm	2% HNO_3	100 ml	85643.180
Vanadium	1000 ppm	2-5% HNO_3	100 ml	456972B
Ytterbium	10 ppm	2% HNO_3	100 ml	85647.180
Ytterbium	1000 ppm	2-5% HNO_3	100 ml	457472B
Yttrium	10 ppm	2% HNO_3	100 ml	85646.180
Yttrium	1000 ppm	2-5% HNO_3	100 ml	456982D
Zinc	10 ppm	2% HNO_3	100 ml	85648.180
Zinc	1000 ppm	2-5% HNO_3	100 ml	456992F
Zinc	10000 ppm	2-5% HNO_3	100 ml	457162C
Zirconium	10 ppm	2% HNO_3	100 ml	85649.180
Zirconium	1000 ppm	2-5% HNO_3	100 ml	457483C

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- Packaged in pre-cleaned high quality HDPE bottles.
- Final Solution is filtered through a 0.2 µm filter

Each standard is supplied with a certificate of analysis, stating traceability to NIST, certified value and expiry date.

Description	Page	Pk	Cat. No.
Ammonium standard solution, 1,000 mg/l NH4 in dil. nitric acid ARISTAR® standard for ion chromatography	29, 456	100 ml	458192M
Anion multi component standard 1 aqueous solution ARISTAR® for ion chromatography	47, 456	100 ml	458142C
Anion multi component standard 2 aqueous solution ARISTAR® for ion chromatography	47, 456	100 ml	458152E
Anion multi component standard 3 aqueous solution ARISTAR® for ion chromatography	47, 456	1 SET	458164C
Bromide standard solution, 1,000 mg/l Br- in water (from NaBr) ARISTAR® standard for ion chromatography	64, 456	100 ml	458042W
Bromide standard solution, 1,000 mg/l Br- in water (from NaBr) ARISTAR® standard for ion chromatography	64, 456	500 ml	458044B
Calcium standard solution, 1,000 mg/l Ca in dil. nitric acid (from Ca) ARISTAR® standard for ion chromatography	74, 456	100 ml	458202U
Cation multi component standard 1 in water with a trace of nitric acid ARISTAR® for ion chromatography	80, 456	100 ml	458352K
Cation multi component standard 2 in water with a trace of nitric acid ARISTAR® for ion chromatography	80, 456	100 ml	458362M
Chloride standard solution, 1,000 mg/l Cl- in water (from NaCl) ARISTAR® standard for ion chromatography	84, 456	100 ml	458012Q
Chloride standard solution, 1,000 mg/l Cl- in water (from NaCl) ARISTAR® standard for ion chromatography	84, 456	500 ml	458014S
Chloride standard solution, 200 mg/l Cl- in water (from NaCl) ARISTAR® standard for ion chromatography	85, 456	100 ml	458082H
Fluoride standard solution, 1,000 mg/l F- in water (from NaF) ARISTAR® standard for ion chromatography	161, 456	100 ml	458002X
Fluoride standard solution, 1,000 mg/l F- in water (from NaF) ARISTAR® standard for ion chromatography	161, 456	500 ml	458004Q
Lithium standard solution, 1,000 mg/l Li in dil. nitric acid (from Li) ARISTAR® standard for ion chromatography	240, 456	100 ml	458242F
Lithium standard solution, 200 mg/l Li in dil. nitric acid (from Li) ARISTAR® standard for ion chromatography	241, 456	100 ml	458322E
Magnesium standard solution, 1,000 mg/l Mg in dil. nitric acid (from Mg) ARISTAR® standard for ion chromatography	245, 456	100 ml	458212W
Nitrate standard solution, 1,000 mg/l NO_3 in water (from $NaNO_3$) ARISTAR® standard for ion chromatography	317, 456	100 ml	458032U
Nitrate standard solution, 1,000 mg/l NO_3 in water (from $NaNO_3$) ARISTAR® standard for ion chromatography	317, 456	500 ml	458034W
Nitrite standard solution, 1,000 mg/l NO_2^- in water (from $NaNO_2$) ARISTAR® standard for ion chromatography	320, 456	100 ml	458022S
Nitrite standard solution, 1,000 mg/l NO_2^- in water (from $NaNO_2$) ARISTAR® standard for ion chromatography	320, 456	500 ml	458024U
Nitrite standard solution, 200 mg/l nitrite in water (from $NaNO_2$) ARISTAR® standard for ion chromatography	320, 456	100 ml	458092J
Phosphate standard solution, 1,000 mg/l PO_4^{3} in water (from KH_2PO_4) ARISTAR® standard for ion chromatography	351, 456	100 ml	458052B
Phosphate standard solution, 1,000 mg/l PO_4^{3} in water (from KH_2PO_4) ARISTAR® standard for ion chromatography	351, 456	500 ml	458054D
Phosphate standard solution, 200 mg/l PO_4^{3} in water (from KH_2PO_4) ARISTAR® standard for ion chromatography	351, 456	100 ml	458122V
Potassium standard solution, 1,000 mg/l K in dil. nitric acid (from K) ARISTAR® standard for ion chromatography	358, 456	100 ml	458222B
Potassium standard solution, 200 mg/l K in dil. nitric acid (from K) ARISTAR® standard for ion chromatography	358, 456	100 ml	458302A
Sodium standard solution, 1,000 mg/l Na in dil. nitric acid (from Na) ARISTAR® standard for ion chromatography	407, 456	100 ml	458232D
Sulphate standard solution, 1,000 mg/l SO_4^{2} in water (from Na_2SO_4) ARISTAR® standard for ion chromatography	456, 468	100 ml	458062D
Sulphate standard solution, 1,000 mg/l SO_4^{2} in water (from Na_2SO_4) ARISTAR® standard for ion chromatography	456, 468	500 ml	458064F

IC standards

Ion chromatography (IC) is used in many different industries including food and beverage, environmental, life sciences, pharmaceutical, power generation and electronics. The large number of applications includes the separation of analytes like inorganic anions and cations, organic acids, carbohydrates, amino acids, proteins, fatty acids, polysaccharides, polyphosphates, surfactants and more.

- High quality
- Complete range of 54 elements
- Available in 100 ml pack sizes and also in 500 ml packs for the most commonly used materials
- Complete certificate of analysis delivered with the product in a individual packaging
- Traceability to NIST
- Control lab accreditated ISO 17025 and ISO Guide 34

Description	Page	Pk	Cat. No.
Acetate 1,000 mg/l in water standard for ion chromatography	1, 456	100 ml	84951.180
Ammonium 1,000 mg/l in water standard for ion chromatography	29, 456	100 ml	84952.180
Ammonium (in N) 1,000 mg/l in water standard for ion chromatography	29, 456	100 ml	84953.180
Barium 1,000 mg/l in water standard for ion chromatography	52, 456	100 ml	84954.180
Benzoate 1,000 mg/l in water standard for ion chromatography	56, 456	100 ml	84955.180
Bromate 1,000 mg/l in water standard for ion chromatography	64, 456	100 ml	84956.180
Bromide 1,000 mg/l in water standard for ion chromatography	64, 456	100 ml	84957.180
Calcium 1,000 mg/l in water standard for ion chromatography	74, 456	100 ml	84958.180
Cesium 1,000 mg/l in water standard for ion chromatography	82, 456	100 ml	84959.180
Chlorate 1,000 mg/l in water standard for ion chromatography	84, 456	100 ml	84960.180
Chlorite 1,000 mg/l in NaOH solution standard for ion chromatography	85, 456	100 ml	84961.180
Chloride 1,000 mg/l in water standard for ion chromatography	84, 456	100 ml	84962.180
Chromate (in Cr(VI)) 1,000 mg/l in water standard for ion chromatography	89, 456	100 ml	84963.180
Citrate 1,000 mg/l in water standard for ion chromatography	91, 456	100 ml	84964.180
Diethanolamine 1,000 mg/l in water standard for ion chromatography	113, 456	100 ml	84965.180
Monoethanolamine 1,000 mg/l in water standard for ion chromatography	151, 310, 456	100 ml	84979.180
Fluoride 1,000 mg/l in water standard for ion chromatography	161, 456	100 ml	84966.180
Formiate 1,000 mg/l in water standard for ion chromatography	165, 456	100 ml	84967.180
Glycolate 1,000 mg/l in water standard for ion chromatography	178, 456	100 ml	84968.180
Hydrogenphthalate 1,000 mg/l in water standard for ion chromatography	206, 456	100 ml	84969.180
Hydrogensulphite 1,000 mg/l in water standard for ion chromatography	206, 456	100 ml	84970.180
Iodate 1,000 mg/l in water standard for ion chromatography	220, 456	100 ml	84971.180
Iodide 1,000 mg/l in water standard for ion chromatography	220, 456	100 ml	84972.180
Lactate 1,000 mg/l in water standard for ion chromatography	235, 456	100 ml	84973.180

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Description	Page	Pk	Cat. No.
Lithium 1,000 mg/l in water standard for ion chromatography	241, 457	100 ml	84974.180
Magnesium 1,000 mg/l in water standard for ion chromatography	245, 457	100 ml	84975.180
Maleate 1,000 mg/l in water standard for ion chromatography	249, 457	100 ml	84976.180
Methanesulphonate 1,000 mg/l in water standard for ion chromatography	255, 457	100 ml	84977.180
3-Methoxypropylamine 1,000 mg/l in water standard for ion chromatography	260, 457	100 ml	84978.180
Monomethylamine 1,000 mg/l in water standard for ion chromatography	260, 457	100 ml	84980.180
Nitrate 1,000 mg/l in water standard for ion chromatography	317, 457	100 ml	84981.180
Nitrate (in N) 1,000 mg/l in water standard for ion chromatography	317, 457	100 ml	84982.180
Nitrilotriacetate 1,000 mg/l in water standard for ion chromatography	320, 457	100 ml	84983.180
Nitrite 1,000 mg/l in water standard for ion chromatography	320, 457	100 ml	84984.180
Nitrite (in N) 1,000 mg/l in water standard for ion chromatography	320, 457	100 ml	84985.180
Oxalate 1,000 mg/l in water standard for ion chromatography	325, 457	100 ml	84986.180
Perchlorate 1,000 mg/l in water standard for ion chromatography	339, 457	100 ml	84987.180
Phosphate 1,000 mg/l in water standard for ion chromatography	351, 457	100 ml	84988.180
Phosphate (in P) 1,000 mg/l in water standard for ion chromatography	352, 457	100 ml	84989.180
Potassium 1,000 mg/l in water standard for ion chromatography	358, 457	100 ml	84990.180
Propionate 1,000 mg/l in water standard for ion chromatography	380, 457	100 ml	84991.180
Silicate 1,000 mg/l in water standard for ion chromatography	396, 457	100 ml	84992.180
Sodium 1,000 mg/l in water standard for ion chromatography	407, 457	100 ml	84993.180
Strontium 1,000 mg/l in water standard for ion chromatography	457, 466	100 ml	84994.180
Succinate 1,000 mg/l in water standard for ion chromatography	457, 466	100 ml	84995.180
Sulphate 1,000 mg/l in water standard for ion chromatography	457, 469	100 ml	84996.180
Sulfite (in HSO3-) 1,000 mg/l in water standard for ion chromatography	457, 469	100 ml	84997.180
Tartrate 1,000 mg/l in water standard for ion chromatography	457, 479	100 ml	84998.180
Thiocyanate 1,000 mg/l in water standard for ion chromatography	457, 486	100 ml	84999.180
Thiosulphate 1,000 mg/l in amylic alcohol standard for ion chromatography	457, 486	100 ml	85000.180
Triethanolamine 1,000 mg/l in water standard for ion chromatography	457, 495	100 ml	85001.180
Triethylamine 1,000 mg/l in water standard for ion chromatography	457, 495	100 ml	85002.180
Trimethylamine 1,000 mg/l in water standard for ion chromatography	457, 497	100 ml	85003.180

Colour standard solutions, Reag. Ph. Eur.

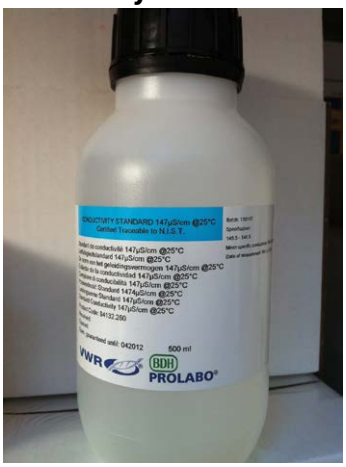
Ready to use colour solutions according to Reag. Ph.Eur.

- Ready to use solutions
- Comprehensive Certificates of Analysis for all batches
- Labelled with minimum shelf life/batch number

Ordering information: Normally manufactured to order. Please check with customer services.

Description	Pk	Cat. No.	Pack type
Colour Reference Solution B (brown) for testing the colour intensity acc. to Ph. Eur. B1-B9 Reag. Ph. Eur.	125 ml	87169.180	Plastic bottle
Colour Reference Solution BY (brownish yellow) for testing the colour intensity acc. to Ph. Eur. BY1-BY7 Reag. Ph. Eur.	125 ml	85748.180	Plastic bottle
Colour Reference Solution GY (greenish yellow) for testing the colour intensity acc. to Ph. Eur. GY1-GY7 Reag. Ph. Eur.	125 ml	85750.180	Plastic bottle
Colour Reference Solution R (red) for testing the colour intensity acc. to Ph. Eur. R1-R7 Reag. Ph. Eur.	125 ml	85751.180	Plastic bottle
Colour Reference Solution R (red) for testing the colour intensity acc. to Ph. Eur. R1-R7 Reag. Ph. Eur.	500 ml	85751.260	Plastic bottle
Colour Reference Solution Y (yellow) for testing the colour intensity acc. to Ph. Eur. Y1-Y7 Reag. Ph. Eur.	125 ml	85749.180	Plastic bottle

Conductivity standard solutions



A complete range of certified control standards with values ranging from 10 to 100 000 µS to meet all the requirements for electrochemical analysis.

- Accurate to ±1%
- Traceable to NIST, meeting Ph.Eur. and USP requirements
- Tested using INAB accredited test methods to ISO 17025

Standard values (25 °C)

Used for determining cell constant - see recommendations of instrument manufacturer for the relevant cell design.

Premium values (25 °C)

These standards are for verifying that the measuring system (instrument, probe and operator) can accurately detect sample values in the area of interest (e.g. 20 µS/cm for pharmaceutical water, or 100 000 µS/cm for environmental samples).

Description	Pk	Cat. No.	Pack type
Standard values (25 °C)			
Conductivity standard 84 µS/cm (25 °C)	100 ml	84131.180	Plastic bottle
Conductivity standard 84 µS/cm (25 °C)	500 ml	84131.260	Plastic bottle
Conductivity standard 147 µS/cm (25 °C)	500 ml	84132.260	Plastic bottle
Conductivity standard 1,413 µS/cm (25 °C)	100 ml	84135.180	Plastic bottle
Conductivity standard 1,413 µS/cm (25 °C)	500 ml	84135.260	Plastic bottle
Conductivity standard 1,413 µS/cm (25 °C)	1 l	84135.290	Plastic bottle
Conductivity standard 12,880 µS/cm (25 °C)	100 ml	84136.180	Plastic bottle
Conductivity standard 12,880 µS/cm (25 °C)	500 ml	84136.260	Plastic bottle
Conductivity standard 12,880 µS/cm (25 °C)	1 l	84136.290	Plastic bottle

Description	Pk	Cat. No.	Pack type
Premium values (25 °C)			
Premium conductivity standard 10 µS/cm	500 ml	84137.260	Plastic bottle
Premium conductivity standard 20 µS/cm	500 ml	84140.260	Plastic bottle
Premium conductivity standard 50 µS/cm	500 ml	84143.260	Plastic bottle
Premium conductivity standard 100 µS/cm	500 ml	84139.260	Plastic bottle
Premium conductivity standard 200 µS/cm	500 ml	84145.260	Plastic bottle
Premium conductivity standard 500 µS/cm	500 ml	84138.260	Plastic bottle
Premium conductivity standard 1,000 µS/cm	500 ml	84141.260	Plastic bottle
Premium conductivity standard 10,000 µS/cm	500 ml	84146.260	Plastic bottle
Premium conductivity standard 50,000 µS/cm	500 ml	84142.260	Plastic bottle
Premium conductivity standard 100,000 µS/cm	500 ml	84144.260	Plastic bottle

COD Calibration standards

These standards are ideal to use as control standards for COD measurements.

Description	Pk	Cat. No.	Pack type
COD standard solution, 10 mg/l	500 ml	85050.260	Plastic bottle
COD standard solution, 20 mg/l	500 ml	85053.260	Plastic bottle
COD standard solution, 50 mg/l	500 ml	85063.260	Plastic bottle
COD standard solution, 100 mg/l	500 ml	85059.260	Plastic bottle
COD standard solution, 200 mg/l	500 ml	85062.260	Plastic bottle
COD standard solution, 500 mg/l	500 ml	85064.260	Plastic bottle
COD standard solution, 600 mg/l	500 ml	85066.260	Plastic bottle
COD standard solution, 1,000 mg/l	500 ml	85060.260	Plastic bottle
COD standard solution, 1,300 mg/l	500 ml	85051.260	Plastic bottle
COD standard solution, 1,500 mg/l	500 ml	85052.260	Plastic bottle
COD standard solution, 2,000 mg/l	500 ml	85054.260	Plastic bottle
COD standard solution, 5,000 mg/l	500 ml	85065.260	Plastic bottle
COD standard solution, 6,000 mg/l	500 ml	85057.260	Plastic bottle
COD standard solution, 10,000 mg/l	500 ml	85061.260	Plastic bottle
COD standard solution, 20,000 mg/l	500 ml	85055.260	Plastic bottle
COD standard solution, 30,000 mg/l	500 ml	85056.260	Plastic bottle
COD standard solution, 60,000 mg/l	500 ml	85058.260	Plastic bottle

Hydrocarbon oil index determination standards

- Designed for analysis of water and ground samples, according to the ISO 9377-2 norm
- Delivered with certificate of analysis, reference and batch number of source materials
- Produced in compliance with ISO 9001/2000 norm
- Packed in 1.5 and 4.5 ml Certan® bottles or 1 and 10 ml glass ampoules

Certan® bottles

Catalogue number ending
001 = 1×1.5 ml
002 = 1×4.5 ml
003 = 3×1.5 ml
004 = 3×4.5 ml

Glass ampoules

Catalogue number ending
005 = 5×1 ml
010 = 10×1 ml
011 = 1×10 ml
030 = 3×10 ml

Description	Pk	Cat. No.
Extraction solvent stock solution (1×1.5 ml)	1 KIT	87508.001
Extraction solvent stock solution (1×4.5 ml)	1 KIT	87508.002
Extraction solvent stock solution (3×1.5 ml)	1 KIT	87508.003
Extraction solvent stock solution (3×4.5 ml)	1 KIT	87508.004
Hydrocarbon mixture standard C10 + C40	1 KIT	87501.005
Hydrocarbon mixture standard C10 + C40	1 KIT	87501.011
Hydrocarbon mixture standard C10 + C40	1 KIT	87501.030
Hydrocarbon mixture standard C10 + C40	10 Ampoule	87501.010
Standard mixture of 4 n-alkanes (1×1.5 ml)	1 KIT	87506.001
Standard mixture of 4 n-alkanes (1×4.5 ml)	1 KIT	87506.002
Standard mixture of 4 n-alkanes (3×1.5 ml)	1 KIT	87506.003
Standard mixture of 4 n-alkanes (3×4.5 ml)	1 KIT	87506.004
Standard mixture of 4 n-alkanes (3×10 ml)	1 KIT	87500.030
Standard mixture of 4 n-alkanes (10×1 ml)	10 Ampoule	87500.010
Stearyl stearate 2,000 µg/ml in hexane (1×1.5 ml)	1 KIT	87507.001
Stearyl stearate 2,000 µg/ml in hexane (1×4.5 ml)	1 KIT	87507.002
Stearyl stearate 2,000 µg/ml in hexane (3×1.5 ml)	1 KIT	87507.003
Stearyl stearate 2,000 µg/ml in hexane (3×4.5 ml)	1 KIT	87507.004
Stearyl stearate 2,000 µg/ml in hexane (1× 10 ml)	1 Ampoule	87496.011
Stearyl stearate 2,000 µg/ml in hexane (3× 10 ml)	1 KIT	87496.030
Stearyl stearate 2,000 µg/ml in hexane (5× 1 ml)	5 Ampoule	87496.005
Stearyl stearate 2,000 µg/ml in hexane (10× 1 ml)	10 Ampoule	87496.010
Standard mixture of mineral oil stock (1×10 ml)	1 Ampoule	87495.011
Standard mixture of mineral oil stock (3×10 ml)	1 Ampoule	87495.030
Quality control standard mixture of mineral oils (5×1 ml)	1 KIT	87497.005
Quality control standard mixture of mineral oils (1×10 ml)	1 KIT	87497.011
Quality control standard mixture of mineral oils (3×10 ml)	1 Ampoule	87497.030

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Description	Pk	Cat. No.
Cartridge quality control standard mixture (5×1 ml)	1 KIT	87498.005
Cartridge quality control standard mixture (10×1 ml)	1 KIT	87498.010
Cartridge quality control standard mixture (1×10 ml)	1 KIT	87498.011
Cartridge quality control standard mixture (3×10 ml)	1 KIT	87498.030
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (5×1 ml)	1 KIT	87499.005
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (1×10 ml)	1 KIT	87499.011
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (3×10 ml)	1 KIT	87499.030
Standard mixture of mineral oil stock (5×1 ml)	5 Ampoule	87495.005
Standard mixture of mineral oil stock (10×1 ml)	10 Ampoule	87495.010
Quality control standard mixture of mineral oils (10×1 ml)	10 Ampoule	87497.010
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (10×1 ml)	10 Ampoule	87499.010
Standard mixture of mineral oil stock (1×1.5 ml)	1 Bottle	87502.001
Standard mixture of mineral oil stock (1×4.5 ml)	1 Bottle	87502.002
Standard mixture of mineral oil stock (3×1.5 ml)	1 KIT	87502.003
Standard mixture of mineral oil stock (3×4.5 ml)	1 KIT	87502.004
Quality control standard mixture of mineral oils (1×1.5 ml)	1 KIT	87503.001
Quality control standard mixture of mineral oils (1×4.5 ml)	1 KIT	87503.002
Quality control standard mixture of mineral oils (3×1.5 ml)	1 KIT	87503.003
Quality control standard mixture of mineral oils (3×4.5 ml)	1 KIT	87503.004
Cartridge quality control standard mixture (1×1.5 ml)	1 KIT	87504.001
Cartridge quality control standard mixture (1×4.5 ml)	1 KIT	87504.002
Cartridge quality control standard mixture (3×1.5 ml)	1 KIT	87504.003
Cartridge quality control standard mixture (3×4.5 ml)	1 KIT	87504.004
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (1×1.5 ml)	1 KIT	87505.001
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (1×4.5 ml)	1 KIT	87505.002
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (3×1.5 ml)	1 KIT	87505.003
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (3×4.5 ml)	1 KIT	87505.004

Hydrocarbon oil index determination standards in glass ampoules according to ISO 93772-2

Designed for analysis of water and ground samples, according to the ISO 9377-2 norm

- Delivered with certificate of analysis, reference and batch number of source materials
- Packed in 1 and 10 ml glass ampoules

Description	Concentration	Pk	Cat. No.
Standard mixture of mineral oil stock (5×1 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	5 Ampoule	87495.005
Standard mixture of mineral oil stock (10×1 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	10 Ampoule	87495.010
Standard mixture of mineral oil stock (1×10 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	1 Ampoule	87495.011
Standard mixture of mineral oil stock (3×10 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	1 Ampoule	87495.030
Quality control standard mixture of mineral oils (5×1 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 KIT	87497.005
Quality control standard mixture of mineral oils (10×1 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	10 Ampoule	87497.010
Quality control standard mixture of mineral oils (1×10 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 KIT	87497.011
Quality control standard mixture of mineral oils (3×10 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 Ampoule	87497.030
Cartridge quality control standard mixture (5×1 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87498.005
Cartridge quality control standard mixture (10×1 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87498.010
Cartridge quality control standard mixture (1×10 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87498.011
Cartridge quality control standard mixture (3×10 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87498.030
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (5×1 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87499.005
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (10×1 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	10 Ampoule	87499.010
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (1×10 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87499.011
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (3×10 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87499.030

VWR Handy Solution Guides

Hydrocarbon oil index determination standards in Certan bottles according to ISO 93772-2

Designed for analysis of water and ground samples, according to the ISO 9377-2 norm

- Delivered with certificate of analysis, reference and batch number of source materials
- Packed in 1.5 and 4.5 Certan® bottles

Certan® bottles provide the advantage of a sealed ampoule with the flexibility of a screw cap bottle or a septum vial. These unique, screw-cap sample containers with a 1.2×28 mm height capillary opening are designed for the storage of volatile samples and reference standards.

Description	Concentration	Pk	Cat. No.
Standard mixture of mineral oil stock (1×1.5 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	1 Bottle	87502.001
Standard mixture of mineral oil stock (1×4.5 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	1 Bottle	87502.002
Standard mixture of mineral oil stock (3×1.5 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	1 KIT	87502.003
Standard mixture of mineral oil stock (3×4.5 ml)	5000 mg/l additive free diesel + 5000 mg/l mineral oil in hexane	1 KIT	87502.004
Quality control standard mixture of mineral oils (1×1.5 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 KIT	87503.001
Quality control standard mixture of mineral oils (1×4.5 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 KIT	87503.002
Quality control standard mixture of mineral oils (3×1.5 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 KIT	87503.003
Quality control standard mixture of mineral oils (3×4.5 ml)	500 mg/l additive free diesel + 5000 mg/l mineral oil in acetone	1 KIT	87503.004
Cartridge quality control standard mixture (1×1.5 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87504.001
Cartridge quality control standard mixture (1×4.5 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87504.002
Cartridge quality control standard mixture (3×1.5 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87504.003
Cartridge quality control standard mixture (3×4.5 ml)	1000 mg/l additive free diesel + 1000 mg/l mineral oil in hexane	1 KIT	87504.004
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (1×1.5 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87505.001
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (1×4.5 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87505.002
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (3×1.5 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87505.003
Standard mixture of 16 n-alkanes, C_{10}-C_{40} (3×4.5 ml)	100 mg/l of each component in 1:1 hexane petroleum ether	1 KIT	87505.004

Melting point standards

These standards can be used with any melting point apparatus. They are prepared using the pure raw materials. Melting points can be determined using a high accuracy Differential Scanning Calorimeter (DSC) system that is calibrated to the ITS – 90 International Temperature Scale.

- Ready to use
- Traceable
- Uncertainty of measurement up to ±0.3 °C

The melting points of these standards range from benzophenone (+47...+49 °C) to anthraquinone (+283...+286 °C).

Description	Pk	Cat. No.
Benzophenone, m.pt.= 47...49 °C	1 g	85101.001
p-Nitrotoluene, m.pt.= 52...54 °C	1 g	85102.001
Vanillin, m.pt.= 81...83 °C	1 g	85103.001
Benzoic acid, m.pt.= 121...123 °C	1 g	85104.001
Phenacetin, m.pt.= 133...135 °C	0,5 g	85105.005
Salicylic acid, m.pt.= 158...160 °C	1 g	85106.001
Sulphanilamide, m.pt.= 164 ...166 °C	1 g	85107.001
Caffeine, m.pt.= 235...238 °C	1 g	85108.001
Carbazole, m.pt.= 243...247 °C	1 g	85109.001
Anthraquinone, m.pt.= 283...286 °C	1 g	85110.001
Melting point standard set (Sulphanilamide, Caffeine, Vanillin)	3 g	85111.003
Melting point standard set, Benzophenone (47...49 °C), Benzoic acid (121...123 °C), Anthraquinone (283...286 °C)	3 g	85112.003
Melting point standard set, Vanillin (81...83 °C), Phenacetin (134...136 °C), Caffeine (235...237 °C)	3 g	85113.003

Organic reference standards

Organic standards, typically used as a reference material for gas chromatography, across a wide range of applications.

Description	Page	Pk	Cat. No.
Aroclor 1242 (PCB-mixture, 42% chlorinated) 1,000 µg/ml in hexane	49, 460	1 ml	122792T
Aroclor 1260 (PCB-mixture, 60% chlorinated) 35 µg/ml in isooctane	49, 460	1 ml	122732H
Benzene 200 µg/ml in methanol	55, 460	1 ml	123152U
Benzo[a]pyrene 50 µg/ml in toluene	55, 460	1 ml	122932N
Bromomethane 200 µg/ml in methanol	64, 460	1 ml	123472K
Chloroethane 200 µg/ml in methanol	86, 460	1 ml	123482M
Chloroethylene 200 µg/ml in methanol	86, 460	1 ml	123462Y
Chlorpyrifos 100 µg/ml in methanol	88, 460	1 ml	123692U
Diazinon 100 µg/ml in methanol	109, 460	1 ml	123972C
Stearyl stearate 2,000 µg/ml in hexane (1× 10 ml)	458, 460	1 Ampoule	87496.011
Stearyl stearate 2,000 µg/ml in hexane (3× 10 ml)	458, 460	1 KIT	87496.030
Stearyl stearate 2,000 µg/ml in hexane (5× 1 ml)	458, 460	5 Ampoule	87496.005
Stearyl stearate 2,000 µg/ml in hexane (10× 1 ml)	458, 460	10 Ampoule	87496.010
Standard solution imidazole 1000 mg/l in water	214, 460	100 ml	87345.180
Standard solution imidazole 1000 mg/l in water	214, 460	1.000 ml	87345.290
Malathion (1,2-Bis(ethoxycarbonyl)ethyl O,O-dimethyl phosphorodithioate) 100 µg/ml in methanol	249, 460	1 ml	124312W
Morpholine 1000 mg/l in aqueous solution for ion chromatography	311, 460	500 ml	87732.260

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Refractive index standards

Refractive index of the standards is verified using calibrated and temperature controlled refractometer.

- Standards are prepared gravimetrically on weight/weight basis
- Solute (sucrose) and solvent (water) are weighed on a calibrated balance using OIML traceable weights

Certificate of calibration is issued in accordance with the requirements of ISO/IEC 17025.

Description	Refractive index	Pk	Cat. No.
Refractive index standard at 20 °C, solvent based	1.38779	15 ml	85114.015
Refractive index standard at 20 °C, solvent based	1.40485	15 ml	85115.015
Refractive index standard at 20 °C, solvent based	1.42345	15 ml	85116.015
Refractive index standard at 20 °C, solvent based	1.44468	15 ml	85117.015
Refractive index standard at 20 °C, solvent based	1.46768	15 ml	85118.015
Refractive index standard at 20 °C, solvent based	1.49672	15 ml	85119.015
Refractive index standard at 20 °C, solvent based	1.50044	15 ml	85120.015
Refractive index standard at 20 °C, solvent based	1.51726	15 ml	85121.015
Refractive index standard at 20 °C, solvent based	1.53660	15 ml	85122.015
Refractive index standard at 20 °C, solvent based	1.65808	15 ml	85123.015
Refractive index standard at 20 °C, stabilised sucrose	1.34325	15 ml	85124.015
Refractive index standard at 20 °C, stabilised sucrose	1.34782	15 ml	85125.015
Refractive index standard at 20 °C, stabilised sucrose	1.34968	15 ml	85126.015
Refractive index standard at 20 °C, stabilised sucrose	1.35015	15 ml	85127.015
Refractive index standard at 20 °C, stabilised sucrose	1.35171	15 ml	85128.015
Refractive index standard at 20 °C, stabilised sucrose	1.35093	15 ml	85129.015
Refractive index standard at 20 °C, stabilised sucrose	1.35568	15 ml	85130.015
Refractive index standard at 20 °C, stabilised sucrose	1.37233	15 ml	85131.015
Refractive index standard at 20 °C, stabilised sucrose	1.38115	15 ml	85132.015
Refractive index standard at 20 °C, stabilised sucrose	1.39032	15 ml	85133.015
Refractive index standard at 20 °C, stabilised sucrose	1.39986	15 ml	85134.015
Refractive index standard at 20 °C, stabilised sucrose	1.40978	15 ml	85135.015
Refractive index standard at 20 °C, stabilised sucrose	1.42009	15 ml	85136.015
Refractive index standard at 20 °C, stabilised sucrose	1.43080	15 ml	85137.015
Refractive index standard at 20 °C, stabilised sucrose	1.44193	15 ml	85138.015

Residual solvents standards according to ICH guidelines

The level of volatile organic solvents in pharmaceutical raw materials or finished product is defined and monitored in accordance with ICH guidelines. Residual solvents are classified according to their risk assessment as Class 1, Class 2 or Class 3.
A selection of residual solvent standards is now available from VWR.

- Conforms to the latest Ph. Eur. edition
- Conforms to ICH guidelines
- Delivered with comprehensive certificate of analysis
- Packed in 1 ml or 1,5 ml glass ampoules

Class I: Benzene, 1,2- dichloroethane, 1,1- dichloroethane, tetrachloromethane, 1,1,1- trichloroethane

Class IIa: Chlorobenzene, cyclohexane, 1,2-dichloroethene (cis-/- trans), dichloromethane, dimethylformamide, ethylbenzene, n-hexane, methylcyclohexane, toluene, trichloroethene, m-xylene, o-xylene, p-xylene

Class IIb: Acetonitrile, chloroform, 1,2-dimethoxyethane, N,N-dimethylacetamide, dioxane, 2-hexanone, methanol, nitromethane, pyridine, tetrahydronaphthalene

Class IIc: Ethyleneglycol-monoethyl ether, ethyleneglycol, formamide, ethyleneglycol-monomethyl ether, 1-methyl-2-pyrrolidon, Sulfolan

Description	Pk	Cat. No.	Pack type
Residual solvent standard mix recommended by Ph. Eur./ICH Class I	1,5 ml	88206.015	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class IIa	1,5 ml	88207.015	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class IIb	1,5 ml	88208.015	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class IIc	1,5 ml	88209.015	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class I	1 Ampoule	88206.001	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class IIa	1 Ampoule	88207.001	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class IIb	1 Ampoule	88208.001	Glass ampoule
Residual solvent standard mix recommended by Ph. Eur./ICH Class IIc	1 Ampoule	88209.001	Glass ampoule

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UV spectroscopy bandwidth standards

Bandwidth standards packed in six permanently sealed UV cuvettes or 100 ml amber bottle

Description	Pk	Cat. No.
Bandwidth standard - blank - ratio of 268.7 nm peak to 266.8 nm trough	100 ml	84795.180
Bandwidth standard toluene in hexane with blank in sealed cuvettes, ratio of 268.7 nm peak to 266.8 nm trough (set of 2 permanently sealed UV cuvettes)	1 SET	84830.600
Bandwidth standard - blank - ratio of 268.7 nm peak to 266.8 nm trough (single permanently sealed UV cuvette)	1 SET	84832.600
Bandwidth standard toluene in hexane, ratio of 268.7 nm peak to 266.8 nm trough	100 ml	84833.180

UV-visible spectroscopy wavelength standards

Wavelength standards (certified at 0.1; 0.2; 0.5; 1; 2 and 5 nm slit widths) packed in six permanently sealed UV cuvettes or 100 ml amber bottle

Description	Pk	Cat. No.
Didymium solution UV/VIS wavelength standard at 298 to 865 nm, certified at 0.1 nm, 0.2 nm, 0.5 nm, 1.0 nm, 2.0 nm and 5 nm slit widths (single permanently sealed UV cuvette)	1 SET	84772.600
Samarium solution UV/VIS wavelength standard at 235 to 480 nm, certified at 0.1 nm, 0.2 nm, 0.5 nm, 1.0 nm, 2.0 nm and 5 nm slit widths (single permanently sealed UV cuvette)	1 SET	84773.600
Holmium oxide solution UV/VIS wavelength standard at 240 to 640 nm, certified at 0.1 nm, 0.2 nm, 0.5 nm, 1.0 nm, 2.0 nm and 5 nm slit widths (single permanently sealed UV cuvette)	1 SET	84774.600
Didymium solution UV and visible wavelength standard 298 nm to 865 nm, wavelength standards, certified at 0.1 nm, 0.2 nm, 0.5 nm, 1.0 nm, 2.0 nm and 5 nm slit widths	100 ml	84775.180
Samarium solution UV and visible wavelength standard 235 nm to 480 nm, certified at 0.1 nm, 0.2 nm, 0.5 nm, 1.0 nm, 2.0 nm and 5 nm slit widths	100 ml	84776.180
Holmium oxide solution UV/VIS wavelength standard at 240 to 640 nm, certified at 0.1 nm, 0.2 nm, 0.5 nm, 1.0 nm, 2.0 nm and 5 nm slit widths	100 ml	84777.180

UV-visible spectroscopy linearity standards at 213 and 261 nm

Linearity standards at 213 and 261 nm, packed in permanently sealed UV cuvettes or 100 ml amber bottle

Description	Pk	Cat. No.
Nicotinic acid linearity standard set - 0 mg/l, 6 mg/l, 12 mg/l, 18 mg/l, 24 mg/l at 213 and 261 nm (set of 5 permanently sealed UV cuvettes plus blank)	1 SET	84762.600
Nicotinic acid absorbance/transmission linearity standard 6 mg/l at 213 and 261 nm (single permanently sealed UV cuvette plus blank)	1 SET	84763.600
Nicotinic acid absorbance/transmission standard 12 mg/l at 213 and 261 nm (single permanently sealed UV cuvette plus blank)	1 SET	84764.600
Nicotinic acid absorbance/transmission linearity standard 18 mg/l at 213 and 261 nm (single permanently sealed UV cuvette plus blank)	1 SET	84765.600
Nicotinic acid absorbance/transmission linearity standard 24 mg/l 213 and 261 nm (single permanently sealed UV cuvette plus blank)	1 SET	84766.600
Blank -- 0.1M hydrochloric acid for linearity standards @ 213 and 261nm	100 ml	84767.180
Nicotinic acid absorbance / transmission standard 6 mg/l linearity standards @ 213 and 261 nm	100 ml	84768.180
Nicotinic acid absorbance/transmission standard 12 mg/l, linearity standards @ 213 and 261 nm	100 ml	84769.180
Nicotinic acid absorbance/transmission standard 18 mg/l, linearity standards @ 213 and 261 nm	100 ml	84770.180
Nicotinic acid absorbance/transmission standard 24 mg/l, linearity standards @ 213 and 261 nm	100 ml	84771.180

UV-visible spectroscopy linearity standards at 235, 257, 313 and 350 nm

Linearity standards packed in permanently sealed UV cuvettes or 100 ml amber bottle

Description	Pk	Cat. No.
Potassium dichromate linearity standards at 235, 257, 313 and 350 - 0 mg/l, 20 mg/l, 40 mg/l, 60 mg/l, 80 mg/l, 100 mg/l (six permanently sealed UV cuvettes plus blank)	1 SET	84750.600
Potassium dichromate absorbance/transmission linearity standard at 235, 257, 313 and 350 nm, 20 mg/l (single permanently sealed UV cuvette plus blank)	1 SET	84751.600
Potassium dichromate absorbance/transmission linearity standard at 235, 257, 313 and 350 nm, 40 mg/l (single permanently sealed UV cuvette plus blank)	1 SET	84752.600
Potassium dichromate absorbance/transmission linearity standard at 235, 257, 313 and 350 nm, 60 mg/l (single permanently sealed UV cuvette plus blank)	1 SET	84753.600
Potassium dichromate absorbance/transmission linearity standard at 235, 257, 313 and 350 nm, 80 mg/l (single permanently sealed UV cuvette plus blank)	1 SET	84754.600
Potassium dichromate absorbance/transmission linearity standard at 235, 257, 313 and 350 nm, 100 mg/l (single permanently sealed UV cuvette plus blank)	1 SET	84755.600
Blank - 0.001M perchloric acid for linearity standards @235, 257, 313 and 350 nm	100 ml	84756.180
Potassium dichromate absorbance/transmission standard - 20 mg/l linearity standards @ 235, 257, 313 and 350 nm	100 ml	84757.180
Potassium dichromate absorbance/transmission standard - 40 mg/l linearity standards @ 235, 257, 313 and 350 nm	100 ml	84758.180
Potassium dichromate absorbance/transmission standard - 60 mg/l linearity standards @ 235, 257, 313 and 350 nm	100 ml	84759.180
Potassium dichromate absorbance/transmission standard - 80 mg/l linearity standards @ 235, 257, 313 and 350 nm	100 ml	84760.180
Potassium dichromate absorbance/transmission standard 100mg/l, linearity standards @ 235, 257, 313 and 350 nm	100 ml	84761.180

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UV-visible spectroscopy stray light standards

Stray light standards packed in permanently sealed UV cuvettes or 100 ml amber bottle

Description	Pk	Cat. No.
Stray light standard, inorganic cut-off filter at 390 nm, sodium nitrite (single permanently sealed UV cuvette plus blank)	1 SET	84778.600
Stray light standard, inorganic cut-off filter at 260 nm, potassium iodide (single permanently sealed UV cuvette plus blank)	1 SET	84779.600
Stray light standard, inorganic cut-off filter at 260 nm, sodium iodide (single permanently sealed UV cuvette plus blank)	1 SET	84780.600
Stray light standard, inorganic cut-off filter at 227 nm, lithium carbonate (single permanently sealed UV cuvette plus blank)	1 SET	84781.600
Stray light standard, inorganic cut-off filter at 205 nm, sodium chloride (single permanently sealed UV cuvette plus blank)	1 SET	84782.600
Stray light standard, inorganic cut-off filter at 200 nm, potassium chloride (single permanently sealed UV cuvette plus blank)	1 SET	84783.600
Stray light inorganic cut-off filter (390 nm), sodium nitrite stray light standards	100 ml	84784.180
Stray light inorganic cut-off filter (260 nm), potassium iodide stray light standards	100 ml	84785.180
Stray light inorganic cut-off filter (260 nm), sodium iodide stray light standards	100 ml	84786.180
Stray light inorganic cut-off filter (227 nm), lithium carbonate stray light standards	100 ml	84787.180
Stray light inorganic cut-off filter (205 nm), sodium chloride stray light standards	100 ml	84788.180
Stray light inorganic cut-off filter (200 nm), potassium chloride stray light standards	100 ml	84789.180
Stray light blank, aqueous stray light standards	100 ml	84829.180

Viscosity standards

These standards can be used for calibration, control, verification, qualification or method validation of kinematic and dynamic viscosity measurement instruments (both manual and automatic). Each standard is certified for kinematic viscosity (mm^2/s, cSt), dynamic viscosity (cP) and density (g/ml) at a range of temperatures.

- Manufactured from high quality, stable base oils and additives
- Extended shelf life with secure package
- All standards observe Newtonian fluid behaviour

These standards are traceable to the ITS-90 temperature scale and the universally accepted primary standard value of the viscosity of water at 20°C, defined as 1.0034mm2/s (cSt) by ISO3666.

Certified according to ASTM D2162 using Ubbelohde master viscometers and ISO17025 accreditation for calibration.

Description	Pk	Cat. No.
Viscosity standards (cSt) reads; 0.47 at 20 °C, 0.45 at 25 °C, 0.41 at 37.78 °C, 0.4 at 40 °C	500 ml	85067.260
Viscosity standards (cSt) reads; 0.74 at 20 °C, 0.7 at 25 °C, 0.61 at 37.78 °C, 0.6 at 40 °C	500 ml	85068.260
Viscosity standards (cSt) reads; 1.3 at 20 °C, 1.2 at 25 °C, 1 at 37.78 °C, 0.97 at 40 °C, 0.87 at 50 °C	500 ml	85069.260
Viscosity standards (cSt) reads; 2.9 at 20 °C, 2.6 at 25 °C, 2.1 at 37.78 °C, 2 at 40 °C, 1.7 at 50 °C	500 ml	85078.260
Viscosity standards (cSt) reads; 4.4 at 20 °C, 3.9 at 25 °C, 3 at 37.78 °C, 2.9 at 40 °C, 2.4 at 50 °C	500 ml	85095.260
Viscosity standards (cSt) reads; 6.7 at 20 °C, 5.8 at 25 °C, 4.2 at 37.78 °C, 4 at 40 °C, 3.2 at 50 °C	500 ml	85084.260
Viscosity standards (cSt) reads; 10 at 20 °C, 8.7 at 25 °C, 6 at 37.78 °C, 5.7 at 40 °C, 4.4 at 50 °C	500 ml	85097.260
Viscosity standards (cSt) reads; 14 at 20 °C, 12 at 25 °C, 8 at 37.78 °C, 7.5 at 40 °C, 5.8 at 50 °C	500 ml	85089.260
Viscosity standards (cSt) reads; 20 at 20 °C, 16 at 25 °C, 11 at 37.78 °C, 10 at 40 °C, 7.5 at 50 °C	500 ml	85070.260
Viscosity standards (cSt) reads; 30 at 20 °C, 24 at 25 °C, 15 at 37.78 °C, 14 at 40 °C, 10 at 50 °C	500 ml	85074.260
Viscosity standards (cSt) reads; 43 at 20 °C, 34 at 25 °C, 20 at 37.78 °C, 18 at 40 °C, 13 at 50 °C	500 ml	85092.260
Viscosity standards (cSt) reads; 59 at 20 °C, 47 at 25 °C, 27 at 37.78 °C, 25 at 40 °C, 18 at 50 °C	500 ml	85081.260
Viscosity standards (cSt) reads; 88 at 20 °C, 66 at 25 °C, 35 at 37.78 °C, 32 at 40 °C, 21 at 50 °C	500 ml	85082.260
Viscosity standards (cSt) reads; 110 at 20 °C, 87 at 25 °C, 48 at 37.78 °C, 44 at 40 °C, 30 at 50 °C	500 ml	85087.260
Viscosity standards (cSt) reads; 160 at 20 °C, 120 at 25 °C, 60 at 37.78 °C, 54 at 40 °C, 35 at 50 °C	500 ml	85098.260
Viscosity standards (cSt) reads; 210 at 20 °C, 160 at 25 °C, 83 at 37.78 °C, 75 at 40 °C, 50 at 50 °C	500 ml	85090.260
Viscosity standards (cSt) reads; 320 at 20 °C, 230 at 25 °C, 110 at 37.78 °C, 98 at 40 °C, 61 at 50 °C	500 ml	85071.260
Viscosity standards (cSt) reads; 400 at 20 °C, 300 at 25 °C, 160 at 37.78 °C, 140 at 40 °C, 90 at 50 °C	500 ml	85075.260
Viscosity standards (cSt) reads; 550 at 20 °C, 400 at 25 °C, 200 at 37.78 °C, 180 at 40 °C, 110 at 50 °C	500 ml	85093.260
Viscosity standards (cSt) reads; 790 at 20 °C, 580 at 25 °C, 280 at 37.78 °C, 250 at 40 °C, 160 at 50 °C	500 ml	85079.260
Viscosity standards (cSt) reads; 980 at 20 °C, 710 at 25 °C, 340 at 37.78 °C, 310 at 40 °C, 190 at 50 °C	500 ml	85083.260
Viscosity standards (cSt) reads; 1,400 at 20 °C, 1000 at 25 °C, 470 at 37.78 °C, 410 at 40 °C, 250 at 50 °C	500 ml	85086.260
Viscosity standards (cSt) reads; 1,800 at 20 °C, 1,300 at 25 °C, 590 at 37.78 °C, 520 at 40 °C, 310 at 50 °C	500 ml	85099.260
Viscosity standards (cSt) reads; 2,600 at 20 °C, 1,800 at 25 °C, 850 at 37.78 °C, 750 at 40 °C, 450 at 50 °C	500 ml	85091.260
Viscosity standards (cSt) reads; 3,300 at 20 °C, 2,300 at 25 °C, 1,100 at 37.78 °C, 940 at 40 °C, 560 at 50 °C	500 ml	85072.260
Viscosity standards (cSt) reads; 4,900 at 20 °C, 3,500 at 25 °C, 1,600 at 37.78 °C, 1,400 at 40 °C, 30 at 50 °C	500 ml	85076.260
Viscosity standards (cSt) reads; 7,900 at 20 °C, 5,800 at 25 °C, 2,800 at 37.78 °C, 2,500 at 40 °C, 1,500 at 50 °C	500 ml	85080.260
Viscosity standards (cSt) reads; 8,400 at 20 °C, 5,300 at 25 °C, 1,900 at 37.78 °C, 1,600 at 40 °C, 810 at 50 °C	500 ml	85094.260
Viscosity standards (cSt) reads; 10,000 at 20 °C, 64,000 at 25 °C, 18,000 at 40 °C, 8,500 at 50 °C	500 ml	85077.260
Viscosity standards (cSt) reads; 19,000 at 20 °C, 12,000 at 25 °C, 4,000 at 37.78 °C, 3,400 at 40 °C, 1,700 at 50 °C	500 ml	85085.260
Viscosity standards (cSt) reads; 28,000 at 20 °C, 17,000 at 25 °C, 6,000 at 37.78 °C, 5,100 at 40 °C, 2,500 at 50 °C	500 ml	85088.260
Viscosity standards (cSt) reads; 41,000 at 20 °C, 25,000 at 25 °C, 8,000 at 37.78 °C, 6,700 at 40 °C, 3,200 at 50 °C	500 ml	85100.260
Viscosity standards (cSt) reads; 58,000 at 20 °C, 36,000 at 25 °C, 10,000 at 40 °C, 4,900 at 50 °C	500 ml	85073.260
Viscosity standards (cSt) reads; 77,000 at 20 °C, 47,000 at 25 °C, 13,000 at 40 °C, 6,100 at 50 °C	500 ml	85324.260

Stannous chloride

See Tin (II) chloride p.488

Stannous chloride dihydrate

See Tin (II) chloride dihydrate p.488

Starch, soluble AnalaR NORMAPUR® analytical reagent

CAS 9005-84-9
$(C_6H_{10}O_5)_n$ **M.W.** 162.14 g/mol
Storage Temperature: Ambient

Appearance ..... White fine powder
pH (2 %) ..... 6.0 - 7.5
Sensitivity ..... Passes test
Ignition residue (SO_4) ..... Max. 0.4 %
Loss on drying (105°C; 2 h) ..... Max. 10 %
Reducing substances (as $C_{12}H_{24}O_2$) ..... Max. 0.7 %

Cat. No.	Pk	Pack type
21153.135	25 g	Plastic bottle for solids
21153.181	100 g	Plastic bottle for solids
21153.237	250 g	Plastic bottle for solids

Starch soluble Iotect® iodine indicator AnalaR NORMAPUR® analytical reagent

CAS 9005-84-9
$(C_6H_{10}O_5)_n$ **M.W.** 162.14 g/mol
Storage Temperature: Ambient
Iodine indicator in iodometry

Melting point ..... 129 - 133 °C
Suited for iodine reagent ..... Passes test

Cat. No.	Pk	Pack type
28610.187	100 g	Plastic bottle for solids
28610.234	250 g	Plastic bottle for solids
28610.291	1 kg	Plastic bottle for solids

Starch, soluble from potatoes TECHNICAL

CAS 9005-84-9
$(C_6H_{10}O_5)_n$ **M.W.** 162.14 g/mol
Storage Temperature: Ambient

Water ..... Max. 20.5 %
Fe (Iron) ..... Max. 10 ppm
Pb (Lead) ..... Max. 0.1 ppm

Cat. No.	Pk	Pack type
21152.234	250 g	Plastic bottle for solids
21152.291	1 kg	Plastic bottle for solids

Starch from wheat, powder TECHNICAL

CAS 9005-25-8
$(C_6H_{10}O_5)_n$ **M.W.** 162.14 g/mol
Density: 1,5 g/cm³ (20 °C)
Storage Temperature: Ambient

IR Spectrum ..... Passes test

Cat. No.	Pk	Pack type
21146.290	1 kg	Plastic bottle for solids

Starch 1% aqueous solution stabilised Reag. Ph. Eur. 1085103

Stabilised with mercury (II) iodide 0.01 %

CAS 9005-25-8
$(C_6H_{10}O_5)_n$ **M.W.** 162.14 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85964.180	100 ml	Plastic bottle

Starch 0.5% aqueous solution stabilised TECHNICAL

CAS 9005-25-8
$(C_6H_{10}O_5)n$ **M.W.** 162.14 g/mol
Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
4729.0500	500 ml	Plastic bottle

Starch potassium iodate paper Reag. Ph. Eur. 1085101

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Description	Pk	Cat. No.
Starch potassium iodate paper Reag. Ph. Eur. 1085101	50 Tests	87942.150

Starch potassium iodide paper Reag. Ph. Eur. 1085106

Ordering Information: Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Description	Pk	Cat. No.
Starch potassium iodide paper Reag. Ph. Eur. 1085106	50 Tests	87943.150

Stearic acid calcium salt

See Calcium stearate p.78

Stearic acid zinc salt

See Zinc stearate p.526

Stearic acid GPR RECTAPUR®

Warning

CAS 57-11-4
$C_{18}H_{36}O_2$ **M.W.** 284.48 g/mol
Boiling Pt: 361 °C (1013 hPa) **Melting Pt:** 67 °C **Density:** 0,94 g/cm³ (20 °C)
Storage Temperature: Refrigerator **REACh:** 01-2119543894-28

Assay ..... Min. 97 %
IR Spectrum ..... Passes test
Melting point ..... 68 - 70 °C

Cat. No.	Pk	Pack type
30267HG	5 kg	Bucket (Plastic)

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Stearic acid, powder TECHNICAL

Warning

CAS 57-11-4
$C_{18}H_{36}O_2$
M.W. 284.48 g/mol
Boiling Pt: 361 °C (1013 hPa) **Melting Pt:** 67 °C
Density: 0,94 g/cm³ (20 °C)
Storage Temperature: Refrigerator
REACh: 01-2119543894-28

Stearic and palmitic acid ..... Min. 90 %

Cat. No.	Pk	Pack type
20666.290	1 kg	Plastic bottle for solids
20666.460	25 kg	Bucket (Plastic)

Stick on (Cell adhesive) Q Path® for microscopy

IVD

Storage Temperature: Ambient
Glue for improving adherence of histologicals sections to slides. Alternative to Abumin-Glycerol.

Appearance ..... Grey liquid
Density (20/4) ..... 0,99 - 1,01
pH ..... 3,2 - 3,8

Cat. No.	Pk	Pack type
11047600.	500 ml	Plastic bottle

Stoddard solvent 150-200°C

See White Spirit 150-200°C p.520

Streptavidin (from Streptomyces avidinii) for biotechnology

A 60 kDa tetrameric protein that exhibits high binding affinity for biotin. Able to bind one molecule of biotin with each subunit, streptavidin is useful in affinity chromatography, ELISA, immunohistochemistry, and Western Blotting.

Signal word: Danger
GHS Symbol: GHS08

Activity: 17 U/mg protein
DNase: NONE
Electrophoresis (One Band): PASS
Protease: NONE
Reassay Date: REPORT
RNase: NONE

Cat. No.	Pk	Pack type
E497-1MG	1 mg	Plastic tube
E497-5MG	5 mg	Plastic tube

Streptomycin sulphate, ultrapure

Warning

CAS 3810-74-0 **UN:** 2811
$C_{42}H_{84}N_{14}O_{36}S_3$ **M.W.** 1457.4 g/mol
Melting Pt: 250 °C
Storage Temperature: Refrigerator
30 µg/ml, binds to the 30S subunit of bacterial ribosome.

Loss on Drying (USP) ..... <= 5 %
pH (20%, Water) @25°C ..... 4.5 - 7
Potency (Dry Basis) ..... 650 mcg/mg - 850 mcg/mg

Cat. No.	Pk	Pack type
0382-EU-50G	50 g	Plastic bottle for solids
0382-EU-100G	100 g	Plastic bottle for solids

Streptozocin, ultrapure

Danger

CAS 18883-66-4 **UN:** 3077
$C_8H_{15}N_3O_7$
Storage Temperature: Freezer
Selection agent, mutagenic agent, and diabetes inducer.

Carbon ..... 35.9 % - 36.6 %
Heavy Metals ..... < 20 ppm
Loss on Drying ..... < 1 %
Melting Point (with decomposition) ..... > 121°C
Nitrogen ..... 15.6 % - 16.2 %
Residue on Ignition ..... < 0.1 %
Solubility (1%, Water) ..... Pass
Specific Rotation ..... > 39°

Cat. No.	Pk	Pack type
N407-1G	1 g	Glass bottle

NEW Strontium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Strontium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456912M
Strontium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85631.180

Strontium standard solution, 10,000 mg/l Sr in dil. nitric acid (from $Sr(NO_3)_2$) ARISTAR® standard for ICP

$Sr(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456072U	100 ml	Plastic bottle
456074W	500 ml	Plastic bottle

Strontium standard solution, 1,000 mg/l Sr in dil. nitric acid (from $Sr(NO_3)_2$) ARISTAR® standard for ICP

$Sr(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456062S	100 ml	Plastic bottle
456064U	500 ml	Plastic bottle

Strontium standard solution, 1,000 mg/l Sr in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86713.180	100 ml	Plastic bottle
86713.260	500 ml	Plastic bottle

NEW Strontium 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84994.180	100 ml	Plastic bottle

Strontium chloride hexahydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 10025-70-4

$SrCl_2 \cdot 6H_2O$ **M.W.** 266.62 g/mol

Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 61 °C **Density:** 1,93 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.0 %	pH (20°C; 5 %)	5.0 - 7.0
Insolubility in water	Max. 50 ppm	NO_3 (Nitrate)	Max. 20 ppm
SO_4 (Sulphate)	Max. 25 ppm	Ba (Barium)	Max. 50 ppm
Ca (Calcium)	Max. 0.05 %	Cu (Copper)	Max. 2 ppm
Fe (Iron)	Max. 5 ppm	K (Potassium)	Max. 100 ppm
Na (Sodium)	Max. 100 ppm	Pb (Lead)	Max. 10 ppm
Zn (Zinc)	Max. 2 ppm		

Cat. No.	Pk	Pack type
28321.268	500 g	Plastic bottle for solids

NEW Succinate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84995.180	100 ml	Plastic bottle

Succinic acid AnalaR NORMAPUR® analytical reagent

Warning

CAS 110-15-6 **UN:** 3261

$HOOCCH_2CH_2COOH$ **M.W.** 118.09 g/mol

Boiling Pt: 235 °C (1013 hPa) **Melting Pt:** 182 °C **Density:** 1,56 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Melting point	183 - 187 °C
Heavy metals (as Pb)	Max. 10 ppm	Ignition residue (SO_4)	Max. 0.02 %
Insolubility in water	Max. 50 ppm	Water	Max. 0.5 %
Cl (Chloride)	Max. 5 ppm	NH_4 (Ammonium)	Max. 10 ppm
SO_4 (Sulphate)	Max. 50 ppm	Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
20668.230	250 g	Plastic bottle for solids

VWR LIFE SCIENCE Succinic acid, high purity

Warning

CAS 110-15-6 **UN:** 3261

$HOOCCH_2CH_2COOH$ **M.W.** 118.09 g/mol

Boiling Pt: 235 °C (1013 hPa) **Melting Pt:** 182 °C **Density:** 1,56 g/cm³ (20 °C)

Storage Temperature: Ambient

Heavy Metals (as Pb)	< = 0.001 %
Melting Point	185 °C - 190 °C
Purity	> 99 %
Residue on Ignition	<= 0.025 %

Cat. No.	Pk	Pack type
0165-500G	500 g	Plastic bottle for solids
0165-2.5KG	2,5 kg	Plastic bottle for solids

D(+)-Sucrose AnalaR NORMAPUR® analytical reagent

CAS 57-50-1

$C_{12}H_{22}O_{11}$ **M.W.** 342.3 g/mol

Melting Pt: 169-170 °C **Density:** 1,29 g/cm³ (20 °C)

Storage Temperature: Ambient

Acidity	Max. 0.005 meq/g	Specific optical rotation (26 %; water)	66.4 - 66.8 °
Glucose	Max. 0.05 %	Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 80 ppm	Insolubility in water	Max. 30 ppm
Loss on drying (100°C)	Max. 0.05 %	Reducing sugars (calculated as $C_6H_{12}O_6$)	Max. 0.1 %
Cl (Chloride)	Max. 5 ppm	N (Nitrogen)	Max. 20 ppm
SO_3 (as SO_2)	Max. 15 ppm	SO_4 (Sulphate)	Max. 20 ppm
Ba (Barium)	Max. 0.02 %	Ca (Calcium)	Max. 10 ppm
Cd (Cadmium)	Max. 0.05 ppm	Cu (Copper)	Max. 0.1 ppm
Fe (Iron)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.1 ppm
Pb (Lead)	Max. 0.5 ppm	Zn (Zinc)	Max. 0.5 ppm

Cat. No.	Pk	Pack type
27480.294	1 kg	Plastic bottle for solids
27480.360	5 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

D(+)-Sucrose (Saccharose) Ph. Eur.

CAS 57-50-1
$C_{12}H_{22}O_{11}$ **M.W.** 342.3 g/mol
Melting Pt: 169-170 °C **Density:** 1,29 g/cm³ (20 °C)
Storage Temperature: Ambient

NOT FOR PARENTERAL USE

Appearance	Conforms (see CoA/CoS)
Identification (IR)	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Conductivity (20°C; 31,3 %)	Max. 35 µS/cm
Specific optical rotation (26 %; water)	66.3 - 67 °
Colour value	Max. 45
Reducing sugars	Passes test
SO_3 (as SO_2)	Max. 10 ppm
Loss on drying (105°C; 3 h)	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
27483.294	1 kg	Plastic bottle for solids
27483.363	5 kg	Plastic bottle for solids
27483.465	25 kg	Bucket (Plastic)

D(+)-Sucrose GPR RECTAPUR®

CAS 57-50-1
$C_{12}H_{22}O_{11}$ **M.W.** 342.3 g/mol
Melting Pt: 169-170 °C **Density:** 1,29 g/cm³ (20 °C)
Storage Temperature: Ambient

Specific optical rotation (2 %; water)	66 - 67 °
Heavy metals (as Pb)	Max. 50 ppm
Ignition residue (SO_4)	Max. 0.2 %

Cat. No.	Pk	Pack type
27478.296	1 kg	Plastic bottle for solids
27478.365	5 kg	Plastic bottle for solids
27478.467	25 kg	Bucket (Plastic)

VWR LIFE SCIENCE D(+)-Sucrose, ultrapure

CAS 57-50-1
$C_{12}H_{22}O_{11}$ **M.W.** 342.3 g/mol
Melting Pt: 169-170 °C **Density:** 1,29 g/cm³ (20 °C)
Storage Temperature: Ambient
Common reagent in routine nucleic acid procedures and electrophoresis loading dyes.

Chloride	<= 0.005%
DNase	none detected
Glucose	<= 0.1%
Heavy Metals (as Pb)	<= 0.0005%
Insolubles	<= 0.005%
Invert Sugar	<= 0.1%
Iron	<= 0.0005%
Loss on Drying	<= 0.03%
Protease	none detected
Purity	>= 99.9%
RNase	none detected
Solubility (10%, Water)	Pass
Specific Rotation	66.3° - 66.8 °
Sulphate	<= 0.005%

Cat. No.	Pk	Pack type
0335-500G	500 g	Plastic bottle for solids
0335-1KG	1 kg	Plastic bottle for solids
0335-2.5KG	2,5 kg	Bucket (Plastic)
0335-10KG	10 kg	Bucket (Plastic)
0335-12KG	12 kg	Bucket (Plastic)
0335-50KG	50 kg	Plastic drum

VWR LIFE SCIENCE D(+)-Sucrose, proteomics grade

CAS 57-50-1
$C_{12}H_{22}O_{11}$ **M.W.** 342.3 g/mol
Melting Pt: 169-170 °C **Density:** 1,29 g/cm³ (20 °C)
Storage Temperature: Ambient

Chloride	< 0.005%
DNase	none detected
Glucose	< = 0.1 %
Heavy Metals (as Pb)	< = 0.0005 %
Appearance	Fine white crystals
Insolubles	< = 0.005 %
Invert Sugar	<= 0.1 %
Iron	< 0.0005 %
Loss on Drying	< 0.03 %
Protease	none
Purity	> 99.9 %
RNase	none detected
Solubility (10%, Water)	Pass
Specific Rotation	66.3°-66.8°
Sulphate	<0.005%

Cat. No.	Pk	Pack type
M117-500G	500 g	Plastic bottle for solids
M117-1KG	1 kg	Plastic bottle for solids

D(+)-Sucrose Electran® Molecular biology grade

CAS 57-50-1
$C_{12}H_{22}O_{11}$ **M.W.** 342.3 g/mol
Melting Pt: 169 - 170 °C **Density:** 1.29 g/cm³ (20 °C)
Storage Temperature: Ambient

Identity (IR-spectrum)	conforms
Spec. rotation (.a. 20/D; 26 % Water)	+66.3 to +67.0 °
Fe (Iron)	Max 0.1 ppm
Pb (Lead)	Max 0.5 ppm
DNases (Exo- and endonucleases)	not detected
RNases	not detected
Proteases	not detected

Cat. No.	Pk	Pack type
443815S	1 kg	Plastic bottle

VWR LIFE SCIENCE Sucrose 20%, in aqueous solution for biotechnology, sterile

CAS 57-50-1
Common reagent in routine nucleic acid procedures and electrophoresis loading dyes.

Clarity	Pass
Sterility	Pass

Cat. No.	Pk	Pack type
E543-100ML	100 ml	Plastic bottle

Sugars (Carbohydrates)

L(+)-Arabinose GPR RECTAPUR® p.49
D(+)-Galactose GPR RECTAPUR® p.168
D(+)-Glucose anhydrous GPR RECTAPUR® p.173
Lactose monohydrate GPR RECTAPUR® p.236
D(+)-Maltose monohydrate GPR RECTAPUR® p.249
D(-)-Mannitol GPR RECTAPUR® p.251
D(+)-Sucrose AnalaR NORMAPUR® analytical reagent p.466
D(+)-Sucrose GPR RECTAPUR® p.467
D(+)-Xylose GPR RECTAPUR® p.522

Sulphamidic acid

See Amidosulphonic acid p.25

Sulphanilamide AnalaR NORMAPUR® analytical reagent

CAS 63-74-1
$H_2NC_6H_4SO_2NH_2$ **M.W.** 172.21 g/mol
Boiling Pt: 401 °C (1013 hPa) **Melting Pt:** 163-167 °C **Density:** 1,46 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 99 %	Insolubility in acid medium	Passes test
Insolubility in alkaline medium	Passes test	Melting point	163 - 166 °C
Heavy metals (as Pb)	Max. 20 ppm	Ignition residue (SO_4)	Max. 0.1 %
Loss on drying (105°C)	Max. 0.5 %	Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.02 %		

Cat. No.	Pk	Pack type
21159.181	100 g	Plastic bottle for solids

Sulphanilamide TECHNICAL

CAS 63-74-1
$H_2NC_6H_4SO_2NH_2$ **M.W.** 172.21 g/mol
Boiling Pt: 401 °C (1013 hPa) **Melting Pt:** 163-167 °C **Density:** 1,46 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
21156.237	250 g	Plastic bottle for solids

Sulphanilic acid AnalaR NORMAPUR® analytical reagent

Warning

CAS 121-57-3
$4\text{-}(H_2N)C_6H_4SO_3H$ **M.W.** 173.19 g/mol
Boiling Pt: 363 °C (1013 hPa) **Melting Pt:** 279 °C **Density:** 1,485 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	98.0 - 102.0 %	Ignition residue (SO_4)	Max. 100 ppm
Insolubility in Na_2CO_3 solution	Max. 0.02 %	Water	Max. 0.7 %
Cl (Chloride)	Max. 20 ppm	NO_2 (Nitrite)	Max. 0.5 ppm
SO_4 (Sulphate)	Max. 100 ppm		

Cat. No.	Pk	Pack type
20674.231	250 g	Plastic bottle for solids

Sulphanilic acid GPR RECTAPUR®

Warning

CAS 121-57-3
$4\text{-}(H_2N)C_6H_4SO_3H$ **M.W.** 173.19 g/mol
Boiling Pt: 363 °C (1013 hPa) **Melting Pt:** 279 °C **Density:** 1,485 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Ignition residue (SO_4)	Max. 0.1 %
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 0.2 %

Cat. No.	Pk	Pack type
20673.294	1 kg	Plastic bottle for solids

Sulphanilic acid 0.02 mol/l in acetic acid 25% Reag. Ph. Eur. 1086203

Danger

CAS 121-57-3 **UN:** 2790
$4\text{-}(H_2N)C_6H_4SO_3H$ **M.W.** 173.19 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87945.180	100 ml	Plastic bottle

Sulphanilic acid 0.02 mol/l in acetic acid 6% Reag. Ph. Eur. 1086201

CAS 121-57-3
$4\text{-}(H_2N)C_6H_4SO_3H$ **M.W.** 173.19 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87944.180	100 ml	Plastic bottle

NEW Sulphanilic acid in acetic acid USP test solutions (TS)

CAS 121-57-3 **UN:** 2790
$4\text{-}(H_2N)C_6H_4SO_3H$ **M.W.** 173.19 g/mol
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85375.180	100 ml	Glass bottle
85375.260	500 ml	Glass bottle

Sulphate standard solution, 1,000 mg/l SO_4^{2-} in water (from Na_2SO_4) ARISTAR® standard for ion chromatography

(SO_4^{2-} in H_2O)

Traceable to SRM from NIST, tested in an ISO Guide 34 / ISO17025 accredited laboratory

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
458062D	100 ml	Plastic bottle
458064F	500 ml	Plastic bottle

HiPerSolv CHROMANORM®

- Complete range of LC-MS solvents, mixes and additives
- High purity solvents for HPLC applications
- Designed to meet your requirements in analysis and quality control

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NEW Sulphate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84996.180	100 ml	Plastic bottle
84996.260	500 ml	Plastic bottle

Standard solution (1000 ppm SO_4) for the preparation of sulphate standard solution (10 ppm SO_4) R1 Reag.Ph.Eur. 5002801

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88091.180	100 ml	Plastic bottle

Standard solution (1000 ppm SO_4) for the preparation of sulphate standard solution (100 ppm SO_4) Reag.Ph.Eur. 5002802

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
88090.180	100 ml	Plastic bottle

NEW Sulphite (in HSO_3^-)1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84997.180	100 ml	Plastic bottle
84997.260	500 ml	Plastic bottle

5-Sulphosalicylic acid dihydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 5965-83-3 **UN:** 2585
$HO_3SC_6H_3$-2-(OH)$CO_2H{\cdot}2H_2O$ **M.W.** 254.22 g/mol
Melting Pt: 224 °C **Density:** 1,695 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %	Free salicylic acid	Max. 0.04 %
Heavy metals (as Pb)	Max. 10 ppm	Ignition residue (SO_4)	Max. 0.1 %
Insolubility in NH_3 4 N	Max. 0.03 %	Insolubility in ethanol 96 % vol	Max. 0.1 %
Insolubility in water	Max. 50 ppm	Cl (Chloride)	Max. 10 ppm
Fe (Iron)	Max. 25 ppm		

Cat. No.	Pk	Pack type
20678.187	100 g	Plastic bottle for solids
20678.267	500 g	Plastic bottle for solids
20678.291	1 kg	Plastic bottle for solids

VWR LIFE SCIENCE Sulfobetaine-10, SB-10 (N-Decyl-N,N-dimethyl-3-ammonio-1-propanesulphonate) for biotechnology

Warning

CAS 15163-36-7
$C_{15}H_{33}NO_3S$
Storage Temperature: Ambient
Zwitterionic detergent.

Appearance	White powder
Moisture (KF)	< = 2 %
Purity	> = 99 %
Solubility (10%, Water)	Pass

Cat. No.	Pk	Pack type

Sulphur AnalaR NORMAPUR® analytical reagent

Warning

CAS 7704-34-9 **UN:** 1350
S **M.W.** 32.07 g/mol
Boiling Pt: 445 °C (1013 hPa) **Melting Pt:** 113-119 °C **Density:** 2,36 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Acidity or alkalinity	Max. 0.002 meq/g
Ignition residue	Max. 0.04 %	Cl (Chloride)	Max. 50 ppm
S (Sulphide)	Max. 2 ppm	SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 5 ppm		

Cat. No.	Pk	Pack type
28260.234	250 g	Plastic bottle for solids

Sulphur, flower TECHNICAL

Warning

CAS 7704-34-9 **UN:** 1350
S **M.W.** 32.07 g/mol
Boiling Pt: 445 °C (1013 hPa) **Melting Pt:** 113-119 °C **Density:** 2,36 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
28256.296	1 kg	Plastic bottle for solids

NEW Sulphur standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Sulfur	1000 ppm	H_2O	Plastic bottle	100 ml	456922X
Sulfur	10 ppm	H_2O	Plastic bottle	100 ml	85594.180

Sulphur standard solution, 10,000 mg/l S in water (from $(NH_4)_2SO_4$) ARISTAR® standard for ICP

$(NH_4)_2SO_4$ in H_2O

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456092B	100 ml	Plastic bottle
456094D	500 ml	Plastic bottle

Sulphur standard solution, 1,000 mg/l S in water (from $(NH_4)_2SO_4$) ARISTAR® standard for ICP

$(NH_4)_2SO_4$ in H_2O

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456082W	100 ml	Plastic bottle
456084B	500 ml	Plastic bottle

Sulphur standard solution, 1,000 mg/l S in water AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86706.180	100 ml	Plastic bottle
86706.260	500 ml	Plastic bottle

Sulphuric acid 98% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7664-93-9 **UN:** 1830

H_2SO_4 **M.W.** 98.08 g/mol

Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	Min. 98.0 %	Colour	Max. 10 APHA
Cl (Chloride)	Max. 0.00002 %	NO_3 (Nitrate)	Max. 0.00002 %
Al (Aluminium)	Max. 0.00001 %	As (Arsenic)	Max. 0.000005 %
Ba (Barium)	Max. 0.000005 %	Ca (Calcium)	Max. 0.00010 %
Cd (Cadmium)	Max. 0.000005 %	Co (Cobalt)	Max. 0.000002 %
Cr (Chromium)	Max. 0.00001 %	Cu (Copper)	Max. 0.000002 %
Fe (Iron)	Max. 0.00010 %	K (Potassium)	Max. 0.00005 %
Mg (Magnesium)	Max. 0.00005 %	Mn (Manganese)	Max. 0.000002 %
Mo (Molybdenum)	Max. 0.000005 %	NH_4 (Ammonium)	Max. 0.00020 %
Na (Sodium)	Max. 0.0005 %	Ni (Nickel)	Max. 0.000005 %
Pb (Lead)	Max. 0.000005 %	Se (Selenium)	Max. 0.0001 %
Sr (Strontium)	Max. 0.000002 %	Zn (Zinc)	Max. 0.00005 %
Substances reducing $KMnO_4$ (as O)	Max. 0.0001 %	Non-volatile matter	Max. 0.002 %

Cat. No.	Pk	Pack type
102765G	1 l	Glass bottle
102766H	2,5 l	Glass bottle

NEW Sulphuric acid ≥97% for nitrogen analysis

Danger

CAS 7664-93-9 **UN:** 1830

H_2SO_4 **M.W.** 98.08 g/mol

Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 0,82 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	Min. 96.5 %
Colouration	Max. 10 APHA
Ignition residue	Max. 2 ppm
Substances reducing $KMnO_4$ (as SO_2)	Max. 2 ppm
Total N (Nitrogen)	Max. 1 ppm

Cat. No.	Pk	Pack type
85546.290	1 l	Glass bottle
85546.320	2,5 l	Glass bottle

NEW Sulphuric acid 96% AnalaR NORMAPUR® calibration solution of viscosity acc. to DIN EN ISO 307

Danger

CAS 7664-93-9 **UN:** 1830

H_2SO_4 **M.W.** 98.08 g/mol

Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay 95,85 - 96,15 %

Cat. No.	Pk	Pack type
85652.290	1 l	Glass bottle
85652.320	2,5 l	Glass bottle

Sulphuric acid 96% Ph. Eur.

Danger

CAS 7664-93-9 **UN:** 1830

H_2SO_4 **M.W.** 98.08 g/mol

Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	95.0 - 100.5 %
Appearance	Clear viscous liquid
Identification A	Passes test
Identification B	Passes test
Appearance of solution	Passes test
Cl (Chloride)	Max. 50 ppm
NO_3 (Nitrate)	Passes test
As (Arsenic)	Max. 1 ppm
Fe (Iron)	Max. 25 ppm
Heavy metals (as Pb)	Max. 5 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
85508.290	1 l	Glass bottle
85508.320	2,5 l	Glass bottle

Sulphuric acid 96% SLSI for the electronics industry

Danger

CAS 7664-93-9 **UN:** 1830

H_2SO_4 **M.W.** 98.08 g/mol

Boiling Pt: ~335 °C (1013 hPa) **Melting Pt:** 3 °C **Density:** 1,84 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119458838-20

Product from BASF

Cat. No.	Pk	Pack type
50139211.	340 kg	Plastic drum

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Sulphuric acid 96% VLSI Selectipur® for the electronics industry

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119458838-20

Product from BASF

Cat. No.	Pk	Pack type
51151507.	2,5 l	Plastic bottle
57384943.	340 kg	Plastic drum

Sulphuric acid 95% ARISTAR® for trace analysis

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	Min. 95.0 %	Cl (Chloride)	Max. 0.1 ppm
NO_3 (Nitrate)	Max. 0.1 ppm	PO_4 (Phosphate)	Max. 0.05 ppm
Al (Aluminium)	Max. 0.050 ppm	As (Arsenic)	Max. 0.005 ppm
B (Boron)	Max. 0.050 ppm	Ba (Barium)	Max. 0.050 ppm
Ca (Calcium)	Max. 0.100 ppm	Cd (Cadmium)	Max. 0.001 ppm
CO	Max. 0.005 ppm	Cu (Copper)	Max. 0.010 ppm
Fe (Iron)	Max. 0.050 ppm	Hg (Mercury)	Max. 0.001 ppm
K (Potassium)	Max. 0.050 ppm	Mg (Magnesium)	Max. 0.030 ppm
Mn (Manganese)	Max. 0.005 ppm	Na (Sodium)	Max. 0.300 ppm
NH_4 (Ammonium)	Max. 1.0 ppm	Ni (Nickel)	Max. 0.005 ppm
Pb (Lead)	Max. 0.005 ppm	Se (Selenium)	Max. 0.100 ppm
Sr (Strontium)	Max. 0.005 ppm	Zn (Zinc)	Max. 0.020 ppm
Oxygen absorbing components	Max. 1 ppm	Non-volatile matter	Max. 10 ppm

Cat. No.	Pk	Pack type
450061Q	500 ml	Glass bottle SAFEBREAK

Sulphuric acid 95% AnalaR NORMAPUR® analytical reagent

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	95.0 - 97.0 %	Colouration	Max. 10 APHA
Ignition residue	Max. 5 ppm	Substances reducing $KMnO_4$ (as SO_2)	Max. 2 ppm
Cl (Chloride)	Max. 0.2 ppm	NH_4 (Ammonium)	Max. 2 ppm
$NO_3 + NO_2$ (as NO_3)	Max. 0.2 ppm	PO_4 (Phosphate)	Max. 0.5 ppm
Ag (Silver)	Max. 0.02 ppm	Al (Aluminium)	Max. 0.02 ppm
As (Arsenic)	Max. 0.005 ppm	Ba (Barium)	Max. 0.02 ppm
Be (Beryllium)	Max. 0.01 ppm	Bi (Bismuth)	Max. 0.01 ppm
Ca (Calcium)	Max. 0.2 ppm	Cd (Cadmium)	Max. 0.02 ppm
Co (Cobalt)	Max. 0.01 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.2 ppm
Ge (Germanium)	Max. 0.02 ppm	K (Potassium)	Max. 0.05 ppm
Li (Lithium)	Max. 0.01 ppm	Mg (Magnesium)	Max. 0.03 ppm
Mn (Manganese)	Max. 0.01 ppm	Mo (Molybdenum)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.02 ppm	Sr (Strontium)	Max. 0.02 ppm
Ti (Titanium)	Max. 0.02 ppm	Tl (Thallium)	Max. 0.02 ppm
V (Vanadium)	Max. 0.01 ppm	Zn (Zinc)	Max. 0.02 ppm
Zr (Zirconium)	Max. 0.02 ppm		

Cat. No.	Pk	Pack type
20700.265	500 ml	Glass bottle
20700.243	1 l	Glass bottle SAFEBREAK
20700.290	1 l	Plastic bottle
20700.298	1 l	Glass bottle
20700.320	2,5 l	Plastic bottle
20700.323	2,5 l	Glass bottle SAFEBREAK
20700.420	2,5 l	Glass bottle

Sulphuric acid 95% AnalaR NORMAPUR® analytical reagent, for trace analysis of cadmium, mercury and lead

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	Min. 95.0 %	Colouration	Max. 10 APHA
Ignition residue	Max. 5 ppm	Substances reducing $KMnO_4$ (as SO_2)	Max. 5 ppm
Cl (Chloride)	Max. 0.2 ppm	NH_4 (Ammonium)	Max. 2 ppm
$NO_3 + NO_2$ (as NO_3)	Max. 0.1 ppm	As (Arsenic)	Max. 0.01 ppm
Cd (Cadmium)	Max. 0.005 ppm	Cu (Copper)	Max. 0.05 ppm
Fe (Iron)	Max. 0.2 ppm	Hg (Mercury)	Max. 0.005 ppm
Ni (Nickel)	Max. 0.05 ppm	Pb (Lead)	Max. 0.005 ppm
Zn (Zinc)	Max. 0.05 ppm		

Cat. No.	Pk	Pack type
20704.292	1 l	Glass bottle
20704.320	2,5 l	Glass bottle

Sulphuric acid 95% GPR RECTAPUR®

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay	95 - 97 %
Density (20/4)	1.800 - 1.940
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
20690.290	1 l	Plastic bottle
20690.330	2,5 l	Plastic bottle
20690.442	20 l	Plastic drum
20690.511	50 l	Plastic drum

Sulphuric acid 95% TECHNICAL

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 330 °C (1013 hPa) **Melting Pt:** 10,38 °C **Density:** 1,84 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119458838-20

Assay Min. 95 %

Cat. No.	Pk	Pack type
20685.295	1 l	Glass bottle
20685.330	2,5 l	Plastic bottle
20685.360	5 l	Plastic container
20685.513	50 l	Plastic drum

NEW Sulphuric acid 93% ULTRAPURE NORMATOM for trace metal analysis

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,82 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay w/w	93-98%	Ag (Silver)	50 ppt
Al (Aluminium)	50 ppt	As (Arsenic)	500 ppt
Ba (Baryum)	10 ppt	Be (Beryllium)	10 ppt
Bi (Bismuth)	10 ppt	Ca (Calcium)	50 ppt
Cd (Cadmium)	10 ppt	Ce (Cerium)	10 ppt
Co (Cobalt)	10 ppt	Cr (Chromium)	10 ppt
Cs (Cesium)	10 ppt	Cu (Copper)	10 ppt
Dy (Dysprosium)	10 ppt	Er (Erbium)	10 ppt
Eu (Europium)	10 ppt	Fe (Iron)	50 ppt
Ga (Gallium)	10 ppt	Gd (Gadolinium)	10 ppt
Ge (Germanium)	100 ppt	Hf (Hafnium)	10 ppt
Hg (Mercury)	100 ppt	Ho (Holmium)	10 ppt
In (Indium)	10 ppt	K (Potassium)	50 ppt
La (Lanthanum)	10 ppt	Li (Lithium)	10 ppt
Lu (Lutetium)	10 ppt	Mg (Magnesium)	50 ppt
Mn (Manganese)	10 ppt	Mo (Molybdenum)	10 ppt
Na (Sodium)	50 ppt	Nb (Niobium)	10 ppt
Nd (Neodymium)	10 ppt	Ni (Nickel)	50 ppt
Pb (Lead)	10 ppt	Pd (Palladium)	Information only
Pr (Praseodymium)	10 ppt	Pt (Platinum)	Information only
Rb (Rubidium)	10 ppt	Rh (Rhodium)	50 ppt
Sb (Antimony)	50 ppt	Sc (Scandium)	10 ppt
Se (Selenium)	500 ppt	Sm (Samarium)	10 ppt
Sn (Tin)	50 ppt	Sr (Strontium)	10 ppt
Ta (Tantalum)	Information only		

Cat. No.	Pk	Pack type
85028.270	500 ml	Plastic bottle
85028.290	1 l	Plastic bottle

Sulphuric acid 93% NORMATOM® for trace metal analysis

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,82 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	93 - 98 %	Colouration	Max. 10 APHA
Cl (Chloride)	Max. 0.7 ppm	Total P (Phosphorus)	Max. 0.1 ppm
NO_3 (Nitrate)	Max. 0.20 ppm	Substances reducing $KMnO_4$	Max. 20.0 ppm
Ag (Silver)	Max. 1 ppb	Al (Aluminium)	Max. 1 ppb
As (Arsenic)	Max. 0.5 ppb	Au (Gold)	Max. 0.5 ppb
Ba (Barium)	Max. 1 ppb	Be (Beryllium)	Max. 0.1 ppb
Bi (Bismuth)	Max. 0.1 ppb	Ca (Calcium)	Max. 1 ppb
Cd (Cadmium)	Max. 0.5 ppb	Ce (Cerium)	Max. 0.1 ppb
Co (Cobalt)	Max. 0.5 ppb	Cr (Chromium)	Max. 0.5 ppb
Cs (Cesium)	Max. 0.1 ppb	Cu (Copper)	Max. 0.5 ppb
Dy (Dysprosium)	Max. 0.1 ppb	Er (Erbium)	Max. 0.1 ppb
Eu (Europium)	Max. 0.1 ppb	Fe (Iron)	Max. 1 ppb
Ga (Gallium)	Max. 0.1 ppb	Gd (Gadolinium)	Max. 0.1 ppb
Ge (Germanium)	Max. 1 ppb	Hf (Hafnium)	Max. 0.1 ppb
Hg (Mercury)	Max. 0.1 ppb	Ho (Holmium)	Max. 0.1 ppb
In (Indium)	Max. 0.1 ppb	K (Potassium)	Max. 1 ppb
La (Lanthanum)	Max. 0.1 ppb	Li (Lithium)	Max. 0.5 ppb
Lu (Lutetium)	Max. 0.1 ppb	Mg (Magnesium)	Max. 1 ppb
Mn (Manganese)	Max. 0.5 ppb	Mo (Molybdenum)	Max. 0.5 ppb
Na (Sodium)	Max. 1 ppb	Nb (Niobium)	Max. 0.1 ppb
Nd (Neodymium)	Max. 0.1 ppb	Ni (Nickel)	Max. 0.5 ppb
Pb (Lead)	Max. 0.1 ppb	Pr (Praseodymium)	Max. 0.1 ppb
Rb (Rubidium)	Max. 0.5 ppb	Rh (Rhodium)	Max. 0.5 ppb
Sb (Antimony)	Max. 1 ppb	Sc (Scandium)	Max. 0.1 ppb
Se (Selenium)	Max. 10 ppb	Sm (Samarium)	Max. 0.1 ppb
Sn (Tin)	Max. 1 ppb	Sr (Strontium)	Max. 0.5 ppb
Tb (Terbium)	Max. 0.1 ppb	Te (Tellurium)	Max. 0.1 ppb
Th (Thorium)	Max. 0.1 ppb	Ti (Titanium)	Max. 1 ppb
Tl (Thallium)	Max. 0.1 ppb	Tm (Thulium)	Max. 0.1 ppb
U (Uranium)	Max. 0.1 ppb	V (Vanadium)	Max. 0.5 ppb
W (Tungsten)	Max. 0.5 ppb	Y (Yttrium)	Max. 0.1 ppb
Yb (Ytterbium)	Max. 0.1 ppb	Zn (Zinc)	Max. 1 ppb
Zr (Zirconium)	Max. 0.5 ppb		

Cat. No.	Pk	Pack type
83875.270	500 ml	Plastic bottle
83875.290	1 l	Plastic bottle
83875.330	2,5 l	Plastic bottle

Sulphuric acid 90% for milk analysis

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,82 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 90 %
Density (20/4)	1.815 - 1.825

Cat. No.	Pk	Pack type
20695.290	1 l	Glass bottle
20695.324	2,5 l	Glass bottle SAFEBREAK

Sulphuric acid 62% for the determination of fats in cheese according to Gerber

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: >100 °C (1013hPa) **Density:** 1,5-1,8 g/cm³ (20°C)

Storage Temperature: Ambient

Density (20/4)	1.517 - 1.527
Assay	61.7 - 62.7 %

Cat. No.	Pk	Pack type
84509.290	1 l	Plastic bottle
84509.360	5 l	Plastic bottle

Sulphuric acid 50% (v/v) for determination of dissolved oxygen in water

Danger

CAS 7664-93-9 **UN:** 1830
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: >100 °C (1013hPa) **Density:** 1,5-1,8 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	49.75 - 50.25 V%
Substances reducing $KMnO_4$	Max. 1 ppm

Cat. No.	Pk	Pack type
160346N	2,5 l	Glass bottle

Sulphuric acid 50% TECHNICAL

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: >100 °C (1013hPa) **Density:** 1,1-1,4 g/cm³ (20°C)

Storage Temperature: Ambient

Assay	Min. 50 %

Cat. No.	Pk	Pack type
20696.293	1 l	Plastic bottle

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Sulphuric acid 25% GPR RECTAPUR®

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: >100 °C (1013hPa) **Density:** 1,1-1,4 g/cm³ (20°C)

Storage Temperature: Ambient

Assay ..... 24 - 26 %
Heavy metals (as Pb) ..... Max. 10 ppm
Ignition residue ..... Max. 50 ppm
Cl (Chloride) ..... Max. 5 ppm
Fe (Iron) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
84513.290	1 l	Glass bottle
84513.360	5 l	Plastic bottle
84513.460	25 l	Plastic drum

Sulphuric acid 10% AnalaR NORMAPUR® analytical reagent

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Boiling Pt: 101 °C (1013 hPa) **Density:** 1,066 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... 10 - 11 %
Substances reducing $KMnO_4$ (as SO_2) ..... Passes test
Cl (Chloride) ..... Max. 50 ppm
As (Arsenic) ..... Max. 3 ppm
Pb (Lead) ..... Max. 5 ppm
Appearance ..... Clear colourless liquid
Heavy metals (as Pb) ..... Max. 20 ppm
NO_3 (Nitrate) ..... Max. 10 ppm
Fe (Iron) ..... Max. 0.02 %
Se (Selenium) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
9755.1000	1 l	Plastic bottle

Sulphuric acid 0.5 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient

Titer (20°C) ..... 0.4975 - 0.5025 mol/l

Cat. No.	Pk	Pack type
32053.602	170 ml	Plastic ampoule

Sulphuric acid 0.05 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution

Dose for preparation of 1 litre of solution.

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient

Titer (20°C) ..... 0.04975 - 0.05025 mol/l

Cat. No.	Pk	Pack type
32054.605	60 ml	Plastic ampoule

Sulphuric acid 5 mol/l (10 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 4.99 - 5.01 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
191665V	2,5 l	Glass bottle SAFEBREAK

Sulphuric acid 4 mol/l (8 N) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 3.992 - 4.008 mol/l
Chemical oxygen demand (COD) ..... Passes test
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30148.297	1 l	Glass bottle
30148.320	2,5 l	Plastic bottle

Sulphuric acid 2.5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,146 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 2.495 - 2.505 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
191675A	2,5 l	Plastic bottle

Sulphuric acid 2.5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,146 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 2.495 - 2.505 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30138.293	1 l	Plastic bottle

Sulphuric acid 2 mol/l (4 N) in aqueous solution AVS TITRINORM® volumetric solution

Danger

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,146 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 1.998 - 2.002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
198154D	500 ml	Glass bottle
198156F	5 l	Plastic bottle

Sulphuric acid 1 mol/l (2 N) in aqueous solution Reag. Ph. Eur. 1086804

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85973.290	1 l	Plastic bottle

Sulphuric acid 1 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.998 - 1.002 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30149.291	1 l	Plastic bottle
30149.325	2,5 l	Plastic bottle
30149.371	5 l	Bag-in-box (Cubitainer)

NEW Sulphuric acid (0.5 mol/l; 1 N) in aqueous solution USP test solutions (TS) 34

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Storage Temperature: Ambient
Ready to use test solutions (TS).

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85376.180	100 ml	Plastic bottle
85376.260	500 ml	Plastic bottle

Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

NIST traceable..... Confirmed
Titer (20°C; real value 0.2 % accuracy) ..... 0.499 - 0.501 mol/l

Cat. No.	Pk	Pack type
30144.294	1 l	Plastic bottle
30144.328	2,5 l	Plastic bottle
30144.363	5 l	Plastic bottle
30144.408	10 l	Bag-in-box (Cubitainer)

Sulphuric acid 0.25 mol/l (0.5 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,02 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.2495 - 0.2505 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30143.291	1 l	Plastic bottle
30143.405	10 l	Bag-in-box (Cubitainer)

NEW Sulphuric acid 0.13 mol/l (0.26 N) in aqueous solution AVS TITRINORM® volumetric solution

Warning

CAS 7664-93-9 **UN:** 3264
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,005 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer ..... 0,1235 - 0,1365 mol/l
Density (20/4)..... 1 - 1,02

Cat. No.	Pk	Pack type
5046.9010	10 l	Plastic drum
5046.9011	10 l	Bag-in-box (Cubitainer)

Sulphuric acid 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30145.297	1 l	Plastic bottle
30145.402	10 l	Bag-in-box (Cubitainer)

Sulphuric acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.0499 - 0.0501 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30150.295	1 l	Plastic bottle
30150.320	2,5 l	Plastic bottle
30150.375	5 l	Bag-in-box (Cubitainer)
30150.400	10 l	Bag-in-box (Cubitainer)

Sulphuric acid 0.02 mol/l (0.04 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7664-93-9 **UN:** 2796
H_2SO_4 **M.W.** 98.08 g/mol
Density: 1,004 g/cm³ (20 °C)
Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.01996 - 0.02004 mol/l
NIST traceable..... Confirmed

Cat. No.	Pk	Pack type
30146.291	1 l	Plastic bottle

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Sulphuric acid 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7664-93-9 **UN:** 2796

H_2SO_4 **M.W.** 98.08 g/mol

Density: 1,01 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer ..... 0.00995 - 0.01005 mol/l

Cat. No.	Pk	Pack type
95032.1000	1 l	Plastic bottle

Sulphuric acid 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7664-93-9 **UN:** 2796

H_2SO_4 **M.W.** 98.08 g/mol

Density: 1,004 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.00998 - 0.01002 mol/l

NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
191736T	5 l	Plastic bottle
191738C	10 l	Bag-in-box (Cubitainer)

Sulphuric acid 0.005 mol/l (0.01 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7664-93-9 **UN:** 2796

H_2SO_4 **M.W.** 98.08 g/mol

Density: 1,01 g/cm³ (20 °C)

Storage Temperature: Ambient

Titer (20°C; real value 0.2 % accuracy) ..... 0.00499 - 0.00501 mol/l

NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
30147.408	10 l	Bag-in-box (Cubitainer)

Sulphurous acid 95%

See Sulphuric acid 98% p.470

Sulphurous acid 90%

See Sulphuric acid 93% p.472

Sulphurous acid 10%

See Sulphuric acid 10% p.473

Supplements, Microbiology

See Microbiology

Reagents for the Sugar Industry

A range of reagents typically used in the sugar industry.

Description	Pk	Cat. No.
Celite® 545, filter aid TECHNICAL for synthesis	1 kg	22552.290
Hydrochloric acid 32% AnalaR NORMAPUR® analytical reagent	1 l	20254.296
Hydrochloric acid 37% AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent	1 l	20252.295
Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	1 l	20624.295
Orthophosphoric acid 85% AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent	2,5 l	20624.330
Sodium hydroxide 32% in aqueous solution AnalaR NORMAPUR® analytical reagent, for nitrogen analysis	1 l	28225.290
Sodium hydroxide 32% in aqueous solution AnalaR NORMAPUR® analytical reagent, for nitrogen analysis	2,5 l	28225.324
Sulphuric acid ≥97% for nitrogen analysis	1 l	85546.290
Sulphuric acid ≥97% for nitrogen analysis	2,5 l	85546.320

Volumetric solutions for the Sugar Industry

Titration, a technique developed more than 200 years ago, is one the most common quantitative method, essential in all modern control labs including "sugar analysis".

The recent improvements in the titrators have delivered significant progress in the measurement technique and the accuracy of final point determination.

VWR provide a range of ‚ready to use' solutions at different concentrations that are:

- Accurate
- Very pure
- Reproducible

The manufacturing process of the VWR solutions utilises:

- High purity of the substances and water used for the production
- Electronic installations and automatic filling lines
- Strong expertise and know-how gained over many years
- Very high accuracy (0.2%), impossible to reach manually

A comprehensive and complete certificate of analysis is available from our website.
It shows:

- Lot-specific concentration value
- Expanded measurement uncertainty
- Traceability to NIST
- Expiry date

Description	Pk	Cat. No.
EDTA disodium salt 0.0178 mol/l (N/28) in aqueous solution AVS TITRINORM®, for hardness of water determinations	10 l	30029.412
Hydrochloric acid 0.0714 mol/l (0.1N/1.4) AVS TITRINORM® volumetric solution	10 l	307902.400
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	1 l	31955.293
Hydrochloric acid 0.357 mol/l (N/2.8) AVS TITRINORM® volumetric solution	1 l	30023.296
Hydrochloric acid 0.714 mol/l (N/1.4) AVS TITRINORM® volumetric solution	10 l	307904.400
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	1 l	30024.290
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	10 l	30024.404
Hydrochloric acid 4 mol/l (4 N) VOLUSOL® volumetric solution	1 l	310701.1000
Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution	1 l	30018.298
Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution	2,5 l	30018.320
Potassium hexacyanoferrate (II) 0.25 mol/l in aqueous solution (CARREZ I Solution)	1 l	85733.290
Potassium hydroxide 0.23 mol/l (0.23 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	5045.9010
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	1 l	31770.294
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	31770.408
Sodium hydroxide 0.205 mol/l (0.205 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	30036.400
Sodium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur. volumetric solution	1 l	31951.290
Sodium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur. volumetric solution	10 l	31951.404
Sodium hydroxide 0.714 mol/l (0.714 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	30028.400
Sodium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	1 l	31627.290
Sodium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	10 l	31627.404
Sodium hydroxide 2 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	1 l	98108.290
Sodium hydroxide 2 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	98108.400
Sodium hydroxide 4 mol/l (4 N) in aqueous solution VOLUSOL® volumetric solution	2,5 l	306452.2500
Sodium hydroxide 5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution	1 l	31624.290
Sodium hydroxide 5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution	2,5 l	31624.320
Sulphuric acid 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	191738C
Sulphuric acid 0.13 mol/l (0.26 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	5046.9010
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	1 l	30144.294
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	2,5 l	30144.328
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	10 l	30144.408
Sulphuric acid 1 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	1 l	30149.291
Sulphuric acid 1 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	2,5 l	30149.325

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VWR LIFE SCIENCE Tris-Acetate-EDTA (TAE) buffer

TAE is an extensively used buffer for agarose gel electrophoresis applications requiring high resolution and separation of high molecular weight, double-stranded DNA. TAE buffer is more compatible with in-gel manipulations and band recovery procedures than TBE buffer.

- Ideal for DNA recovery and in-gel manipulations
- Low ionic strength
- Better resolution of large DNA fragments (>12 kb DNA)
- Convenient packaging options minimise weighing and mixing

Composition of (1X) TAE Buffer: 0.04 M Tris-Acetate; 0.001 M EDTA; final pH 8.0

Description	Pk	Cat. No.	Pack type
TAE buffer, 25X Ready-Pack™, each pack makes 1 litre of 25X TAE buffer	2	0912-2PK	Pouch
TAE buffer, 25X liquid concentrate	1,6 l	0796-1.6L	Glass bottle
TAE buffer, 50X liquid concentrate	1,6 l	K915-1.6L	Plastic bottle
TAE buffer, 50X liquid concentrate	4 l	K915-4L	Bag-in-box (Cubitainer)

Buffer, TAE solution 50X concentrate (TRIS-acetate-EDTA buffer) Electran® for electrophoresis

50x concentrated solution of 2M Tris 50 mM EDTA and 1 M acetic acid pH 8.0 in distilled, deionised water.

DNases (exo and endonucleases), RNases and proteases are not detected.

50x concentrated solution of 2M Tris 50mM EDTA and 1M acetic acid pH 8.0 in distilled, deionised water

Cat. No.	Pk	Pack type
444125D	1 l	Glass bottle

Talc Ph. Eur.

CAS 14807-96-6
Mg3O11Si4.1H2O

M.W. 379.27 g/mol
Melting Pt: > 1200 °C
Density: 2,58-2,83g/cm³ (20 °C)

Storage Temperature: Ambient

Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Solution S1	Passes test
Solution S2	Passes test
Acidity or alkalinity	Passes test
Water-soluble substances	Max. 0.2 %
Al (Aluminium)	Max. 2 %
Ca (Calcium)	Max. 0.9 %
Fe (Iron)	Max. 0.25 %
Pb (Lead)	Max. 10 ppm
Mg (Magnesium)	17.0 - 19.5 %
Loss on ignition	Max. 7 %
TAMC	Max. 10^2 CFU/g
Residual solvents	Passes test

Cat. No.	Pk	Pack type
83557.260	500 g	Plastic bottle for solids

Talc GPR RECTAPUR®

CAS 14807-96-6
$Mg_3O_{11}Si_4 \cdot 1H_2O$

M.W. 379.27 g/mol
Melting Pt: > 1200 °C
Density: 2,58-2,83g/cm³ (20 °C)

Storage Temperature: Ambient

Loss on ignition	Max. 10 %

Cat. No.	Pk	Pack type
28460.268	500 g	Plastic bottle for solids

Talc TECHNICAL

CAS 14807-96-6
$Mg_3O_{11}Si_4 \cdot 1H_2O$

M.W. 379.27 g/mol
Melting Pt: > 1200 °C
Density: 2,58-2,83g/cm³ (20 °C)

Storage Temperature: Ambient

Loss on ignition	Max. 10 %

Cat. No.	Pk	Pack type
28454.360	5 kg	Bucket (Plastic)

NEW Tantalum standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Tantalum	1000 ppm	H_2O/tr HF	Plastic bottle	100 ml	457459V
Tantalum	10 ppm	2% HNO_3/0,5% HF	Plastic bottle	100 ml	85632.180

Tantalum standard solution, 1,000 mg/l Ta in water with hydrofluoric acid (max. 1%) (from Ta) ARISTAR® standard for ICP

Ta in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456102J	100 ml	Plastic bottle
456104L	500 ml	Plastic bottle

Tantalum standard solution, 1,000 mg/l Ta in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86714.180	100 ml	Plastic bottle
86714.260	500 ml	Plastic bottle

Tap for Drums

PP, white, 3/4" screw thread

Type	Pk	Cat. No.
Tap, 3/4" threaded for drums	1	331582B

Tap for Drums, Vented

PE, white, 3/4" screw thread

Supplied with 2" adapter (PE) for 25 litre and 200 litre drums.

Type	Pk	Cat. No.
Tap, vented with 3/4 " screw thread + 2" adapter	1	332862K

Tap for Jerricans

PE, vented, for use with plastic jerricans with external thread (DIN 42)

Type	Pk	Cat. No.
Tap with cap and screw thread DIN 42	1	29048.098
Tap with cap and screw thread DIN 42, fluorinated	1	29048.099

Tap for Drums

PE, white, 3/4" screw thread

Type	Pk	Cat. No.
Tap, 3/4" threaded for drums	1	29548.096

Tap for Drums

PE, white, 2" screw thread

Type	Pk	Cat. No.
Tap, 2" threaded for drums	1	29548.097

TAPS (3-(Tris(hydroxymethyl)methylamino) propane-1-sulphonic acid), high purity

CAS 29915-38-6

$C_7H_{17}NO_6S$ **M.W.** 243.28 g/mol

Storage Temperature: Ambient

DNase	none detected
Heavy Metals	< = 0.0005 %
Appearance	White powder
pH (5%, Water) @25°C	3.5 - 6.5
Protease	none detected
Purity	> = 99 %
RNase	none detected
Solubility (5%, Water)	Pass
Water (KF)	< = 1 %

Cat. No.	Pk	Pack type
J562-100G	100 g	Plastic bottle for solids

TAPS sodium salt (3-(Tris(hydroxymethyl) methylamino)propane-1-sulphonic acid sodium salt) for biotechnology

Warning

CAS 91000-53-2

$C_7H_{17}NO_6S$ **M.W.** 243.28 g/mol

Storage Temperature: Ambient

pH (1%, Water) @25°C	10.1 - 10.7
Purity	> 98 %

Cat. No.	Pk	Pack type
J598-100G	100 g	Plastic bottle for solids

Taq DNA Polymerase

See PCR

(R,R)-(+)-Tartaric acid dipotassium salt hemihydrate

See di-Potassium L(+)-tartrate hemihydrate p.388

L(+)-Tartaric acid dipotassium salt hemihydrate

See di-Potassium L(+)-tartrate hemihydrate p.388

L(+)-Tartaric acid disodium salt dihydrate

See di-Sodium L(+)-tartrate dihydrate p.455

(R,R)-(+)-Tartaric acid disodium salt dihydrate

See di-Sodium L(+)-tartrate dihydrate p.455

L(+)-Tartaric acid potassium salt

See L(+)-Potassium hydrogen tartrate p.381

(R,R)-(+)-Tartaric acid potassium salt

See L(+)-Potassium hydrogen tartrate p.381

L(+)-Tartaric acid potassium sodium salt tetrahydrate

See L(+)-Potassium sodium tartrate tetrahydrate p.387

(R,R)-(+)-Tartaric acid potassium sodium salt tetrahydrate

See L(+)-Potassium sodium tartrate tetrahydrate p.387

(R,R)-(+)-Tartaric acid

See L(+)-Tartaric acid p.498

L(+)-Tartaric acid AnalaR NORMAPUR® analytical reagent

Warning

CAS 87-69-4

$C_4H_6O_6$ **M.W.** 150.09 g/mol

Boiling Pt: 399 °C (1013 hPa) **Melting Pt:** 168-170 °C **Density:** 1,759 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 01-2119537204-47

Assay	Min. 99.5 %	Heavy metals (as Pb)	Max. 5 ppm
Ignition residue (SO_4)	Max. 100 ppm	Insolubility in water	Max. 50 ppm
C_2O_4 (Oxalate)	Max. 0.1 %	Cl (Chloride)	Max. 5 ppm
PO_4 (Phosphate)	Max. 10 ppm	SO_4 (Sulphate)	Max. 50 ppm
Ca (Calcium)	Max. 20 ppm	Fe (Iron)	Max. 5 ppm

Cat. No.	Pk	Pack type
20718.233	250 g	Plastic bottle for solids
20718.290	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

L(+)-Tartaric acid, powder Ph. Eur.

Warning

CAS 87-69-4

$C_4H_6O_6$ **M.W.** 150.09 g/mol
Boiling Pt: 399 °C (1013 hPa) **Melting Pt:** 168-170 °C **Density:** 1,759 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119537204-47

Assay (calculated on dried substance)	99.5 - 101.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Spec. opt. rotation (dried substance)	12.0 - 12.8 °
Oxalic acid	Max. 350 ppm
Cl (Chloride)	Max. 100 ppm
SO_4 (Sulphate)	Max. 150 ppm
Ca (Calcium)	Max. 200 ppm
Heavy metals (as Pb)	Max. 10 ppm
Loss on drying (105°C)	Max. 0.2 %
Sulphated ash	Max. 0.1 %
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
83511.290	1 kg	Plastic bottle for solids
83511.360	5 kg	Plastic bottle for solids

L(+)-Tartaric acid, crystallised GPR RECTAPUR®

Warning

CAS 87-69-4

$C_4H_6O_6$ **M.W.** 150.09 g/mol
Boiling Pt: 399 °C (1013 hPa) **Melting Pt:** 168-170 °C **Density:** 1,759 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119537204-47

Assay	Min. 99 %
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.2 %
Cl (Chloride)	Max. 50 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
20715.290	1 kg	Plastic bottle for solids
20715.368	5 kg	Plastic bottle for solids

NEW Tartrate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84998.180	100 ml	Plastic bottle

VWR LIFE SCIENCE TBE powder - disodium, ultrapure

Foil pouch contains sufficient material to prepare 1 l of 10X concentrate. A single strength (1X) solution contains 0.089 M Tris Base; 0.089 M Boric Acid; and 0.002 M EDTA, Disodium Salt, Dihydrate with a final pH of 8.3.

Conductivity (1.703%, Water) @25 °C	750 - 1250 umhos
pH (1.703%, Water) @25 °C	8.2 - 8.4
Solubility (17.03%, Water)	PASS

Cat. No.	Pk	Pack type
J490-2PK	2	Pouch

TBE buffer solution 10X concentrate (TRIS-borate-EDTA buffer) Electran® for electrophoresis

10X concentrated solution of 0.9 M Tris, 0.9 M borate and 0.02 M EDTA; pH 8.3 ±0.1 in distilled, deionised water.

RNases and DNases (exo and endonucleases) not detectable.

Cat. No.	Pk	Pack type
444136G	5 l	Plastic container

VWR LIFE SCIENCE TBE buffer solution, 10X concentrate (TRIS-borate-EDTA buffer), ultrapure

pH (1:10) @25° C: 8.20 - 8.40

Cat. No.	Pk	Pack type
E442-500ML	500 ml	Plastic bottle

VWR LIFE SCIENCE TBE (Tris-Borate-EDTA) buffers

TBE is optimised for DNA electrophoresis techniques using both acrylamide and agarose. Buffers are available as liquid concentrate or Ready-Pack™ (a foil pouch containing sufficient material to prepare 1 L of 10X concentrate).

- High buffering capacity
- High ionic strength
- Permits extended electrophoresis runs without buffer recirculation
- Convenient packaging options minimise weighing and mixing

Composition of (1X) solution contains 0.089 M Tris base, 0.089 M borate and 0.002 M EDTA, disodium salt, dihydrate with a final pH of 8.3.

Description	Pk	Cat. No.	Pack type
TBE buffer, 10X Ready-Pack™, each pack makes 1 litre of 10X TBE buffer	2	0478-2PK	Pouch
TBE buffer, 10X liquid concentrate	500 ml	0658-500ML	Plastic bottle
TBE buffer, 1X solution	1 kg	0478-40L	Plastic bottle for solids
TBE buffer, 10X liquid concentrate	1 l	0658-1L	Plastic bottle
TBE buffer solution 5X concentrate (TRIS-borate-EDTA buffer), ultrapure	1 l	J885-1L	Plastic bottle
TBE buffer, 10X liquid concentrate	4 l	0658-4L	Bag-in-box (Cubitainer)
TBE buffer solution 5X concentrate (TRIS-borate-EDTA buffer), ultrapure	4 l	J885-4L	Bag-in-box (Cubitainer)

VWR LIFE SCIENCE Tris buffered saline (TBS) tablets, ultra pure grade

Each tablet prepares 100 ml of a 1X TBS solution when dissolved in 100 ml deionised H_2O. 1X TBS contains 25 mM Tris, 140 mM sodium chloride, and 3,0 mM potassium chloride.

Cat. No.	Pk	Pack type
K859-100TABS	100 Tab.	Plastic bottle for solids
K859-200TABS	200 Tab.	Plastic bottle for solids

TBS/Tween® washing buffer, 20X liquid concentrate, ultrapure

Convenient liquid concentrate that produces 10 litres of 1X buffer for blotting and ELISA applications.

- Prevent high background by effectively removing unbound reagents

Cat. No.	Pk	Pack type
K873-500ML	500 ml	Plastic bottle

TBX Agar

See Microbiology

TCA

See Trichloroacetic acid p.513

TCEP HCl (Tris(2-carboxyethyl)phosphine hydrochloride) for biotechnology

Danger

CAS 51805-45-9 **UN:** 3261
$C_9H_{16}ClO_6P$
Storage Temperature: Refrigerator

Purity (TLC) ..... > 99%
Solubility (50mg/ml, Water) ..... pass

Cat. No.	Pk	Pack type
K831-2G	2 g	Glass bottle
K831-10G	10 g	Glass bottle

TE (Tris-EDTA) buffer, pH 8.0 for biotechnology

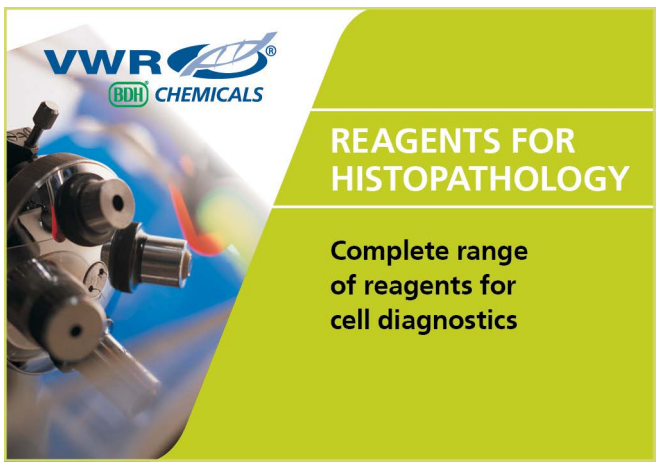
Cat. No.	Pk	Pack type
E112-100ML	100 ml	Plastic bottle
E112-500ML	500 ml	Plastic bottle

NEW Tellurium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Tellurium	1000 ppm	20% HCl	Plastic bottle	100 ml	457461A
Tellurium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85634.180



Tellurium standard solution, 10,000 mg/l Te in 40% hydrochloric acid (from Te) ARISTAR® standard for ICP

Te in HCl 20%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456132P	100 ml	Plastic bottle

Tellurium standard solution, 1,000 mg/l Te in 20% hydrochloric acid (from Te) ARISTAR® standard for ICP

Te in HCl 20%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456122N	100 ml	Plastic bottle
456124P	500 ml	Plastic bottle

Tellurium standard solution, 1,000 mg/l Te in 10% nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86715.180	100 ml	Plastic bottle
86715.260	500 ml	Plastic bottle

TEMED

See TEMED (N,N,N',N'-Tetramethylethylenediamine) p.504

Tensides

Benzethonium chloride anhydrous TECHNICAL p.56
Cetrimonium bromide AnalaR NORMAPUR® analytical reagent p.85
Tween® 20 (Polysorbate) TECHNICAL p.525
Tween® 80 (Polysorbate) TECHNICAL p.526

TEOS

See Tetraethyl orthosilicate (TEOS) p.502

NEW Terbium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Terbium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456932Q
Terbium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85633.180

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Terbium standard solution, 1,000 mg/l Tb in dil. nitric acid (from Tb_4O_7) ARISTAR® standard for ICP

Tb_4O_7 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456142R	100 ml	Plastic bottle
456144T	500 ml	Plastic bottle

Terpentine

See Turpentine oil p.524

TES (2-(Tris(hydroxymethyl)methylamino) ethane-1-sulphonic acid), reagent grade

Warning

CAS 7365-44-8
$C_6H_{15}NO_6S$ **M.W.** 229.25 g/mol
Storage Temperature: Ambient

Abs.@260nm (0.1M, Water) ..... < 0.02
Melting Point ..... 214°C - 224°C
Moisture (KF) ..... < 1 %
Purity ..... > 99 %

Cat. No.	Pk	Pack type
E133-100G	100 g	Glass bottle

Tetraammonium cerium tetrakis(sulphate) dihydrate

See Ammonium cerium (IV) sulphate dihydrate p.31

2,4,5,7-Tetrabromofluorescein

See Dyes and Stains p.300

Tetrabromofluorescein

See Dyes and Stains p.300

Tetrabutylammonium bisulphate

See Tetrabutylammonium hydrogen sulphate p.501

Tetrabutylammonium hydrogen sulphate for synthesis

Warning

CAS 32503-27-8
$(C_4H_9)_4NHSO_4$ **M.W.** 339.54 g/mol
Melting Pt: 169-172 °C **Density:** 1,01 g/cm³ (25 °C)

Assay ..... Min. 98 %
Melting point ..... 168 - 174 °C

Cat. No.	Pk	Pack type
28529.186	100 g	Plastic bottle for solids

Tetrabutylammonium hydroxide 40% in aqueous solution TECHNICAL

Danger

CAS 2052-49-5 **UN:** 3267
$(C_4H_9)_4NOH$
Storage Temperature: Refrigerator
May crystallise; can be dissolved on heating to 40°C

Assay ..... 39 - 41 %

Cat. No.	Pk	Pack type
28530.135	25 ml	Glass bottle

Tetrabutylammonium hydroxide 0.1 mol/l (0.1 N) in 2-propanol 90% (v/v) / methanol 10% (v/v) AVS TITRINORM® volumetric solution

Danger

CAS 2052-49-5 **UN:** 1992
$(C_4H_9)_4NOH$
Storage Temperature: Refrigerator

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
28533.261	500 ml	Glass bottle

Tetrabutylammonium hydroxide 0.1 mol/l (0.1 N) in toluene 90% (v/v) / methanol 10% (v/v) AVS TITRINORM® volumetric solution

Danger

CAS 2052-49-5 **UN:** 1992
$(C_4H_9)_4NOH$
Storage Temperature: Refrigerator

Titer (20°C; real value 0.2 % accuracy) ..... 0.0998 - 0.1002 mol/l
NIST traceable ..... Confirmed

Cat. No.	Pk	Pack type
28532.267	500 ml	Glass bottle

Tetrachloroauric acid trihydrate

See tetra-Chloroauric (III) acid trihydrate p.87

1,1,2,2-Tetrachloroethane GPR RECTAPUR®

Danger

CAS 79-34-5 **UN:** 1702
$Cl_2HCCHCl_2$ **M.W.** 167.85 g/mol
Boiling Pt: 146,3 °C (1013 hPa) **Melting Pt:** -43 °C **Density:** 1,595 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 98 %
Density (20/4) ..... 1.590 - 1.600
n 20/D ..... 1.493 - 1.495

Cat. No.	Pk	Pack type
20091.293	1 l	Glass bottle

Tetrachloroethene

See Tetrachloroethylene p.502

Tetrachloroethylene SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Warning

CAS 127-18-4 **UN:** 1897

C_2Cl_4 **M.W.** 165.83 g/mol

Boiling Pt: 121,1 °C (1013 hPa) **Melting Pt:** -22 °C **Density:** 1,620 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 10 ppm
Water	Max. 100 ppm
Transmittance (290 nm)	Min. 15 %
Transmittance (295 nm)	Min. 60 %
Transmittance (310 nm)	Min. 85 %
Transmittance (350 nm)	Min. 89 %
Transmittance (400 nm)	Min. 95 %

Cat. No.	Pk	Pack type
83950.290	1 l	Glass bottle

Tetrachloroethylene GPR RECTAPUR®

Warning

CAS 127-18-4 **UN:** 1897

C_2Cl_4 **M.W.** 165.83 g/mol

Boiling Pt: 121,1 °C (1013 hPa) **Melting Pt:** -22 °C **Density:** 1,63 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
IR Spectrum	Passes test
Boiling point	120 - 122 °C
Density (20/4)	1.620 - 1.630
Free acidity	Max. 0.0003 meq/g
n 20/D	1.503 - 1.505
Evaporation residue	Max. 10 ppm
Free chlorine	Max. 2 ppm
Water	Max. 50 ppm

Cat. No.	Pk	Pack type
26218.292	1 l	Glass bottle
26218.326	2,5 l	Glass bottle
26218.361	5 l	Fluorinated plastic bottle

Tetrachloroethylene TECHNICAL

Warning

CAS 127-18-4 **UN:** 1897

C_2Cl_4 **M.W.** 165.83 g/mol

Boiling Pt: 121,1 °C (1013 hPa) **Melting Pt:** -22 °C **Density:** 1,63 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
n 20/D	1.503 - 1.505

Cat. No.	Pk	Pack type
26217.298	1 l	Glass bottle
26217.323	2,5 l	Glass bottle
26217.367	5 l	Fluorinated plastic bottle
26217.460	25 l	Metal drum

2,2,o,p'-Tetrachlorovinylidenebisbenzene

See 2,4'-DDE p.107

Tetracycline hydrochloride, ultrapure

Warning

CAS 64-75-5

$C_{22}H_{25}ClN_2O_8$

Storage Temperature: Ambient

Blocks the binding of tRNA to the 30S subunit. Recommended working concentration: 15 µg/ml.

4-Ephianhydrotetracycline	2.0 %
Crystallinity	PASS
Expiration Date	REPORT
Heavy Metals	0.005 %
Identification	PASS
Loss on Drying	2.0 %
pH (1%, Water) @25 °C	1.8 - 2.8
Potency (Anhydrous)	900 mcg/mg
Potency (As Is)	REPORT
Specific Rotation	-255 to -240 °

Cat. No.	Pk	Pack type
0422-EU-25G	25 g	Glass bottle

Tetraethyl orthosilicate (TEOS) GPR RECTAPUR®

Warning

CAS 78-10-4 **UN:** 1292

$Si(OC_2H_5)_4$ **M.W.** 208.33 g/mol

Boiling Pt: 168 °C (1013 hPa) **Melting Pt:** -85,5 °C **Density:** 0,933 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Acidity	Max. 0.002 meq/g
Density (20/4)	0.930 - 0.940
Cl (Chloride)	Max. 0.02 %

Cat. No.	Pk	Pack type
24004.290	1 l	Glass bottle

Tetrafluoroboric acid 34% in aqueous solution TECHNICAL

Danger

CAS 16872-11-0 **UN:** 1775

HBF_4

Density: 1,23 g/cm³ (20 °C)

Assay	Min. 34 %

Cat. No.	Pk	Pack type
20304.290	1 l	Plastic bottle

NEW Tetrahydrofuran unstabilised HiPerSolv CHROMANORM® for LC-MS

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-99-9 **UN:** 2056

C_4H_8O **M.W.** 72.11 g/mol

Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)

Storage Temperature: Ambient **REACh:** 05-2114615188-48

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0005 meq/g
Evaporation residue	Max. 0.0001 %
Water	Max. 0.005 %
Peroxides (at packaging)	Max. 1 ppm
Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm
Transmittance (215 nm)	Min. 10 %
Transmittance (235 nm)	Min. 50 %
Transmittance (255 nm)	Min. 80 %
Transmittance (275 nm)	Min. 95 %
Transmittance (295 nm)	Max. 99 % min.
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84882.290	1 l	Glass bottle
84882.320	2,5 l	Glass bottle

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Tetrahydrofuran unstabilised HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-99-9 **UN:** 2056
C_4H_8O **M.W.** 72.11 g/mol
Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 05-2114615188-48

Not being stabilised, this product normally loses strength during storage.

Assay (on anhydrous substance)	Min. 99.70 %
Water	Max. 0.1000 %
Evaporation residue	Max. 0.0005 %
Acidity	Max. 0.0005 meq/g
Transmittance (230 nm)	Min. 40.0 %
Transmittance (240 nm)	Min. 60.0 %
Transmittance (250 nm)	Min. 70.0 %
Transmittance (260 nm)	Min. 80.0 %
Transmittance (280 nm)	Min. 96.0 %
Transmittance (300 nm)	Min. 98.0 %
Conforms to BDH 15247	Passes test
Conforms to BDH 15247	Passes test

Cat. No.	Pk	Pack type
28559.290	1 l	Glass bottle
28559.320	2,5 l	Glass bottle

Tetrahydrofuran unstabilised SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-99-9 **UN:** 2056
C_4H_8O **M.W.** 72.11 g/mol
Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 05-2114615188-48

Assay (GC)	Min. 99.8 %
Acidity	Max. 0.0005 meq/g
Residue on evaporation	Max. 0.0005 %
Water	Max. 0.02 %
Transmittance (250 nm)	Min. 60 %
Transmittance (260 nm)	Min. 75 %
Transmittance (280 nm)	Min. 95 %
Transmittance (300 nm)	Min. 98 %

Cat. No.	Pk	Pack type
84707.290	1 l	Glass bottle

Tetrahydrofuran, anhydrous (max. 0.003% H_2O) stabilised

Stabilised with BHT (Ionol) 250 ppm
Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 109-99-9 **UN:** 2056
C_4H_8O **M.W.** 72.11 g/mol
Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 05-2114615188-48

250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (on anhydrous substance)	Min. 99.9 %
Acidity	Max. 0.0005 meq/g
Evaporation residue	Max. 5 ppm
Water	Max. 30 ppm

Cat. No.	Pk	Pack type
83678.230	250 ml	Glass bottle with septum cap
83678.290	1 l	Glass bottle

NEW Tetrahydrofuran (THF), secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85677.180	100 ml	Glass bottle

Tetrahydrofuran stabilised AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Stabilised with BHT (Ionol) 250-400 ppm

Danger

CAS 109-99-9 **UN:** 2056
C_4H_8O **M.W.** 72.11 g/mol
Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 05-2114615188-48

Assay (on anhydrous substance)	Min. 99.5 %	IR Spectrum	Passes test
Acidity	Max. 0.001 meq/g	Boiling point	65 - 66.5 °C
Colouration	Max. 20 APHA	Density (20/4)	0.885 - 0.888
Density (20/20)	0.886 - 0.890	n 20/D	1.406 - 1.408
Evaporation residue	Max. 0.03 %	Peroxides (as H_2O_2)	Max. 0.015 %
Water	Max. 0.05 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.03 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
28551.296	1 l	Glass bottle
28551.321	2,5 l	Glass bottle
28551.460	25 l	Metal drum

Tetrahydrofuran, dehydrated (max. 0.01% H_2O) stabilised AnalaR NORMAPUR® analytical reagent

Stabilised with BHT (Ionol) ≤ 300 ppm

Danger

CAS 109-99-9 **UN:** 2056
C_4H_8O **M.W.** 72.11 g/mol
Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 05-2114615188-48

Assay (calculated on dried substance)	Min. 99.8 %	Appearance	Clear colourless liquid
Acidity	Max. 0.0060 %	Peroxides (as H_2O_2)	Max. 0.0200 %
Residue on evaporation	Max. 0.0010 %	Stabiliser (Ionol/BHT)	Max. 0.030 %
Water	Max. 0.0100 %	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.1 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
28553.293	1 l	Glass bottle

Tetrahydrofuran stabilised GPR RECTAPUR®

Stabilised with BHT (Ionol) 250-400 ppm

Danger

CAS 109-99-9 **UN:** 2056
C_4H_8O **M.W.** 72.11 g/mol
Boiling Pt: 66 °C (1013 hPa) **Melting Pt:** -108,5 °C **Density:** 0,888 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 05-2114615188-48

Assay	Min. 99 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test
Boiling point	65.0 - 66.5 °C
Density (20/4)	0.885 - 0.888
Free acidity	Max. 0.0003 meq/g
n 20/D	1.406 - 1.408
Peroxides (as H_2O_2)	Max. 100 ppm
Water	Max. 0.03 %

Cat. No.	Pk	Pack type
28552.290	1 l	Glass bottle
28552.324	2,5 l	Glass bottle
28552.368	5 l	Metal can
28552.461	25 l	Metal drum

Tetrahydrofuran-[D8] (99.5% D) for NMR spectroscopy

Danger

CAS 1693-74-9 **UN:** 2056
C_4D_8O **M.W.** 80.04 g/mol
Boiling Pt: 65 °C (1013 hPa) **Melting Pt:** -108 °C **Density:** 0,98 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.50 %
Water (HDO+D_2O)	Max. 0.0500 %

Cat. No.	Pk	Pack type
87158.0010	10 ml	Glass bottle

Tetramethylammonium chloride

See TMA (Tetramethylammonium chloride) p.510

Tetramethylammonium hydroxide 25% in aqueous solution GPR RECTAPUR®

Danger

CAS 75-59-2 **UN:** 1835
$(CH_3)_4N(OH)$
Boiling Pt: 110 °C (1013 hPa) **Density:** 1,02 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	24 - 26 %
Halide (as Cl)	Max. 0.2 %
Ignition residue (SO_4)	Max. 0.1 %

Cat. No.	Pk	Pack type
191773B	100 ml	Glass bottle

TEMED (N,N,N',N'-Tetramethylethylenediamine) Electran® for electrophoresis

Danger

CAS 110-18-9 **UN:** 2372
$C_6H_{16}N_2$ **M.W.** 116.21 g/mol
Boiling Pt: 120 °C (1013 hPa) **Melting Pt:** -64 °C **Density:** 0,7765 g/cm³ (20 °C)
Storage Temperature: Ambient
Accelerator used in polyacrylamide gel polymerisation, usually equimolar to initiator - TEMED

Cat. No.	Pk	Pack type
443083G	25 ml	Glass bottle

TEMED (N,N,N',N'-Tetramethylethylenediamine), ultrapure

Danger

CAS 110-18-9 **UN:** 2372
$C_6H_{16}N_2$ **M.W.** 116.21 g/mol
Boiling Pt: 120 °C (1013 hPa) **Melting Pt:** -64 °C **Density:** 0,7765 g/cm³ (20 °C)
Storage Temperature: Ambient

Boiling Range	119°C - 121°C
Purity (Anhydrous Basis)	>=99%
Refractive Index	1.417 - 1.419

Cat. No.	Pk	Pack type
0761-25ML	25 ml	Glass bottle
0761-50ML	50 ml	Glass bottle
0761-100ML	100 ml	Glass bottle

TEMED (N,N,N',N'-Tetramethylethylenediamine), proteomics grade

Danger

CAS 110-18-9 **UN:** 2372
$C_6H_{16}N_2$ **M.W.** 116.21 g/mol
Boiling Pt: 120 °C (1013 hPa) **Melting Pt:** -64 °C **Density:** 0,7765 g/cm³ (20 °C)
Storage Temperature: Ambient

Boiling Range	119°C - 121°C
DNase	none detected
Protease	none detected
Purity (Anhydrous Basis)	>= 99%
Refractive Index	1.417 - 1.419
RNase	none detected

Cat. No.	Pk	Pack type
M146-25ML	25 ml	Glass bottle
M146-50ML	50 ml	Glass bottle
M146-100ML	100 ml	Glass bottle

Tetrapotassium hexacyanoferrate trihydrate

See Potassium hexacyanoferrate (II) trihydrate p.379

Tetrasodium diphosphate decahydrate

See tetra-Sodium diphosphate decahydrate p.435

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Tetrasodium ethylenediaminetetraacetate

See EDTA tetrasodium salt p.134

Tetrazolium salt

See 2,3,5-Triphenyltetrazolium chloride p.518

TFA

See Trifluoroacetic acid p.516

TGB broth

See Microbiology

NEW Thallium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Thallium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456942S
Thallium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85639.180

Thallium standard solution, 10,000 mg/l Tl in dil. nitric acid (from Tl) ARISTAR® standard for ICP

Tl in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456172A	100 ml	Plastic bottle

Thallium standard solution, 1,000 mg/l Tl in dil. nitric acid (from Tl) ARISTAR® standard for ICP

Tl in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456162V	100 ml	Plastic bottle

Thallium standard solution, 1,000 mg/l Tl in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86718.180	100 ml	Plastic bottle
86718.260	500 ml	Plastic bottle

THAM HCl

See TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) p.521

THAM

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.518

THF

See Tetrahydrofuran p.503

THF-D8

See Tetrahydrofuran-[D8] p.504

Thiamine hydrochloride TECHNICAL

CAS 67-03-8

$C_{12}H_{18}Cl_2N_4OS$ **M.W.** 337.27 g/mol

Melting Pt: 252 °C **Density:** 1,401 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
28605.180	100 g	Plastic bottle for solids

Thiaminium chloride

See Thiamine hydrochloride p.505

Thiazine red TECHNICAL

Warning

CAS 2150-33-6

$H_2NCOCH_2NHCH_2CH_2SO_3H$ **M.W.** 599.58 g/mol

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
27419.123	10 g	Plastic bottle for solids

Thioacetamide analytical reagent

Danger

CAS 62-55-5

CH_3CSNH_2 **M.W.** 75.13 g/mol

Melting Pt: 113-114 °C **Density:** 1,336 g/cm³ (20 °C)

Assay ..... Min. 99.0 %
Melting point ..... 110 - 113 °C
Heavy metals (as Pb) ..... Max. 10 ppm
Ignition residue (SO_4) ..... Max. 0.05 %
Fe (Iron) ..... Max. 5 ppm

Cat. No.	Pk	Pack type
28603.137	25 g	Glass bottle

Thioacetamide 4% in aqueous solution Reag. Ph. Eur. 1089602

Danger

CAS 62-55-5
CH_3CSNH_2
M.W. 75.13 g/mol
Boiling Pt: ~100 °C (1013 hPa)
Density: 1 g/cm³ (20 °C)

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85975.180	100 ml	Plastic bottle
85975.260	500 ml	Plastic bottle
85975.290	1 l	Plastic bottle

Thioacetamide Reagent I + II Reag. Ph. Eur. 1089601

Danger

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
85976.290	1 l	Plastic bottle

Thiocarbamide

See Thiourea p.506

NEW Thiocyanate 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
84999.180	100 ml	Plastic bottle

2,2'-Thiodiethanol

See Thiodiglycol..... p.506

Thiodiglycol TECHNICAL

Warning

CAS 111-48-8
UN: 3334
$S(CH_2CH_2OH)_2$
M.W. 122.19 g/mol
Boiling Pt: 282 °C (1013 hPa)
Melting Pt: -10 °C
Density: 1,18 g/cm³ (20 °C)

Assay..... Min. 99 %

Cat. No.	Pk	Pack type
28620.182	100 ml	Glass bottle

Thioglycolic acid

See Mercaptoacetic acid (Thioglycolic acid)..... p.257

Thioglycollate broth

See Microbiology

NEW Thiosulphate 1,000 mg/l in amylic alcohol standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
85000.180	100 ml	Plastic bottle

Thiourea analytical reagent

Warning

CAS 62-56-6
UN: 3077
NH_2CSNH_2
M.W. 76.12 g/mol
Melting Pt: 174-177 °C
Density: 1,435 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (Iodometric)..... Min. 99.0 %
Appearance of solution (50 g/l; water)..... C'less to (almost) clear
IR Spectrum..... Passes test
Sensitivity to bismuth ..... Passes test
Melting point..... 174 - 178 °C
Ignition residue (SO_4) (600°C) ..... Max. 0.1 %
Loss on drying (105°C) ..... Max. 0.5 %
Fe (Iron)..... Max. 5 ppm

Cat. No.	Pk	Pack type
28615.231	250 g	Plastic bottle for solids

VWR LIFE SCIENCE Thiourea, proteomics grade

Warning

CAS 62-56-6
UN: 3077
NH_2CSNH_2
M.W. 76.12 g/mol
Melting Pt: 174-177 °C
Density: 1,435 g/cm³ (20 °C)
Storage Temperature: Ambient

Melting Range ..... 165°C - 178°C
Protease ..... none detected
Purity..... > =99 %
Solubility (1%, Water) ..... Pass
Appearance ..... White powder

Cat. No.	Pk	Pack type
M226-100G	100 g	Plastic bottle for solids

NEW Thulium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Thulium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85640.180

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Thulium standard solution, 1,000 mg/l Tm in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86719.180	100 ml	Plastic bottle
86719.260	500 ml	Plastic bottle

VWR LIFE SCIENCE Thymidine (2'-Deoxythymidine), ultrapure

Danger

CAS 50-89-5
$C_{10}H_{14}N_2O_5$
Storage Temperature: Ambient

Em (267nm, Phosphate Buffer, pH 7.0) ..... >= 9200

Cat. No.	Pk	Pack type
0481-5G	5 g	Plastic bottle for solids
0481-25G	25 g	Plastic bottle for solids

Thymol Ph. Eur.

Danger

CAS 89-83-8 **UN:** 2430
$2\text{-}[(CH_3)_2CH]C_6H_3\text{-}5\text{-}(CH_3)OH$ **M.W.** 150.22 g/mol
Boiling Pt: 233 °C (1013 hPa) **Melting Pt:** 49-51 °C **Density:** 0,965 g/cm³ (25 °C)
Storage Temperature: Ambient

Appearance ..... Colourless crystals
Identification B ..... Passes test
Appearance of solution ..... Passes test
Acidity ..... Passes test
Related substances ..... Passes test
Residue on evaporation ..... Max. 0.05 %
Residual solvents ..... Passes test

Cat. No.	Pk	Pack type
83558.180	100 g	Plastic bottle for solids

Thymol GPR RECTAPUR®

Danger

CAS 89-83-8 **UN:** 2430
$2\text{-}[(CH_3)_2CH]C_6H_3\text{-}5\text{-}(CH_3)OH$ **M.W.** 150.22 g/mol
Boiling Pt: 233 °C (1013 hPa) **Melting Pt:** 49-51 °C **Density:** 0,965 g/cm³ (25 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
Melting point ..... 49 - 51 °C
Ignition residue (SO_4) ..... Max. 0.1 %

Cat. No.	Pk	Pack type
20728.237	250 g	Plastic bottle for solids

Thymol blue 0.04% in ethanol TECHNICAL

Danger

CAS 76-61-9 **UN:** 1170
$C_{27}H_{30}O_5S$
Storage Temperature: Ambient

Transition range: pH 8,0 - 9,6

Identification ..... Passes test

Cat. No.	Pk	Pack type
34300.234	250 ml	Glass bottle

Tin, shots AnalaR NORMAPUR® analytical reagent

CAS 7440-31-5
Sn **M.W.** 118.71 g/mol
Boiling Pt: 2270 °C (1013 hPa) **Melting Pt:** 232 °C **Density:** 7,31 g/cm³ (25 °C)
Storage Temperature: Ambient

As (Arsenic) ..... Max. 10 ppm
Bi (Bismuth) ..... Max. 40 ppm
Fe (Iron) ..... Max. 50 ppm
Zn (Zinc) ..... Max. 20 ppm
Cu (Copper) ..... Max. 10 ppm
Pb (Lead) ..... Max. 60 ppm
Sb (Antimony) ..... Max. 0.02 %

Cat. No.	Pk	Pack type
23723.231	250 g	Plastic bottle for solids

NEW Tin standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Tin	1000 ppm	2% HNO_3/0,5% HF	Plastic bottle	100 ml	456952U
Tin	10 ppm	1% HNO_3	Plastic bottle	100 ml	85630.180

Tin standard solution, 10,000 mg/l Sn in 10% hydrochloric acid (from Sn) ARISTAR® standard for ICP

Sn in HCl

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456252W	100 ml	Plastic bottle

VWR BDH CHEMICALS

AVS® TITRINORM® READY TO USE SOLUTIONS

- Volumetric solutions
- pH buffers
- AAS standard solutions
- Traceable to NIST
- Complete Certificate of Analysis available on the web

Tin standard solution, 1,000 mg/l Sn in 10% hydrochloric acid (from Sn) ARISTAR® standard for ICP

Sn in HCl

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456242U	100 ml	Plastic bottle

Tin standard solution, 10,000 mg/l Sn in dil. nitric acid with hydrofluoric acid (max. 1%) (from Sn) ARISTAR® standard for ICP

Sn in HNO_3 tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456232S	100 ml	Plastic bottle

Tin standard solution, 1,000 mg/l Sn in dil. nitric acid with hydrofluoric acid (max. 1%) (from Sn) ARISTAR® standard for ICP

Sn in HNO_3 tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456222Q	100 ml	Plastic bottle
456224S	500 ml	Plastic bottle

Tin standard solution, 1,000 mg/l Sn in 20% hydrochloric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86712.180	100 ml	Plastic bottle
86712.260	500 ml	Plastic bottle

Tin dichloride

See Tin (II) chloride p.508

Tin (II) chloride, anhydrous GPR RECTAPUR®

Danger

CAS 7772-99-8 **UN:** 3260

$SnCl_2$ **M.W.** 189.62 g/mol

Boiling Pt: 623 °C (1013 hPa) **Melting Pt:** 246 °C **Density:** 3,95 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
SO_4 (Sulphate)	Max. 0.02 %
Cd (Cadmium)	Max. 40 ppm
Cu (Copper)	Max. 40 ppm
Fe (Iron)	Max. 100 ppm
Pb (Lead)	Max. 75 ppm
Zn (Zinc)	Max. 40 ppm

Cat. No.	Pk	Pack type
23746.296	1 kg	Glass bottle for solids

Tin (II) chloride dihydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 10025-69-1 **UN:** 3260

$SnCl_2 \cdot 2H_2O$ **M.W.** 225.65 g/mol

Boiling Pt: 623 °C (1013 hPa) **Melting Pt:** 246 °C **Density:** 2,71 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	98.0 - 103.0 %	Identification	Passes test
Insolubility in diluted HCl	Passes test	Not precipitated by H_2S (as SO_4)	Max. 0.05 %
NH_4 (Ammonium)	Max. 20 ppm	SO_4 (Sulphate)	Max. 20 ppm
As (Arsenic)	Max. 1 ppm	Ca (Calcium)	Max. 50 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 20 ppm
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 100 ppm
Pb (Lead)	Max. 50 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
23742.260	500 g	Plastic bottle for solids
23742.293	1 kg	Plastic bottle for solids

Tin (II) chloride dihydrate AnalaR NORMAPUR® analytical reagent (max. 0.05 ppm Hg)

Danger

CAS 10025-69-1 **UN:** 3260

$SnCl_2 \cdot 2H_2O$ **M.W.** 225.65 g/mol

Boiling Pt: 623 °C (1013 hPa) **Melting Pt:** 246 °C **Density:** 2,71 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 98 %	Insolubility in diluted HCl	Passes test
Not precipitated by H_2S (as SO_4)	Max. 0.05 %	NH_4 (Ammonium)	Max. 20 ppm
SO_4 (Sulphate)	Max. 20 ppm	As (Arsenic)	Max. 1 ppm
Ca (Calcium)	Max. 50 ppm	Cu (Copper)	Max. 10 ppm
Fe (Iron)	Max. 20 ppm	Hg (Mercury)	Max. 0.05 ppm
K (Potassium)	Max. 50 ppm	Na (Sodium)	Max. 100 ppm
Pb (Lead)	Max. 50 ppm		

Cat. No.	Pk	Pack type
2512.0250	250 g	Plastic bottle for solids

Tin (II) chloride dihydrate GPR RECTAPUR® for mirror makers

Danger

CAS 10025-69-1 **UN:** 3260

$SnCl_2 \cdot 2H_2O$ **M.W.** 225.65 g/mol

Boiling Pt: 623 °C (1013 hPa) **Melting Pt:** 246 °C **Density:** 2,71 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 96 %
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 100 ppm
Pb (Lead)	Max. 50 ppm

Cat. No.	Pk	Pack type
23743.230	250 g	Plastic bottle for solids
23743.296	1 kg	Plastic bottle for solids

Tin (II) chloride dihydrate TECHNICAL

Danger

CAS 10025-69-1 **UN:** 3260

$SnCl_2 \cdot 2H_2O$ **M.W.** 225.65 g/mol

Boiling Pt: 623 °C (1013 hPa) **Melting Pt:** 246 °C **Density:** 2,71 g/cm³ (25 °C)

Storage Temperature: Ambient

Assay	Min. 95 %

Cat. No.	Pk	Pack type
23738.232	250 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Tin (II) chloride 30% in hydrochloric acid 20% Reag. Ph. Eur. 1085001

CAS 7772-99-8 **UN:** 1789
$SnCl_2$ **M.W.** 189.62 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87941.180	100 ml	Plastic bottle

Tiosinamine

See Allylthiourea p.22

TISAB solution (Total Ionic Strength Adjustment Buffer) for fluoride determinations

Total ionic strength adjustment buffer solution for use with selective ion electrodes.

Cat. No.	Pk	Pack type
160847G	5 l	Plastic container

Titan yellow 0.05% aqueous solution Reag. Ph. Eur. 1090902

CAS 1829-00-1
$C_{28}H_{19}N_5Na_2O_6S_4$ **M.W.** 695.73 g/mol

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87955.180	100 ml	Plastic bottle

Titan yellow paper Reag. Ph. Eur. 1090901

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Description	Pk	Cat. No.
Titan yellow paper Reag. Ph. Eur. 1090901	50 Tests	87954.150

NEW Titanium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Titanium	1000 ppm	H_2O/tr HF	Plastic bottle	100 ml	456962W
Titanium	10 ppm	H_2O/tr HF	Plastic bottle	100 ml	85636.180

Titanium standard solution, 1,000 mg/l Ti in water with hydrofluoric acid (max. 1%) (from $(NH_4)_2TiF_6$) ARISTAR® standard for ICP

$(NH_4)_2$ TiF_6 in H_2O tr. HF

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456262B	100 ml	Plastic bottle
456264D	500 ml	Plastic bottle

Titanium standard solution, 1,000 mg/l Ti in 5% nitric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86717.180	100 ml	Plastic bottle
86717.260	500 ml	Plastic bottle

Titanium dioxide

See Titanium (IV) oxide p.509

Titanium (III) chloride 15% in hydrochloric acid 10% solution AnalaR NORMAPUR® analytical reagent

Danger

CAS 7705-07-9 **UN:** 1789
$TiCl_3$

Assay ..... 14.5 to 15.5 %

Cat. No.	Pk	Pack type
28660.236	250 ml	Glass bottle
28660.293	1 l	Glass bottle

Titanium trichloride solution Reag. Ph. Eur. 1091201

Danger

CAS 7705-07-9 **UN:** 1789
$TiCl_3$

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87708.180	100 ml	Plastic bottle

Titanium (IV) oxide AnalaR NORMAPUR®

CAS 13463-67-7
TiO_2 **M.W.** 79.88 g/mol
Boiling Pt: 2900 °C (1013 hPa) **Melting Pt:** 1855 °C **Density:** 4,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	99.0 - 100.5 %	Heavy metals (as Pb)	Max. 20 ppm
Loss on drying (105°C)	Max. 0.5 %	Loss on ignition (800°C)	Max. 0.5 %
Solubility in hot water	Max. 0.5 %	Solubility in hydrochloric acid	Max. 0.5 %
As (Arsenic)	Max. 1 ppm	Fe (Iron)	Max. 0.02 %
Sb (Antimony)	Max. 100 ppm		

Cat. No.	Pk	Pack type
84853.290	1 kg	Plastic bottle for solids

Titanium (IV) oxide GPR RECTAPUR®

CAS 13463-67-7
TiO_2 **M.W.** 79.88 g/mol
Boiling Pt: 2900 °C (1013 hPa) **Melting Pt:** 1855 °C **Density:** 4,2 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 99 %
Loss on ignition (800°C) ..... Max. 0.5 %
As (Arsenic) ..... Max. 5 ppm
Fe (Iron) ..... Max. 0.02 %

Cat. No.	Pk	Pack type
20732.298	1 kg	Plastic bottle for solids

Titanium trichloride - sulphuric acid reagent Reag. Ph. Eur. 1091202

Danger

UN: 2796
M.W. 240.01 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87711.180	100 ml	Plastic bottle

NEW Titration solvent ASTM D-5776 VOLUSOL

Danger

UN: 2790

Cat. No.	Pk	Pack type
5449.2500	2,5 l	Glass bottle

Titriplex® III

See EDTA disodium salt dihydrate p.132

Titriplex® VI

See EGTA (Ethylene glycol bis(2-aminoethyl ether)-N,N,N′,N′-tetraacetic acid)… p.134

VWR LIFE SCIENCE TMA (Tetramethylammonium chloride), high purity

Danger

CAS 75-57-0 **UN:** 2811
$(CH_3)_4NCl$ **M.W.** 109.6 g/mol
Melting Pt: > 300 °C **Density:** 1,169 g/cm³ (20 °C)
Storage Temperature: Ambient

TMA effectively abolishes the differential melting temperatures of AT and GC base pairs, making it a useful reagent for nucleic acid hybridisation procedures.

Loss on Drying ..... < = 1 %
Purity ..... >= 99 %

Cat. No.	Pk	Pack type
0104-500G	500 g	Plastic bottle for solids

VWR LIFE SCIENCE TMB Liquid membrane substrate for biotechnology

Danger

Ready-to-use sensitive substrate for the detection of horseradish peroxidase activity. Absorbs at 450 nm (yellow end-product). Ideal for ELISA and solution assays.

Cat. No.	Pk	Pack type
E888-100ML	100 ml	Kit

VWR LIFE SCIENCE TMP liquid,1-component, for biotechnology

Warning

Ready-to-use sensitive substrate for the detection of horseradish peroxidase activity. Absorbs at 450 nm (yellow end-product). Ideal for ELISA and solution assays.

Abs.@650nm ..... < 0.02
pH @25°C ..... 5 - 7
UV/Vis Assay ..... Pass

Cat. No.	Pk	Pack type
J644-100ML	100 ml	Plastic bottle

VWR LIFE SCIENCE TMP plus liquid, 1-component substrate for biotechnology

Warning

Ready-to-use sensitive substrate for the detection of horseradish peroxidase activity. Absorbs at 450 nm (yellow end-product). Ideal for ELISA and solution assays. Offers faster signal, enhanced sensitivity and the lowest possible background.

Abs.@450nm (50%, 1M H_2SO_4) 0.1
Abs.@650nm (undiluted) 0.1
Assay ..... PASS
pH @25 °C (undiluted) ..... 2.6 - 3.6

Cat. No.	Pk	Pack type
K830-100ML	100 ml	Plastic bottle

o-Tolidine TECHNICAL

Danger

CAS 119-93-7 **UN:** 3077
$[-C_6H_3(CH_3)-4-NH_2]_2$ **M.W.** 212.29 g/mol
Boiling Pt: ~361 °C (1013 hPa) **Melting Pt:** 129-131 °C **Density:** ~1,234 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
28671.187	100 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

o-Tolidine 0.1 % (1.6 M) hydrochloric solution for chlorine determination in water according to the NF T 90-010 standard

Danger

CAS 119-93-7 **UN:** 1760
$[-C_6H_3(CH_3)-4-NH_2]_2$ **M.W.** 212.29 g/mol

Determination of oxygen or free chlorine

Identification ..... Passes test

Cat. No.	Pk	Pack type
28672.294	1 l	Glass bottle

o-Tolidine 0.03% with 0.2% potassium iodide in acetic acid 6% Reag. Ph. Eur. 1123001

CAS 119-93-7
$[-C_6H_3(CH_3)-4-NH_2]_2$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87971.260	500 ml	Plastic bottle

Toluene HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay (GC) ..... Min. 99,8 %
Acidity ..... Max. 0.0005 meq/g
Alkalinity ..... Max. 0.0002 meq/g
Evaporation residue ..... Max. 5 ppm
Water ..... Max. 0.05 %
Absorbance (300 nm) ..... Max. 0.15
Absorbance (310 nm) ..... Max. 0.1
Absorbance (330 nm) ..... Max. 0.02
Absorbance (350 nm) ..... Max. 0.01
Transmittance (300 nm) ..... Min. 70 %
Transmittance (310 nm) ..... Min. 80 %
Transmittance (330 nm) ..... Min. 95 %
Transmittance (350 nm) ..... Min. 98 %

Cat. No.	Pk	Pack type
83625.290	1 l	Glass bottle
83625.320	2,5 l	Glass bottle
83625.400	4 l	Glass bottle

Toluene SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay (GC) ..... Min. 99.8 %
Acidity ..... Max. 0.0005 meq/g
Residue on evaporation ..... Max. 0.0005 %
Water ..... Max. 0.01 %
Transmittance (320 nm) ..... Min. 90 %
Transmittance (330 nm) ..... Min. 95 %
Transmittance (340 nm) ..... Min. 96 %
Transmittance (350 nm) ..... Min. 98 %

Cat. No.	Pk	Pack type
84708.290	1 l	Glass bottle
84708.320	2,5 l	Glass bottle

Toluene, anhydrous (max. 0.002% H_2O)

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51
250 ml bottle with a septum cap featuring six separate re-sealable puncture po ints

Assay (calculated on anhydrous) ..... Min. 99.8 %
Acidity ..... Max. 0.0005 meq/g
Residue on evaporation ..... Max. 0.0005 %
Water (K.F.) ..... Max. 0.0020 %

Cat. No.	Pk	Pack type
83680.230	250 ml	Glass bottle with septum cap
83680.290	1 l	Glass bottle

NEW Toluene, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85678.180	100 ml	Glass bottle

NEW Toluene PESTINORM® SUPRA TRACE for organic trace analysis

Filtered through a 0.2 µm filter, packaged under inert gas.

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay (on anhydrous substance) ..... Min. 99.9 %
Evaporation residue ..... Max 0.0003%
Colouration ..... Max 10 APHA
Water ..... Max 0.05%
GC/ECD Dioxins, Furans & PCB's ..... Max 5 ng/l
GC/ECD any pesticide (as Lindane) ..... Max 5 ng/l
GC/NPD any pesticide (as Parathion) ..... Max 10 ng/l
GC/ECD 1,2,4-TCB to daca-PCB (as Lindane) ..... Max 5 pg/ml
GC/ECD DCM to 1,2,4-TCB (as TCM) ..... Max 1 ng/l
GC/FID C10 to C40 (as n-Decane) ..... Max 2 ng/l
GC/MSD C10 to C40 (as Decane; 30-600amu) ..... Max 2 ng/l
Filtered through 0.2um, filled under inert gas ..... Conforms

Cat. No.	Pk	Pack type
85393.320	2,5 l	Glass bottle

Toluene PESTINORM® for pesticide residue analysis

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay (on anhydrous substance) ..... Min. 99.70 %
Evaporation residue ..... Max. 5 ppm
Water ..... Max. 0.0300 %
Pesticide analysis (Ethylparathion/PND) ..... Max. 10 ng/l
Pesticide analysis (Lindane/ECD) ..... Max. 5 ng/l
Pesticide analysis (Lindane/ECD) ..... Max. 5 ng/l

Cat. No.	Pk	Pack type
83664.320	2,5 l	Glass bottle

Toluene AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Appearance	Clear colourless liquid	Assay (on anhydrous substance)	Min. 99.5 %
Carbonisable substances	Passes test	IR Spectrum	Passes test
Substances coloured by H_2SO_4	Passes test ACS/ISO	Acidity or alkalinity	Max. 0.0001 meq/g
Boiling point	109 - 112 °C	Colouration	Max. 10 APHA
Density (20/4)	0.865 - 0.868	Density (20/20)	0.865 - 0.870
n 20/D	1.496 - 1.498	Benzene	Max. 50 ppm
Evaporation residue	Max. 10 ppm	Thiophene	Max. 1 ppm
Total S (as SO_4)	Max. 10 ppm	Water	Max. 0.03 %
Al (Aluminium)	Max. 0.05 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.02 ppm	Ca (Calcium)	Max. 0.2 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.01 ppm	Cu (Copper)	Max. 0.01 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.05 ppm	Mn (Manganese)	Max. 0.01 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.01 ppm	Sn (Tin)	Max. 0.05 ppm
Sr (Strontium)	Max. 0.02 ppm	Zn (Zinc)	Max. 0.01 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
28676.297	1 l	Glass bottle
28676.322	2,5 l	Glass bottle
28676.366	5 l	Fluorinated plastic bottle
28676.468	25 l	Metal drum
28676.550	200 l	Metal drum

Toluene, anhydrous (max. 0.005% H_2O) AnalaR NORMAPUR® analytical reagent

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Appearance	Clear colourless liquid	Colour value	Max. 10 APHA
Assay (calculated on anhydrous)	Min. 99.8 %	Residue on evaporation	Max. 0.0010 %
Water (K.F.)	Max. 0.0050 %	Acidity or alkalinity	Max. 0.0001 meq/g
Benzene	Max. 0.05 %	Thiophene	0.0001 %
Carbonisable substances	Passes test	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.01 ppm	Fe (Iron)	Max. 0.05 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.01 ppm	Pb (Lead)	Max. 0.01 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.01 ppm
Total S (Sulphur)	Max. 10 ppm		

Cat. No.	Pk	Pack type
28681.295	1 l	Glass bottle

Toluene GPR RECTAPUR®

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay	Min. 99.0 %
Appearance	Clear colourless liquid
IR Spectrum	Passes test
Boiling point	109 - 112 °C
Density (20/4)	0.865 - 0.868
Benzene	Max. 0.02 %
Evaporation residue	Max. 50 ppm
Water	Max. 0.1 %

Cat. No.	Pk	Pack type
28675.465	25 l	Metal drum
28675.556	200 l	Metal drum

Toluene GPR RECTAPUR® for pathology

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay	Min. 99 %
Boiling point	109 - 112 °C
Density (20/4)	0.865 - 0.868
Benzene	Max. 0.02 %
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
28684.364	5 l	Fluorinated plastic bottle

Toluene TECHNICAL

Danger

CAS 108-88-3 **UN:** 1294
$C_6H_5CH_3$ **M.W.** 92.14 g/mol
Boiling Pt: 110,6 °C (1013 hPa) **Melting Pt:** -95 °C **Density:** 0,867 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119471310-51

Assay	Min. 98 %

Cat. No.	Pk	Pack type
28701.364	5 l	Fluorinated plastic bottle
28701.466	25 l	Metal drum
28701.550	200 l	Metal drum

Toluene-[D8] (99.5% D) for NMR spectroscopy

Danger

CAS 2037-26-5 **UN:** 1294
$C_6D_5CD_3$ **M.W.** 100.08 g/mol
Boiling Pt: 110 °C (1013 hPa) **Melting Pt:** -85 °C **Density:** 0,94 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Assay (on anhydrous substance)	Min. 99.9 %
Isotopic enrichment (FT NMR 400 MHz)(D)	Min. 99.5 %
Water (HDO+D_2O)	Max. 0.0200 %

Cat. No.	Pk	Pack type
87159.0010	10 ml	Glass bottle
87159.0025	25 ml	Glass bottle

VWR LIFE SCIENCE Toluene-α-sulphonyl fluoride, high purity

Danger

CAS 329-98-6 **UN:** 2923
$C_7H_7FO_2S$ **M.W.** 174.2 g/mol
Boiling Pt: 80-85 °C (0,3 torr) **Melting Pt:** 91-92 °C
Storage Temperature: Ambient

An irreversible serine protease inhibitor of trypsin, chymotrypsin, kallikrein, subtilisin, and thrombin. Also inhibits the cysteine protease papain.

Solubility (5%, EtOH)	pass
Melting Point	91 °C - 95 °C
Purity	> 99 %

Cat. No.	Pk	Pack type
0754-5G	5 g	Glass bottle
0754-25G	25 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Toluene-α-sulphonyl fluoride, proteomics grade

Danger

CAS 329-98-6 **UN:** 2923
$C_7H_7FO_2S$ **M.W.** 174.2 g/mol
Boiling Pt: 80-85 °C (0,3 torr) **Melting Pt:** 91-92 °C
Storage Temperature: Ambient
An irreversible serine protease inhibitor of trypsin, chymotrypsin, kallikrein, subtilisin, and thrombin. Also inhibits the cysteine protease papain.

Identification	PASS
Melting Point	91 - 95 °C
Purity	99.0 %
Solubility (5 %, EtOH)	PASS
TLC	ONE SPOT

Cat. No.	Pk	Pack type
M145-5G	5 g	Glass bottle
M145-25G	25 g	Glass bottle

Toluidine blue O TECHNICAL

CAS 92-31-9
$C_{15}H_{16}ClN_3S$ **M.W.** 305.83 g/mol
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
34187.185	100 g	Glass bottle

Tosylchloramide sodium trihydrate

See Chloramine T (sodium salt) trihydrate p.84

Tragacanth

See Gum tragacanth p.182

Tragacanth gum

See Gum tragacanth p.182

D(+)-Trehalose dihydrate for biochemistry

CAS 6138-23-4
$C_{12}H_{22}O_{11}{\cdot}2H_2O$ **M.W.** 378.33 g/mol
Melting Pt: 97-99 °C
Storage Temperature: Ambient

Assay	Min. 98 %
Ignition residue (SO_4)	Max. 0.1 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 50 ppm
As (Arsenic)	Max. 0.1 ppm
Cd (Cadmium)	Max. 5 ppm
Co (Cobalt)	Max. 5 ppm
Cu (Copper)	Max. 5 ppm
Fe (Iron)	Max. 5 ppm
Ni (Nickel)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm
Zn (Zinc)	Max. 5 ppm

Cat. No.	Pk	Pack type
28719.290	1 kg	Plastic bottle for solids

Triacetin (Glycerol triacetate) TECHNICAL

CAS 102-76-1
$C_9H_{14}O_6$ **M.W.** 218.21 g/mol
Boiling Pt: 258 °C (1013 hPa) **Melting Pt:** 4 °C **Density:** 1,1596 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
n 20/D	1.429 - 1.434
Water	Max. 0.2 %

Cat. No.	Pk	Pack type
24391.296	1 l	Glass bottle

Triammonium 2-hydroxypropane-1,2,3-tricarboxylate

See tri-Ammonium citrate p.33

Tribromomethane

See Bromoform p.64

Tributyl phosphate TECHNICAL

Warning

CAS 126-73-8
$(CH_3(CH_2)_3O)_3PO$ **M.W.** 266.32 g/mol
Boiling Pt: 289 °C (1013 hPa) **Melting Pt:** -79 °C **Density:** 0,982 g/cm³ (20 °C)
Storage Temperature: Ambient

n 20/D	1.424 - 1.426

Cat. No.	Pk	Pack type
28726.291	1 l	Glass bottle

Tributyrin agar

See Microbiology

Tricalcium bis(orthophosphate)

See tri-Calcium phosphate p.78

Trichloroacetic acid AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 76-03-9 **UN:** 1839
Cl_3CCOOH **M.W.** 163.39 g/mol
Boiling Pt: 196 °C (1013 hPa) **Melting Pt:** 54-56 °C **Density:** 1,63 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.5 %	Clarity of solution	Passes test ACS
IR Spectrum	Passes test	Substances coloured by H_2SO_4	Passes test
Melting point	Min. 57 °C	Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.03 %	Insolubility in water	Max. 50 ppm
Cl (Chloride)	Max. 10 ppm	NO_3 (Nitrate)	Max. 20 ppm
PO_4 (Phosphate)	Max. 5 ppm	SO_4 (Sulphate)	Max. 0.02 %
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 10 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
20742.180	100 g	Plastic bottle for solids
20742.236	250 g	Plastic bottle for solids
20742.293	1 kg	Plastic bottle for solids

Trichloroacetic acid, crystallised Ph. Eur.

Danger

CAS 76-03-9 **UN:** 1839
Cl_3CCOOH **M.W.** 163.39 g/mol
Boiling Pt: 196 °C (1013 hPa) **Melting Pt:** 54-56 °C **Density:** 1,63 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	98.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Cl (Chloride)	Max. 100 ppm
Sulphated ash	Max. 0.1 %
Residual solvents	Passes test

Cat. No.	Pk	Pack type
20741.290	1 kg	Plastic bottle for solids

Trichloroacetic acid GPR RECTAPUR®

Danger

CAS 76-03-9 **UN:** 1839
Cl_3CCOOH **M.W.** 163.39 g/mol
Boiling Pt: 196 °C (1013 hPa) **Melting Pt:** 54-56 °C **Density:** 1,63 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Melting point	55 - 59 °C
Heavy metals (as Pb)	Max. 20 ppm
Ignition residue (SO_4)	Max. 0.1 %

Cat. No.	Pk	Pack type
20734.295	1 kg	Plastic bottle for solids
20734.460	25 kg	Bucket (Plastic)

Trichloroacetic acid (glacial) 4% in aqueous solution Reag. Ph. Eur.

Danger

CAS 76-03-9 **UN:** 2564
Cl_3CCOOH
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87956.180	100 ml	Plastic bottle

2,2,2-Trichloroethane-1,1-diol

See Chloral hydrate..... p.84

1,1,2-Trichloroethene

See Trichloroethylene..... p.494

Trichloroethene

See Trichloroethylene..... p.494

Trichloroethylene AnalaR NORMAPUR® analytical reagent

Danger

CAS 79-01-6 **UN:** 1710
$ClCH{=}CCl_2$ **M.W.** 131.39 g/mol
Boiling Pt: 86,7 °C (1013 hPa) **Melting Pt:** -73 °C **Density:** 1,46 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.0 %	Acidity	Max. 0.0001 meq/g
Alkalinity	Max. 0.0006 meq/g	Boiling point	86.0 - 87.5 °C
Colouration	Max. 10 APHA	Density (20/4)	1.460 - 1.470
n 20/D	1.460 - 1.480	Evaporation residue	Max. 50 ppm
Free halogens	Max. 0.3 ppm	Water	Max. 100 ppm
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	Mg (Magnesium)	Max. 0.1 ppm
Mn (Manganese)	Max. 0.02 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.5 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
28735.292	1 l	Glass bottle

Trichloroethylene GPR RECTAPUR®

Danger

CAS 79-01-6 **UN:** 1710
$ClCH{=}CCl_2$ **M.W.** 131.39 g/mol
Boiling Pt: 86,7 °C (1013 hPa) **Melting Pt:** -73 °C **Density:** 1,46 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
IR Spectrum	Passes test
Density (20/4)	1.460 - 1.470
Evaporation residue	Max. 50 ppm
Free alkali	Max. 0.01 meq/g
n 20/D	1.460 - 1.480
Water	Max. 0.02 %
Cl (Chloride)	Max. 1 ppm

Cat. No.	Pk	Pack type
28733.295	1 l	Glass bottle
28733.320	2,5 l	Glass bottle

1,1,2-Trichloroethylene

See Trichloroethylene..... p.494

Trichloromethane

See Chloroform..... p.86

Trichloromethane-D1

See Chloroform-[D1]..... p.88

VWR LIFE SCIENCE Tricine, ultrapure

CAS 5704-04-1
$(HOCH_2)_3CNHCH_2CO_2H$ **M.W.** 179.17 g/mol
Melting Pt: 187 °C **Density:** 1,523 g/cm³ (19,85 °C)
Storage Temperature: Ambient

DNase	none detected
Lead	<= 0.001 %
Melting Point	182°C - 188°C
pKa @25°C	8.1 - 8.2
Protease	none detected
Purity	> = 99 %
RNase	none detected
Solubility (10%, Water)	Pass

Cat. No.	Pk	Pack type
E170-100G	100 g	Plastic bottle for solids
E170-250G	250 g	Plastic bottle for solids
E170-500G	500 g	Plastic bottle for solids

VWR LIFE SCIENCE Tricine, proteomics grade

CAS 5704-04-1
$(HOCH_2)_3CNHCH_2CO_2H$ **M.W.** 179.17 g/mol
Melting Pt: 187 °C **Density:** 1,523 g/cm³ (19,85 °C)
Storage Temperature: Ambient

DNase	NONE
Identification (IR)	PASS
Lead	<0.001 %
Melting Point	182 - 188 °C
pKa @25 °C	8.10 - 8.20
Protease	NONE
Purity	99.0 %
RNase	NONE
Solubility (10 %, Water)	PASS

Cat. No.	Pk	Pack type
M159-500G	500 g	Plastic bottle for solids

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Triethanolamine (Trolamine) analytical reagent

CAS 102-71-6
$C_6H_{15}NO_3$ **M.W.** 149.19 g/mol
Boiling Pt: 335,4 °C (1013 hPa) **Melting Pt:** 21,6 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99.0 %
IR Spectrum	Passes test
Density (20/4)	1.120 - 1.130
Solidification point	20 - 22 °C
Diethanolamine	Max. 0.5 %
Ethanolamine	Max. 0.1 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO_4)	Max. 50 ppm
Water	Max. 0.2 %
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
28746.290	1 l	Glass bottle
28746.320	2,5 l	Glass bottle

Triethanolamine (Trolamine) GPR RECTAPUR®

CAS 102-71-6
$C_6H_{15}NO_3$ **M.W.** 149.19 g/mol
Boiling Pt: 335,4 °C (1013 hPa) **Melting Pt:** 21,6 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Density (20/4)	1.120 - 1.130
Water	Max. 0.5 %

Cat. No.	Pk	Pack type
28744.293	1 l	Glass bottle
28744.362	5 l	Plastic bottle

Triethanolamine (Trolamine) TECHNICAL

CAS 102-71-6
$C_6H_{15}NO_3$ **M.W.** 149.19 g/mol
Boiling Pt: 335,4 °C (1013 hPa) **Melting Pt:** 21,6 °C **Density:** 1,13 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 95 %

Cat. No.	Pk	Pack type
28743.290	1 l	Plastic bottle

NEW Triethanolamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
85001.180	100 ml	Plastic bottle

NEW Triethylamine HiPerSolv CHROMANORM® for LC-MS

Packed under nitrogen.

Danger

CAS 121-44-8 **UN:** 1296
$(C_2H_5)_3N$ **M.W.** 101.19 g/mol
Boiling Pt: 90 °C (1013 hPa) **Melting Pt:** -115 °C **Density:** 0,729 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.8 %
Evaporation residue	Max. 0.0001 %
Water	Max. 0.02 %
Transmittance (230 nm) (0.1 %)	Min. 10 %
Transmittance (240 nm) (0.1 %)	Min. 50 %
Transmittance (245 nm) (0.1 %)	Min. 80 %
Transmittance (250 nm) (0.1 %)	Min. 95 %
Transmittance (255 nm) (0.1 %)	Min. 99 %
Suitable for LC-MS (0.1 %)	Passes test

Cat. No.	Pk	Pack type
84883.180	100 ml	Glass bottle
84883.260	500 ml	Glass bottle

Triethylamine HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 121-44-8 **UN:** 1296
$(C_2H_5)_3N$ **M.W.** 101.19 g/mol
Boiling Pt: 90 °C (1013 hPa) **Melting Pt:** -115 °C **Density:** 0,729 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.6 %
IR Spectrum	Passes test
n 20/D	1.399 - 1.401
Evaporation residue	Max. 50 ppm
Water	Max. 0.2 %
Fe (Iron)	Max. 0.2 ppm
Pb (Lead)	Max. 0.02 ppm
Transmittance (254 nm)	Min. 20 %
Transmittance (280 nm)	Min. 90 %

Cat. No.	Pk	Pack type
28757.184	100 ml	Glass bottle
28757.230	250 ml	Glass bottle

Triethylamine TECHNICAL

Danger

CAS 121-44-8 **UN:** 1296
$(C_2H_5)_3N$ **M.W.** 101.19 g/mol
Boiling Pt: 90 °C (1013 hPa) **Melting Pt:** -115 °C **Density:** 0,729 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
n 20/D	1.399 - 1.401

Cat. No.	Pk	Pack type
28745.296	1 l	Glass bottle

NEW Triethylamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
85002.180	100 ml	Plastic bottle

NEW Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS

Packed under nitrogen.

Danger

CAS 76-05-1 **UN:** 2699
CF_3COOH **M.W.** 114.02 g/mol
Boiling Pt: 71,8 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 1,5351 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min 99.9 %
Evaporation residue	Max 0.0001 %
Water	Max 0.005 %
Ca (Calcium)	Max 0.2 ppm
K (Potassium)	Max 0.2 ppm
Mg (Magnesium)	Max 0.2 ppm
Na (Sodium)	Max 0.5 ppm
Transmittance (205 nm)	Min 10 %
Transmittance (220 nm)	Min 50 %
Transmittance (230 nm)	Min 80 %
Transmittance (250 nm)	Min 95 %
Transmittance (255 nm)	Min 99 %
Suitability for LC-MS (0.1% aqueous solution)	Passes test

Cat. No.	Pk	Pk Info	Pack type
85049.001	1 SET	10× 1 ml	Glass ampoule

NEW Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

Danger

CAS 76-05-1 **UN:** 2699
CF_3COOH **M.W.** 114.02 g/mol
Boiling Pt: 71,8 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 1,5351 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.9 %
Evaporation residue	Max. 0.0001 %
Water	Max. 0.005 %
Ca (Calcium) (0.1 %)	Max. 0.2 ppm
K (Potassium) (0.1 %)	Max. 0.2 ppm
Mg (Magnesium) (0.1 %)	Max. 0.2 ppm
Na (Sodium) (0.1 %)	Max. 0.5 ppm
Transmittance (205 nm) (0.1 %)	Min. 10 %
Transmittance (220 nm) (0.1 %)	Min. 50 %
Transmittance (230 nm) (0.1 %)	Min. 80 %
Transmittance (250 nm) (0.1 %)	Min. 95 %
Transmittance (255 nm) (0.1 %)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84868.180	100 ml	Glass bottle
84868.260	500 ml	Glass bottle
84868.290	1 l	Glass bottle

Trifluoroacetic acid 100% HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 76-05-1 **UN:** 2699
CF_3COOH **M.W.** 114.02 g/mol
Boiling Pt: 71,8 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 1,5351 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.80 %
Colour value	Max. 10 APHA
Non-volatile matter	Max. 0.005 %
Transmittance (210 nm)	Min. 30 %
Transmittance (220 nm)	Min. 60 %
Transmittance (230 nm)	Min. 85 %
Transmittance (240 nm)	Min. 95 %
Transmittance (250 nm)	Min. 99 %

Cat. No.	Pk	Pack type
153112E	100 ml	Glass bottle SAFEBREAK

Trifluoroacetic acid for peptide synthesis

Danger

CAS 76-05-1 **UN:** 2699
CF_3COOH **M.W.** 114.02 g/mol
Boiling Pt: 71,8 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 1,5351 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated on anhydrous)	Min. 99.9 %
Appearance	Clear colourless liquid
Density (20/4)	1.475 - 1.500
Identification	Passes test
Residue on evaporation	Max. 0.002 %
Water	Max. 0.02 %
Absorbance (260 nm)	Max. 1
Absorbance (300 nm)	Max. 0.03

Cat. No.	Pk	Pack type
84578.290	1 l	Glass bottle

Trifluoroacetic acid ≥99% TECHNICAL

Danger

CAS 76-05-1 **UN:** 2699
CF_3COOH **M.W.** 114.02 g/mol
Boiling Pt: 71,8 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 1,490 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %

Cat. No.	Pk	Pack type
20751.181	100 ml	Glass bottle
20751.261	500 ml	Glass bottle

α,α,α-Trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine

See Trifluralin p.496

Trifluralin, extra pure

Warning

CAS 1582-09-8 **UN:** 2811
$C_{13}H_{16}F_3N_3O_4$ **M.W.** 335.28 g/mol
Boiling Pt: 369 °C (1013 hPa) **Melting Pt:** 49 °C **Density:** 1,294 g/cm³ (20 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pack type
124582T	10 mg	Glass ampoule

1,2,3-Trihydroxybenzene

See Pyrogallol p.382

Triiron tetraoxide

See Iron (II,III) oxide p.225

Trilead bis(carbonate) dihydroxide

See Lead (II) carbonate basic p.238

(±)-3,5,5-Trimethyl-1-hexanol TECHNICAL

Warning

CAS 3452-97-9 **UN:** 3082
$(CH_3)_3CCH_2CH(CH_3)CH_2CH_2OH$ **M.W.** 144.26 g/mol
Boiling Pt: 193-194 °C (1013 hPa) **Melting Pt:** -70 °C **Density:** 0,83 g/cm³ (20 °C)
Storage Temperature: Ambient

IR Spectrum	Passes test
Density (20/4)	0.826 - 0.831

Cat. No.	Pk	Pack type
262134R	500 ml	Glass bottle

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NEW Trimethylamine 1,000 mg/l in water standard for ion chromatography

- Traceable to NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis

Cat. No.	Pk	Pack type
85003.180	100 ml	Plastic bottle

Trimethylcarbinol

See tert-Butanol..... p.71

2,2,4-Trimethylpentane HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 540-84-1 **UN:** 1262
$(CH_3)_2CHCH_2C(CH_3)_3$ **M.W.** 114.23 g/mol
Boiling Pt: 99,2 °C (1013 hPa) **Melting Pt:** -107 °C **Density:** 0,692 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (GC)	Min. 99.50 %
Water	Max. 0.01 %
Non-volatile residue	Max. 0.0005 %
Acidity	Max. 0.0005 meq/g
Alkalinity	Max. 0.0002 meq/g
Transmittance (220 nm)	Min. 70.0 %
Transmittance (235 nm)	Min. 80.0 %
Transmittance (255 nm)	Min. 98.0 %
Conforms to BDH 15246	Passes test

Cat. No.	Pk	Pack type
83630.290	1 l	Glass bottle
83630.320	2,5 l	Glass bottle

2,2,4-Trimethylpentane SPECTRONORM® for spectroscopy

Filtered through a 0.2 µm filter, packaged under nitrogen.

Danger

CAS 540-84-1 **UN:** 1262
$(CH_3)_2CHCH_2C(CH_3)_3$ **M.W.** 114.23 g/mol
Boiling Pt: 99,2 °C (1013 hPa) **Melting Pt:** -107 °C **Density:** 0,692 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.5 %
Colouration	Max. 10 APHA
Density (20/4)	0.690 - 0.695
n 20/D	1.390 - 1.392
Water	Max. 0.02 %
Transmittance (210 nm)	Min. 45 %
Transmittance (220 nm)	Min. 73 %
Transmittance (230 nm)	Min. 85 %
Transmittance (240 nm)	Min. 92 %
Transmittance (from 255 nm)	Min. 98 %

Cat. No.	Pk	Pack type
28776.293	1 l	Glass bottle
28776.320	2,5 l	Glass bottle

NEW 2,2,4-Trimethylpentane, secondary reference standard for GC, PESTINORM®

A secondary GC solvent reference standard for various chromatographic and analytical applications.

- Purity and the specific impurity profile is determined by GC-MS and reported in the Cof A
- Traceability data to specific current lot of primary standard
- Completely synthetic and typically over 99.9% pure by GC-FID

Cat. No.	Pk	Pack type
85674.180	100 ml	Glass bottle

2,2,4-Trimethylpentane AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 540-84-1 **UN:** 1262
$(CH_3)_2CHCH_2C(CH_3)_3$ **M.W.** 114.23 g/mol
Boiling Pt: 99,2 °C (1013 hPa) **Melting Pt:** -107 °C **Density:** 0,692 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99.5 %	IR Spectrum	Passes test
Acidity	Max. 0.0003 meq/g	Boiling point	99 - 100 °C
Colouration	Max. 10 APHA	Density (20/4)	0.690 - 0.695
Density (20/20)	0.691 - 0.696	n 20/D	1.391 - 1.393
Substances coloured by H_2SO_4	Max. 35 APHA	Evaporation residue	Max. 10 ppm
Sulphur compounds (as S)	Max. 10 ppm	Water	Max. 100 ppm
Al (Aluminium)	Max. 0.5 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.05 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.1 ppm	K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Na (Sodium)	Max. 0.5 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm	Sn (Tin)	Max. 0.2 ppm
Sr (Strontium)	Max. 0.05 ppm	Zn (Zinc)	Max. 0.1 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
28781.291	1 l	Glass bottle
28781.325	2,5 l	Glass bottle
28781.460	25 l	Metal drum

2,2,4-Trimethylpentane, dehydrated (max. 0.01% H_2O) GPR RECTAPUR® for synthesis

Danger

CAS 540-84-1 **UN:** 1262
$(CH_3)_2CHCH_2C(CH_3)_3$ **M.W.** 114.23 g/mol
Boiling Pt: 99,2 °C (1013 hPa) **Melting Pt:** -107 °C **Density:** 0,692 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
IR Spectrum	Passes test
Density (20/4)	0.690 - 0.695
Free acidity	Max. 0.0004 meq/g
Evaporation residue	Max. 50 ppm
Water	Max. 100 ppm

Cat. No.	Pk	Pack type
28780.322	2,5 l	Glass bottle
28780.366	5 l	Metal can

2,2,4-Trimethylpentane TECHNICAL

Danger

CAS 540-84-1 **UN:** 1262
$(CH_3)_2CHCH_2C(CH_3)_3$ **M.W.** 114.23 g/mol
Boiling Pt: 99,2 °C (1013 hPa) **Melting Pt:** -107 °C **Density:** 0,692 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
n 20/D	1.391 - 1.393

Cat. No.	Pk	Pack type
28775.290	1 l	Glass bottle
28775.368	5 l	Metal can
28775.461	25 l	Metal drum

2,4,4-Trimethylpentene TECHNICAL

Danger

CAS 25167-70-8 **UN:** 2050
$(CH_3)_3CCH_2C(CH_3)=CH_2+(CH_3)_3CCH=C(CH_3)_2$ **M.W.** 112.22 g/mol
Boiling Pt: 101-102 °C (1013 hPa) **Melting Pt:** -106 °C **Density:** 0,71 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ..... Min. 90 %

Cat. No.	Pk	Pack type
23416.263	500 ml	Glass bottle

1,3,7-Trimethylxanthine

See Caffeine p.73

N8,N8,3-Trimethyl-2,8-phenazinediamine monohydrochloride

See Neutral red p.;290

2,3,5-Triphenyltetrazolium chloride TECHNICAL

Warning

CAS 298-96-4
$C_{19}H_{15}ClN_4$ **M.W.** 334.81 g/mol
Boiling Pt: < 360 °C (1013 hPa) **Melting Pt:** 235 °C
Storage Temperature: Refrigerator

Identification ..... Passes test

Cat. No.	Pk	Pack type
28804.121	10 g	Plastic bottle for solids

2,3,5-Triphenyltetrazolium chloride 1% in aqueous solution, sterile

Warning

CAS 298-96-4
$C_{19}H_{15}ClN_4$

Cat. No.	Pk	Pack type
301950ZK	100 ml	Plastic bottle

Tripotassium hexacyanoferrate

See Potassium hexacyanoferrate (III) p.365

Tripotassium 2-hydroxypropane-1,2,3-tricarboxylate monohydrate

See tri-Potassium citrate monohydrate p.361

TRIS

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.498

VWR LIFE SCIENCE Tris acetate, high purity

Warning

CAS 6850-28-8
$NH_2C(CH_2OH)_3 \cdot CH_3COOH$
Storage Temperature: Ambient

Heavy Metals ..... < = 0.001 %
Moisture ..... <= 0.3 %
pH (0.1M, Water) @25°C ..... 6 - 7
Purity ..... >= 98 %
Residue on Ignition ..... <= 0.1 %

Cat. No.	Pk	Pack type
0189-100G	100 g	Plastic bottle

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) AnalaR NORMAPUR® analytical reagent

Warning

CAS 77-86-1
$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol
Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on anhydrous) ..... 99.8 - 100.5 %
Identification ..... Passes test
Ignition residue (SO_4) ..... Max. 100 ppm
Water ..... Max. 0.1 %
SO_4 (Sulphate) ..... Max. 5 ppm
Ca (Calcium) ..... Max. 1 ppm
Cu (Copper) ..... Max. 0.1 ppm
K (Potassium) ..... Max. 0.3 ppm
Na (Sodium) ..... Max. 5 ppm
Absorbance (280 nm) (0.5 mol/l) ..... Max. 0.05
Appearance ..... White crystalline powder
Heavy metals (as Pb) ..... Max. 5 ppm
Insolubility in water ..... Max. 30 ppm
Cl (Chloride) ..... Max. 5 ppm
As (Arsenic) ..... Max. 0.2 ppm
Cd (Cadmium) ..... Max. 0.1 ppm
Fe (Iron) ..... Max. 0.2 ppm
Mg (Magnesium) ..... Max. 0.3 ppm
Pb (Lead) ..... Max. 0.1 ppm

Cat. No.	Pk	Pack type
103154M	250 g	Plastic bottle for solids
103156X	1 kg	Plastic bottle for solids
103157P	5 kg	Bucket (Plastic)
10315AC	20 kg	Plastic drum

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) buffer substance, for analysis and biochemical purposes

Warning

CAS 77-86-1
$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol
Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (calculated on dried substance) ..... Min. 99.9 %
Colouration (20 %; water) ..... Max. 20 APHA
Melting point ..... Min. 170 °C
pH (20°C; 5 %) ..... 10.0 - 11.5
Heavy metals (as Pb) ..... Max. 1 ppm
Insolubility in water ..... Max. 50 ppm
Water ..... Max. 0.2 %
Absorbance (260 nm) (1 mol/l) ..... Max. 0.03
Absorbance (280 nm) (1 mol/l) ..... Max. 0.03
Absorbance (430 nm) (1 mol/l) ..... Max. 0.004

Cat. No.	Pk	Pack type
28808.294	1 kg	Plastic bottle for solids
28808.440	25 kg	Plastic drum

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Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) Ph. Eur., USP

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (calculated on dried substance)	99.0 - 100.5 %
Appearance	Conforms (see CoA/CoS)
Identification B	Passes test USP
Identification C	Passes test USP
Identification (IR)	Passes test
Solution S	Passes test Ph.Eur.
Appearance of solution	Passes test Ph.Eur.
Melting point	168 - 172 °C
pH (20°C; 5 %)	10.0 - 11.5
Related substances	Passes test Ph.Eur.
Cl (Chloride)	Max. 100 ppm
Heavy metals (as Pb)	Max. 10 ppm
Fe (Iron)	Max. 10 ppm
Loss on drying (105°C; 3 h)	Max. 0.5 %
Sulphated ash	Max. 0.1 %
Organic volatile impurities	Passes test Ph.Eur./USP
Residues of metal catalysts or reagents	Conform
Residual solvents Class 2 (ICH Q3C)	:
Methanol	Below option 1 limit
Other residual solvents(Ph.Eur./ICH)	Unlikely by manuf.process
Conforms to Ph.Eur.	Passes test
Conforms to USP	Passes test

Cat. No.	Pk	Pack type
87020.290	1 kg	Plastic bottle for solids
87020.360	5 kg	Bucket (Plastic)
87020.460	25 kg	Bucket (Plastic)

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) GPR RECTAPUR®

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Melting point	169 - 172 °C
Ignition residue (SO_4)	Max. 0.2 %

Cat. No.	Pk	Pack type
28811.295	1 kg	Plastic bottle for solids
28811.364	5 kg	Bucket (Plastic)
28811.460	20 kg	Plastic drum

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) Gen-Apex® Molecular biology grade

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Colouration (0,5 mol/l; water)	Max. 10 APHA
Heavy metals (as Pb)	Max. 10 ppm
Transmittance (230 nm) (0,5 mol/l)	Min. 45 %
Transmittance (260 nm) (0,5 mol/l)	Min. 75 %
Transmittance (280 nm) (0.5 mol/l)	Min. 80 %
Transmittance (320 nm) (0.5 mol/l)	Min. 90 %

Cat. No.	Pk	Pack type
33621.260	500 g	Plastic bottle for solids

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) Electran® for electrophoresis

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.00 %
Appearance	White crystalline powder
Identity (IR)	Passes test
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Absorbance (260 nm) (10 %)	Max. 0.030
Absorbance (280 nm) (10 %)	Max. 0.020
pH (20°C; 1 mol/l)	10.50 - 11.50
Heavy metals (as Pb)	Max. 0.005 %
Water	Max. 0.3 %
Cu (Copper)	Max. 0.0001 %
Fe (Iron)	Max. 0.0001 %
Pb (Lead)	Max. 0.0001 %

Cat. No.	Pk	Pack type
443864E	500 g	Plastic bottle
443866G	2,5 kg	Plastic bottle

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol), ultrapure

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Reagent for stabilisation of buffer formulations and electrophoresis of biological molecules.

Biological buffers are useful for cell culture *in vitro*, enzyme assays and some electrophoretic applications at physiological pH. Universally applicable buffers for biochemistry must be water soluble, not interfere with biological processes or biological membranes (penetration, solubilisation, adsorption on surface, etc.), have known complex forming tendency with metal ions, be non toxic and have a very low U.V. absorption at wavelength >260 nm.

Abs.@280nm (1M, Water)	< 0.05
Abs.@290nm (40%, Water)	<= 0.2
Abs.@400nm (40%, Water)	<= 0.05
Arsenic	<= 0.0005%
Copper	<= 0.0001%
Insolubles	<= 0.005%
Iron	<= 0.0001%
Lead	<= 0.0001%
Magnesium	<= 0.0005%
Melting Point	168°C - 172°C
Moisture (KF)	<= 1%
pH (5%, Water) @25°C	10 - 11.5
Purity	>= 99.9%
Solubility (10%, Water)	Pass

Cat. No.	Pk	Pack type
0497-500G	500 g	Plastic bottle for solids
0497-1KG	1 kg	Plastic bottle for solids
0497-5KG	5 kg	Bucket (Plastic)
0497-10KG	10 kg	Bucket (Plastic)
0497-12KG	12 kg	Bucket (Plastic)
0497-50KG	50 kg	Plastic drum

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol), proteomics grade

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Reagent for stabilisation of buffer formulations and electrophoresis of biological molecules.

Abs.@280 nm (1M, Water)	0.05
Arsenic	<0.0005 %
Copper	<0.0001 %
DNase	NONE
Insolubles	0.005 %
Iron	< 0.0001 %
Lead	< 0.0001 %
Loss on Drying	1.0 %
Magnesium	0.0005 %
Protease	NONE
Purity	99.8 %
RNase	NONE
Solubility (10%, Water)	PASS

Cat. No.	Pk	Pack type
M151-500G	500 g	Plastic bottle for solids
M151-1KG	1 kg	Plastic bottle for solids

Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) for biotechnology

Warning

CAS 77-86-1

$NH_2C(CH_2OH)_3$ **M.W.** 121.14 g/mol

Boiling Pt: 357 °C (1013 hPa) **Melting Pt:** 169-172 °C **Density:** 1,328 g/cm³ (20 °C)

Storage Temperature: Ambient

Reagent for stabilisation of buffer formulations and electrophoresis of biological molecules.

Abs.@280nm (1M, Water)	< = 0.05
Arsenic	< 0.0005 %
Copper	< 0.0001 %
DNase	none detected
Insolubles	<= 0.005 %
Iron	< 0.0001 %
Lead	< 0.0001 %
Loss on Drying	< 1 %
Magnesium	< 0.0005 %
Protease	none
Purity	> 99.8 %
RNase	none detected

Cat. No.	Pk	Pack type
0826-500G	500 g	Plastic bottle for solids
0826-1KG	1 kg	Plastic bottle for solids
0826-5KG	5 kg	Bucket (Plastic)

TRIS base

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.498

Tris buffer solution, pH 6.8 (0.5 mol/l) for biotechnology

Cat. No.	Pk	Pack type
J832-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 7.4 (0.1 mol/l) for biotechnology

Cat. No.	Pk	Pack type
E553-100ML	100 ml	Plastic bottle
E553-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 7.5 (1 mol/l), ultrapure

Cat. No.	Pk	Pack type
E691-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 7.5 (2 mol/l)

Cat. No.	Pk	Pack type
J838-1L	1 l	Plastic bottle

Tris buffer solution, pH 7.8 (2 mol/l) for biotechnology

Cat. No.	Pk	Pack type
J837-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 8 (1 mol/l) for biotechnology

Cat. No.	Pk	Pack type
E199-100ML	100 ml	Plastic bottle
E199-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 8.8 (1.5 mol/l) for biotechnology

Cat. No.	Pk	Pack type
J831-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 8.8 (1.5 mol/l), proteomics grade

Cat. No.	Pk	Pack type
M195-500ML	500 ml	Plastic bottle

Tris buffer solution, pH 9 (1 mol/l), ultrapure

Cat. No.	Pk	Pack type
E694-250ML	250 ml	Plastic bottle

TE (Tris-EDTA) buffer pH 7.0 for biotechnology

10 mM Tris pH 7,0; 1 mM EDTA

Cat. No.	Pk	Pack type
N634-50ML	50 ml	Plastic bottle

Tris-glycine buffer, ultrapure

A pre-blended Tris-glycine powder for preparation of Laemmli SDS-PAGE running buffer.

The 40 l pack size prepares 40 litres of 1X Tris-glycine solution (0.025 M Tris base and 0.192 M glycine). Each Ready-Pack™ prepares 1 litre of a 10X concentrate.

Cat. No.	Pk	Pack type
0251-2PK	2	Pouch
0251-40L	40 l	Plastic bottle for solids

Tris-Glycine buffers, 10X concentrate, ultrapure

Running buffers for both 1-D and 2-D protein gel electrophoresis.

- Concentrated solutions with a choice of packaging options.

A 1X working solution contains 0.025 M Tris base and 0.192 M glycine.

Cat. No.	Pk	Pack type
0307-1L	1 l	Plastic bottle
0307-4L	4 l	Bag-in-box (Cubitainer)

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Tris-glycine buffer, proteomics grade

A pre-blended Tris-glycine powder for preparation of Laemmli SDS-PAGE running buffer. The 40 l pack size prepares 40 litres of 1X Tris-glycine solution (0.025 M Tris base and 0.192 M glycine). Each Ready-Pack™ prepares 1 litre of a 10x concentrate.

Cat. No.	Pk	Pack type
M115-40L	40 l	Plastic bottle for solids

Tris-glycine buffer,10X concentrate, proteomics grade

A 1X working solution contains 0.025 M Tris base, 0.192 M Glycine. 1X buffer is used as a transfer buffer for Western blotting procedures.

Cat. No.	Pk	Pack type
M114-1L	1 l	Plastic bottle
M114-4L	4 l	Bag-in-box (Cubitainer)

TRIS-glycine-SDS buffer, solid for 10X concentrated solution

TG-SDS buffer for preparation of Laemmli SDS-PAGE running buffer.

The 40 l pack size includes sufficient powder to prepare 40 litres of a 1X solution (0.025 M Tris, 0.192 M glycine and 0.1% SDS). Each Ready-Pack™ prepares 1 litre of a 10X solution.

Cat. No.	Pk	Pack type
0147-2PK	2	Pouch
0147-40L	40 l	Plastic bottle for solids

Tris-glycine-SDS (TGS) buffer, powder, proteomics grade

Each pack makes 1 l of 10X concentrate. 40 l size contains sufficient dry powder to prepare 40 l of 1X buffer. 1X solution contains: 0.025 M Tris, 0.192 M glycine, and 0.1% SDS.

Cat. No.	Pk	Pack type
M149-40L	40 l	Plastic bottle for solids

Tris-glycine-SDS (TGS) buffersolution,10X liquid concentrate, ultrapure

Liquid concentrate used for protein electrophoresis to maintain pH and temperature of the environment as well as provide ions that carry electrical current.

Cat. No.	Pk	Pack type
0783-1L	1 l	Plastic bottle
0783-4L	4 l	Bag-in-box (Cubitainer)

Tris-glycine-SDS (TGS) buffer solution, 10X concentrate, proteomics grade

A single strength (1X) solution contains 0.025 M Tris base, 0.192 M Glycine, and 0.1 % sodium dodecyl sulphate. In the 4 l pack size, there is sufficient concentrate to prepare 40 l of 1X TG-SDS buffer.

Cat. No.	Pk	Pack type
M148-4L	4 l	Bag-in-box (Cubitainer)

TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) Electran® for electrophoresis

CAS 1185-53-1

$NH_2C(CH_2OH)_3 \cdot HCl$ **M.W.** 157.6 g/mol

Melting Pt: 150-152 °C

Storage Temperature: Ambient

Assay	Min. 99.0 %	Appearance	White crystalline powder
Identity (IR)	Passes test	DNases	Not detected
RNases	Not detected	Proteases	Not detected
pH (0.5 mol/l)	3.5 - 5.0	Absorbance (230 nm) (10 %)	Max. 0.1
Absorbance (260 nm) (1 mol/l)	Max. 0.06	Absorbance (280 nm) (1 mol/l)	Max. 0.05
Absorbance (300 nm) (10 %)	Max. 0.02	Absorbance (405 nm) (10 %)	Max. 0.004
Sulphated ash	Max. 0.03 %	Water	Max. 0.5 %
As (Arsenic)	Max. 0.0001 %	Ba (Barium)	Max. 0.0001 %
Cd (Cadmium)	Max. 0.0001 %	Cu (Copper)	Max. 0.0001 %
Fe (Iron)	Max. 0.0003 %	Mn (Manganese)	Max. 0.0001 %
Pb (Lead)	Max. 0.0002 %	Zn (Zinc)	Max. 0.0002 %

Cat. No.	Pk	Pack type
441514A	500 g	Plastic bottle

TRIS HCl (Tris(hydroxymethyl) aminomethane hydrochloride), ultrapure

CAS 1185-53-1

$NH_2C(CH_2OH)_3 \cdot HCl$ **M.W.** 157.6 g/mol

Melting Pt: 150-152 °C

Storage Temperature: Ambient

Reagent for stabilisation of buffer formulations and electrophoresis of biological molecules.

Calcium	< 0.0001%
Copper	<= 0.0001%
DNase	none detected
Insolubles	<= 0.001%
Iron	<= 0.001%
Lead	<= 0.0001%
Magnesium	<= 0.0001%
Manganese	<= 0.0001%
pH (0.1M, Water) @25°C	4.2 - 4.9
Protease	none detected
Purity (Titration)	>= 99.5%
RNase	none detected
Zinc	<= 0.0001%

Cat. No.	Pk	Pack type
0234-500G	500 g	Plastic bottle for solids
0234-1KG	1 kg	Plastic bottle for solids
0234-5KG	5 kg	Bucket (Plastic)
0234-12KG	12 kg	Bucket (Plastic)

TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride), proteomics grade

CAS 1185-53-1

$NH_2C(CH_2OH)_3 \cdot HCl$ **M.W.** 157.6 g/mol

Melting Pt: 150-152 °C

Storage Temperature: Ambient

Calcium	< 0.0001%
Copper	< 0.0001 %
DNase	none detected
Electrophoresis	Pass
Insolubles	< 0.001 %
Iron	< 0.001 %
Lead	< 0.0001 %
Magnesium	< 0.0001 %
Manganese	< 0.0001 %
pH (0.1M, Water) @25°C	4.2 - 4.9
Protease	none detected
Purity	> 99.5
RNase	none detected
Zinc	<= 0.0001%

Cat. No.	Pk	Pack type
M108-500G	500 g	Plastic bottle for solids
M108-1KG	1 kg	Plastic bottle for solids

NEW TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) for biopharmaceutical production

CAS 1185-53-1

$NH_2C(CH_2OH)_3 \cdot HCl$ **M.W.** 157.6 g/mol

Melting Pt: 150-152 °C

Storage Temperature: Ambient

Assay	Min. 99,0 %	Appearance	White crystalline powder
Cell culture toxicity	Passes test	Dnases	Not detected
Identification by IR	Conforms to structure	Proteases	Not detected
Rnases	Not detected	Solubility (1 mol/l)	Clear and complete
pH (0,5 mol/l)	3,5 --> 5,0	pKa (25°C)	8,0 --> 8,4
Ignition residue	Max. 0,1 %	Insoluble substances	Max. 50 ppm
Loss on drying (105°C)	Max. 0,5 %	Ca (Calcium)	Max. 5 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm
Mg (Magnesium)	Max. 5 ppm	Mn (Manganese)	Max. 5 ppm
Pb (Lead)	Max. 5 ppm	Zn (Zinc)	Max. 5 ppm
Absorbance (260 nm) (1 mol/l)	Max. 0,05	Absorbance (280 nm) (1 mol/l)	Max. 0,05
Bioburden	Max. 100 CFU/g	Endotoxin (1 %) (EU/mg)	Max. 0,1

Cat. No.	Pk	Pack type
85827.297	1 kg	Plastic bottle
85827.366	5 kg	Bucket (Plastic)
85827.468	25 kg	Bucket (Plastic)

TRIS-tricine buffer solution 10X concentrate, proteomics grade

A 1X solution contains 100 mM TRIS and 100 mM tricine.

Cat. No.	Pk	Pack type
M170-1L	1 l	Plastic bottle

TRIS-tricine-SDS buffer solution, 10X concentrate, ultrapure

Tris-tricine buffers are a popular alternative for TG buffers because they stack and resolve small polypeptides with greater efficiency.

pH of 1X solution at 25 °C: 8.1 - 8.5

Cat. No.	Pk	Pack type
E449-1L	1 l	Plastic bottle

Tris-(2-hydroxyethyl)amine

See Triethanolamine (Trolamine) p.495

Tris(hydroxymethyl)methylamine hydrochloride

See TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) p.501

Tris(hydroxymethyl)methylamine

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.498

Tris(hydroxymethyl)methylammonium chloride

See TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) p.501

Trisodium orthophosphate dodecahydrate

See tri-Sodium phosphate dodecahydrate p.432

Triton® X-100 (Polyethylene glycol tert-octylphenyl ether), proteomics grade

Warning

CAS 9002-93-1 **UN:** 3082
Boiling Pt: >200 °C (1013hPa) **Melting Pt:** 6 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Non-ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Cloud Point ..... REPORT
Colour (APHA) 100
Peroxides ..... NONE
pH (5 %, Water) @25 °C ..... 6.0 - 8.0
Protease ..... NONE

Cat. No.	Pk	Pack type
M143-1L	1 l	Plastic bottle
M143-4L	4 l	Bag-in-box (Cubitainer)

Triton® X-100 (Polyethylene glycol tert-octylphenyl ether), reagent grade

Warning

CAS 9002-93-1 **UN:** 3082
Boiling Pt: >200 °C (1013hPa) **Melting Pt:** 6 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Non-ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

pH (5%, Water) @25°C ..... 6 - 8
Color (APHA) ..... <= 100

Cat. No.	Pk	Pack type
0694-1L	1 l	Plastic bottle
0694-4L	4 l	Bag-in-box (Cubitainer)

Triton® X-100 (Polyethylene glycol tert-octylphenyl ether) Molecular biology grade

Warning

CAS 9002-93-1 **UN:** 3082
Boiling Pt: >200 °C (1013hPa) **Melting Pt:** 6 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Biodegradable non-ionic surfactant, suitable for use in molecular biology applications.

Triton® is a registered trade mark of Union Carbide

Assay ..... Min. 98.0 %
Appearance ..... Clear viscous liquid
Identity (IR) ..... Passes test
DNases ..... Not detected
RNases ..... Not detected
Proteases ..... Not detected
Density (20/4) ..... 1.0640 - 1.0670
pH (1 %) ..... 6.00 - 8.00
Water ..... Max. 1.0 %
Heavy metals (as Pb) ..... Max. 0.0005 %
SO_4 (Sulphate) ..... Max. 0.005 %
Cl (Chloride) ..... Max. 0.005 %

Cat. No.	Pk	Pack type
437002A	50 ml	Glass bottle for solids

Triton® X-100 (Polyethylene glycol tert-octylphenyl ether) TECHNICAL

Warning

CAS 9002-93-1 **UN:** 3082
Boiling Pt: >200 °C (1013hPa) **Melting Pt:** 6 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Refrigerator

n 20/D ..... 1.489 - 1.491

Cat. No.	Pk	Pack type
28817.295	1 l	Plastic bottle

NEW Triton® X-100 (Polyethylene glycol tert-octylphenyl ether)

Danger

CAS 9002-93-1 **UN:** 3082
Boiling Pt: >200 °C (1013hPa) **Melting Pt:** 6 °C **Density:** 1,06 g/cm³ (20 °C)
Storage Temperature: Refrigerator

Cat. No.	Pk	Pack type
MX2347.290	1 l	Glass bottle
MX2347.320	2,5 l	Glass bottle
MX2347.460	25 l	Metal drum

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Triton® X-100 10% aqueous solution, proteomics grade

Danger

CAS 9002-93-1
Boiling Pt: ~100 °C (1013 hPa) **Density:** 1,01 g/cm³ (20 °C)
Storage Temperature: Ambient
Contains 5×10 ml vials of a 10% solution.

Colour (APHA)	100
Peroxides	NONE
pH (50 %, Water) @25 °C	6.0 - 8.0
Protease	NONE

Cat. No.	Pk	Pack type
M236-10ML-5PK	1 KIT	Glass ampoule

Triton® X-114 (Polyethylene glycol tert-octylphenyl ether), reagent grade

Danger

CAS 9036-19-5 **UN:** 3082
Boiling Pt: >150 °C (1013hPa) **Density:** 1,055 g/cm³ (20 °C)
Storage Temperature: Ambient

Cloud Point (1%, Water)	22 °C - 28 °C
Color (APHA)	< 100
Index of Refraction	1.48 - 1.5

Cat. No.	Pk	Pack type
0747-1L	1 l	Plastic bottle

Triton® X-114 (Polyethylene glycol tert-octylphenyl ether), proteomics grade

Danger

CAS 9036-19-5 **UN:** 3082
Boiling Pt: >150 °C (1013hPa) **Density:** 1,055 g/cm³ (20 °C)
Storage Temperature: Ambient
Non-ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Cloud Point (1 %, Water)	22 - 28 °C
Colour (APHA)	<100
Index of Refraction	1.48 - 1.50

Cat. No.	Pk	Pack type
M144-1L	1 l	Plastic bottle

Triton® X-405 (Polyethylene glycol tert-octylphenyl ether), reagent grade

Danger

CAS 9002-93-1
Boiling Pt: 120 °C (1013 hPa) **Melting Pt:** -4 °C **Density:** 1,05 g/cm³ (20 °C)
Storage Temperature: Ambient

Color (APHA)	< 250
pH (5%, Water) @25°C	6 - 8

Cat. No.	Pk	Pack type
0471-500ML	500 ml	Plastic bottle

Trolamine

See Triethanolamine (Trolamine) p.495

Trometamol hydrochloride

See TRIS HCl (Tris-(hydroxymethyl) aminomethane hydrochloride) p.501

Trometamol

See Tris(hydroxymethyl)aminomethane (TRIS, Trometamol) p.498

Trp

See L(-)-Tryptophan p.503

Trypan Blue 4 g/l in aqueous solution Cell Culture Reagent

Danger

CAS 72-57-1
$C_{34}H_{24}N_6Na_4O_{14}S_4$
A dye used in cell culture applications to determine cell viability.

Abs.@ Lambda Max (1:100, Water)	1 - 1.3
Lambda Max (1:100, Water)	585 nm - 595 nm

Cat. No.	Pk	Pack type
K940-100ML	100 ml	Plastic bottle

Trypsin, 2,500 U/mg, crystals, proteomics grade

From bovine pancreas.

Cat. No.	Pk	Pack type
M150-1G	1 g	Glass bottle

Trypsin, 2,500 U/mg USP

From bovine pancreas.

Product is tested to USP specifications

Cat. No.	Pk	Pack type
0785-1G	1 g	Glass bottle
0785-5G	5 g	Glass bottle

Trypsin, from Bovine Pancreas

(formerly EC 3.4.4.4)

Contains about 85% lactose as diluent; activity about 0.5 Anson units per g (calculated as at 35.5°C). 1 Anson unit is that which hydrolyses urea denatured haemoglobin at such an initial rate under the specified conditions (25°C) that the hydrolysis products formed per minute give the same absorbance with the Folin and Ciocalteu's reagent as 1 millimole of tyrosine. (Based on Anson, M.L., J. Gen. Physiol., 1938, 22, 79)
For *in-vitro* laboratory use only

Cat. No.	Pk	Pack type
39041CU	5 kg	Plastic bottle

Trypsin inhibitor, from Soy Bean, proteomics grade

A serine protease inhibitor specific for trypsin and trypsin-like proteases.

Cat. No.	Pk	Pack type
M191-1G	1 g	Glass bottle

Trypsin inhibitor, from Soy Bean, reagent grade

A serine protease inhibitor specific for trypsin and trypsin-like proteases.

Cat. No.	Pk	Pack type
K213-1G	1 g	Glass bottle

Tryptic soy agar

See Microbiology

L(-)-Tryptophan for biochemistry

CAS 73-22-3
$C_{11}H_{12}N_2O_2$ **M.W.** 204.23 g/mol
Melting Pt: 290 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Specific optical rotation (5 %; HCl 1 N)	1.5 - 2.5 °
Foreign amino acids	Max. 0.3 %
Heavy metals (as Pb)	Max. 10 ppm
Ninhydrin-positive substances (glycine)	Max. 0.1 %
NH_4 (Ammonium)	Max. 100 ppm

Cat. No.	Pk	Pack type
28821.131	25 g	Plastic bottle for solids

(S)-(-)-Tryptophan

See L(-)-Tryptophan p.503

Trytpic soy broth

See Microbiology

TSA

See Microbiology

TSB

See Microbiology

TSC agar

See Microbiology

TSI agar

See Microbiology

TSN agar

See Microbiology

TTC

See 2,3,5-Triphenyltetrazolium chloride p.498

TTC agar

See Microbiology

NEW

Tungsten standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Tungsten	1000 ppm	H_2O/tr.NH_4OH	Plastic bottle	100 ml	457494D
Tungsten	10 ppm	H_2O/tr.NH_4OH	Plastic bottle	100 ml	85644.180

Tungsten standard solution, 10,000 mg/l W in water (from W) ARISTAR® standard for ICP

W in H_2O tr.NH_4OH

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
457172E	100 ml	Plastic bottle

Tungsten standard solution, 1,000 mg/l W in water (from W) ARISTAR® standard for ICP

W in H_2O tr.NH_4OH

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
457182G	100 ml	Plastic bottle
457184Y	500 ml	Plastic bottle

Tungsten standard solution, 1,000 mg/l W in nitric acid with hydrofluoric acid (each max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86722.180	100 ml	Plastic bottle
86722.260	500 ml	Plastic bottle

12-Tungstophosphate hydrate

See Phosphotungstic acid hydrate p.353

Tungstophosphoric acid hydrate

See Phosphotungstic acid hydrate p.353

Turkey Red Oil

Warning

CAS 8002-33-3

Density: 1.05 g/cm³ (20 °C)

Appearance ..... Clear amber liquid
Water ..... 45.0 - 47.0 %

Cat. No.	Pk	Pack type
56049CK	25 l	Plastic bottle

Turpentine oil TECHNICAL

Danger

CAS 8006-64-2
Boiling Pt: 153-175 °C (1013 hPa)
UN: 1299
Melting Pt: (-60)-(-50) °C
Density: 0,854-0,868g/cm³ (25 °C)
REACh: 01-2119553060-53

Identification ..... Passes test

Cat. No.	Pk	Pack type
23699.293	1 l	Glass bottle

Tween® 20 (Polysorbate)

CAS 9005-64-5
$C_{58}H_{114}O_{26}$
M.W. 1227.53 g/mol
Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient
Tween® is a registered trade mark of Atlas Chemical Industries Inc.

IR Spectrum ..... Passes test
Density (20/4) ..... 1.095 - 1.105
Hydroxyl value ..... 96 - 113
Saponification value ..... 40 - 51

Cat. No.	Pk	Pack type
663684B	500 ml	Glass bottle

VWR LIFE SCIENCE Tween® 20 (Polysorbate), reagent grade

CAS 9005-64-5
$C_{58}H_{114}O_{26}$
M.W. 1227.53 g/mol
Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Arsenic ..... < 0.0003 %
DNase ..... NONE
Heavy Metals ..... <0.001 %
Hydroxyl Number ..... 96 - 108
Identification ..... PASS
Moisture (KF) ..... 3.0 %
Protease ..... NONE
Residue on Ignition ..... 0.25 %
RNase ..... NONE

Cat. No.	Pk	Pack type
0777-1L	1 l	Plastic bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

VWR LIFE SCIENCE Tween® 20 (Polysorbate), proteomics grade

CAS 9005-64-5

$C_{58}H_{114}O_{26}$ **M.W.** 1227.53 g/mol

Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Non-ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

Arsenic	< 0.0003 %
DNase	NONE
Heavy Metals	<0.001 %
Hydroxyl Number	96 - 108
Identification	PASS
Moisture (KF)	3.0 %
Protease	NONE
Residue on Ignition	0.25 %
RNase	NONE

Cat. No.	Pk	Pack type
M147-1L	1 l	Plastic bottle
M147-4L	4 l	Bag-in-box (Cubitainer)

Tween® 20 (Polysorbate) Molecular biology grade

CAS 9005-64-5

$C_{58}H_{114}O_{26}$ **M.W.** 1227.53 g/mol

Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Tween® is a registered trade mark of Atlas Chemical Industries Inc.

A detergent specifically tested for use in molecular biology applications.

Appearance	Yellowish granules
DNases	Not detected
RNases	Not detected
Proteases	Not detected
Density (20/4)	1.095 - 1.105
Hydroxyl value	96 - 108
Saponification value	40.0 - 50.0

Cat. No.	Pk	Pack type
437082Q	100 ml	Glass bottle for solids

Tween® 20 (Polysorbate) TECHNICAL

CAS 9005-64-5

$C_{58}H_{114}O_{26}$ **M.W.** 1227.53 g/mol

Density: 1,1 g/cm³ (20 °C)

Storage Temperature: Ambient

Hydroxyl value	90 - 110

Cat. No.	Pk	Pack type
28829.183	100 ml	Glass bottle
28829.296	1 l	Plastic bottle

VWR LIFE SCIENCE Tween® 20, 10% aqueous solution, proteomics grade

CAS 9005-64-5

$C_{58}H_{114}O_{26}$ **M.W.** 1227.53 g/mol

Storage Temperature: Ambient

Contains 5×10 ml vials of 10% solution.

DNase	NONE
Heavy Metals	0.001 %
Identification	PASS
Milliflex (SDA)	NONE
Milliflex (TSA)	NONE
Peroxide	1.0 umol/mL
Protease	NONE
Residue on Ignition	0.25 %
RNase	NONE

Cat. No.	Pk	Pack type
M228-10ML-5PK	10 ml	Glass ampoule

VWR LIFE SCIENCE Tween® 80 (Polysorbate), proteomics grade

CAS 9005-65-6

Boiling Pt: >100 °C (1013hPa) **Melting Pt:** -21 °C **Density:** 1,062 g/cm³ (20 °C)

Storage Temperature: Ambient

Non-ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

DNase	NONE
Heavy Metals	<0.001 %
Hydroxyl Number	65 - 80
Identification	PASS
Moisture (KF)	3.0 %
Protease	NONE
Residue on Ignition	0.25 %
RNase	NONE
Specific Gravity	1.06 - 1.09
Viscosity	300 - 500 centistokes

Cat. No.	Pk	Pack type
M126-100ML	100 ml	Plastic bottle
M126-1L	1 l	Plastic bottle

VWR LIFE SCIENCE Tween® 80 (Polysorbate), reagent grade

CAS 9005-65-6

Boiling Pt: >100 °C (1013hPa) **Melting Pt:** -21 °C **Density:** 1,062 g/cm³ (20 °C)

Storage Temperature: Ambient

Non-ionic detergent efficiently separates hydrophilic proteins from membrane spanning, hydrophobic proteins without altering biological activity.

DNase	NONE
Heavy Metals	<0.001 %
Hydroxyl Number	65 - 80
Identification	PASS
Moisture (KF)	3.0 %
Protease	NONE
Residue on Ignition	0.25 %
RNase	NONE
Specific Gravity	1.06 - 1.09
Viscosity	300 - 500 centistokes

Cat. No.	Pk	Pack type
0442-1L	1 l	Plastic bottle
0442-4L	4 l	Bag-in-box (Cubitainer)

Tween® 80 (Polysorbate) TECHNICAL

CAS 9005-65-6

Boiling Pt: >100 °C (1013hPa) **Melting Pt:** -21 °C **Density:** 1,062 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification	Passes test
Density (20/4)	1.070 - 1.090
Hydroxyl value	65 - 80
Saponification value	45 - 55

Cat. No.	Pk	Pack type
28830.291	1 l	Plastic bottle

NEW L-Tyrosine disodium salt dihydrate for biopharmaceutical production

CAS 122666-87-9

$C_9H_9NNa_2 \cdot 2H_2O$ **M.W.** 261.9 g/mol

Assay	Min. 98.0 %
Appearance (on dried substance)	Powder
Colour	Off white to pale brown
Cell culture toxicity	Passes test
DNases	Not detected
Identification by IR	Conforms to structure
Proteases	Not detected
RNases	Not detected
Solubility (1 %)	Clear.complete.yellowish
pH (25°C; 1 %)	10.5 - 11.5
Spec.rot.(4 g/100 ml;calc. as free acid)	-14.40 to -12.60 °
Heavy metals (as Pb)	Max. 15 ppm
Water	Max. 16.0 %
Bioburden	Max. 100 CFU/g
Endotoxin (1 %) (EU/mg)	Max. 0.04 EU/mg

Cat. No.	Pk	Pack type
87058.180	100 g	Plastic bottle for solids
87058.297	1 kg	Plastic bottle for solids
87058.366	5 kg	Bucket (Plastic)
87058.468	25 kg	Bucket (Plastic)

Universal indicator solution

See Universal indicator ethanol solution TECHNICAL p.214

Uracil, ultrapure

CAS 66-22-8

$C_4H_4N_2O_2$ **M.W.** 112.09 g/mol
Boiling Pt: 379 °C (1013 hPa) **Melting Pt:** 194 °C **Density:** 0,99744 g/cm³ (25 °C)
Storage Temperature: Ambient

Em (258nm, Phosphate Buffer, pH 7.0) ..... >= 7850

Cat. No.	Pk	Pack type
0847-250G	250 g	Plastic bottle for solids
0847-500G	500 g	Plastic bottle for solids

NEW Uranium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Uranium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85641.180

Urea AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent

CAS 57-13-6

NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Assay ..... 99.5 - 100.5 %
IR Spectrum ..... Passes test
Acidity ..... Max. 0.0005 meq/g
Melting point ..... 132 - 134 °C
Heavy metals (as Pb) ..... Max. 4 ppm
Insolubility in water ..... Max. 30 ppm
Cl (Chloride) ..... Max. 5 ppm
SO_4 (Sulphate) ..... Max. 10 ppm
Fe (Iron) ..... Max. 1 ppm
Conforms to ACS ..... Passes test
Appearance of solution (10 %; water) ..... Clear and colourless
Solution S ..... Passes test
Alkalinity ..... Max. 0.0005 meq/g
Biuret ..... Max. 0.05 %
Ignition residue (SO_4) ..... Max. 50 ppm
Loss on drying (100-105°C) ..... Max. 1.0 %
NH_4 (Ammonium) ..... Max. 0.05 %
Cu (Copper) ..... Max. 1 ppm
Pb (Lead) ..... Max. 2 ppm
Conforms to Reag. Ph.Eur. ..... Passes test

Cat. No.	Pk	Pack type
28877.235	250 g	Plastic bottle for solids
28877.260	500 g	Plastic bottle for solids
28877.361	5 kg	Bucket (Plastic)
28877.460	25 kg	Bucket (Plastic)

Urea GPR RECTAPUR®

CAS 57-13-6

NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Assay ..... Min. 95 %
Melting point ..... 132 - 135 °C
Heavy metals (as Pb) ..... Max. 10 ppm
Ignition residue (SO_4) ..... Max. 0.2 %
Cl (Chloride) ..... Max. 5 ppm
Fe (Iron) ..... Max. 10 ppm

Cat. No.	Pk	Pack type
28876.298	1 kg	Plastic bottle for solids
28876.367	5 kg	Bucket (Plastic)
28876.460	25 kg	Bucket (Plastic)

Urea Gen-Apex® Molecular biology grade

CAS 57-13-6

NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Assay ..... Min. 99.5 %
Colouration (8 mol/l; water) ..... Max. 10 APHA
Heavy metals (as Pb) ..... Max. 5 ppm
Absorbance (260 nm) (8 mol/l) ..... Max. 0.1
Absorbance (280 nm) (8 mol/l) ..... Max. 0.1

Cat. No.	Pk	Pack type
33622.263	500 g	Plastic bottle for solids

Urea Electran® for electrophoresis

CAS 57-13-6

NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Assay ..... Min. 99.5 %
Cyanate (as OCN) ..... Not detected
DNases (exo- and endonucleases) ..... Not detected
Proteases ..... Not detected
RNases ..... Not detected
Melting point ..... Max. 134 °C
Biuret ..... Max. 0.05 %
Ignition residue (SO_4) ..... Max. 0.01 %
Cl (Chloride) ..... Max. 5 ppm
CN (Cyanide) ..... Max. 0.01 ppm
NH_4 (Ammonium) ..... Max. 0.1 ppm
SO_4 (Sulphate) ..... Max. 10 ppm
Cu (Copper) ..... Max. 0.3 ppm
Fe (Iron) ..... Max. 0.3 ppm
Pb (Lead) ..... Max. 1.7 ppm
Absorbance (260 nm) (5 mol/l) ..... Max. 0.05
Absorbance (280 nm) (5 mol/l) ..... Max. 0.04

Cat. No.	Pk	Pack type
443874G	500 g	Plastic bottle
443876Y	2,5 kg	Plastic bottle
443877J	5 kg	Plastic bottle

Urea, ultrapure

CAS 57-13-6

NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Commonly used to denature nucleic acids for electrophoresis and to study the secondary and tertiary structure of proteins.

Abs.@280nm (5M, Water) ..... < 0.05
Biuret Test ..... Pass
Chloride ..... <= 0.0005%
Cyanate ..... <= 0.002%
DNase ..... none detected
Heavy Metals (as Pb) ..... <= 0.0005%
Insolubles ..... <= 0.005%
Iron ..... <= 0.0001%
Melting Point ..... 132°C - 135°C
Protease ..... none detected
Purity ..... >= 99.5%
RNase ..... none detected
Solubility (5M, Water) ..... Pass

Cat. No.	Pk	Pack type
0568-100G	100 g	Plastic bottle for solids
0568-500G	500 g	Plastic bottle for solids
0568-1KG	1 kg	Plastic bottle for solids
0568-2.5KG	2,5 kg	Bucket (Plastic)
0568-5KG	5 kg	Bucket (Plastic)

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Urea, proteomics grade

CAS 57-13-6
NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Abs.@280nm (5M, Water) ... < 0.05
Biuret Test ... Pass
Chloride ... <= 0.0005 %
Cyanate ... <= 0.002 %
DNase ... none detected
Heavy Metals (as Pb) ... < = 0.0005 %
Insolubles ... < 0.005 %
Iron ... < = 0.0001 %
Melting Point ... 132°C - 135°C
Protease ... none
Purity ... > = 99.5 %
RNase ... none detected
Solubility (5M, Water) ... Pass

Cat. No.	Pk	Pack type
M123-500G	500 g	Plastic bottle for solids
M123-1KG	1 kg	Plastic bottle for solids

Urea TECHNICAL

CAS 57-13-6
NH_2CONH_2 **M.W.** 60.06 g/mol
Boiling Pt: 197 °C (1013 hPa) **Melting Pt:** 132,7 °C **Density:** 1,34 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119463277-33

Assay ... Min. 90 %

Cat. No.	Pk	Pack type
28875.460	25 kg	Cardboard carton

Urea 40% in aqueous solution for microbiology

CAS 57-13-6
NH_2CONH_2
Storage Temperature: Ambient
Sterile additive for the urease test in microbiology.

Cat. No.	Pk	Pack type
992830ZF	100 ml	Glass bottle

Urea 8 mol/l in aqueous solution, ultrapure

CAS 57-13-6
NH_2CONH_2
Storage Temperature: Ambient
Commonly used to denature nucleic acids for electrophoresis and to study the secondary and tertiary structure of proteins.

Appearance ... Clear and colorless liquid
Urea ... 7.8 Molar - 8.2 Molar

Cat. No.	Pk	Pack type
E720-250ML	250 ml	Plastic bottle

Urea 8 mol/l in aqueous solution, proteomics grade

CAS 57-13-6
NH_2CONH_2
Storage Temperature: Ambient

Clarity ... Pass
Protease ... none detected
Urea ... 7.8 Molar - 8.2 Molar
Appearance ... Clear and colorless liquid

Cat. No.	Pk	Pack type
M124-250ML	250 ml	Plastic bottle

Uric acid, purified

CAS 69-93-2
$C_5H_4N_4O_3$ **M.W.** 168.11 g/mol
Melting Pt: 436 °C **Density:** 1,89 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay ... Min. 99 %

Cat. No.	Pk	Pack type
20745.134	25 g	Plastic bottle for solids

Uridine, ultrapure

CAS 58-96-8
$C_9H_{12}N_2O_6$
Storage Temperature: Ambient

Em (261nm, 0.15M Phosphate Buffer, pH 7.3) ... >= 10100

Cat. No.	Pk	Pack type
0975-25G	25 g	Plastic bottle for solids
0975-50G	50 g	Plastic bottle for solids

Urine dipslide

See Microbiology

Urotropine

See Methenamine ... p.259

UTP-Na3 (Uridine-5'-triphosphoric acid trisodium salt), ultrapure

CAS 19817-92-6
$C_9H_{12}N_2Na_3O_{15}P_3$
Storage Temperature: Freezer

Moisture (KF) ... < = 13 %
Purity (Dried) ... >= 98 %

Cat. No.	Pk	Pack type
0145-250MG	250 mg	Glass bottle

UV-visible spectroscopy standards

See Standards UV/Vis ... p.462

Vacuum oil for pump TECHNICAL

CAS 8012-95-1

Identification ... Passes test

Cat. No.	Pk	Pack type
9930.5000	5 l	Plastic container

NEW Vanadium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Vanadium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456972B
Vanadium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85643.180

Vanadium standard solution, 10,000 mg/l V in dil. nitric acid (from V2O5) ARISTAR® standard for ICP

V_2O_5 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456332V	100 ml	Plastic bottle
456334A	500 ml	Plastic bottle

Vanadium standard solution, 1,000 mg/l V in dil. nitric acid (from V2O5) ARISTAR® standard for ICP

V_2O_5 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456322T	100 ml	Plastic bottle
456324V	500 ml	Plastic bottle

Vanadium standard solution, 1,000 mg/l V in 2% sulphuric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86721.180	100 ml	Plastic bottle
86721.260	500 ml	Plastic bottle

Vanadium oxide sulphate pentahydrate

See Vanadyl sulphate pentahydrate p.508

di-Vanadium pentoxide solution in sulphuric acid Reag. Ph. Eur. 1034001

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87828.180	100 ml	Plastic bottle

Vanadium (IV) sulphate oxide pentahydrate

See Vanadyl sulphate pentahydrate p.508

Vanadomolybdate reagent Reag. Ph. Eur. 1060100

Danger

UN: 2031

Boiling Pt: ~100 °C (1013 hPa) **Density:** 1,2 g/cm³ (20 °C)

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87882.220	200 ml	Plastic bottle

Vanadomolybdate reagent

Danger

UN: 2031

Boiling Pt: ~100 °C (1013 hPa) **Density:** 1,2 g/cm³ (20 °C)

Colour reaction ..... Satisfactory

Cat. No.	Pk	Pack type
191844W	1 l	Glass bottle

Vanadyl sulphate pentahydrate TECHNICAL

Warning

CAS 12439-96-2 **UN:** 2931

$VOSO_4 \cdot 5H_2O$ **M.W.** 253.08 g/mol

Density: 2 g/cm³ (20 °C)

Identification ..... Passes test

Cat. No.	Pk	Pack type
28900.180	100 g	Plastic bottle for solids

Vaseline oil

See Paraffin, liquid p.328

Vaseline white Ph. Eur.

CAS 92045-74-4

Boiling Pt: 343 °C (1013 hPa) **Melting Pt:** 38-56 °C (1013 hPa) **Density:** 0,865 g/cm³ (20 °C)

Appearance	Conforms (see CoA/CoS)
Drop point	35 - 70 °C
Identification (IR)	Passes test
Appearance test	Passes test
Acidity or alkalinity	Passes test
Consistency	60 - 300
Polycyclic aromatic hydrocarbons	Passes test
Sulphated ash	Max. 0.05 %
Residual solvents	Passes test
Conforms to Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
28908.290	1 kg	Plastic bottle

Violet bile red dextrose agar

See Microbiology

Violet red Bile Agar

See Microbiology

Violet red bile dextrose agar

See Microbiology

Violet red bile glucose agar

See Microbiology

Violet red lactose agar

See Microbiology

VitamineB1 hydrochloride

See Thiamine hydrochloride p.485

Vitamine B2

See Riboflavine (Vitamin B2) p.389

Vitamine G

See Riboflavine (Vitamin B2) p.389

Organic reference standard, Volatile Organic Compound Mix 1 (Liquid)

0.2mg/ml of each component in Methanol
Volatile Organic Components by PID/ELCD
54 liquid components :

Benzene; Bromobenzene; Bromochloromethane; Bromodichloromethane; Bromoform; n-Butylbenzene; sec-Butylbenzene; tert-Butylbenzene; Carbon tetrachloride; Chlorobenzene; Chloroform; 2-Chlorotoluene; 4-Chlorotoluene; Dibromochloromethane; 1,2-Dibromo-3-chloropropane; 1,2-Dibromoethane; Dibromomethane; 1,2-Dichlorobenzene; 1,3-Dichlorobenzene; 1,4-Dichlorobenzene; 1,1-Dichloroethane; 1,2-Dichloroethane; 1,1-Dichloroethene; cis-1,2-Dichloroethene; trans-1,2-Dichloroethene; 1,2-Dichloropropane; 1,3-Dichloropropane; 2,2-Dichloropropane; 1,1-Dichloropropene; cis-1,3-Dichloropropene; trans-1,3-Dichloropropene; Ethylbenzene; Hexachlorobutadiene; Isopropylbenzene; p-Isopropyltoluene; Methylene chloride; Naphthalene; n-Propylbenzene; Styrene; 1,1,1,2-Tetrachloroethane; 1,1,1,2-Tetrachloroethane; Tetrachloroethene; Toluene; 1,2,3-Trichlorobenzene; 1,2,4-Trichlorobenzene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethene; 1,2,3-Trichloropropane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; o-Xylene; m-Xylene; p-Xylene

Cat. No.	Pk	Pack type
123382J	1 ml	Glass ampoule

VOLTALEF® oil

See Oil 10 S p.355

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Volumetric solutions AVS TITRINORM®

Traceable to SRM from NIST

- No costly preparation time
- Variety of pack sizes/pack types: 250 ml up to 20 l, in bottles, bag-in-box or bulk packs
- Manufactured from analytical grade products, within an accuracy of 0.2%
- High reproducibility, labelled with minimum shelf life/batch number

Description	Page	Pk	Cat. No.
Acetic acid 1 mol/l (1 N) AVS TITRINORM® volumetric solution	5, 509	1 l	30010.292
Ammonium cerium (IV) sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	31, 509	1 l	2678.1000
Benzethonium chloride 0.004 mol/l AVS TITRINORM® volumetric solution	55, 509	2,5 l	30497.327
Calcium chloride 1 mol/l in aqueous solution AVS TITRINORM® volumetric solution	76, 509	1 l	190464K
Cerium (IV) sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	81, 509	2,5 l	190475N
Cerium (IV) sulphate 0.05 mol/l (0.05 N) in aqueous solution AVS TITRINORM® volumetric solution	81, 509	1 l	31307.294
EDTA disodium salt 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution	131, 509	1 l	28662.290
EDTA disodium salt 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution	131, 509	5 l	28662.370
EDTA disodium salt 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	131, 509	1 l	30031.294
EDTA disodium salt 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	131, 509	10 l	30031.408
EDTA disodium salt 0.0178 mol/l (N/28) in aqueous solution AVS TITRINORM®, for hardness of water determinations	131, 476, 509	10 l	30029.412
EDTA disodium salt 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution	131, 509	5 l	160226G
Hydrochloric acid 6 mol/l (6 N) AVS TITRINORM® Reag. Ph. Eur. 3001500 volumetric solution	201, 509	5 l	2611.5000
Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution	201, 476, 509	1 l	30018.298
Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution	201, 476, 509	2,5 l	30018.320
Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution	201, 509	5 l	30018.360
Hydrochloric acid 5 mol/l (5 N) AVS TITRINORM® volumetric solution	201, 509	20 l	30018.447
Hydrochloric acid 4 mol/l (4 N) VOLUSOL® volumetric solution	201, 476, 509	1 l	310701.1000
Hydrochloric acid 2 mol/l (2 N) AVS TITRINORM® volumetric solution	201, 509	1 l	30025.293
Hydrochloric acid 2 mol/l (2 N) AVS TITRINORM® volumetric solution	201, 509	2,5 l	30025.320
Hydrochloric acid 2 mol/l (2 N) AVS TITRINORM® volumetric solution	201, 509	5 l	30025.362
Hydrochloric acid 2 mol/l (2 N) AVS TITRINORM® volumetric solution	201, 509	5 l	30025.373
Hydrochloric acid 2 mol/l (2 N) AVS TITRINORM® volumetric solution	201, 509	10 l	30025.407
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	202, 476, 509	1 l	30024.290
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	202, 509	2,5 l	30024.324
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	202, 509	5 l	30024.370
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	202, 476, 509	10 l	30024.404
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	202, 509	10 l	30024.415
Hydrochloric acid 1 mol/l (1 N) AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	202, 509	20 l	30024.448
Hydrochloric acid 0.714 mol/l (N/1.4) AVS TITRINORM® volumetric solution	202, 476, 509	10 l	307904.400
Hydrochloric acid 0.5 mol/l (0.5 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	202, 509	1 l	31954.290
Hydrochloric acid 0.5 mol/l (0.5 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	202, 509	5 l	31954.368
Hydrochloric acid 0.5 mol/l (0.5 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	202, 509	10 l	31954.404
Hydrochloric acid 0.357 mol/l (N/2.8) AVS TITRINORM® volumetric solution	202, 476, 509	1 l	30023.296
Hydrochloric acid 0.2 mol/l (0.2 N) AVS TITRINORM® volumetric solution	203, 509	1 l	31983.290
Hydrochloric acid 0.2 mol/l (0.2 N) AVS TITRINORM® volumetric solution	203, 509	5 l	31983.370
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	203, 476, 509	1 l	31955.293
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	203, 509	2,5 l	31955.327
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	203, 509	5 l	31955.373
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	203, 509	10 l	31955.407
Hydrochloric acid 0.1 mol/l (0.1 N) AVS TITRINORM® Reag. Ph. Eur. volumetric solution	203, 509	20 l	31955.442
Hydrochloric acid 0.0714 mol/l (0.1N/1.4) AVS TITRINORM® volumetric solution	203, 476, 509	10 l	307902.400
Hydrochloric acid 0.04 mol/l (0.04 N) AVS TITRINORM® according to the NF T 90-036 standard, volumetric solution	203, 509	1 l	30022.293
Hydrochloric acid 0.02 mol/l (0.02 N) AVS TITRINORM® volumetric solution	203, 509	1 l	98052.296
Hydrochloric acid 0.01 mol/l (0.01 N) VOLUSOL® volumetric solution	203, 509	1 l	311341.1000
Iodine 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	220, 509	250 ml	30914.238
Iodine 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	220, 509	1 l	30914.295
Iodine 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	220, 509	1 l	30917.295
Iodine 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	220, 509	2,5 l	30917.320
Nitric acid 1 mol/l (1 N) AVS TITRINORM® volumetric solution	320, 509	1 l	30065.291
Orthophosphoric acid 150 ml/l AVS TITRINORM® for TOC	325, 509	2,5 l	310337.2500
Oxalic acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	325, 509	1 l	30086.293
Oxalic acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	326, 509	1 l	30093.297
Perchloric acid 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	340, 509	1 l	30111.291
Perchloric acid 0.1 mol/l (0.1 N) in anhydrous acetic acid AVS TITRINORM® volumetric solution	340, 509	500 ml	30110.264
Perchloric acid 0.1 mol/l (0.1 N) in anhydrous acetic acid AVS TITRINORM® volumetric solution	340, 509	1 l	30110.297
Perchloric acid 0.1 mol/l (0.1 N) in anhydrous acetic acid AVS TITRINORM® volumetric solution	340, 509	2,5 l	30110.320
Potassium dichromate 1/6 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	362, 509	1 l	31396.291
Potassium dichromate 0.04 mol/l (0.24 N) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	362, 509	1 l	30892.298
Potassium dichromate 1/60 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	363, 509	2,5 l	191005X
Potassium dichromate 0.04 mol/l (0.24 N) with mercury (II) sulphate 80 g/l in sulphuric acid solution AVS TITRINORM® volumetric solution, for COD determination in water	363, 509	1 l	30891.295
Potassium dichromate 0.04 mol/l (0.24 N) with mercury (II) sulphate 80 g/l in sulphuric acid solution AVS TITRINORM® volumetric solution, for COD determination in water	363, 509	2,5 l	30891.420
Potassium hexacyanoferrate (II) 0.25 mol/l in aqueous solution (CARREZ I Solution)	365, 476, 509	1 l	85733.290
Potassium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	368, 509	1 l	31300.291
Potassium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® volumetric solution	368, 509	1 l	31950.296
Potassium hydroxide 0.23 mol/l (0.23 N) in aqueous solution AVS TITRINORM® volumetric solution	368, 476, 509	10 l	5045.9010
Potassium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	368, 509	1 l	31780.298
Potassium hydroxide 1 mol/l (1 N) in ethanol AVS TITRINORM® volumetric solution	369, 509	500 ml	31306.267
Potassium hydroxide 0.5 mol/l (0.5 N) in ethanol AVS TITRINORM® volumetric solution	369, 509	500 ml	31308.264
Potassium hydroxide 0.5 mol/l (0.5 N) in ethanol AVS TITRINORM® volumetric solution	369, 509	1 l	31308.297
Potassium hydroxide 0.1 mol/l (0.1 N) in ethanol AVS TITRINORM® volumetric solution	369, 509	1 l	31303.291
Potassium hydroxide 0.05 mol/l (0.05 N) in ethanol AVS TITRINORM® volumetric solution	369, 509	1 l	31305.297
Potassium hydroxide 0.1 mol/l 0.1 N in methanol AVS TITRINORM® volumetric solution	369, 509	1 l	32304.291
Potassium hydroxide 0.1 mol/l 0.1 N in methanol AVS TITRINORM® volumetric solution	369, 509	2,5 l	32304.427
Potassium permanganate 0.2 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	372, 509	1 l	31451.292
Potassium permanganate 0.2 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	372, 509	2,5 l	31451.326

Description	Page	Pk	Cat. No.
Potassium permanganate 0.02 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	373, 510	1 l	31455.295
Potassium permanganate 0.02 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	373, 510	2,5 l	31455.320
Potassium thiocyanate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	375, 510	1 l	31481.295
Silver nitrate 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	404, 510	250 ml	30471.237
Silver nitrate 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	404, 510	1 l	30471.294
Silver nitrate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP volumetric solution	404, 510	1 l	30472.297
Silver nitrate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP volumetric solution	404, 510	2,5 l	30472.322
Silver nitrate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP volumetric solution	404, 510	10 l	30472.402
Silver nitrate 0.0855 mol/l (0.0855 N; 14.52 g/l; 1 ml = 5 mg NaCl) in aqueous solution AVS TITRINORM® volumetric solution	405, 510	1 l	30488.292
Silver nitrate 0.05 mol/l (0.05 N) in aqueous solution AVS TITRINORM® volumetric solution	405, 510	1 l	30475.297
Silver nitrate 0.05 mol/l (0.05 N) in aqueous solution AVS TITRINORM® volumetric solution	405, 510	2,5 l	30475.322
Silver nitrate 0.02 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution	405, 510	2,5 l	191265J
Silver nitrate 0.01 mol/l (0.01 N) in aqueous solution AVS TITRINORM® volumetric solution	405, 510	1 l	30476.291
Silver sulphate 10 g/l in sulphuric acid AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	406, 510	1 l	30491.247
Silver sulphate 10 g/l in sulphuric acid AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	406, 510	2,5 l	30491.420
Silver sulphate 6.6 g/l in sulphuric acid AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	406, 510	1 l	30492.241
Silver sulphate 6.6 g/l in sulphuric acid AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	406, 510	2,5 l	30492.423
Sodium carbonate 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	411, 510	1 l	31524.294
Sodium chloride 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	413, 510	1 l	31535.292
Sodium hydrogen carbonate 0.35% in aqueous solution AVS TITRINORM® volumetric solution	419, 510	2,5 l	307212.2500
Sodium hydroxide 10 mol/l (10 N) in aqueous solution VOLUSOL® volumetric solution	425, 510	1 l	310933.1000
Sodium hydroxide 5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution	425, 476, 510	1 l	31624.290
Sodium hydroxide 5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution	425, 476, 510	2,5 l	31624.320
Sodium hydroxide 4 mol/l (4 N) in aqueous solution AVS TITRINORM® volumetric solution low in carbonate	425, 510	1 l	191373M
Sodium hydroxide 4 mol/l (4 N) in aqueous solution VOLUSOL® volumetric solution	425, 476, 510	2,5 l	306452.2500
Sodium hydroxide 2 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	425, 476, 510	1 l	98108.290
Sodium hydroxide 2 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	425, 510	5 l	98108.360
Sodium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	426, 476, 510	1 l	31627.290
Sodium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	426, 510	5 l	31627.368
Sodium hydroxide 1 mol/l (1 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur., USP, NF volumetric solution	426, 476, 510	10 l	31627.404
Sodium hydroxide 0.714 mol/l (0.714 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 476, 510	10 l	30028.400
Sodium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur. volumetric solution	426, 476, 510	1 l	31951.290
Sodium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur. volumetric solution	426, 510	5 l	31951.370
Sodium hydroxide 0.5 mol/l (0.5 N) in aqueous solution AVS TITRINORM® Reag. Ph. Eur. volumetric solution	426, 476, 510	10 l	31951.404
Sodium hydroxide 0.25 mol/l (0.25 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 510	1 l	31956.296
Sodium hydroxide 0.205 mol/l (0.205 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 476, 510	10 l	30036.400
Sodium hydroxide 0.2 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 510	1 l	31952.293
Sodium hydroxide 0.111 mol/l (0.111 N) in aqueous solution AVS TITRINORM® volumetric solution, for milk acidity analysis according to Dornic	426, 510	1 l	31760.290
Sodium hydroxide 0.111 mol/l (0.111 N) in aqueous solution AVS TITRINORM® volumetric solution, for milk acidity analysis according to Dornic	426, 510	5 l	31760.368
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 476, 510	1 l	31770.294
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 510	5 l	31770.363
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 510	5 l	31770.374
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 476, 510	10 l	31770.408
Sodium hydroxide 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	426, 510	20 l	31770.443
Sodium hydroxide 0.04 mol/l (0.04 N) in aqueous solution AVS TITRINORM® volumetric solution	427, 510	1 l	31769.290
Sodium peroxodisulphate 1 mol/l in aqueous solution AVS TITRINORM® volumetric solution, for TOC	432, 510	2,5 l	306448.2500
Sodium thiosulphate 1 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	437, 510	1 l	31547.293
Sodium thiosulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	437, 510	1 l	31553.294
Sodium thiosulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	437, 510	5 l	31553.363
Sodium thiosulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	437, 510	10 l	31553.408
Sodium thiosulphate 0.01 mol/l (0.01 N) in aqueous solution VOLUSOL® volumetric solution	437, 510	1 l	309337.1000
Sulphuric acid 5 mol/l (10 N) in aqueous solution AVS TITRINORM® volumetric solution	473, 510	2,5 l	191665V
Sulphuric acid 4 mol/l (8 N) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	473, 510	1 l	30148.297
Sulphuric acid 4 mol/l (8 N) in aqueous solution AVS TITRINORM® volumetric solution, for COD determination according to NFT 90-101 standard	473, 510	2,5 l	30148.320
Sulphuric acid 2.5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution	473, 510	2,5 l	191675A
Sulphuric acid 2.5 mol/l (5 N) in aqueous solution AVS TITRINORM® volumetric solution	473, 510	1 l	30138.293
Sulphuric acid 1 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 476, 510	1 l	30149.291
Sulphuric acid 1 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 476, 510	2,5 l	30149.325
Sulphuric acid 1 mol/l (2 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	5 l	30149.371
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 476, 510	1 l	30144.294
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 476, 510	2,5 l	30144.328
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	5 l	30144.363
Sulphuric acid 0.5 mol/l (1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 476, 510	10 l	30144.408
Sulphuric acid 0.25 mol/l (0.5 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	1 l	30143.291
Sulphuric acid 0.25 mol/l (0.5 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	10 l	30143.405
Sulphuric acid 0.13 mol/l (0.26 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 476, 510	10 l	5046.9010
Sulphuric acid 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	1 l	30145.297
Sulphuric acid 0.1 mol/l (0.2 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	10 l	30145.402
Sulphuric acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	1 l	30150.295
Sulphuric acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	2,5 l	30150.320
Sulphuric acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	5 l	30150.375
Sulphuric acid 0.05 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	10 l	30150.400
Sulphuric acid 0.02 mol/l (0.04 N) in aqueous solution AVS TITRINORM® volumetric solution	474, 510	1 l	30146.291
Sulphuric acid 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution	475, 510	5 l	191736T
Sulphuric acid 0.01 mol/l (0.02 N) in aqueous solution AVS TITRINORM® volumetric solution	475, 476, 510	10 l	191738C
Sulphuric acid 0.005 mol/l (0.01 N) in aqueous solution AVS TITRINORM® volumetric solution	475, 510	10 l	30147.408
Tetrabutylammonium hydroxide 0.1 mol/l (0.1 N) in 2-propanol 90% (v/v) / methanol 10% (v/v) AVS TITRINORM® volumetric solution	481, 510	500 ml	28533.261
Tetrabutylammonium hydroxide 0.1 mol/l (0.1 N) in toluene 90% (v/v) / methanol 10% (v/v) AVS TITRINORM® volumetric solution	481, 510	500 ml	28532.267
Zinc sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution	510, 527	1 l	30498.296

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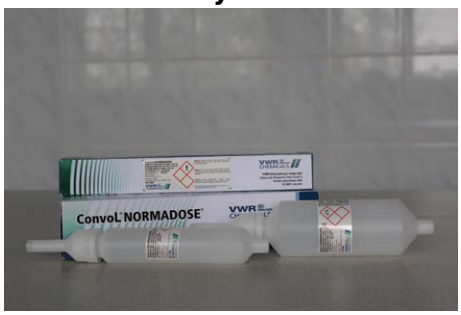
Concentrated analytical solutions for volumetric titrations, Convol NORMADOSE®



Concentrated analytical solutions that save space and cost without compromising on quality.

- Concentrated solutions in an ampoule for dilution to 1 litre
- Solutions prepared from analytical reagents
- Economical and space saving
- Final concentration can be user-specified
- Instructions for use written on the boxes
- Accuracy of 0.2 %

Description	Page	Pk	Cat. No.
EDTA disodium salt 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	131, 511	60 ml	32068.603
Hydrochloric acid 1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	200, 511	160 ml	32050.602
Hydrochloric acid 0.5 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	200, 511	210 ml	84589.600
Hydrochloric acid 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	200, 511	60 ml	32051.605
Iodine 0.05 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	220, 511	30 ml	84591.600
Nitric acid 0.1 mol concentrated solution ConvoL NORMADOSE® volumetric solution	320, 511	60 ml	32069.606
Potassium dichromate 1/60 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	362, 511	60 ml	32061.600
Silver nitrate 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	404, 511	60 ml	32056.602
Sodium chloride 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	413, 511	60 ml	32064.600
Sodium hydroxide 1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	424, 511	170 ml	32066.606
Sodium hydroxide 0.5 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	424, 511	210 ml	84597.600
Sodium hydroxide 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	425, 511	60 ml	32067.600
Sodium hydroxide 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	425, 511	60 ml	84596.600
Sodium thiosulphate 0.1 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	437, 511	60 ml	32065.603
Sodium thiosulphate 0.01 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	437, 511	60 ml	84598.600
Sulphuric acid 0.5 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	473, 511	170 ml	32053.602
Sulphuric acid 0.05 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	473, 511	60 ml	32054.605
Sodium carbonate 0.05 mol concentrated aqueous solution ConvoL NORMADOSE® volumetric solution	411, 511	60 ml	32063.606

VRB

See Microbiology

VRB agar

See Microbiology

VRBD agar

See Microbiology

Water (reagents for the analysis of)

Iodine AnalaR NORMAPUR® Reag. Ph. Eur. analytical reagent resublimed p.220
Methanol AnalaR NORMAPUR® Reag. Ph. Eur., ACS analytical reagent.... p.258
Pyridine anhydrous AnalaR NORMAPUR® ACS, ISO, Reag. Ph. Eur. analytical reagent, for Karl Fischer titration..... p.382
di-Sodium L(+)-tartrate dihydrate GPR RECTAPUR® p.435

Water NORMATOM® for trace metal analysis

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Colouration	10 CO max.	Ag (Silver)	Max. 50 ppt
Al (Aluminium)	Max. 200 ppt	As (Arsenic)	Max. 50 ppt
Au (Gold)	Max. 50 ppt	B (Boron)	Max. 500 ppt
Ba (Barium)	Max. 50 ppt	Be (Beryllium)	Max. 50 ppt
Bi (Bismuth)	Max. 50 ppt	Ca (Calcium)	Max. 500 ppt
Cd (Cadmium)	Max. 50 ppt	Ce (Cerium)	Max. 20 ppt
Co (Cobalt)	Max. 50 ppt	Cr (Chromium)	Max. 50 ppt
Cs (Cesium)	Max. 50 ppt	Cu (Copper)	Max. 100 ppt
Dy (Dysprosium)	Min. 20 ppt	Er (Erbium)	Max. 20 ppt
Eu (Europium)	Max. 20 ppt	Fe (Iron)	Max. 300 ppt
Ga (Gallium)	Max. 50 ppt	Gd (Gadolinium)	Max. 20 ppt
Ge (Germanium)	Max. 50 ppt	Hf (Hafnium)	Max. 10 ppt
Hg (Mercury)	Max. 200 ppt	Ho (Holmium)	Max. 20 ppt
In (Indium)	Max. 50 ppt	K (Potassium)	Max. 300 ppt
La (Lanthanum)	Max. 20 ppt	Li (Lithium)	Max. 50 ppt
Lu (Lutetium)	Max. 20 ppt	Mg (Magnesium)	Max. 100 ppt
Mn (Manganese)	Max. 50 ppt	Mo (Molybdenum)	Max. 50 ppt
Na (Sodium)	Max. 500 ppt	Nb (Niobium)	Max. 50 ppt
Nd (Neodymium)	Max. 50 ppt	Ni (Nickel)	Max. 50 ppt
Pb (Lead)	Max. 50 ppt	Pd (Palladium)	Max. 50 ppt
Pr (Praseodymium)	Max. 20 ppt	Pt (Platinum)	Max. 50 ppt
Rb (Rubidium)	Max. 20 ppt	Re (Rhenium)	Max. 50 ppt
Rh (Rhodium)	Max. 50 ppt	Ru (Ruthenium)	Max. 50 ppt
Sb (Antimony)	Max. 50 ppt	Sc (Scandium)	Max. 50 ppt
Se (Selenium)	Max. 200 ppt	Sm (Samarium)	Max. 20 ppt
Sn (Tin)	Max. 50 ppt	Sr (Strontium)	Max. 50 ppt
Ta (Tantalum)	Max. 50 ppt	Tb (Terbium)	Max. 50 ppt
Te (Tellurium)	Max. 50 ppt	Th (Thorium)	Max. 10 ppt
Ti (Titanium)	Max. 50 ppt	Tl (Thallium)	Max. 50 ppt
Tm (Thulium)	Max. 20 ppt	U (Uranium)	Max. 10 ppt
V (Vanadium)	Max. 50 ppt	W (Tungsten)	Max. 100 ppt
Y (Yttrium)	Max. 10 ppt	Yb (Ytterbium)	Max. 20 ppt
Zn (Zinc)	Max. 500 ppt	Zr (Zirconium)	Max. 50 ppt

Cat. No.	Pk	Pack type
83877.260	500 ml	Plastic bottle
83877.290	1 l	Glass bottle

NEW Water HiPerSolv CHROMANORM® for LC-MS, suitable for UPLC/UHPLC instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1,000 g/cm³ (20 °C)
Storage Temperature: Ambient

Colouration	Max. 5 APHA
Conductivity (25°C) (at filling)	Max. 1 µS/cm
Evaporation residue	Max. 1 ppm
Al (Aluminium)	Max. 50 ppb
Ca (Calcium)	Max. 50 ppb
Fe (Iron)	Max. 50 ppb
K (Potassium)	Max. 50 ppb
Mg (Magnesium)	Max. 50 ppb
Na (Sodium)	Max. 100 ppb
Fluorescence (as quinine) (254/450 nm)	Max. 1 ppb
Fluorescence (as quinine) (365/450 nm)	Max. 0.5 ppb
Gradient grade (210 nm)	Max. 5 mAU
Gradient (220 nm)	Max. 2 mAU
Gradient (254 nm)	Max. 1 mAU
MS-ESI+ (as Reserpine)	Max. 2 ppb
MS-APCI+ (as Reserpine)	Max. 2 ppb
MS-ESI- (as 4-Nitrophenol)	Max. 20 ppb
MS-APCI- (as 4-Nitrophenol)	Max. 20 ppb
Colony count (Ph.Eur.) (at filling)	Max. 100 CFU/ml
TOC (at filling)	Max. 30 ppb

Cat. No.	Pk	Pack type
83645.290	1 l	Glass bottle
83645.320	2,5 l	Glass bottle
83645.400	4 l	Glass bottle

NEW Water HiPerSolv CHROMANORM®, super gradient grade for HPLC, suitable for UPLC/UHPLC instruments

Filtered through a 0.2 µm filter, packaged under nitrogen.

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Filtered at 0.2 µm	Passes test
Colouration	Max. 5 APHA
Evaporation residue	Max. 1 ppm
Spec. conductivity (25°C)(at filling)	Max. 1 µS/cm
Total organic carbon (TOC)	Max. 10 ppb
Absorbance (200 nm)	Max. 0.01
Absorbance (210 nm)	Max. 0.01
Absorbance (220 nm)	Max. 0.01
Absorbance (240 nm)	Max. 0.01
Absorbance (254 nm)	Max. 0.005
Absorbance (280 nm)	Max. 0.005
Absorbance (300 nm)	Max. 0.005
Fluorescence (as quinine; 254 nm)	Max. 1 ppb
Fluorescence (as quinine) (365 nm)	Max. 0.5 ppb
Gradient (220 nm)	Max. 5 mAU
Gradient (254 nm)	Max. 2 mAU

Cat. No.	Pk	Pack type
83650.290	1 l	Glass bottle
83650.320	2,5 l	Glass bottle

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Water HiPerSolv CHROMANORM® for HPLC

Filtered through a 0.2 µm filter, packaged under nitrogen.

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Filtered at 0,2 µm*	Passes test
Colouration	Max. 10 APHA
Evaporation residue	Max. 1 ppm
Spec. conductivity (25°C)(at filling)	Max. 1 µS/cm
Total organic carbon (TOC)	Max. 10 ppb
Absorbance (200 nm)	Max. 0.01
Absorbance (210 nm)	Max. 0.01
Absorbance (220 nm)	Max. 0.01
Absorbance (240 nm)	Max. 0.01
Absorbance (254 nm)	Max. 0.005
Absorbance (280 nm)	Max. 0.005
Absorbance (300 nm)	Max. 0.005
Fluorescence (as quinine; 254 nm)	Max. 1 ppb
Fluorescence (as quinine) (365 nm)	Max. 0.5 ppb
Gradient grade (210 nm)	Max. 5 mAU
Gradient (254 nm)	Max. 1 mAU

Cat. No.	Pk	Pack type
23595.294	1 l	Glass bottle
23595.328	2,5 l	Glass bottle
23595.400	4 l	Glass bottle

Water AnalaR NORMAPUR® ISO 3696 Grade 3 analytical reagent

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Produced by reversed osmosis and CDI

Substances reducing $KMnO_4$	Passes test	Conductivity (at filling)	Max. 1 µS/cm
pH (25°C)	5.0 - 7.5	Evaporation residue	Max. 1 ppm
Ignition residue	Max. 1 ppm	Silica	Max. 0.1 ppm
Cl (Chloride)	Max. 0.05 ppm	F (Fluoride)	Max. 0.05 ppm
NH_4 (Ammonium)	Max. 0.2 ppm	NO_3 (Nitrate)	Max. 0.01 ppm
PO_4 (Phosphate)	Max. 0.01 ppm	SO_4 (Sulphate)	Max. 0.1 ppm
Ag (Silver)	Max. 0.0004 ppm	Al (Aluminium)	Max. 0.002 ppm
As (Arsenic)	Max. 0.002 ppm	Au (Gold)	Max. 0.001 ppm
B (Boron)	Max. 0.005 ppm	Ba (Barium)	Max. 0.001 ppm
Be (Beryllium)	Max. 0.002 ppm	Bi (Bismuth)	Max. 0.001 ppm
Ca (Calcium)	Max. 0.05 ppm	Cd (Cadmium)	Max. 0.001 ppm
Co (Cobalt)	Max. 0.001 ppm	Cr (Chromium)	Max. 0.0004 ppm
Cu (Copper)	Max. 0.0004 ppm	Fe (Iron)	Max. 0.001 ppm
Ga (Gallium)	Max. 0.004 ppm	Ge (Germanium)	Max. 0.001 ppm
In (Indium)	Max. 0.001 ppm	K (Potassium)	Max. 0.05 ppm
Li (Lithium)	Max. 0.002 ppm	Mg (Magnesium)	Max. 0.005 ppm
Mn (Manganese)	Max. 0.0004 ppm	Mo (Molybdenum)	Max. 0.002 ppm
Na (Sodium)	Max. 0.1 ppm	Ni (Nickel)	Max. 0.0004 ppm
Pb (Lead)	Max. 0.001 ppm	Pd (Palladium)	Max. 0.008 ppm
Pt (Platinum)	Max. 0.001 ppm	Sb (Antimony)	Max. 0.001 ppm
Sn (Tin)	Max. 0.001 ppm	Sr (Strontium)	Max. 0.0004 ppm
Ti (Titanium)	Max. 0.001 ppm	Tl (Thallium)	Max. 0.00005 ppm
V (Vanadium)	Max. 0.001 ppm	Zn (Zinc)	Max. 0.004 ppm
Zr (Zirconium)	Max. 0.001 ppm	ISO Standard Water Grade 3	Passes test

Cat. No.	Pk	Pack type
102922B	2,5 l	Plastic bottle
102923C	5 l	Plastic container
102926D	10 l	Plastic drum
102927G	10 l	Bag-in-box (Cubitainer)
102928H	25 l	Plastic drum

Water Reag. Ph. Eur. 1095502 carbon dioxide free

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87959.290	1 l	Plastic bottle

Water Reag. Ph. Eur. 1095500

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87957.360	5 l	Plastic bottle

Water Reag. Ph. Eur. 1095501 ammonium free

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87958.290	1 l	Plastic bottle

Water Reag. Ph. Eur. 1095503 for chromatography

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87960.290	1 l	Plastic bottle

Water Reag. Ph. Eur. 1095506 nitrate free

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87961.290	1 l	Plastic bottle

Water Reag. Ph. Eur. 1095507 particle free

CAS 7732-18-5
H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87962.290	1 l	Plastic bottle

Water Ph. Eur., USP, NF, purified

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1,00 g/cm³ (20 °C)
Storage Temperature: Ambient

Appearance	Clear colourless liquid
Conductivity (20°C) (on line)	Max. 1.1 µS/cm
NO_3 (Nitrate)	Max. 0.2 ppm
Heavy metals (as Pb)	Max. 0.1 ppm
Acidity or alkalinity	Passes test Ph.Eur.
Oxidisable substances	Passes test Ph.Eur.
Cl (Chloride)	Passes test Ph.Eur.
SO_4 (Sulphate)	Passes test Ph.Eur.
NH_4 (Ammonium)	Max. 0.2 ppm
Calcium and magnesium	Passes test Ph.Eur.
Residue on evaporation	Max. 0.001 %
Microbial contamination	Passes test Ph.Eur.
Total organic carbon (TOC) (on line)	Max. 50 ppb

Cat. No.	Pk	Pack type
90200.9010	10 l	Plastic drum
90200.9025	25 l	Plastic drum
90200.9200	200 l	Plastic drum
90200.0999	1.000 l	Plastic container

Water GPR RECTAPUR®

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Acidity or alkalinity	Passes test
Oxidisable substances	Passes test
Conductivity (20°C)	Max. 1.5 µS/cm
Evaporation residue	Max. 1 ppm
Heavy metals (as Pb)	Max. 0.1 ppm
Cl (Chloride)	Max. 0.1 ppm
NH_4 (Ammonium)	Max. 0.2 ppm
NO_3 (Nitrate)	Max. 0.2 ppm
SO_4 (Sulphate)	Max. 1 ppm
Ca (Calcium)	Max. 0.1 ppm
Na (Sodium)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
83612.360	5 l	Plastic container
83612.400	10 l	Bag-in-box (Cubitainer)
83612.410	10 l	Plastic drum
83612.460	25 l	Plastic drum

VWR LIFE SCIENCE Water for biotechnology nuclease-free, sterile

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Sterile, nuclease-free water treated with diethylpyrocarbonate (DEPC) for nucleic acid applications.

DNase	NONE
Protease	NONE
RNase	NONE
Sterility	PASS

Cat. No.	Pk	Pack type
E476-100ML	100 ml	Plastic bottle
E476-500ML	500 ml	Plastic bottle
E476-1L	1 l	Plastic bottle

Water Molecular biology grade

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Osmolality (mOsm/kg)	Max. 3
DNases	Not detected
RNases	Not detected
Proteases	Not detected

Cat. No.	Pk	Pack type
445847D	10 l	Bag-in-box (Cubitainer)

NEW Water for PCR

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

DNA nicking activity	Passed
Endonuclease activity	Passed
Exonuclease activity	Passed
Absence of Human DNA	Passed
Volume check, > 5 ml/tube	Passed

Cat. No.	Pk	Pk Info	Pack type
733-2573	1 KIT	6 x 5 ml	Plastic tube

NEW Water, purified, sterile

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Cat. No.	Pk	Pk Info	Pack type
AX021376	10	90 ml vials	Glass bottle

Water nuclease-free

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Water, nuclease-free, is packed from Molecular biology grade (RNase, DNase and protease tested) water and sterile filled into irradiated bottles.

Osmolality (mOsm/kg)	Max. 3
DNases	Not detected
RNases	Not detected
Proteases	Not detected

Cat. No.	Pk	Pack type
436912C	100 ml	Plastic bottle

Water TECHNICAL, demineralized

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Boiling Pt: 100 °C (1013 hPa) **Melting Pt:** 0 °C **Density:** 1 g/cm³ (4 °C)
Storage Temperature: Ambient

Conductivity (20°C) (at production)	Max. 1.5 µS/cm

Cat. No.	Pk	Pack type
23597.405	10 l	Bag-in-box (Cubitainer)
23597.410	10 l	Plastic drum
23597.440	20 l	Plastic drum
23597.553	200 l	Plastic drum

NEW Water with 0.1% Acetic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol
Storage Temperature: Ambient

Nominal concentration (V/V)	0.095 - 0.105 %
Evaporation residue	Max. 0.0001 %
Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm
Transmittance (205 nm)	Min. 20 %
Transmittance (225 nm)	Min. 50 %
Transmittance (240 nm)	Min. 80 %
Transmittance (245 nm)	Min. 95 %
Transmittance (255 nm)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84873.290	1 l	Glass bottle
84873.320	2,5 l	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

NEW Water with 0.1% Formic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol

Storage Temperature: Ambient

Nominal concentration (V/V)	0.095 - 0.105 %
Evaporation residue	Max. 0.0001 %
Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm
Transmittance (225 nm)	Min. 20 %
Transmittance (235 nm)	Min. 50 %
Transmittance (240 nm)	Min. 80 %
Transmittance (250 nm)	Min. 95 %
Transmittance (260 nm)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84867.290	1 l	Glass bottle
84867.320	2,5 l	Glass bottle

NEW Water with 0.1% Trifluoroacetic acid HiPerSolv CHROMANORM® for LC-MS

Packaged under nitrogen.

CAS 7732-18-5

H_2O **M.W.** 18.02 g/mol

Storage Temperature: Ambient

Nominal concentration (V/V)	0.095 - 0.105 %
Evaporation residue	Max. 0.0001 %
Ca (Calcium)	Max. 0.2 ppm
K (Potassium)	Max. 0.2 ppm
Mg (Magnesium)	Max. 0.2 ppm
Na (Sodium)	Max. 0.5 ppm
Transmittance (210 nm)	Min. 20 %
Transmittance (220 nm)	Min. 50 %
Transmittance (230 nm)	Min. 80 %
Transmittance (240 nm)	Min. 95 %
Transmittance (250 nm)	Min. 99 %
Suitable for LC-MS	Passes test

Cat. No.	Pk	Pack type
84871.290	1 l	Glass bottle
84871.320	2,5 l	Glass bottle

Water-D2

See Deuterium oxide p.108

Water bath protective agent, Aquaresist

Prevents the growth of algae and bacteria in baths and circulating thermostats, for optimally hygienic working conditions.

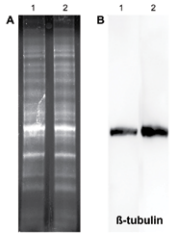
- Durable: Effective for weeks, as displayed by a colour indicator
- Economical: Low consumption - only 1 ml solution per 1 litre of water

Description	Pk	Cat. No.
Water bath protective agent, Aquaresist	100 ml	462-7000

Water blue 6B

See Dyes and Stains p.290

RapidBlock™ solution, 10X



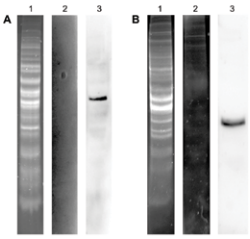
RapidBlock™ for Western blotting. Cytoplasmic protein (10 µg) isolated from K562 cells with AMRESCO's Cytoplasmic/ Nuclear Fractionation Kit (M330) was resolved using 12.5% Fluorescent SPRINT NEXT GEL® (M318). Total protein and band resolution were determined by visualization on a UV transilluminator prior to transfer to PVDF membrane using NEXT GEL® Transfer Buffer (M279, lanes A1, A2). The membrane was cut into strips and blocked 5 minutes in either TBST/5% non-fat dry milk (lane B1) or AMRESCO's RapidBlock™ Solution (lane B2). The blots were probed with ß-tubulin antibody diluted 1:5,000 in their respective blocking solutions and detected with VisiGlo Plus™ HRP Chemiluminescent Substrate Kit (N219).

RapidBlock™ solution reduces blocking time to 5 minutes for Western and dot blotting procedures on PVDF and nitrocellulose membranes. This protein-free formulation minimises cross-reactivity and non-specific antibody binding, generating blots with low background and enhanced signal-to-noise ratio.

- Only 5 minutes for PVDF or nitrocellulose blocking
- Reduce background and cross-reactivity
- Enhance chemiluminescent signals
- Protein-free formulation

Description	Pk	Cat. No.
RapidBlock™ solution, 10X	15 ml	M325-15ML
RapidBlock™ solution, 10X	100 ml	M325-100ML

Rapid Transfer Buffer 10X



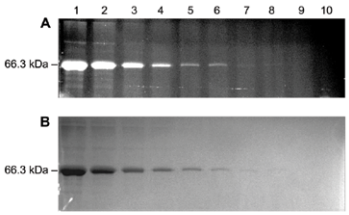
Rapid Transfer of protein using wet and semi-dry methods. Cytoplasmic protein isolated from K562 cells using AMRESCO's Cytoplasmic and Nuclear Protein Enrichment Kit (M330) was separated using 10% Fluorescent SPRINT NEXT GEL® (M317). An image was captured with UV transillumination using the Syngene GBox-HR Gel Doc System (lanes A1, B1). Gels were equilibrated for 5 minutes in Rapid Transfer Buffer and wet transferred at 90 V at RT for 15 minutes (Figure A) or at 25 V for 10 minutes using Bio-Rad's Trans-Blot® SD Semi-Dry Electrophoretic Transfer Cell (Figure B). Image capture of the gels after transfer was performed again with UV transillumination using the Syngene GBox-HR Gel Doc System (lanes A2, B2). The membranes were then probed with 1:5,000 anti-ß-tubulin (lane A3) and 1:1,000 anti-ß-actin antibody (lane B3) using the Rapid Western Kit (N793 or N791). The blots were developed with VisiGlo Plus™ HRP Chemiluminescent Substrate Kit (N219).

Rapid Transfer Buffer is a simple, single component system for quick and efficient transfer of proteins from SDS-PAGE gels to membranes for Western blotting applications. Transfer is completed in 10 or 20 minutes using a standard semi-dry or wet transfer apparatus, respectively. Rapid Transfer Buffer is a methanol-free, non-hazardous formulation that is compatible with PVDF and nitrocellulose membranes. The transfer efficiency is equivalent to that observed when using a Tris-Glycine-Methanol transfer buffer.

- Transfer in 10 to 20 minutes
- Utilises standard transfer equipment
- Non-hazardous formulation
- Transfers to PVDF and nitrocellulose from multiple types of gels

Description	Pk	Cat. No.
Rapid Transfer Buffer, 10X	1 l	N789-1L
Rapid Transfer Buffer, 10X	4 l	N789-4L

Protein EZ-Vision®, 4X



Comparison of Protein EZ-Vision® and Coomassie® Blue sensitivity. Figures A and B were generated using the same gel for comparison. Two-fold serial dilutions of bovine serum albumin (BSA) were separated on a 12.5% Laemmli SDS-PAGE gel using Protein EZ-Vision®, 4X (N836) as the sample loading buffer. Lane 7 is approximately 100 ng protein. Immediate fluorescent visualization of protein post-electrophoresis was achieved with a 2 second UV exposure using a SYBR® Green filter with the Syngene GBox-HR Gel Doc System (A). The same gel was post-stained with Coomassie® Blue protein stain for one hour and destained one hour (B).

Protein EZ-Vision® is non-hazardous, fluorescent reagent that produces instant visualisation of protein bands upon UV illumination of SDS-PAGE gels. Supplied in a 4X loading buffer, Protein EZ-Vision® co-migrates with the protein-SDS complex during electrophoresis. Post-run staining and destaining is completely eliminated and results can be visualised immediately after the run by placing the gel on a standard UV transilluminator.

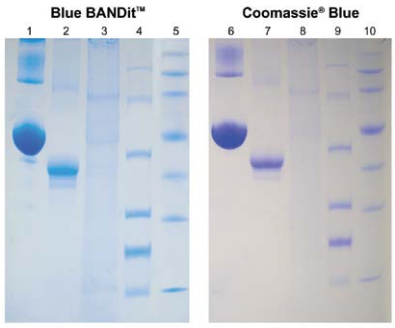
- Immediate visualisation
- Sensitivity down to 100 ng protein
- Compatible with downstream Western blotting

Supplied in 2×1 ml tubes.

Description	Pk	Cat. No.
Protein EZ-Vision®, 4X	2 ml	N836-KIT

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Protein stain, Blue BANDit™



BlueBANDit™ and Coomassie® Blue Staining Comparison. A 12.5% Fluorescent SPRINT NEXT GEL® (M318) was loaded with 10 µg BSA (lanes 1, 6), 5 µg ovalbumin (lanes 2, 7), 2 µg K562 cytoplasmic lysate (lanes 3 and 8), 10 µl Mid/Low Range Protein Molecular Weight Marker (J450, lanes 4, 9), and 10 µl Precise™ Protein Molecular Weight Marker (J383, lanes 5, 10). Following electrophoresis, the gel was cut in half. Lanes 1-5 were stained with BlueBANDit™ (K217) and lanes 6-10 were stained with Coomassie® Blue.

Blue BANDit™ is a safer and more environmentally friendly alternative to traditional Coomassie® Blue staining procedures. This ready-to-use stain utilises deionised water for destaining, thereby reducing the handling of hazardous materials and solvent waste in the lab. The easy protocol requires a pre-wash in water for 15 minutes, 1 hour of staining in Blue BANDit™, and a final water wash for 30 minutes. As the bands appear on the gel, the background remains clear, providing excellent visibility of proteins. Provides sufficient material for 50 mini-gels (1 l) or 12 mini-gels (250 ml).

- Sensitivity below 20 ng of protein per band
- No methanol or acetic acid - uses water for destaining
- Ready to use

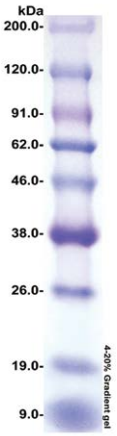
Description	Pk	Cat. No.
Protein stain, Blue BANDit™	250 ml	K217-250ML
Protein stain, Blue BANDit™	1 l	K217-1L

Molecular weight markers, M.W. 12.3-78 kDa, calibration kit for SDS PAGE, Electran®

This product is tested for its suitability for use on Tris-based discontinuous buffer systems using a method based on that of Laemmli. It consists of a mixture of 6 electrophoretically homogeneous proteins.

Description	Pk	Cat. No.
Molecular weight markers, calibration kit for SDS PAGE	2 mg	442642L

Protein MW markers, BlueStep™ broad range, pre-stained

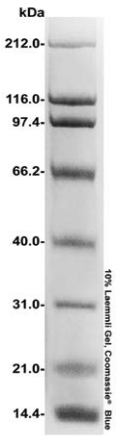


BlueStep™ protein molecular weight marker, broad range, pre-stained has 9 bands ranging from 9.0 to 200.0 kDa. Pre-stained bands are easily transferred to blotting membranes for use in Western blotting. There is sufficient material for 50 assays.

- 9 bands ranging from 9.0 to 200.0 kDa
- Monitor real-time conditions during electrophoresis

Description	Pk	Cat. No.
Protein MW markers, BlueStep™ broad range, pre-stained	0,5 ml	K973-0.5ML

Protein MW markers, wide range



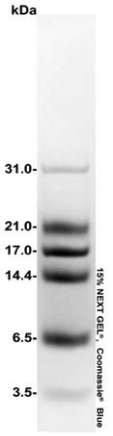
Protein molecular weight marker, wide range offers 8 bands ranging from 14.4 - 212.0 kDa. There is sufficient material for 100 - 150 assays.

- 8 bands ranging from 14.4 to 212.0 kDa
- Ideal for high or low molecular weight applications

Description	Pk	Cat. No.
Protein MW markers, wide range	500 µl	K494-500UL

Protein MW markers, low range

Protein molecular weight marker, low range offers 6 bands ranging from 3.5 to 3.,0 kDa. There is sufficient material for 40 assays.

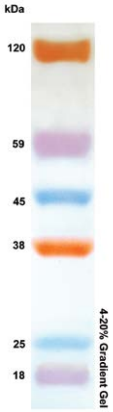


- 6 bands ranging from 3.5 kDa to 31.0 kDa
- Excellent for gels separating low molecular weight proteins and polypeptides

Description	Pk	Cat. No.
Protein MW markers, low range	200 µl	K880-200UL

Protein MW markers, Prism

The Prism protein marker contains 6 purified proteins stained orange, blue, and violet for easy molecular weight estimation of samples. The bands ranging from 19 to 130 kDa can simplify monitoring protein migration during electrophoresis, and subsequently assess protein transfer efficiency to a blotting membrane. Prism protein marker is ready to load and may be applied to lab-prepared or commercial pre-cast gels. Sufficient material for 50 - 100 lanes.

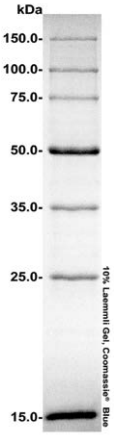


- 6 bands ranging from 19 to 130 kDa
- 3 vibrant colours for easy band identification

Description	Pk	Cat. No.
Prism protein marker	500 µl	1B1349-500UL
Prism protein marker	50 µl	1B1349-50UL

Protein MW markers, Precise™

Precise™ protein molecular weight marker offers 7 bands ranging from 15.0 - 150.0 kDa. There is sufficient material for 40 assays.

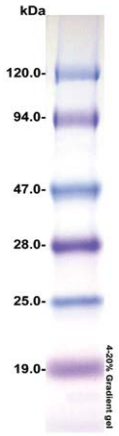


- 7 bands ranging from 15.0 to 150.0 kDa
- Premixed with loading buffer

Description	Pk	Cat. No.
Protein MW markers, Precise™	200 µl	J383-200UL

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Protein MW markers, BlueStep™ low range, pre-stained

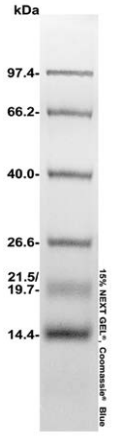


BlueStep™ protein molecular weight marker, low range, pre-stained has 6 bands ranging from 19.0 to 120.0 kDa. Pre-stained bands are easily transferred to blotting membranes for use in Western blotting. There is sufficient material for 50 assays.

- 6 bands ranging from 19.0 to 120.0 kDa
- Monitor real-time running conditions during electrophoresis

Description	Pk	Cat. No.
Protein MW markers, BlueStep™ low range, pre-stained	0,5 ml	K972-0.5ML

Protein MW markers, mid/low range

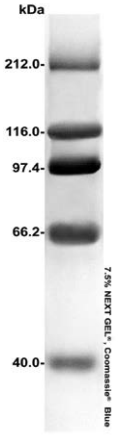


Mid/low range protein molecular weight marker offers 7 bands ranging from 14.4 - 97.4 kDa. The 200 µl size provides sufficient material for 40 assays.

- 7 bands ranging from 14.4 to 97.4 kDa
- Ideal for polyacrylamide gel concentrations from 8% - 15% (37.5:1 Acryl/Bis)

Description	Pk	Cat. No.
Protein MW markers, mid/low range	200 µl	J450-200UL

Protein MW markers, high range



High range protein molecular weight marker offers 5 bands ranging from 40.0 - 212.0 kDa. The 200 µl size provides sufficient material for 40 assays.

- 5 bands ranging from 40.0 to 212.0 kDa
- Ideal for polyacrylamide gel concentrations from 6% - 8% (37.5:1 Acryl/Bis)

Description	Pk	Cat. No.
Protein MW markers, high range	200 µl	J449-200UL

White Spirit 150-200°C SPECTRONORM® for atomic absorption spectroscopy

Danger

CAS 8052-41-3 **UN:** 1268
Boiling Pt: 150-200 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 0,77 g/cm³ (20 °C)

REACh: 01-2119458049-33

Density (20/4)	0.750 - 0.790
Al (Aluminium)	Max. 0.02 ppm
Ba (Barium)	Max. 0.05 ppm
Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.02 ppm
Co (Cobalt)	Max. 0.005 ppm
Cr (Chromium)	Max. 0.005 ppm
Cu (Copper)	Max. 0.2 ppm
Fe (Iron)	Max. 0.1 ppm
K (Potassium)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.02 ppm
Mn (Manganese)	Max. 0.005 ppm
Mo (Molybdenum)	Max. 0.005 ppm
Na (Sodium)	Max. 0.1 ppm
Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.1 ppm
Sr (Strontium)	Max. 0.005 ppm
Zn (Zinc)	Max. 0.1 ppm

Cat. No.	Pk	Pack type
141976Y	2,5 l	Glass bottle

White Spirit 150-200°C TECHNICAL

Danger

CAS 8052-41-3 **UN:** 1268
Boiling Pt: 150-200 °C (1013 hPa) **Melting Pt:** -15 °C **Density:** 0,77 g/cm³ (20 °C)

REACh: 01-2119458049-33

n 20/D	1.425 - 1.450
Benzene	Max. 10 ppm

Cat. No.	Pk	Pack type
28963.368	5 l	Fluorinated plastic bottle

Wijs reagent

See Wijs'reagent p.221

Wintergreen Oil

See Methyl salicylate p.264

Wolframophosphoric acid hydrate

See Phosphotungstic acid hydrate p.353

Wood alcohol

See Methanol p.255

Wool fat

See Lanolin p.236

Wort Agar

See Microbiology

Wright's Stain

See p.520

X-Gal (5-Bromo-4-chloro-3-indolyl-ß-D-galactopyranoside), ultrapure

CAS 7240-90-6
$C_{14}H_{15}BrClNO_6$ **M.W.** 408.63 g/mol
Melting Pt: 237-239 °C
Storage Temperature: Freezer
Used in conjunction with IPTG to identify bacterial colonies that contain recombinant plasmids by blue/white selection.

Blank (A620; 0.1 %, PO_4, pH 7.3)	0.01
Identification	PASS
Purity (Enzymatic)	99.0 %
Solubility (2 %, DMF)	PASS
Specific Rotation (0.1 %, 50 % DMF)	-64 to -56 °

Cat. No.	Pk	Pack type
0428-100MG	100 mg	Glass bottle
0428-1G	1 g	Glass bottle

X-Gal (5-Bromo-4-chloro-3-indolyl-ß-D-galactopyranoside)

CAS 7240-90-6
$C_{14}H_{15}BrClNO_6$ **M.W.** 408.63 g/mol
Melting Pt: 237-239 °C
Storage Temperature: Freezer
X-Gal is a chromogenic substrate for ß-Galactosidase that forms an intense blue precipitate. Used in conjunction with IPTG in a colorimetric assay, X-Gal allows differentiation of recombinants from non recombinants in cloning experiments with vectors containing the lacZ gene. It is also used in microbiology to detect microorganisms which have ß-Galactosidase activity.

Assay	Min. 98.0 %
Identification	Passes test
Appearance	White crystalline powder
Spec.opt. rotation (1 %;DMF/water 50/50)	60.0 - 64.0 °
Water	Max. 1 %

Cat. No.	Pk	Pack type
437132J	1 g	Glass bottle for solids

NEW X-Gal (5-Bromo-4-chloro-3-indolyl-ß-D-galactopyranoside)

CAS 7240-90-6
$C_{14}H_{15}BrClNO_6$ **M.W.** 408.63 g/mol
Melting Pt: 237-239 °C
Storage Temperature: Freezer

Cat. No.	Pk	Pack type
AC120	1 g	Glass bottle for solids

X-GAL - IPTG ready solution for biotechnology

Danger

Sterile, ready-to-use, stable IPTG-X-Gal solution available in a dropper bottle for convenient dispensing. Also available in standard tubes. Stable at 4 °C up to 6 months. Contains no hazardous or toxic solvents.

Functional Growth Test	PASS

Cat. No.	Pk	Pack type
N714-1.5ML	1,5 ml	Plastic tube
N714-10ML	10 ml	Plastic bottle

X-GlcA ((5-Bromo-4-chloro-3-indolyl-ß-D-glucuronide) cyclohexylammonium salt), ultrapure

CAS 114162-64-0
$C_{20}H_{26}BrClN_2O_7$ **M.W.** 521.79 g/mol
Melting Pt: 230 °C
Storage Temperature: Freezer
Chromogenic substrate for the detection of β-glucuronidase. Commonly used to detect the GUS gene in bacterial colonies.

Specific Rotation	-90° to -86°

Cat. No.	Pk	Pack type
0919-5MG	5 mg	Glass bottle

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

X-GlcA ((5-Bromo-4-chloro-3-indolyl-ß-D-glucuronide) cyclohexylammonium salt) Molecular biology grade

CAS 114162-64-0
$C_{20}H_{26}BrClN_2O_7$ **M.W.** 521.79 g/mol
Melting Pt: 230 °C
Storage Temperature: Freezer

(5-Bromo-4-chloro-3-indolyl-ß-D-glucuronide) cyclohexylammonium salt (X-GlcA) is a chromogenic substrate for detection of the ß-glucuronidase (GUS) gene, producing a blue colour in GUS+ bacterial colonies.

Appearance	White powder
Solubility in dimethylformamide (2 %)	Clear and colourless
Assay	TLC (single spot)
Optical rotation	-92.0 to -88.0 °
Water	Max. 3.5 %
1H-NMR	Passes test

Cat. No.	Pk	Pack type
438542E	100 mg	Glass bottle

XIAMETER® silicone fluid

See Silicone - Fluids DOW CORNING® p.521

XLD agar

See Microbiology

XLT4 agar

See Microbiology

Xylene alternative for histology

See Q Path® Safesolv, xylene, toluene, and methylecyclohexane substitute Safesolv 391

Xylene (mixture of isomers) AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Warning

CAS 1330-20-7 **UN:** 1307
$C_6H_4(CH_3)_2$ **M.W.** 106.17 g/mol
Boiling Pt: 140 °C (1013 hPa) **Melting Pt:** -34 °C **Density:** 0,86 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488216-32

Assay (mix of 3 isomers + ethylbenzene)	Min. 98.5 %	IR Spectrum	Passes test
Acidity or alkalinity	Max. 0.0002 meq/g	Boiling point	137 - 141 °C
Colouration	Max. 10 APHA	Density (20/4)	0.865 - 0.867
Density (20/20)	0.866 - 0.868	n 20/D	1.495 - 1.499
Substances coloured by H_2SO_4	Max. 1600 APHA	Benzene	Max. 0.02 %
Ethylbenzene	Max. 25 %	Evaporation residue	Max. 10 ppm
Sulphur compounds (as S)	Max. 5 ppm	Thiophene	Max. 1 ppm
Toluene	Max. 1.0 %	Water	Max. 0.03 %
Al (Aluminium)	Max. 0.05 ppm	B (Boron)	Max. 0.02 ppm
Ba (Barium)	Max. 0.05 ppm	Ca (Calcium)	Max. 0.2 ppm
Cd (Cadmium)	Max. 0.02 ppm	Co (Cobalt)	Max. 0.01 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.05 ppm	Mg (Magnesium)	Max. 0.05 ppm
Mn (Manganese)	Max. 0.05 ppm	Ni (Nickel)	Max. 0.01 ppm
Pb (Lead)	Max. 0.02 ppm	Sn (Tin)	Max. 0.05 ppm
Zn (Zinc)	Max. 0.05 ppm	Conforms to ACS	Passes test
Conforms to Reag. Ph.Eur.	Passes test		

Cat. No.	Pk	Pack type
28975.291	1 l	Glass bottle
28975.325	2,5 l	Glass bottle
28975.360	5 l	Fluorinated plastic bottle
28975.462	25 l	Metal drum
28975.553	200 l	Metal drum

Xylene (mixture of isomers), anhydrous (max. 0.005% H_2O) AnalaR NORMAPUR® analytical reagent

Warning

CAS 1330-20-7 **UN:** 1307
$C_6H_4(CH_3)_2$ **M.W.** 106.17 g/mol
Boiling Pt: 140 °C (1013 hPa) **Melting Pt:** -34 °C **Density:** 0,86-0,88g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488216-32

Appearance	Clear colourless liquid	Colour value	Max. 10 APHA
Assay (calculated as mixture of isomers)	Min. 99.5 %	Residue on evaporation	Max. 0.0010 %
Water (K.F.)	Max. 0.0050 %	Benzene	Max. 0.100 %
Toluene	Max. 1 %	Thiophene	Max. 0.00010 %
Acidity or alkalinity	Max. 0.00020 meq/g	Al (Aluminium)	Max. 0.5 ppm
B (Boron)	Max. 0.02 ppm	Ba (Barium)	Max. 0.01 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.05 ppm
Co (Cobalt)	Max. 0.02 ppm	Cr (Chromium)	Max. 0.02 ppm
Cu (Copper)	Max. 0.02 ppm	Fe (Iron)	Max. 0.1 ppm
Mg (Magnesium)	Max. 0.1 ppm	Mn (Manganese)	Max. 0.02 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.05 ppm
Sn (Tin)	Max. 0.1 ppm	Zn (Zinc)	Max. 0.05 ppm
Total S (Sulphur)	Max. 5 ppm		

Cat. No.	Pk	Pack type
28976.294	1 l	Glass bottle

Xylene (mixture of isomers) TECHNICAL

Warning

CAS 1330-20-7 **UN:** 1307
$C_6H_4(CH_3)_2$ **M.W.** 106.17 g/mol
Boiling Pt: 140 °C (1013 hPa) **Melting Pt:** -34 °C **Density:** 0,86 g/cm³ (20 °C)
Storage Temperature: Ambient **REACh:** 01-2119488216-32

Assay	Min. 98 %

Cat. No.	Pk	Pack type
28973.294	1 l	Glass bottle
28973.328	2,5 l	Glass bottle
28973.465	25 l	Metal drum
28973.556	200 l	Metal drum

o-Xylene GPR RECTAPUR®

Warning

CAS 95-47-6 **UN:** 1307
C_8H_{10} **M.W.** 106.17 g/mol
Boiling Pt: 144 °C (1013 hPa) **Melting Pt:** -25 °C **Density:** 0,88 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay (on anhydrous substance)	Min. 99 %
IR Spectrum	Passes test
Density (20/4)	0.870 - 0.890

Cat. No.	Pk	Pack type
28979.294	1 l	Glass bottle

p-Xylene GPR RECTAPUR®

Warning

CAS 106-42-3 **UN:** 1307
$C_6H_4(CH_3)_2$ **M.W.** 106.17 g/mol
Boiling Pt: 138,3 °C (1013 hPa) **Melting Pt:** 14 °C **Density:** 1,096 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 99 %
Boiling point	137 - 139 °C
Solidification point	12 - 14 °C
n 20/D	1.496 - 1.498
Evaporation residue	Max. 50 ppm

Cat. No.	Pk	Pack type
28984.292	1 l	Glass bottle

Xylene Brilliant Cyanine G

See Coomassie® Brilliant Blue G-250 ..... p.96

Xylene Cyanole FF, ultrapure

Warning

CAS 2650-17-1
$C_{25}H_{27}N_2NaO_6S_2$ **M.W.** 538.62 g/mol
Melting Pt: 295 °C
Storage Temperature: Ambient

DNase	none detected
Em (614nm, Water)	>= 30000
Lambda Max	612 nm - 616 nm
Loss on Drying	<= 10 %
RNase	none

Cat. No.	Pk	Pack type
0819-20G	20 g	Glass bottle

Xylenol orange tetrasodium salt TECHNICAL

CAS 3618-43-7
$C_{31}H_{28}N_2Na_4O_{13}S$ **M.W.** 760.59 g/mol
Melting Pt: ~ 210 °C
Storage Temperature: Ambient

Identification	Passes test

Cat. No.	Pk	Pack type
26086.103	5 g	Glass bottle

Xylenol orange triturate 1% in potassium nitrate Reag. Ph. Eur. 1096301

Warning

CAS 1611-35-4 **UN:** 1486
$C_{31}H_{32}N_2O_{13}S$ **M.W.** 672.67 g/mol
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87963.150	50 g	Plastic bottle for solids

Xylenol orange water soluble

See Xylenol orange tetrasodium salt p.522

D(+)-Xylose GPR RECTAPUR®

CAS 58-86-6
$C_5H_{10}O_5$ **M.W.** 150.13 g/mol
Boiling Pt: 331 °C (1013 hPa) **Melting Pt:** 154 °C **Density:** 1,525 g/cm³ (20 °C)
Storage Temperature: Ambient

Melting point	145 - 150 °C
Specific optical rotation (10 %; water)	18 - 20 °
Ignition residue (SO_4)	Max. 0.2 %
Loss on drying (100°C)	Max. 0.2 %

Cat. No.	Pk	Pack type
29013.237	250 g	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Yeast (Brewers), dry, powder TECHNICAL

CAS 68876-77-7

Identification ..... Passes test

Cat. No.	Pk	Pack type
24979.297	1 kg	Plastic bottle for solids
24979.413	10 kg	Bucket (Plastic)

YPD Media, liquid, for biotechnology

A complete medium for the propagation and maintenance of yeast. The composition of YPD is (w/v) 1% Yeast Extract, 2% Peptone, and 2% D-Glucose.

Bioburden (Milliflex) ..... NONE
pH @25 °C ..... 6.14 - 7.14
Refractive Index ..... 1.339 - 1.345
Specific Gravity @20 °C ..... 1.0178 - 1.0190

Cat. No.	Pk	Pack type
1B1493-1L	1 l	Plastic bottle

NEW Ytterbium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Ytterbium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457472B
Ytterbium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85647.180

Ytterbium standard solution, 1,000 mg/l Yb in dil. nitric acid (from Yb2O3) ARISTAR® standard for ICP

Yb_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456344C	500 ml	Plastic bottle

Ytterbium standard solution, 1,000 mg/l Yb in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86724.180	100 ml	Plastic bottle
86724.260	500 ml	Plastic bottle

NEW Yttrium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Yttrium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456982D
Yttrium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85646.180

Yttrium standard solution, 1,000 mg/l Y in dil. nitric acid (from Y2O3) ARISTAR® standard for ICP

Y_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456362E	100 ml	Plastic bottle
456364G	500 ml	Plastic bottle

Yttrium standard solution, 1,000 mg/l Y in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86723.180	100 ml	Plastic bottle
86723.260	500 ml	Plastic bottle

Yttrium standard solution, 10,000 mg/l Y in dil. nitric acid (from Y2O3) ARISTAR® standard for ICP

Y_2O_3 in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456372G	100 ml	Plastic bottle
456374Y	500 ml	Plastic bottle

Yttrium (III) chloride hexahydrate GPR RECTAPUR®

Warning

CAS 10025-94-2

$YCl_3 \cdot 6H_2O$ **M.W.** 303.36 g/mol
Boiling Pt: 1507 °C (1013 hPa) **Melting Pt:** 153 °C **Density:** 2,18 g/cm³ (20 °C)

Assay (calculated as Y_2O_3) ..... Min. 99.99 %

Cat. No.	Pk	Pack type
29029.106	5 g	Plastic bottle for solids

Yttrium oxide

See di-Yttrium trioxide p.523

Yttrium trichloride hexahydrate

See Yttrium (III) chloride hexahydrate p.523

di-Yttrium trioxide GPR RECTAPUR®

CAS 1314-36-9

Y_2O_3 **M.W.** 225.81 g/mol
Boiling Pt: 4300 °C (1013 hPa) **Melting Pt:** 2410 °C **Density:** 5,01 g/cm³ (20 °C)

Assay ..... Min. 99.9 %

Cat. No.	Pk	Pack type
29033.101	5 g	Glass bottle

Zimmermann-Reinhardt's solution

Danger

UN: 3264

M.W. 223.06 g/mol

Identification ..... Passes test

Cat. No.	Pk	Pack type
9110.1000	1 l	Glass bottle

Zinc, pellets AnalaR NORMAPUR® analytical reagent

CAS 7440-66-6

Zn

M.W. 65.39 g/mol

Boiling Pt: 908 °C (1013 hPa) **Melting Pt:** 420 °C **Density:** 7,14 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.9 %
As (Arsenic) ..... Max. 0.1 ppm
Cu (Copper) ..... Max. 10 ppm
Pb (Lead) ..... Max. 50 ppm
Mean diameter ..... 3 to 8 mm
Cd (Cadmium) ..... Max. 30 ppm
Fe (Iron) ..... Max. 0.003 %
Sn (Tin) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
29080.238	250 g	Plastic bottle for solids
29080.295	1 kg	Plastic bottle for solids

Zinc, coarse powder AnalaR NORMAPUR® ACS analytical reagent

Danger

CAS 7440-66-6 **UN:** 1436

Zn

M.W. 65.39 g/mol

Boiling Pt: 907 °C (1013 hPa) **Melting Pt:** 419,5 °C **Density:** 7,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.8 %
Cd (Cadmium) ..... Max. 20 ppm
Fe (Iron) ..... Max. 100 ppm
Conforms to ACS ..... Passes test
As (Arsenic) ..... Max. 0.1 ppm
Cu (Copper) ..... Max. 10 ppm
Pb (Lead) ..... Max. 50 ppm

Cat. No.	Pk	Pack type
29068.236	250 g	Plastic bottle for solids

Zinc stabilised, fine powder TECHNICAL

Stabilised with zinc oxide 6 %

Danger

CAS 7440-66-6 **UN:** 1436

Zn

M.W. 65.39 g/mol

Boiling Pt: 907 °C (1013 hPa) **Melting Pt:** 419,5 °C **Density:** 7,13 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 97 %

Cat. No.	Pk	Pack type
29063.296	1 kg	Plastic bottle for solids
29063.365	5 kg	Plastic bottle for solids

NEW Zinc standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Zinc	10 ppm	2% HNO_3	Plastic bottle	100 ml	85648.180
Zinc	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	456992F
Zinc	10000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457162C

Zinc standard solution, 10,000 mg/l Zn in dil. nitric acid (from Zn) ARISTAR® standard for ICP

Zn in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456392K	100 ml	Plastic bottle
456394M	500 ml	Plastic bottle

Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid (from Zn) ARISTAR® standard for ICP

Zn in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456382Y	100 ml	Plastic bottle
456384K	500 ml	Plastic bottle

Zinc standard solution, 1,000 mg/l Zn in dil. nitric acid AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86725.180	100 ml	Plastic bottle
86725.260	500 ml	Plastic bottle

Zinc acetate dihydrate AnalaR NORMAPUR® analytical reagent

Warning

CAS 5970-45-6 **UN:** 3077

$(H_3CCOO)_2Zn \cdot 2H_2O$

M.W. 219.51 g/mol

Melting Pt: 237 °C **Density:** 1,718 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 99.0 %
Not precipitated by $(NH_4)_2S$ (as SO_4) ... Max. 0.25 %
Cl (Chloride) ..... Max. 5 ppm
NO_3 (Nitrate) ..... Max. 10 ppm
As (Arsenic) ..... Max. 2 ppm
Fe (Iron) ..... Max. 5 ppm
Insolubility in water ..... Max. 50 ppm
Reducing substances (as HCOOH) ..... Max. 0.015 %
NH_4 (Ammonium) ..... Max. 10 ppm
SO_4 (Sulphate) ..... Max. 20 ppm
Cu (Copper) ..... Max. 10 ppm
Pb (Lead) ..... Max. 20 ppm

Cat. No.	Pk	Pack type
29088.235	250 g	Plastic bottle for solids
29088.292	1 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Zinc acetate dihydrate GPR RECTAPUR®

Warning

CAS 5970-45-6 **UN:** 3077
$(H_3CCOO)_2Zn \cdot 2H_2O$ **M.W.** 219.51 g/mol
Melting Pt: 237 °C **Density:** 1,718 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 98 %
Cl (Chloride)	Max. 50 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 20 ppm
Pb (Lead)	Max. 100 ppm

Cat. No.	Pk	Pack type
29087.298	1 kg	Plastic bottle for solids

Zinc acetate, 0.25 mol/l, buffered with ammonium acetate, pH 6.4 Reag. Ph. Eur. 1102301

Warning

CAS 557-34-6 **UN:** 3082
$(H_3CCOO)_2Zn$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87967.290	1 l	Plastic bottle

Zinc carbonate basic GPR RECTAPUR®

CAS 51839-25-9
$Zn_{(x/2+y)}(OH)_x(CO_3)_y$ **M.W.** 99.3947 - 125.4179
Melting Pt: > 140 °C **Density:** 3,5 g/cm³ (20 °C)

Assay (calculated as ZnO)	70 - 75 %
Heavy metals (as Pb)	Max. 100 ppm
Insolubility in diluted H_2SO_4	Max. 0.05 %
Cl (Chloride)	Max. 100 ppm
NO_3 (Nitrate)	Max. 100 ppm
SO_4 (Sulphate)	Max. 1 %
As (Arsenic)	Max. 3 ppm
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
29110.290	1 kg	Plastic bottle for solids

Zinc chloride AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 7646-85-7 **UN:** 2331
$ZnCl_2$ **M.W.** 136.3 g/mol
Boiling Pt: 732 °C (1013 hPa) **Melting Pt:** 283 °C **Density:** 2,91 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	98.0 - 100.5 %	Al + Ca + heavy metals + Fe + Mg	Passes test
Identification A	Passes test Ph.Eur.	Identification B	Passes test Ph.Eur.
Solution S	Passes test Ph.Eur.	pH (20°C; 10 %)	4.6 - 5.5
Insoluble substances	Max. 50 ppm	Oxide chloride (as ZnO)	Max. 1.20 %
Total N (Nitrogen)	Max. 20 ppm	NH_4 (Ammonium)	Max. 50 ppm
NO_3 (Nitrate)	Max. 30 ppm	SO_4 (Sulphate)	Max. 20 ppm
Ca (Calcium)	Max. 10 ppm	Cd (Cadmium)	Max. 5 ppm
Cu (Copper)	Max. 10 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 0.02 %	Mg (Magnesium)	Max. 100 ppm
Na (Sodium)	Max. 50 ppm	Pb (Lead)	Max. 10 ppm
Conforms to ACS	Passes test	Conforms to Reag. Ph.Eur.	Passes test

Cat. No.	Pk	Pack type
29156.231	250 g	Plastic bottle for solids
29156.260	500 g	Plastic bottle for solids
29156.297	1 kg	Plastic bottle for solids

Zinc chloride TECHNICAL

Danger

CAS 7646-85-7 **UN:** 2331
$ZnCl_2$ **M.W.** 136.3 g/mol
Boiling Pt: 732 °C (1013 hPa) **Melting Pt:** 283 °C **Density:** 2,91 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay	Min. 97 %
Fe (Iron)	Max. 20 ppm
Pb (Lead)	Max. 20 ppm

Cat. No.	Pk	Pack type
29126.294	1 kg	Plastic bottle for solids
29126.363	5 kg	Bucket (Plastic)

Zinc chloride 71% in aqueous solution

Danger

CAS 7646-85-7 **UN:** 1840
$ZnCl_2$
Storage Temperature: Ambient

Assay	Min. 71 %
Heavy metals (as Pb)	Max. 20 ppm
SO_4 (Sulphate)	Max. 0.02 %
Fe (Iron)	Max. 20 ppm

Cat. No.	Pk	Pack type
29142.290	1 l	Glass bottle

Zinc chloride-formic acid solution Reag. Ph. Eur. 1096601

Danger

CAS 7646-85-7 **UN:** 1760
$ZnCl_2$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87965.290	1 l	Plastic bottle

Zinc diacetate dihydrate

See Zinc acetate dihydrate p.524

Zinc iodide and starch solution Reag. Ph. Eur. 1096502

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87964.180	100 ml	Plastic bottle

Zinc iodine chloride in aqueous solution Reag. Ph. Eur. 1096602

Danger

UN: 2920

Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87726.180	100 ml	Plastic bottle

Zinc oxide light TECHNICAL

Warning

CAS 1314-13-2 **UN:** 3077

ZnO **M.W.** 81.39 g/mol

Boiling Pt: 2360 °C (1013 hPa) **Melting Pt:** 1975 °C **Density:** 5,6 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay ..... Min. 98 %

Cat. No.	Pk	Pack type
29199.295	1 kg	Plastic bottle for solids

Zinc oxide AnalaR NORMAPUR® analytical reagent

Warning

CAS 1314-13-2 **UN:** 3077

ZnO **M.W.** 81.39 g/mol

Melting Pt: 1975 °C **Density:** 5,61 g/cm³ (25 °C)

Storage Temperature: Ambient **REACh:** 01-2119463881-32

Assay	Min. 99.0 %	Insolubility in diluted HCl	Max. 50 ppm
Not precipitated by $(NH_4)_2S$ (as SO_4)	Max. 0.25 %	Substances reducing $KMnO_4$ (as O)	Max. 15 ppm
Cl (Chloride)	Max. 10 ppm	NO_3 (Nitrate)	Max. 20 ppm
PO_4 (Phosphate)	Max. 20 ppm	SO_4 (Sulphate)	Max. 100 ppm
As (Arsenic)	Max. 1 ppm	Cu (Copper)	Max. 20 ppm
Fe (Iron)	Max. 5 ppm	Mn (Manganese)	Max. 10 ppm
Pb (Lead)	Max. 50 ppm		

Cat. No.	Pk	Pack type
29211.298	1 kg	Plastic bottle for solids

Zinc stearate Ph. Eur.

CAS 557-05-1

$C_{36}H_{70}O_4Zn$ **M.W.** 632.34 g/mol

Melting Pt: 140 °C **Density:** 1,095 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay (Zn)	10.0 - 12.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
Appearance of solution of fatty acids	Passes test
Acidity or alkalinity	Passes test
Acid value of the fatty acids	195 - 210
Cl (Chloride)	Max. 250 ppm
SO_4 (Sulphate)	Max. 0.6 %
Cd (Cadmium)	Max. 5 ppm
Pb (Lead)	Max. 25 ppm
Residual solvents	Passes test

Cat. No.	Pk	Pack type
83563.370	5 kg	Bucket (Plastic)

Zinc stearate TECHNICAL

CAS 557-05-1

$C_{36}H_{70}O_4Zn$ **M.W.** 632.34 g/mol

Melting Pt: 140 °C **Density:** 1,095 g/cm³ (20 °C)

Storage Temperature: Ambient

Identification ..... Passes test

Cat. No.	Pk	Pack type
29240.298	1 kg	Bucket (Plastic)

Zinc sulphate monohydrate, purified

Danger

CAS 7446-19-7 **UN:** 3077

$ZnSO_4 \cdot 1H_2O$ **M.W.** 179.47 g/mol

Density: 3,2 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 98 %
Pb (Lead)	Max. 100 ppm
Fe (Iron)	Max. 0.012 %

Cat. No.	Pk	Pack type
29245.262	500 g	Plastic bottle for solids

Zinc sulphate heptahydrate AnalaR NORMAPUR® ACS, Reag. Ph. Eur. analytical reagent

Danger

CAS 7446-20-0 **UN:** 3077

$ZnSO_4 \cdot 7H_2O$ **M.W.** 287.56 g/mol

Melting Pt: 100 °C **Density:** 1,97 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99.5 %	Solution in water	Passes test
pH (20°C; 5 %)	4.4 - 6	pH (25°C; 5 %)	4.4 - 6
Insolubility in water	Max. 100 ppm	Cl (Chloride)	Max. 5 ppm
Total N (Nitrogen)	Max. 5 ppm	As (Arsenic)	Max. 0.5 ppm
Ca (Calcium)	Max. 10 ppm	Cd (Cadmium)	Max. 5 ppm
Cu (Copper)	Max. 5 ppm	Fe (Iron)	Max. 5 ppm
K (Potassium)	Max. 10 ppm	Li (Lithium)	Max. 10 ppm
Mn (Manganese)	Max. 3 ppm	Na (Sodium)	Max. 10 ppm
Pb (Lead)	Max. 20 ppm	Sr (Strontium)	Max. 5 ppm
Conforms to BDH 10299	Passes test		

Cat. No.	Pk	Pack type
29253.236	250 g	Plastic bottle for solids
29253.260	500 g	Plastic bottle for solids
29253.293	1 kg	Plastic bottle for solids
29253.460	25 kg	Bucket (Plastic)

Zinc sulphate heptahydrate Ph. Eur.

Danger

CAS 7446-20-0 **UN:** 3077

$ZnSO_4 \cdot 7H_2O$ **M.W.** 287.56 g/mol

Melting Pt: 100 °C **Density:** 1,97 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	99.0 - 104.0 %
Appearance	Conforms (see CoA/CoS)
Identification A	Passes test
Identification B	Passes test
Solution S	Passes test
Appearance of solution	Passes test
pH (5 %)	4.4 - 5.6
Cl (Chloride)	Max. 300 ppm
Fe (Iron)	Max. 100 ppm
Residues of metal catalysts or reagents	Unlikely by manuf.process
Residual solvents	Unlikely by manuf.process

Cat. No.	Pk	Pack type
29158.294	1 kg	Plastic bottle for solids
29158.363	5 kg	Plastic bottle for solids

Zinc sulphate heptahydrate GPR RECTAPUR®

Danger

CAS 7446-20-0 **UN:** 3077

$ZnSO_4 \cdot 7H_2O$ **M.W.** 287.56 g/mol

Melting Pt: 100 °C **Density:** 1,97 g/cm³ (20 °C)

Storage Temperature: Ambient

Assay	Min. 99 %
Cl (Chloride)	Max. 0.03 %
Fe (Iron)	Max. 20 ppm
Pb (Lead)	Max. 100 ppm

Cat. No.	Pk	Pack type
29247.292	1 kg	Plastic bottle for solids
29247.361	5 kg	Plastic bottle for solids

Please visit vwr.com for terms and conditions of sale, latest pricing, certificates and SDS

Zinc sulphate heptahydrate TECHNICAL

Danger

CAS 7446-20-0 **UN:** 3077
$ZnSO_4 \cdot 7H_2O$
M.W. 287.56 g/mol
Melting Pt: 100 °C **Density:** 1,97 g/cm³ (20 °C)
Storage Temperature: Ambient

Assay..... Min. 98 %

Cat. No.	Pk	Pack type
29243.367	5 kg	Bucket (Plastic)

Zinc sulphate 0.1 mol/l (0.1 N) in aqueous solution AVS TITRINORM® volumetric solution

CAS 7733-02-0 **UN:** 3082
$ZnSO_4$
Storage Temperature: Ambient

NIST traceable..... Confirmed
Titer (20°C; real value 0.2 % accuracy) .....0.0998 - 0.1002 mol/l

Cat. No.	Pk	Pack type
30498.296	1 l	Plastic bottle

NEW Zinc sulphate (0.05 mol/l; 0.05 N) in aqueous solution USP test solutions (TS)

CAS 7733-02-0
O_4SZn
Storage Temperature: Ambient
Ready to use solutions.

- Produced according to Pharmacopoeia requirements
- Reduces time and expenses
- Independent, traceable and certified
- Conforms to USP 34
- Certificates of analysis and safety data sheets available

Cat. No.	Pk	Pack type
85378.180	100 ml	Plastic bottle
85378.260	500 ml	Plastic bottle

NEW Zirconium standard solutions for ICP-MS, ARISTAR®

- Produced from high purity acids, water ASTM I 18 Megaohms
- Solution assayed by titration
- Final concentration verified against reference material from NIST
- Total maximum uncertainty: 0.5% (typical)
- Delivered with complete certificate of analysis

Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Element	Concentration	Matrix	Pack type	Pk	Cat. No.
Zirconium	1000 ppm	2-5% HNO_3	Plastic bottle	100 ml	457483C
Zirconium	10 ppm	2% HNO_3	Plastic bottle	100 ml	85649.180

Zirconium standard solution, 10,000 mg/l Zr in dil. nitric acid (from ZrO(NO3)2) ARISTAR® standard for ICP

$ZrO(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456414W	500 ml	Plastic bottle

Zirconium standard solution, 1,000 mg/l Zr in dil. nitric acid (from ZrO(NO3)2) ARISTAR® standard for ICP

$ZrO(NO_3)_2$ in HNO_3 2 - 5%

Traceable to SRM from NIST, manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities

Supplied with certificate of analysis.

Cat. No.	Pk	Pack type
456402S	100 ml	Plastic bottle

Zirconium standard solution, 1,000 mg/l Zr in 5% hydrochloric acid with hydrofluoric acid (max. 1%) AVS TITRINORM® standard for AAS

- Traceable to SRM from NIST
- Manufactured and tested in ISO Guide 34/ ISO17025 accredited facilities
- Supplied with certificate of analysis, real value ± 0.3%

Cat. No.	Pk	Pack type
86726.180	100 ml	Plastic bottle
86726.260	500 ml	Plastic bottle

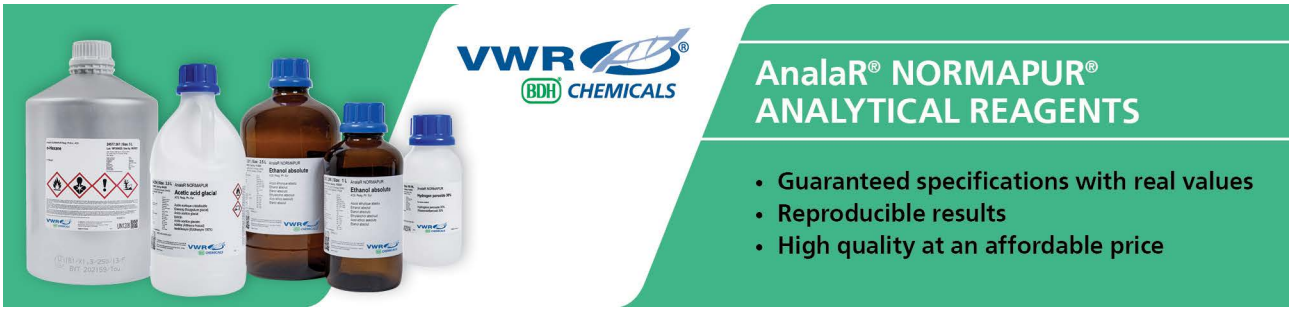
Zirconyl nitrate 0.1% in hydrochloric acid 22% Reag. Ph. Eur. 1097201

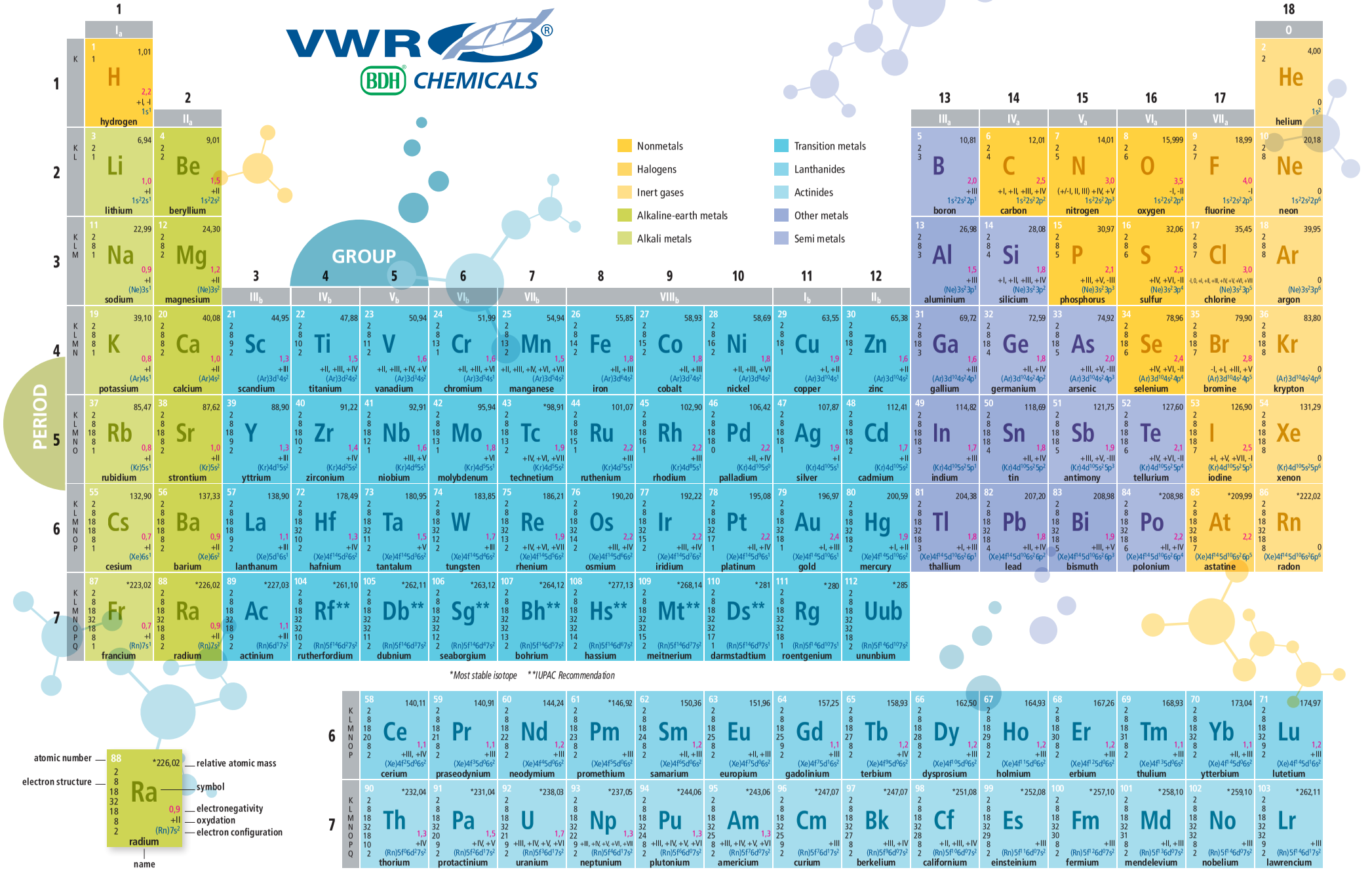
Warning

CAS 13826-66-9 **UN:** 1789
$ZrO(NO_3)_2$
Storage Temperature: Ambient

Supplied with certificate of analysis. Normally manufactured to order. Please check with customer services.

Cat. No.	Pk	Pack type
87966.180	100 ml	Plastic bottle

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electron structure
relative atomic mass
symbol
electronegativity
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2017	VWR invests to become a major manufacturer of high purity acids
2015	VWR invests to become a major manufacturer of high purity HPLC solvents
2014	VWR becomes a NASDAQ listed company
2013	VWR acquire UBI, a major manufacturer of biological buffers and amino acid derivatives
2013	VWR acquire LABOnord, manufacturers of the Q Path range of pathology chemicals and consumables
2012	The new 'VWR Chemicals' brand is launched
2011	VWR acquire Amresco, a life science product manufacturer
2007	BDH and Prolabo brands merge, production moves to VWR's sites in Briare and Haasrode
2007	Madison Dearborn Partners acquire VWR International
2004	CD&R acquire VWR International from Merck
2002	Company name changes to VWR International Ltd.
2000	Company name changes to Merck Eurolab Ltd.
1999	Merck acquire VWR Scientific Products, USA
1991/8	BDH production moves to Merck, Darmstadt
1991	Company starts trading as Merck Ltd.
1978	Merck acquire BDH Chemicals Division from Glaxo
1968	Glaxo acquire BDH
1966	Gurr® microscopy chemicals acquired by BDH
1946	BDH Chemicals Division re-locates to Poole, Dorset
1934	Launch of "AnalaR" range of analytical reagents
1909	Creation of British Drug Houses (BDH), London

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