AHLSTROM
MUNKSJÖ

DNA COLLECTION: EASY AND RELIABLE SOLUTIONS

Ahlstrom-Munksjö GenCollect™

Ahlstrom-Munksjö GenCollect™ 2.0

SPECIMEN COLLECTION CARDS

Rapidity, Cost-effectiveness, Reliability.

What small cards can offer - And more.

Ahlstrom-Munksjö GenCollect™ and GenCollect™ 2.0 provide a practical and convenient solution for the collection, transport and storage of biological samples. And it can all be done at ambient temperature.

A few reasons why:

We make it simple for you

- The sample collection is easy and it does not require particular skills or equipment
- No need for cold chains and freezers. The cards can be transported at ambient temperature

Save money and work efficiently

- No costly stabilizing chemistry is needed for the short-term ambient storage of DNA
- Reduce your costs – no cold storage needed

Trust your results

- The fiber-based material of our cards is made following the highest manufacturing standards
- The quality and purity of the paper provides DNA analysis free of interferences after a trouble-free extraction

We meet your needs

- Our cards are customizable and can be tailored to fully accommodate your biological fluids sampling process requirements

Our solutions to your needs:

- FORENSICS
- PATERNITY TESTS
- ANIMAL SCREENING
- PLASMID SCREENING
- GENOTYPING

Your results are a few steps away

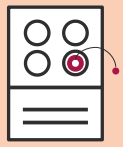
How to – simplified collection and analysis

Ahlstrom-Munksjö GenCollect™

Reliable processing through purification and amplification. GenCollect™ card is a chemical free card designed for efficient extraction and purification of DNA.

1. Collect biosample and let it dry

2. Punch a 1.2 mm paper disc



3. Extraction and purification of DNA

4. Add purified DNA to PCR reagents

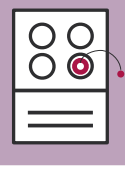
5. Amplify genomic DNA

Ahlstrom-Munksjö GenCollect™ 2.0

Fast processing through direct DNA amplification. GenCollect™ 2.0 card is a chemically treated card that lyses cells and preserves biosamples from microbiological contamination. It is fully compatible for direct DNA amplification, eliminating the extraction step.

1. Collect biosample and let it dry

2. Punch a 1.2 mm paper disc



3. Add the disc to PCR reagents

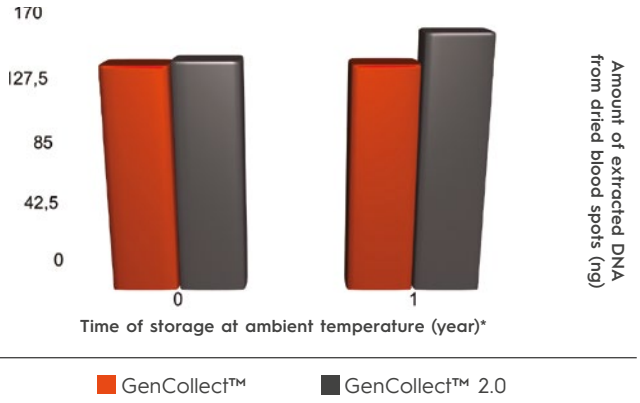
4. Amplify genomic DNA

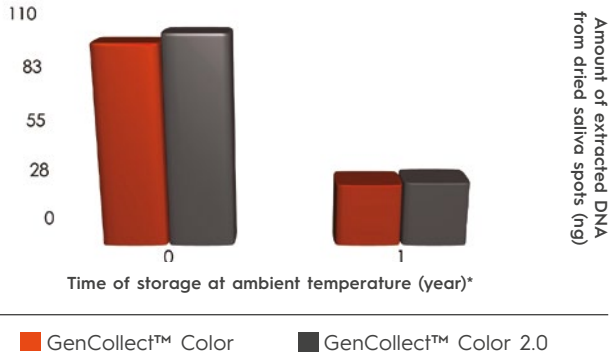
Typical characteristics

Product	Cards/ Pack	Sample areas/card	Max. Vol loaded/ sample area (µl)	Ref. Number	Samples type	Max. storage	Applications
Ahlstrom-Munksjö GenCollect™	25/100	4	125	8.560.0002.B-G/8.560.0002.B-N	Blood	1 year	– Human Identification (PCR and quantitative PCR, STR & NGS genotyping) – Genomics – Animal identification – Plasmid screening – Transgenic identification
	25/100	2		8.560.0001.B-G/8.560.0001.B-N			
	25/100	1		8.560.0000.B-G/8.560.0000.B-N			
Ahlstrom-Munksjö GenCollect™ Color	25/100	4	70	8.561.0002.B-G/8.561.0002.B-N	Saliva Buccal cells Urine		
	25/100	2		8.561.0001.B-G/8.561.0001.B-N			
	25/100	1		8.561.0000.B-G/8.561.0000.B-N			
Ahlstrom-Munksjö GenCollect™ 2.0	25/100	4	125	8.562.0002.B-G/8.562.0002.B-N	Blood		– Human Identification (direct-multiplex PCR and quantitative PCR, STR & NGS genotyping) – Genomics – Animal identification – Plasmid screening – Transgenic identification
	25/100	2		8.562.0001.B-G/8.562.0001.B-N			
	25/100	1		8.562.0000.B-G/8.562.0000.B-N			
Ahlstrom-Munksjö GenCollect™ Color 2.0	25/100	4	70	8.563.0002.B-G/8.563.0002.B-N	Saliva Buccal cells Urine		
	25/100	2		8.563.0001.B-G/8.563.0001.B-N			
	25/100	1		8.563.0000.B-G/8.563.0000.B-N			

High recovery of preserved human genomic DNA

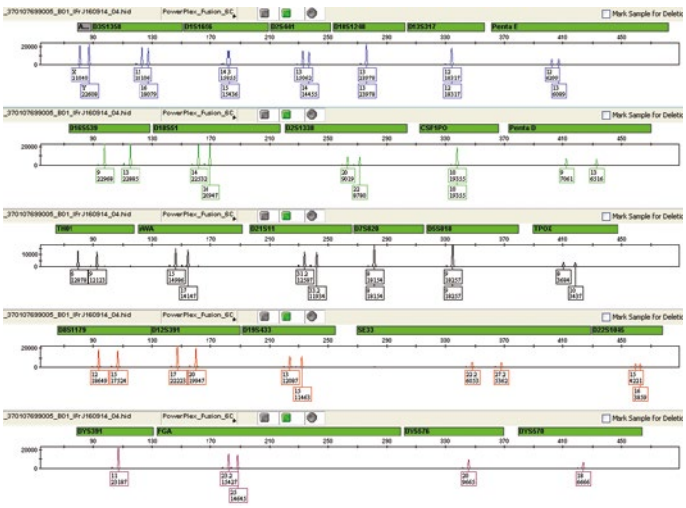
Total yield of human genomic DNA purified from discs taken at the center of human blood spots or saliva spots collected on Ahlstrom cards and then stored for one year* at ambient temperature. Human genomic DNA was quantified by real time PCR.



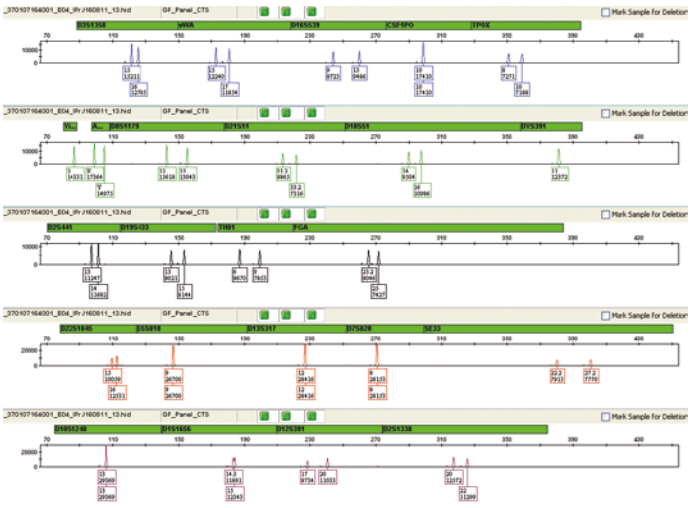


High quality STR Profile

Data obtained from human genomic DNA extracted and purified from whole human blood collected on GenCollect™ 2.0 card not stored or stored at ambient temperature for 1 year*.



Electrophoregram for the STR amplification from genomic DNA purified from dried blood spots after 24 hours of storage at ambient temperature.



Electrophoregram for the STR amplification from genomic DNA purified from dried blood spots stored 1 year at ambient temperature.

Next Generation Sequencing Data

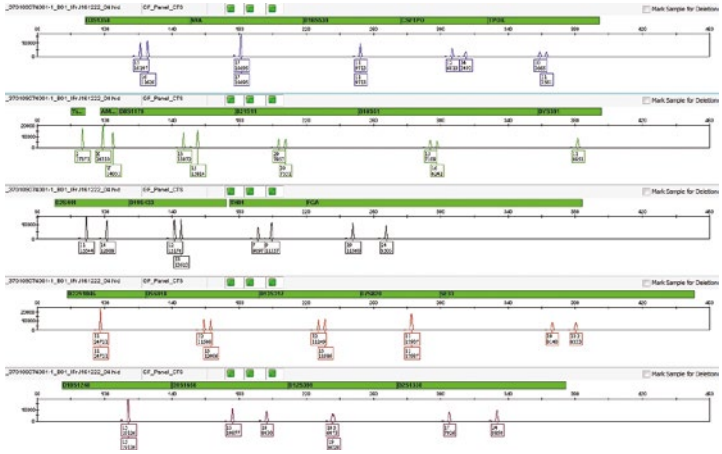
NGS data obtained from DNA purified from blood (GenCollect™ 2.0) or saliva (GenCollect™ Color 2.0) stored at ambient temperature for 1 year*. The high quantity and quality of DNA stored and extracted is correlated with a high number of Reads and a Quality test (Q20) value higher than 94%. This high data quality is consistent and demonstrates that NGS is achievable even after 1 year* of storage of DNA at ambient temperature.

Ahlstrom-Munksjö card	Bases	≥ Q20	Reads	Mean Read Length
GenCollect™ 2.0	18 863 852	17 753 69 (94,1%)	205,170	92 bp
GenCollect™ Color 2.0	21 043 802	19 881 901 (94,5%)	243,384	86 bp

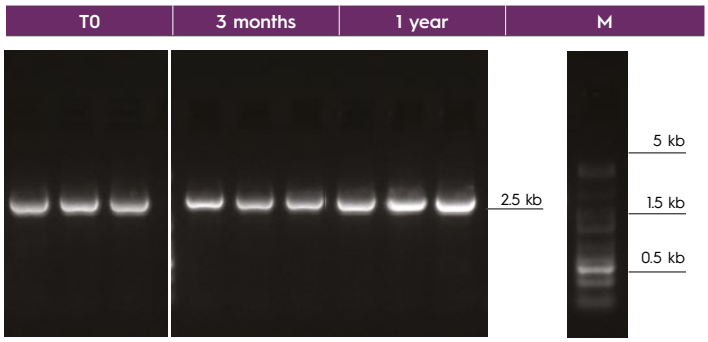
*Test performed with accelerated ageing conditions. Real time stability studies are ongoing to confirm these results.

Suitability for direct DNA amplification

Data obtained from genomic DNA purified from human saliva collected on GenCollect™ Color 2.0 card then stored at room temperature for 1 year*.



STR Electrophoregram for the direct DNA amplification from a 1.2 mm paper disc taken from the center of saliva spots.



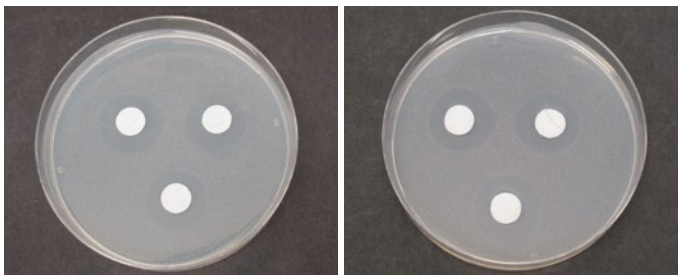
Agarose gel analysis (1XTAE, 1% agarose) of a direct amplification of a 2.5 kb PCR product from 1 mm discs taken from the center of dried saliva spot collected on GenCollect™ Color 2.0 card and stored 3 months or 1 year* at ambient temperature.

Locus	Allele 1	Allele 2	Summary
DS1358	100%	100%	4 correct calls out of 4
vWA	100%	N/A	2 correct calls out of 2
D16S539	100%	N/A	2 correct calls out of 2
CSF1PO	100%	100%	4 correct calls out of 4
TPOX	100%	100%	4 correct calls out of 4
Yindel	100%	N/A	2 correct calls out of 2
AMEL	100%	100%	4 correct calls out of 4
D8S1179	100%	100%	4 correct calls out of 4
D21S11	100%	100%	4 correct calls out of 4
D18S51	100%	100%	4 correct calls out of 4
DYS391	100%	N/A	2 correct calls out of 2
D2S441	100%	100%	4 correct calls out of 4
D19S433	100%	100%	4 correct calls out of 4
TH01	100%	100%	4 correct calls out of 4
FGA	100%	100%	4 correct calls out of 4
D22S1045	100%	N/A	2 correct calls out of 2
D5S818	100%	100%	4 correct calls out of 4
D13S317	100%	100%	4 correct calls out of 4
D7S820	100%	N/A	2 correct calls out of 2
SE33	100%	100%	4 correct calls out of 4
D10S1248	100%	N/A	2 correct calls out of 2
D1S1656	100%	100%	4 correct calls out of 4
D12S391	100%	100%	4 correct calls out of 4
D2S1338	100%	100%	4 correct calls out of 4

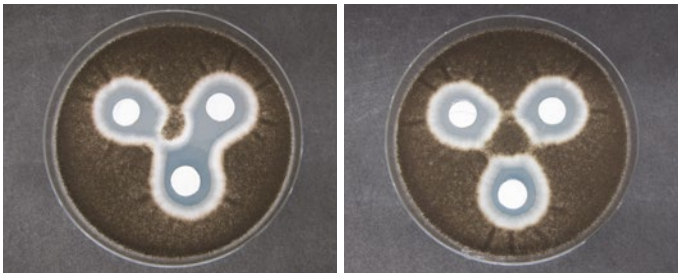
Total numbers of sample	2
Total of possible allele calls	82
Total correct allele calls	82
Percentage of Accuracy N/A: Non Applicable	**100%**

Percentage accuracy of allele calls for 24 loci determined by STR profiling of purified DNA.

Antimicrobial activity



Zones of growth inhibition for *Bacillus subtilis* (seeded on classic nutrient medium 10^4 CFU/ml) grown in the presence of 10 mm GenCollect™ 2.0 (left) and (right) GenCollect™ Color 2.0 discs.



Zones of growth inhibition for *Aspergillus niger*, *Penicillium veridicatum*, *Cladosporium sphaeosporum* (seeded on Sabouraud nutrient medium 10^5 spores/ml) grown in the presence of 10 mm GenCollect™ 2.0 (left) and GenCollect™ Color 2.0 (right) discs.

Ahlstrom-Munksjö is a global leader in fiber-based materials, supplying innovative and sustainable solutions to customers worldwide. Our offerings include decor paper, filter media, release liners, abrasive backings, nonwovens, electrotechnical paper, glass fiber materials, food packaging and labeling, tape, medical fiber materials and solutions for diagnostics. Combined annual net sales are about EUR 2.15 billion and we employ 6,000 people. The Ahlstrom-Munksjö share is listed on the Nasdaq Helsinki and Stockholm. The company was formed on April 1, 2017 through the merger of Ahlstrom Corporation and Munksjö Oyj.

In compliance with ISO 18385 Forensic DNA Grade

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