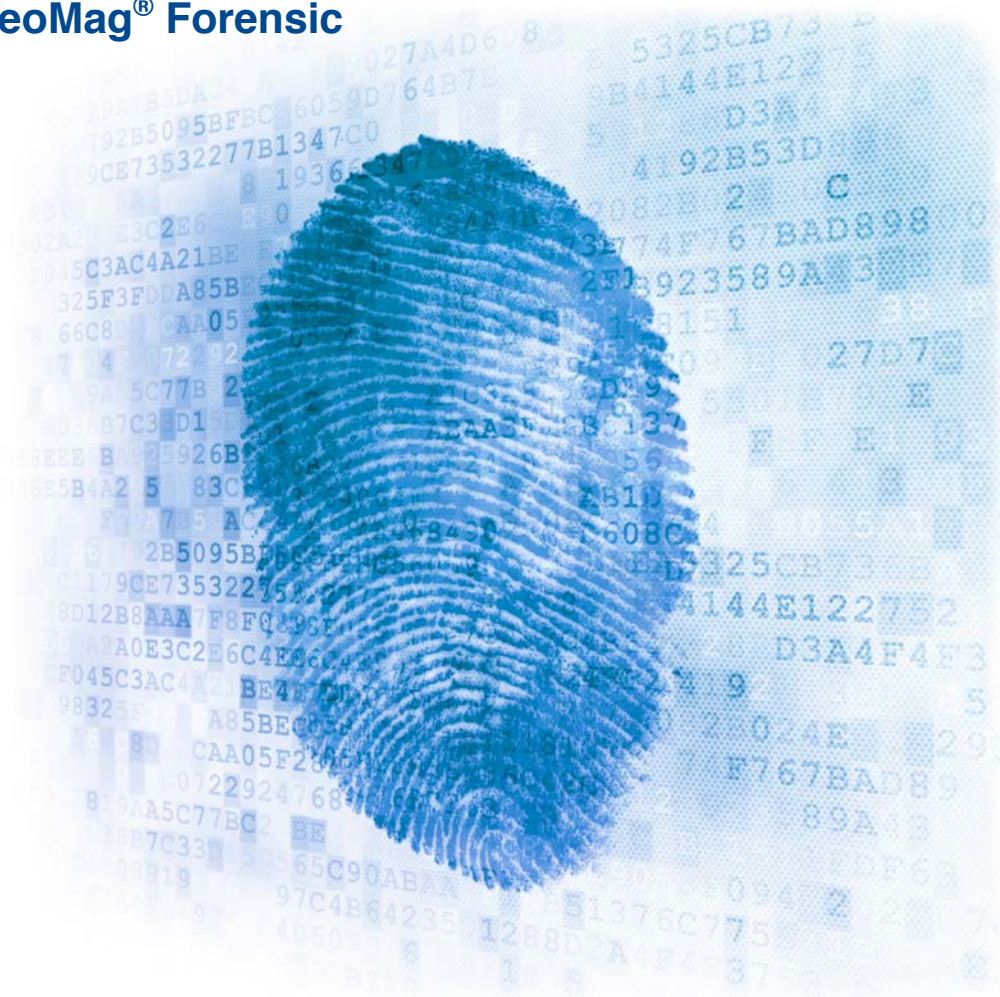


DNA purification products from MACHEREY-NAGEL

DNA Isolation for forensic science

Reliable results for your samples

NucleoMag® Forensic



Excellent DNA purity from all casework samples

Magnetic bead based isolation

High sensitivity for low and high DNA content

... reliable quality for your STR analysis

MACHEREY-NAGEL

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Since 1911

NucleoMag® Forensic

NucleoMag® Forensic

For purification of DNA from forensic samples

Product-at-a-glance

Technology	Magnetic-bead technology
Processing	Automated or manual
Sample material	Casework samples, contact traces (e.g., dried blood spots, cigarette butts), buccal swabs
Typical concentration/yield	< 1 ng/μL; total yield depend on sample amount and quality
Elution volume	25–50 μL

Application data

Reliable profiles from different samples

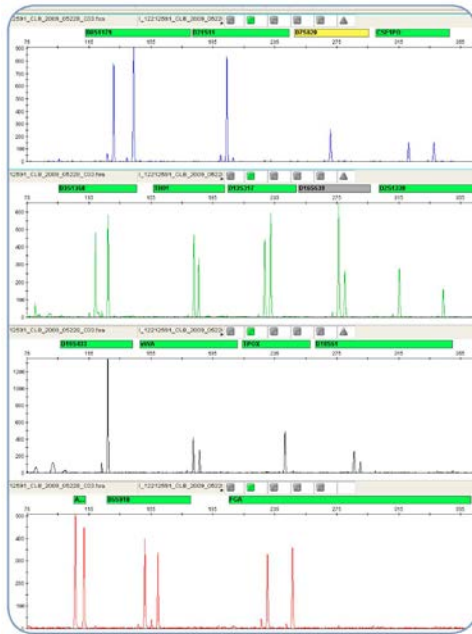


Figure 1: STR profile obtained from cigarette butt.

Table 1: Results and numbers of valid loci from different sample material.

(a) valid locus: all alleles of peak height of 70 rfu refer to heterozygotes and 400 rfu to homozygotes. (b) valid profile: 6 out of 16 analyzed autosomal loci are valid. Data generated in cooperation with INSTITUT NATIONAL DE POLICE SCIENTIFIQUE - Laboratoire de Police Scientifique de Marseille; for details see also MN Application Note "CSI: automated nuclear DNA extraction from rich, low traces using the NucleoMag® Forensic kit on the Hamilton Microlab STAR platform".

Sample type	„Input: DNA quantity/number of cells“	„Loci number valid(a)(max=16)“	„Profile number valid(b)“
Epithelial cells	4 ng / 670 cells	16 / 15 / 16	1
	2 ng / 330 cells	16 / 16 / 16	1
	1 ng / 160 cells	14 / 14 / 15	1
Blood cells	12 ng / 2000 cells	16 / 16 / 16	1
	4 ng / 2000 cells	16 / 16 / 16	1
	0.5 ng / 80 cells	14 / 14 / 15	1
Chewing gum	amount of biological material not determined	16 / 16 / 16	1
Cigarette butt	amount of biological material not determined	16 / 16 / 16	1
Epithel cells on jeans	2 ng / 320 cells	16 / 16 / 16	1
Blood on swabs	720 ng / 120,000 cells	16 / 16 / 16	1

Sample	Yield (ng)	Concentration (ng/μL)
Whole blood (10 μL)	474	9,48
Blood spot on jeans	189	3,78
10 μL blood on fleece	29,9	0,60
10 μL blood on cotton	26,5	0,53
1 μL blood on table top	4,265	0,09
Saliva from a concrete surface	333	6,66
Buccal swab (male)	858,5	17,17

Sample	Yield (ng)	Concentration (ng/μL)
Half a chewing gum	300	6,00
Cigarette butts	67	1,34
Trace papillary	14	0,28
Cotton swab on tool cabinet	4,205	0,08
Cotton swab on a pliers handle	4,89	0,10
Sample from a mug	3,745	0,07

Table 2: Examples for starting materials and yield

Different sample materials were used for DNA isolation using NucleoMag® Forensic. The shown results are examples for possible yield, however yield strongly depends on general DNA content in the forensic sample. The shown concentrations are obtained from 50 μL elution fractions.

Ordering information

Product	Preps	REF
NucleoMag® Forensic	1 x 96 / 4 x 96	744650.1 / .4

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