

DNA and RNA clean-up products from MACHEREY-NAGEL

MN guide to DNA and RNA clean-up products

Don't limit your downstream applications

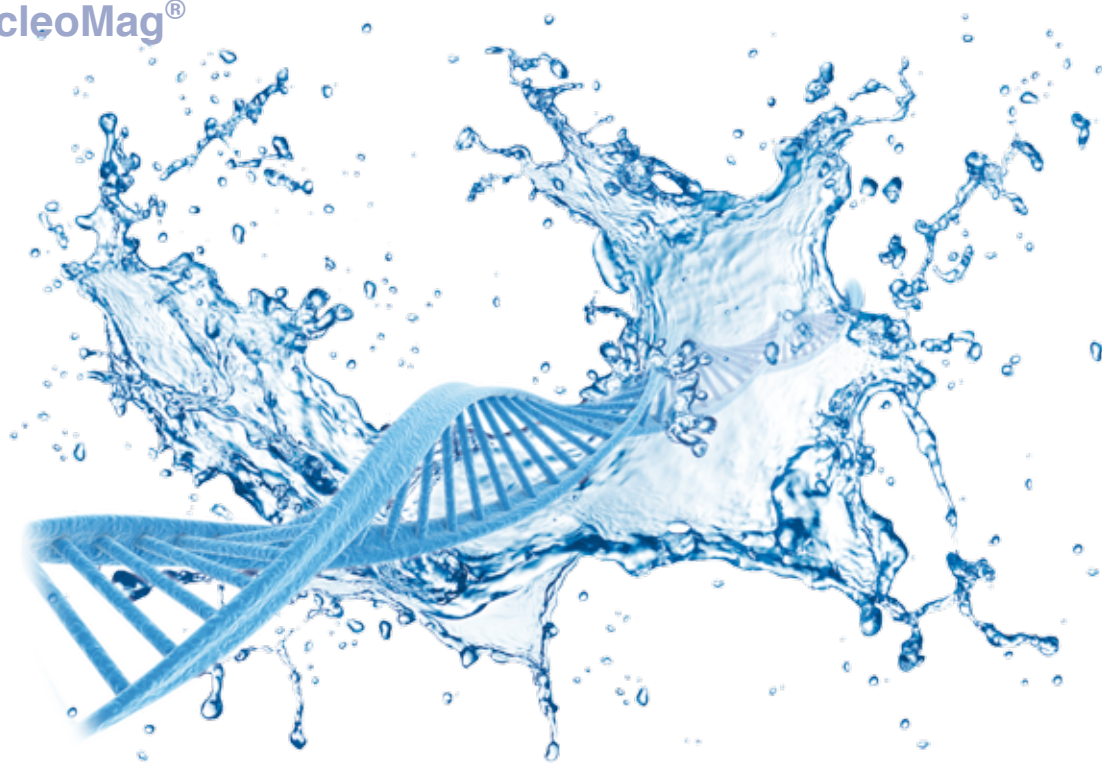
NucleoSpin®

NucleoSEQ®

NucleoTrap®

NucleoFast®

NucleoMag®



Selective purification technologies and formats

Fast and easy-to-handle procedures

... get the best templates for your downstream applications

MACHEREY-NAGEL

www.mn-net.com



MACHEREY-NAGEL DNA and RNA Clean-up Kit Finder

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Technologies

NucleoSpin® technology

Technology/Material: Silica membrane

Separation principle: Chaotropic salt binding

Formats: Single spin column, 8-well strip, 96-well plate

Processing: Centrifuge, vacuum



Features:

- Highest quality, sequencing-grade, and PCR-grade DNA/RNA
- From low to high throughput
- Fast and easy to use

NucleoSEQ® technology

Technology/Material: Gel-filtration matrix

Separation principle: Size-exclusion chromatography

Formats: Single spin column

Processing: Centrifuge



Features:

- Superior removal of dye terminators
- Fast and convenient procedure

NucleoTrap® technology

Technology/Material: Silica matrix

Separation principle: Chaotropic salt binding

Formats: Scalable matrix volume in spin cup

Processing: Centrifuge



Features:

- Sequencing-grade and PCR-grade DNA
- Scalable sample volume
- No fragment shearing

NucleoFast® technology

Technology/Material: Ultrafiltration membrane

Separation principle: Filtration

Formats: 96-well plate

Processing: Vacuum, centrifuge



Features:

- Fast and easy procedure
- Sequencing-grade and PCR-grade DNA
- Detergent-free membrane, resistant to tip touching
- Cost-efficient high-throughput PCR clean-up

NucleoMag® technology

Technology/Material: Magnetic beads

Separation principle: Chaotropic salt binding

Formats: From single reaction cup to 96-well plate

Processing: Magnetic separator



Features:

- Sequencing-grade and PCR-grade DNA
- Optimal for automated robotic use
- Scalable format, from single to high throughput
- Flexible sample and elution volume

NucleoSpin® Gel and PCR Clean-up

Perfect for both PCR clean-up and gel extraction

Two-in-one kit

Two applications, one buffer with optimal performance for both PCR clean-up and gel extraction

Highest recovery for any fragment size and minimal elution volume

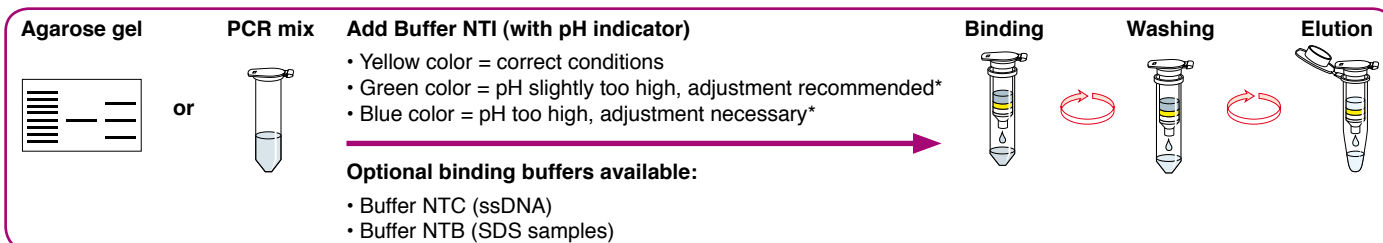
High recovery even for small fragments (≥ 50 bp) with complete removal of contaminating primers
Minimized elution volumes (15–50 μ L)

Binding buffer including pH indicator

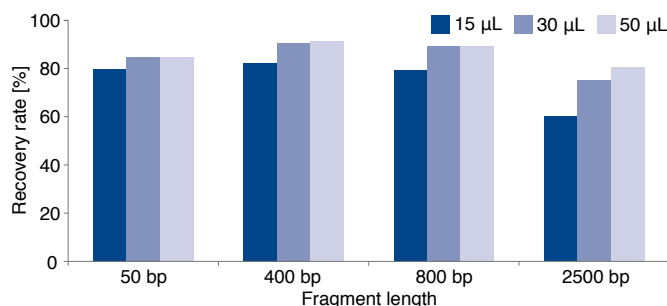
Check your binding conditions for optimal performance

Special binding buffers for single stranded DNA or samples containing SDS available separately

Procedure

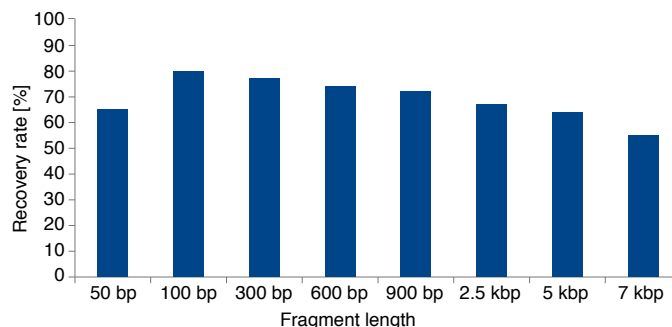


Application data



PCR clean-up: High recovery down to 50 bp

DNA fragments of different sizes were purified from standard PCR buffer using NucleoSpin® Gel and PCR Clean-up (Elution volume: 15 μ L, 30 μ L, 50 μ L). DNA was analyzed and quantified by Agilent Bioanalyzer 2100.



Gel extraction: High recovery for a wide range of fragment sizes

DNA fragments of different sizes were purified from 1% TAE agarose gel by NucleoSpin® Gel and PCR Clean-up. DNA was analyzed and quantified by Agilent Bioanalyzer 2100.

Ordering information

Product	Preps / Volume	REF
NucleoSpin® Gel and PCR Clean-up	10 / 50 / 250	740609.10 / .50 / .250
Buffer NTC	100 mL	740654.100
Buffer NTB	150 mL	740595.150
Buffer NTI	120 mL	740305.120

* see user manual or contact MN Technical Support

NucleoSpin® 8/96 PCR Clean-up

Clean-up of PCR products in medium- and high-throughput format

▶ **High recovery for a wide range of fragment sizes (64 bp–10 kbp)**

Quantitative primer removal up to 100 nt

▶ **High flexibility**

8-well strip and 96-well plate for manual or automated use, vacuum or centrifugation

▶ **NucleoSpin® 8/96 PCR Clean-up Core Kit available**

Kits with basic content for use on automation platforms

Ordering information

Product	Preps	REF
NucleoSpin® 8 PCR Clean-up	12 / 60 x 8	740668 / .5
NucleoSpin® 8 PCR Clean-up Core Kit	48 x 8	740463.4
NucleoSpin® 96 PCR Clean-up	1 / 2 / 4 / 24 x 96	740658.1 / .2 / .4 / .24
NucleoSpin® 96 PCR Clean-up Core Kit	4 x 96	740464.4

NucleoTraP®CR

Silica-matrix based kit for PCR clean-up without use of binding columns

▶ **Batch binding procedure for PCR clean-up**

Purification without binding columns, procedure is based on silica-matrix beads for high flexibility in sample volume

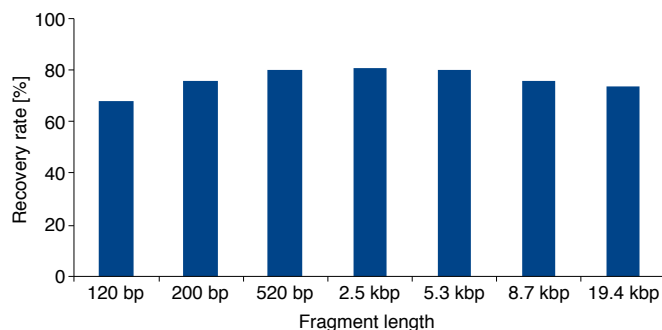
▶ **Recovery of large fragments without fragment shearing**

Fragment sizes from 100 bp to 50 kbp, 100 bp cut-off to remove primers

▶ **High recovery for any DNA fragment size**

Typical recovery 70–80 %

Application data



High recovery for any fragment size

DNA fragments of different sizes were purified with NucleoTraP®CR (elution volume 50 µL).

Ordering information

Product	Preps	REF
NucleoTraP®CR	10 / 100	740587.10 / 740587

NucleoTrap[®]

Silica-matrix based kit for gel extraction without use of binding columns

▶ *Batch binding procedure for gel extraction*

Purification without binding columns, procedure is based on silica-matrix beads for high flexibility in sample amount

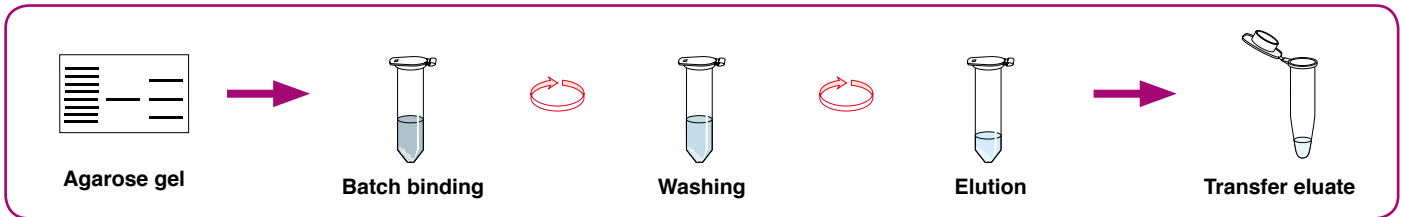
▶ *High binding capacity and recovery*

For small fragments (≥ 20 bp) and large fragments (≤ 50 kbp)

▶ *Large DNA fragments up to 50 kbp are neither sheared nor degraded*

Due to the bead-matrix technology, there is no mechanical shearing when centrifuging the Mini spin columns

Procedure



Ordering information

Product	Preps	REF
NucleoTrap [®]	10 / 100	740584.10 / 740584

NucleoFast[®] 96 PCR

Cost-efficient PCR clean-up in high throughput

▶ *Fast and cost-efficient ultrafiltration procedure*

A total of 96 samples can be purified in 20 min

▶ *Purification of PCR products ≥ 150 bp*

The durable, detergent-free membrane allows for easy DNA recovery

▶ *High flexibility*

Manual or automated use; vacuum or centrifugation

Procedure



Ordering information

Product	Preps	REF
NucleoFast [®] 96 PCR Clean-up Kit	4 x 96	743500.4
NucleoFast [®] 96 PCR Plates	10 / 50 x 96	743100.10 / .50

NucleoMag® 96 PCR

Highly flexible magnetic-bead based PCR clean-up

▶ **Highly reactive superparamagnetic beads**

Binding capacity of approx. 0.3 µg/µL beads

▶ **High flexibility in sample volume, amount of samples, and elution volume**

Easily adapted to automated use apart from manual use

▶ **Elute in ≥ 25 µL, different elution volumes do not affect the yield**

Clean-up and concentrate your PCR product in 30–45 min/96 preps

Ordering information

Product	Preps	REF
NucleoMag® 96 PCR	1 / 4 / 24 x 96	744100.1 / .4 / .24

NucleoSpin® gDNA Clean-up XS

Clean-up and concentration of pre-purified genomic DNA

▶ **Fast and convenient post clean-up of large sized DNA for successful downstream applications**

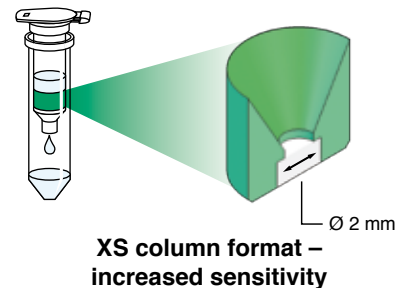
Purify 400 µL (up to 2 µg) aqueous DNA sample in approx. 20 min (phenol / chloroform extracts, reaction mixtures)
More efficient and easier than microdialysis filtration units

▶ **XS column format for minimal elution in 6–10 µL to concentrate your DNA**

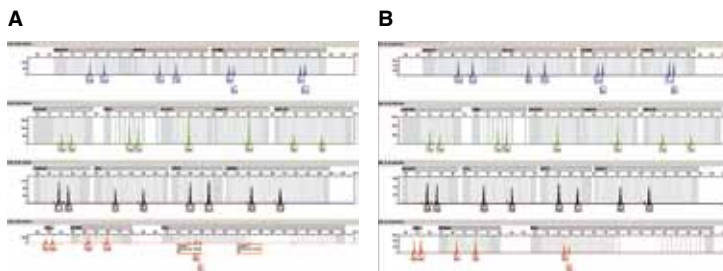
Designed for very small DNA amounts, such as forensic samples

▶ **High recovery for any fragment size**

Efficient purification of fragments from 100 bp to 50 kbp



Application data



Electropherograms from DNA samples cleaned up with NucleoSpin® gDNA Clean-up XS kit and amplified with the AmpF/STR® Identifiler® PCR Amplification Kit

DNA extracted from a laboratory staff buccal swab (A) and a laboratory staff semen stain (B) with concentration / clean-up of the aqueous phase from the organic extraction using the NucleoSpin® gDNA Clean-up XS kit. DNA extracts were used in a standard Identifiler® PCR and analyzed on a 3130 CE instrument (Applied Biosystems).

(Data Courtesy of California Department of Justice, Bureau of Forensic Services)

Ordering information

Product	Preps	REF
NucleoSpin® gDNA Clean-up XS	10 / 50 / 250	740904.10 / .50 / .250

NucleoSpin® gDNA Clean-up

Clean-up and concentration of pre-purified genomic DNA

▶ **Efficient post clean-up and concentration of large sized DNA**

Purify up to 25 µg DNA and elute down to 50 µL for successful downstream applications

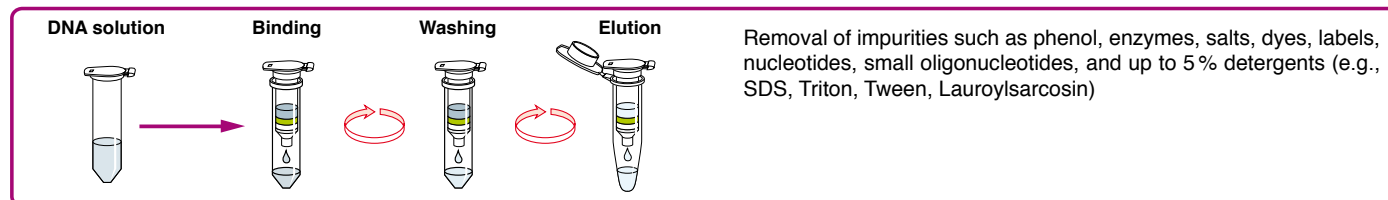
▶ **High recovery rates of up to 90 %**

Efficient purification of fragments from 100 bp to 50 kbp

▶ **Simple and fast purification from pre-purified samples or enzymatic reactions**

More efficient and easier than microdialysis filtration units or time-consuming precipitations

Procedure



Ordering information

Product	Preps	REF
NucleoSpin® gDNA Clean-up	10/50/250	740230.10/.50/.250

NucleoSpin® RNA Clean-up XS

Clean-up and concentration of pre-purified RNA

▶ **Easy and convenient post clean-up of various RNA samples**

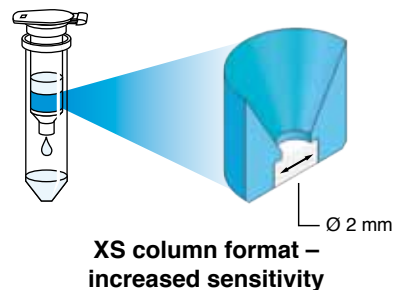
RNA clean-up from up to 300 µL (110 µg) pre-purified RNA (phenol/chloroform), enzymatic reactions (e.g., amplification reactions, labeling reactions), etc.

▶ **Concentrate your RNA samples using XS column format**

Elute in 5 µL to concentrate your RNA up to 55 times
High recovery of 85–95 %

▶ **Excellent RNA purity**

Complete removal of RT-PCR inhibitors
Remove even traces of organic solvents



Ordering information

Product	Preps	REF
NucleoSpin® RNA Clean-up XS	10/50/250	740903.10/.50/.250

NucleoSpin® RNA Clean-up

Clean-up and concentration of pre-purified RNA

► **Various samples can be easily cleaned up**

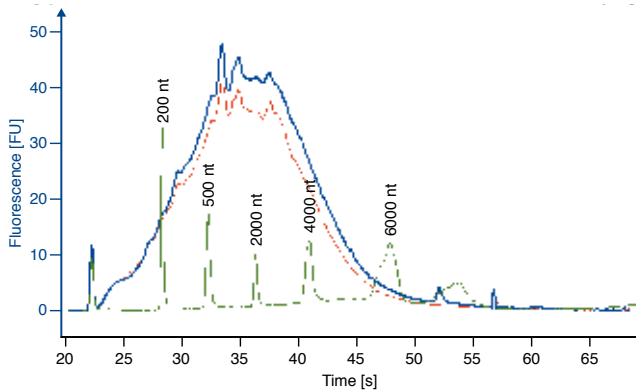
RNA clean-up from up to 200 µL (200 µg) pre-purified RNA (phenol / chloroform), enzymatic reactions (e.g., amplification reactions, labeling reactions), etc.

► **Simple, fast, and convenient clean-up of pre-purified RNA samples**

Complete removal of RT-PCR inhibitors in 20 min

► **High recovery of 85–95 %**

Application data



Superior RNA clean-up

Amino-allyl-modified cRNA (total RNA from rat kidney) was purified using either NucleoSpin® RNA Clean-up (blue) or using a kit from competitor Q (red). 1/20 µL was analyzed by Agilent Bioanalyzer 2100 (green: RNA 6000 ladder, Ambion, Austin/TX, USA).

(Data kindly provided by Dr. Guido Krupp, artus GmbH, Hamburg)

Ordering information

Product	Preps	REF
NucleoSpin® RNA Clean-up	10 / 50 / 250	740948.10 / .50 / .250

NucleoSEQ®

Pre-filled single spin columns for dye-terminator removal

► **Efficient removal of dye terminators by gel-filtration**

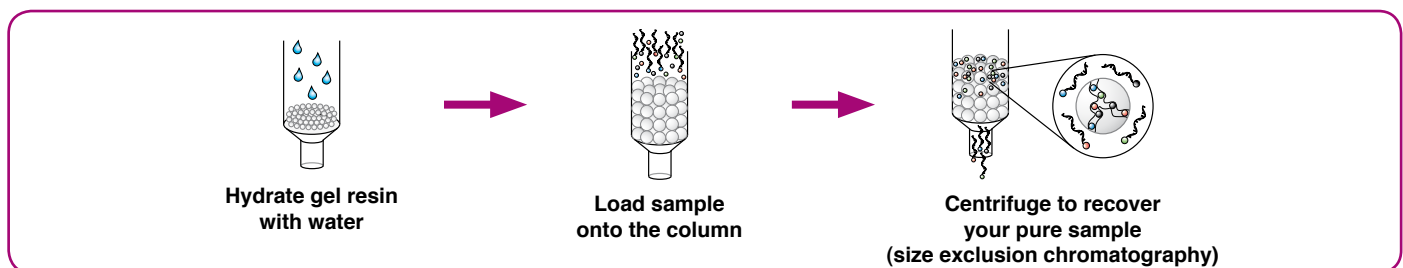
Complete removal of residual dye terminators (e.g., BigDye™)

► **Ultra-fast procedure in convenient spin column format**

Preparation time of just 5 min/prep

► **Convenient long-term storage of dry material at room temperature**

Procedure



Ordering information

Product	Preps	REF
NucleoSEQ®	10 / 50 / 250	740523.10 / .50 / .250

Ordering information

Single prep (spin columns)	Preps	REF
NucleoSpin® Gel and PCR Clean-up Mini spin kit for PCR clean-up and gel extraction	10/50/250	740609.10/.50/.250
NucleoTrap® CR Batch purification kit for PCR clean-up	10/100	740587.10/740587
NucleoTrap® Batch purification kit for gel extraction	10/100	740584.10/740584
NucleoSpin® gDNA Clean-up Mini spin kit for post clean-up and concentration of genomic DNA	10/50/250	740230.10/.50/.250
NucleoSpin® gDNA Clean-up XS Mini spin kit (XS columns) for post clean-up and concentration of genomic DNA	10/50/250	740904.10/.50/.250
NucleoSpin® RNA Clean-up Mini spin kit for total RNA clean-up and concentration	10/50/250	740948.10/.50/.250
NucleoSpin® RNA Clean-up XS Mini spin kit (XS columns) for total RNA clean-up and concentration	10/50/250	740903.10/.50/.250
NucleoSEQ® Mini spin kit for dye-terminator removal	10/50/250	740523.10/.50/.250
Medium and high throughput (strips, plates, beads)	Preps	REF
NucleoSpin® 8 PCR Clean-up	12/60 x 8	740668/.5
NucleoSpin® 8 PCR Clean-up Core Kit	48 x 8	740463.4
NucleoSpin® 96 PCR Clean-up	1/2/4/24 x 96	740658.1/.2/.4/.24
NucleoSpin® 96 PCR Clean-up Core Kit PCR clean-up kits for medium and high throughput	4 x 96	740464.4
NucleoFast® 96 PCR Clean-up Kit	4 x 96	743500.4
NucleoFast® 96 PCR Plates PCR clean-up kits / plates for high throughput	10/50 x 96	743100.10/.50
NucleoMag® 96 PCR PCR clean-up for high throughput	1/4/24 x 96	744100.1/.4/.24

Related products

Buffers	Volume	REF
Buffer NTI NucleoSpin® Gel and PCR Clean-up, standard binding buffer	120 mL	740305.120
Buffer NTC NucleoSpin® Gel and PCR Clean-up, optional binding buffer for ssDNA	100 mL	740654.100
Buffer NTB NucleoSpin® Gel and PCR Clean-up, optional binding buffer for SDS-samples	150 mL	740595.150

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