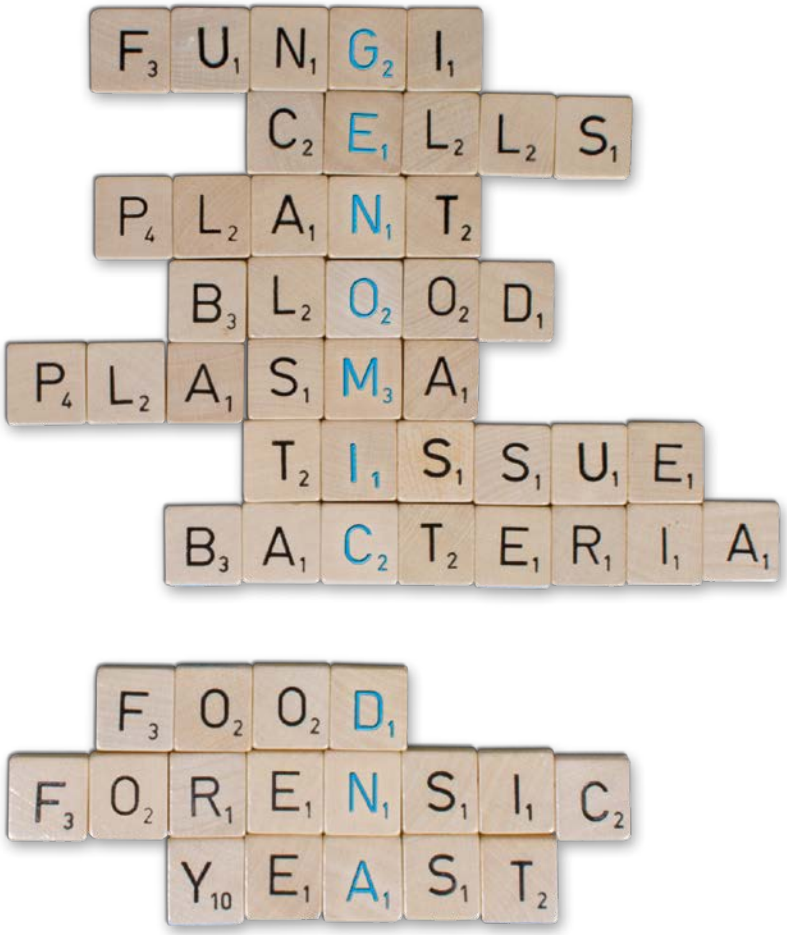
gDNA Purification Guide

Genomic DNA purification products from MACHEREY-NAGEL

MN guide to genomic DNA purification

Puzzled about finding your DNA solution?



Selective solutions for various sample materials

Superior reproducibility and quality

Highest lysis efficiency

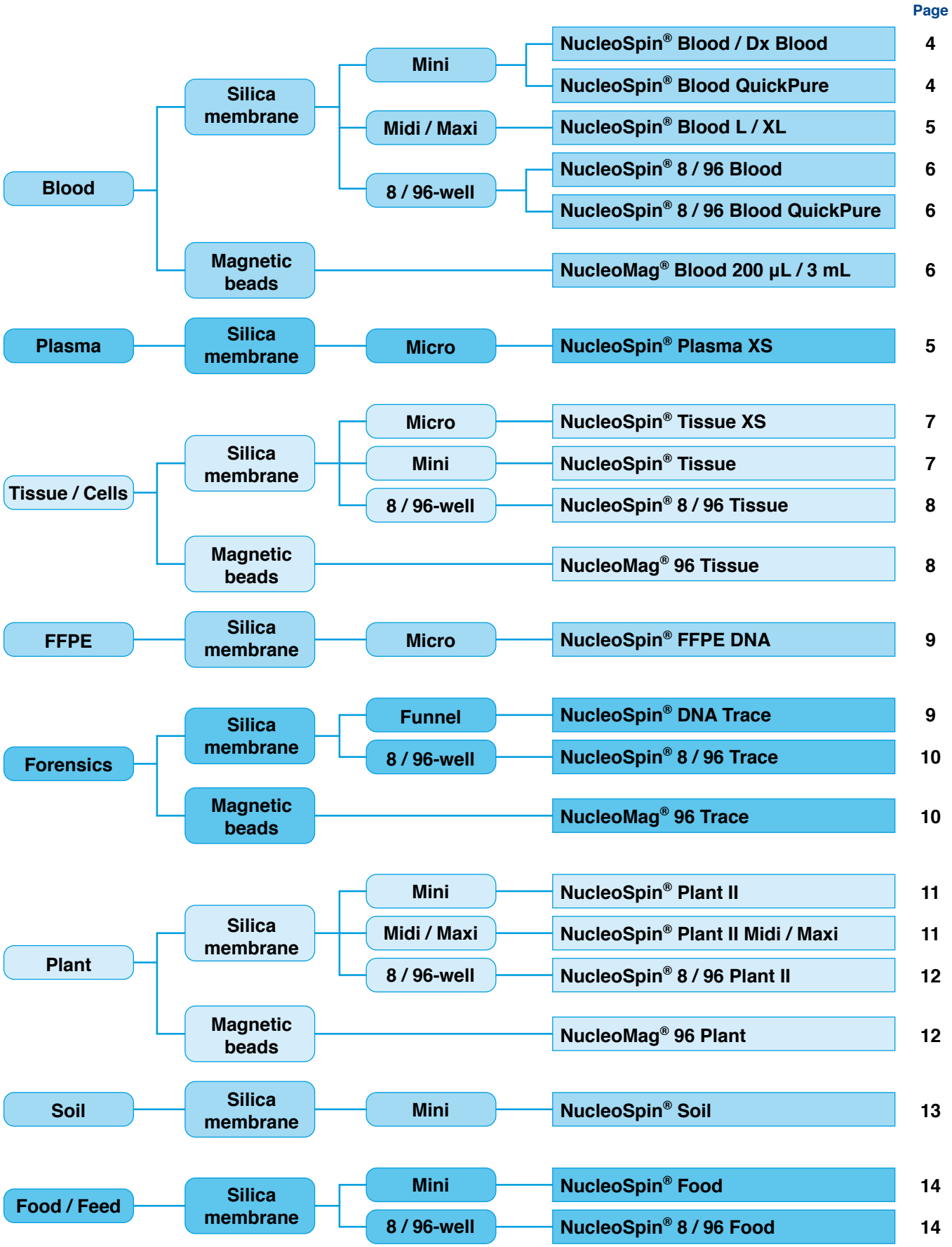
… isolating genomic DNA the easy and efficient way

MACHEREY-NAGEL

www.mn-net.com

MN Since 1911

MACHEREY-NAGEL Genomic DNA Kit Finder



Genomic DNA

Processing of individual starting materials highlights the need for a combination of selective purification technologies and chemistries.

A comprehensive range of specialized MACHEREY-NAGEL DNA isolation kits enable successful genomic DNA isolation in order to fulfill individual application requirements. To suit all throughput needs, MACHEREY-NAGEL's purification kits are provided in a single mini spin format as well as in flexible medium- and efficient high-throughput formats. The products for genomic DNA purification are based on two technologies:

Technologies

NucleoSpin® technology

Technology / Material	Silica-membrane
Format	**Spin columns:** Manual processing by centrifuge **8-well strips:** Medium-throughput system, for vacuum manifolds, centrifuges, and robotic systems **96-well plates:** High-throughput system, for vacuum manifolds, centrifuges, and robotic systems
Principle	**Chaotropic salt binding (high-salt):** Interaction between DNA and silica membrane (hydrate shell of nucleic acids is reversibly removed by chaotropic salt) **Washing:** High-salt and ethanolic washing steps remove contaminants **Elution (low-salt):** Low-salt or water elution (hydrate shell is recovered, DNA is released from the membrane)
Features / Result	• High-quality, sequencing-grade and PCR-grade DNA • From extra small to extra large scale • From medium to high throughput • No alcohol precipitation necessary • Easy to use

DNA
Contaminants

DNA is bound to the silica membrane under high-salt conditions

Contaminants are washed away under high-salt and ethanolic conditions

DNA is eluted using low-salt buffer or water

NucleoMag® technology

Technology / Material	Superparamagnetic beads (non-silica)
Format	Flexible
Principle	**Chaotropic salt binding (high-salt):** Adsorption of DNA to the beads (hydrate shell of nucleic acids is reversibly removed by chaotropic salt) **Washing:** High-salt and ethanolic washing steps remove contaminants **Elution (low-salt):** Low-salt or water elution (hydrate shell is recovered, DNA is released from the beads)
Features / Result	**Easily adapted to automated use due to:** • Efficient bead separation • Easy resuspension and mixing, without bead clumping • Very slow magnetic bead sedimentation • Minimized bead carry-over • Flexible throughput • Flexible sample volume • Minimized risk of cross-contamination (one-tube procedure)

DNA
Contaminants
NucleoMag® Beads

NucleoMag® Beads are added to the sample

DNA is bound to the NucleoMag® Beads
Beads are restrained in the well by the magnet while contaminants are washed away

DNA is eluted from the beads and recovered, while beads are restrained in the well by the magnet

NucleoSpin® Blood

High-yielding DNA isolation from blood and body fluids

Consistently high DNA yields from several types of blood samples

Successful isolation from fresh or frozen blood, or blood treated with anticoagulants such as EDTA, citrate, and heparin

Complete removal of inhibitors and contaminants

Ready-to-use DNA for reliable downstream applications

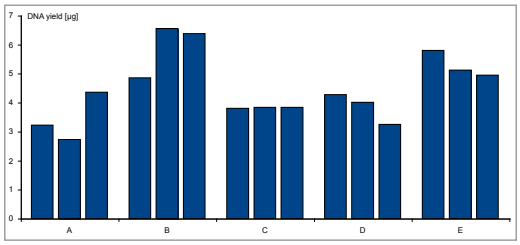
Isolation of viral DNA or bacterial DNA from blood

Proven for a large variety of viruses (e.g., HBV, CMS, HPV, TTV, EBV)

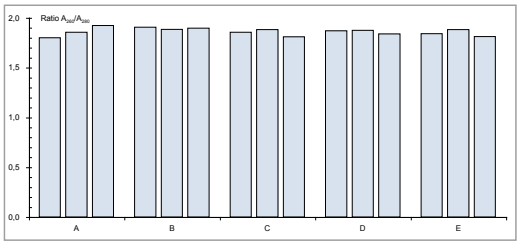
NucleoSpin® Dx Blood:*

CE-certified kit for *in-vitro* diagnostic purposes – very similar protocol to NucleoSpin® Blood

Application data



Excellent DNA recovery with NucleoSpin® Dx Blood
DNA was isolated from triplicates of blood samples (200 µL, EDTA) from 5 individuals (A–E) with the CE-certified NucleoSpin® Dx Blood kit. The DNA yield varies from 2.7–6.6 µg, depending on blood sample.



Consistent high purity with NucleoSpin® Dx Blood
Ratio A_{260}/A_{280} was measured for 15 DNA samples (triplicates, from 5 individuals, A–E). The ratio in a range of 1.80 and 1.92 indicates excellent DNA quality. Consistency in DNA quality for best performance in IVD workflows with the NucleoSpin® Dx Blood kit.

Ordering information

Product	Preps	REF
NucleoSpin® Blood	10 / 50 / 250	740951.10 / .50 / .250
NucleoSpin® Dx Blood*	50 / 250	740899.50 / .250

* CE-IVD marked kit: not available in all countries, please inquire.

NucleoSpin® Blood QuickPure

Rapid DNA isolation from blood

Ultra-fast purification of highly concentrated DNA from blood

Less than 25 min hands-on-time – washing and drying in one combined step

Optimal for viscous or clotted blood (e.g., animal blood) to prevent membrane clogging

Also compatible with stabilized blood such as citrate, EDTA, heparin

Highly concentrated DNA

Elution volume only 30–50 µL

Complete removal of PCR inhibitors

Ready-to-use DNA

Ordering information

Product	Preps	REF
NucleoSpin® Blood QuickPure	10 / 50 / 250	740569.10 / .50 / .250

NucleoSpin® Blood L / XL

Large-scale DNA isolation from blood samples

For larger sample volumes

Use up to 2 mL or 10 mL whole blood with NucleoSpin® Blood L or NucleoSpin® Blood XL

Suitable for whole blood and blood samples treated with citrate, EDTA, heparin, or CPDA

Ready-to-use DNA in less than 60 min

Complete removal of PCR inhibitors

Ordering information

Product	Preps	REF
NucleoSpin® Blood L	20	740954.20
NucleoSpin® Blood XL	10/50	740950.10/.50

NucleoSpin® Plasma XS

Isolation of circulating DNA from serum and plasma

Non-invasive method for prenatal diagnostics or cancer research

Ideal for analysis of fetal DNA from maternal plasma and for tumor marker detection in plasma

High recovery of highly fragmented, circulating DNA

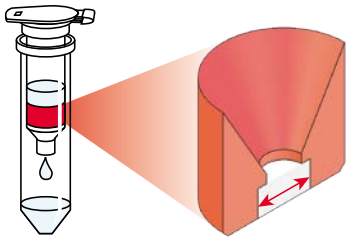
Down to 50 bp DNA can be isolated

Extracted DNA is highly concentrated

Elution in as little as 5 µL

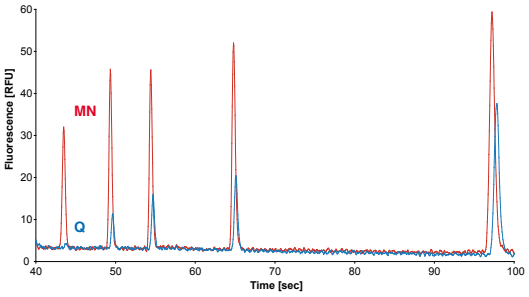
Rapid purification procedure

Less than 30 min hands-on-time

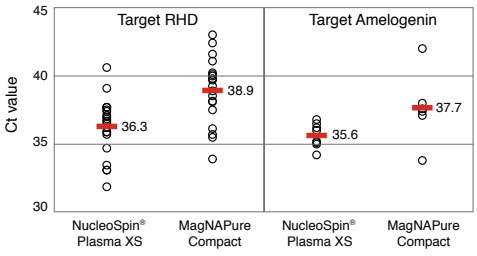


XS column format
– increased sensitivity

Application data



Recovery of DNA spikes from plasma
DNA spikes of 50, 100, 150, 250, and 1000 bp were mixed with plasma samples. The DNA was subsequently purified with NucleoSpin® Plasma XS and a kit of competitor Q in parallel.



NucleoSpin® Plasma XS is ideally suited for the detection of fetal DNA in maternal plasma
Starting material: Human maternal plasma used for fetal DNA diagnostics Duplex PCR amplification: RHD fragment (Rhesus-gene) and an Amelogenin fragment specific for the male Y-chromosome, amplicons 150–180 bp in size. Comparison: Roche MagNA Pure® Compact Nucleic Isolation Kit I - Large Volume, NucleoSpin® Plasma XS. Roche MagNA Pure® Compact Nucleic Isolation Kit I - Large Volume, input 1000 µL plasma, purification according to the user manual, 10 % of the eluate used for PCR (i.e., DNA from approx. 100 µL plasma) NucleoSpin® Plasma XS input 240 µL plasma, purification according to the user manual, 40 % of the eluate used for PCR (i.e., DNA from approx. 100 µL plasma). The significantly better performance of NucleoSpin® Plasma XS is demonstrated by an earlier PCR signal of 2.6 cycles (RHD gene) and 2.1 cycles (Amelogenin), respectively. Data kindly provided by Dr. Doescher, DRK Blutspendedienst NSTOB, Oldenburg, Germany

Ordering information

Product	Preps	REF
NucleoSpin® Plasma XS	10 / 50 / 250	740900.10 / .50 / .250

NucleoSpin® 8 / 96 Blood

DNA isolation from blood samples in 8-well strip and 96-well plate format

- ***Reliable results: consistently high yields and purities***
- ***Whole procedure at room temperature***
- ***Convenient handling***
  Improved flow-rate reduces risk of clogging
  Processing by vacuum
  Suitable for automated processing
- ***NucleoSpin® 8 / 96 Blood Core Kit:***
  Kits with basic content focused on automation platforms – additional accessories can be combined as needed

Ordering information

Product	Preps	REF
NucleoSpin® 8 Blood	12 x 8 / 60 x 8	740664 / .5
NucleoSpin® 8 Blood Core Kit	48 x 8	740455.4
NucleoSpin® 96 Blood	1 x 96 / 4 x 96 / 24 x 96	740665.1 / .4 / .24
NucleoSpin® 96 Blood Core Kit	4 x 96	740456.4

NucleoSpin® 8 / 96 Blood QuickPure

Fast DNA isolation from blood samples in 8-well strip and 96-well plate format

- ***Time-saving isolation of genomic DNA***
  Reduced number of washing steps minimizes hands-on-time to 60 min / 12 strips or 60 min / 2 plates
- ***Suitable for difficult blood samples (e.g., animal blood, clotted blood)***
  Processing by centrifugation

Ordering information

Product	Preps	REF
NucleoSpin® 8 Blood QuickPure	12 x 8 / 60 x 8	740666 / .5
NucleoSpin® 96 Blood QuickPure	2 x 96 / 4 x 96 / 24 x 96	740667.2 / .4 / .24

NucleoMag® Blood 200 µL, 3 mL

Magnetic bead-based DNA isolation from blood

- ***Outstanding DNA quality in high concentrations***
  Small elution volumes: ≥ 50 µL (NucleoMag® Blood 200 µL), ≥ 1 mL (NucleoMag® Blood 3 mL)
- ***Scalable DNA isolation and convenient handling***
  Easy upscaling depending on sample volume and desired DNA yield
  Complete processing at room temperature
- ***Easily adapted to automated use (see page 3)***

Ordering information

Product	Preps	REF
NucleoMag® Blood 200 µL	1 x 96 / 4 x 96	744501.1 / .4
NucleoMag® Blood 3 mL	4 x 96	744502.1

NucleoSpin® Tissue

DNA isolation from a wide variety of starting materials

Efficient lysis allows processing of various starting materials

High lysis efficiency for cells, tissues, bacterial and yeast cells, clinical and forensic samples, or viruses
Many support protocols available

Suitable for additional isolation of bacterial and viral DNA

E.g., *M. tuberculosis* or *L. pneumonella* from sputum

High DNA recovery and purity

PCR inhibitors are efficiently removed

Reliable DNA purification for reproducible results

High-quality DNA for genetic fingerprinting, real-time PCR, enzymatic reactions, and sequencing

Ordering information

Product	Preps	REF
NucleoSpin® Tissue	10 / 50 / 250	740952.10 / .50 / .250

NucleoSpin® Tissue XS

DNA isolation from smallest amounts of starting materials

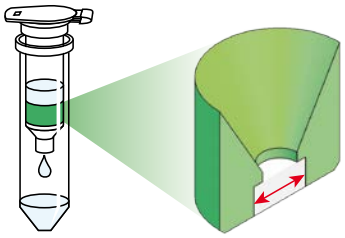
Extraction of genomic, bacterial, and viral DNA with highest sensitivity

Laser microdissections, fine needle aspirates, biopsies, forensic samples, FACS sorted cells, etc.

Excellent DNA recovery, concentration, and purity for reliable results

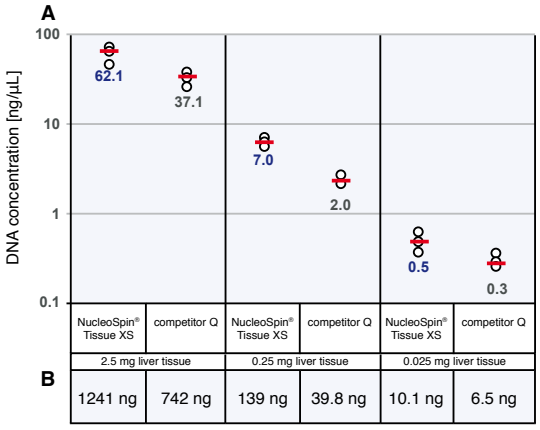
Elution in as little as 5 µL

DNA ready to use for all common downstream applications



XS column format
– increased sensitivity

Application data



Extraction of genomic DNA from small amounts of murine liver
Genomic DNA was purified from small amounts of murine liver tissue using NucleoSpin® Tissue XS and a competitor kit, both especially designed for very small sample amounts. DNA was eluted in 20 µL elution buffer. In each case the DNA was subsequently subjected to LightCycler™ analysis.
The NucleoSpin® Tissue XS kit is superior in both: DNA concentration (A) and total yield (B).

Ordering information

Product	Preps	REF
NucleoSpin® Tissue XS	10 / 50 / 20	740901.10 / .50 / .250

NucleoSpin® 8 / 96 Tissue

DNA isolation from different samples in 8-well strip and 96-well plate format

High-consistent parallel isolation of DNA from a variety of starting materials

E.g., cells, tissues, bacterial and yeast cells, stool

Highly pure DNA

Efficient PCR inhibitor removal – MN Wash Plate minimizes risk of cross-contamination

Processing under vacuum or by centrifugation

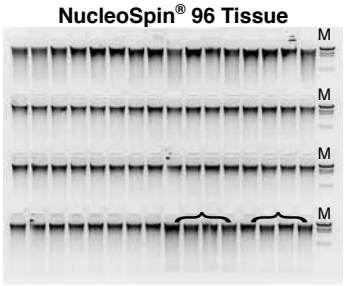
Suitable for manual and automated processing

NucleoSpin® 8 / 96 Tissue Core Kit:

Kits with basic content focused on automation platforms – additional accessories can be combined as needed

Application data

NucleoSpin® 96 Tissue



High consistency of DNA yield and purity from mouse tail clippings purified by NucleoSpin® 96 Tissue
Automated extraction method using NucleoSpin® 96 Tissue on the MultiPROBE® II achieves 6.42–9.12 µg of genomic DNA. Control samples were isolated using the NucleoSpin® Tissue kit for manual single preparation (8.6–9.5 µg genomic DNA) or using a precipitation method (10.1–10.7 µg genomic DNA). Eluted genomic DNA (10 µL/lane) was analyzed on a 0.8 % agarose gel.

M: Marker
1: NucleoSpin® Tissue
2: Precipitation

Ordering information

Product	Preps	REF
NucleoSpin® 8 Tissue	12 x 8 / 60 x 8	740740 / .5
NucleoSpin® 8 Tissue Core Kit	48 x 8	740453.4
NucleoSpin® 96 Tissue	2 x 96 / 4 x 96 / 24 x 96	740741.2 / .4 / .24
NucleoSpin® 96 Tissue Core Kit	4 x 96	740454.4

NucleoMag® 96 Tissue

Magnetic bead-based isolation of DNA from tissue, cultured cells, or bacteria

Reliable DNA purification for reproducible results

Highly pure DNA ready to use for genotyping applications

One-tube processing minimizes risk of cross-contamination

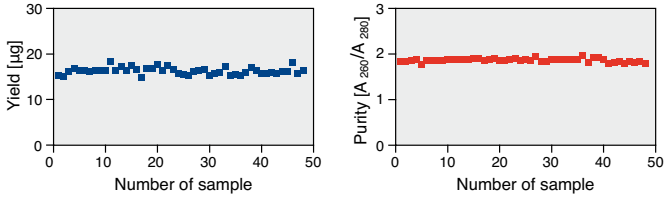
Consistent DNA yield

Small elution volumes ≥ 50 µL – yield is not affected by different elution volumes

Processing at room temperature (excluding lysis step)

Easily adapted to automated use (see page 3)

Application data



Reproducibility of DNA yield and purity
Isolation of genomic DNA using NucleoMag® 96 Tissue from a mouse tail master lysate (resulting in 20 mg tissue per sample) on a KingFisher® 96 instrument. The results show the reproducibility of DNA yield and DNA purity. Average yields of 16.23 µg (CV: 4.86 %) were obtained.

Ordering information

Product	Preps	REF
NucleoMag® 96 Tissue	1 x 96 / 4 x 96 / 24 x 96	744300.1 / .4 / .24

NucleoSpin® FFPE DNA

DNA isolation from formalin-fixed, paraffin-embedded samples (FFPE)

No xylene needed – odorless and easy paraffin removal

Paraffin Dissolver included for convenient paraffin removal (patent pending)

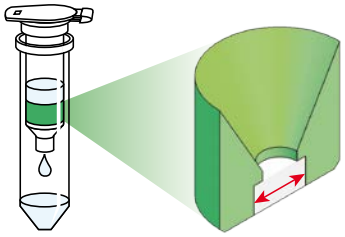
Preserve existing DNA quality

Special Decrosslink Buffer to overcome formalin crosslinks of DNA

Reliable DNA quantification possible

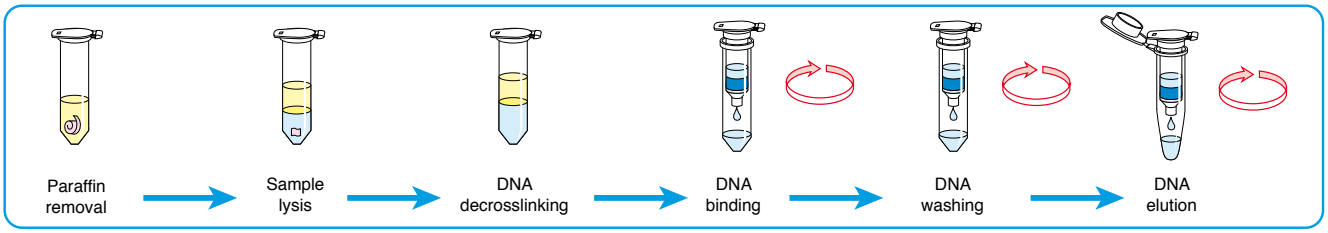
High yield even with smallest elution volume

Concentrated DNA in as little as 5 µL

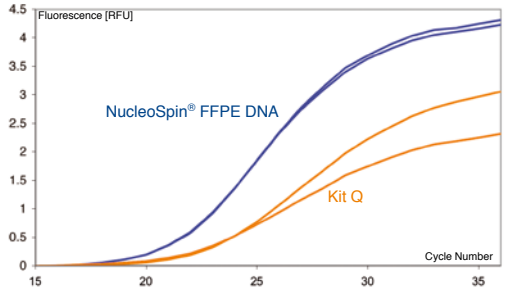


XS column format
– increased sensitivity

Procedure



Application data



Outstanding PCR performance due to efficient recovery of well decrosslinked DNA
DNA was isolated from formalin-fixed and paraffin-embedded rat liver tissue with NucleoSpin® FFPE DNA (2 x, blue graphs) and with a FFPE mini elution kit from competitor Q (2 x, orange graphs). DNA isolated with NucleoSpin® FFPE DNA is consistently high in yields and shows better performance in the PCR reaction than the competitor kit. Roche LightCycler® real-time PCR, target length: 100 bp. Starting material each: 1 section FFPE rat liver; overnight lysis; 30 µL elution volume.

Ordering information

Product	Preps	REF
NucleoSpin® FFPE DNA	10 / 50 / 250	740980.10 / .50 / .250

NucleoSpin® DNA Trace

DNA isolation from forensic samples

Isolation of DNA from forensic samples

Reliable recovery of DNA traces in a large amount of starting material (up to 8 mL lysis buffer per prep)

Concentrated DNA

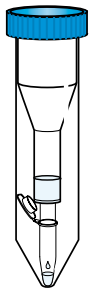
Effective funnel column design, elution in only 100 µL

Highest safety, cross-contamination avoided

Closed system

Suitable for genomic DNA from bones

Additional NucleoSpin® DNA Trace Bone Buffer Set needed



Funnel column format
– especially for DNA traces

Ordering information

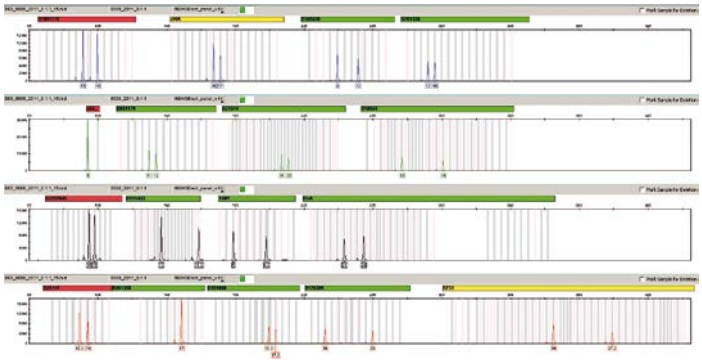
Product	Preps	REF
NucleoSpin® DNA Trace	4 / 25	740942.4 / .25
NucleoSpin® DNA Trace Bone Buffer Set	1 set	740943.25

NucleoSpin® 8 / 96 Trace

DNA isolation from forensic samples in 8-well strip and 96-well plate format

- ***Parallel isolation of genomic DNA from various forensic samples***
  Such as buccal swabs, dried blood spots, cigarette filters
- ***Reliable DNA extraction for consistent downstream analysis***
  MN Wash Plate minimizes risk of cross-contamination
- ***DNA ready to use (e.g., PCR, STR analysis, or any kind of enzymatic reaction)***
- ***Processing under vacuum or by centrifugation***
  Suitable for manual and automated processing

Application data



STR analysis
Genomic DNA has been prepared from buccal swabs using NucleoSpin® 8 Trace. DNA was quantified with Quantifiler® Human DNA Quantification Kit on the 7500 Thermocycler.
750 pg DNA have been used in a Multiplex PCR using the AmpFlSTR® NGM™ PCR Amplification Kit. Sequencing and subsequent analysis was performed on a 3500 Genetic Analyzer with GeneMapper® ID-X 1.0 software.
Data kindly provided by Dr. Witt, Landeskriminalamt Hamburg, Germany.

Ordering information

Product	Preps	REF
NucleoSpin® 8 Trace	12 x 8 / 60 x 8	740722.1 / .5
NucleoSpin® 96 Trace	2 x 96 / 4 x 96	740726.2 / .4

NucleoMag® 96 Trace

Magnetic bead-based DNA isolation from forensic samples

- ***Isolation of genomic DNA from various forensic samples with magnetic bead technology***
  E.g., buccal swabs, dried blood spots, cigarette filters
- ***One-tube processing minimizes risk of cross-contamination***
- ***Highly concentrated DNA***
  Small elution volumes ≥ 50 µL – yield is not affected by different elution volumes
- ***DNA ready to use (e.g., PCR, STR analysis, or any kind of enzymatic reaction)***
  Easily adapted to automated use (see page 3)

Ordering information

Product	Preps	REF
NucleoMag® 96 Trace	1 x 96 / 4 x 96 / 24 x 96	744600.1 / .4 / .24

NucleoSpin® Plant II

DNA isolation from a wide variety of plant materials

Genomic DNA isolation from plants and fungi

Easy protocol for processing up to 100 mg plant material

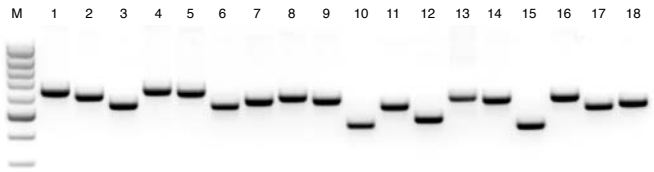
Improved buffer chemistry for highest yield and purity

Lysis Buffer PL1 (CTAB-based) and Lysis Buffer PL2 (SDS-based) for optimal processing of various samples

NucleoSpin® Filters for easy lysate clarification

Optimal RNA removal by RNase A digestion (enzyme included)

Application data



Successful DNA purification from a huge variety of plants
PCR analysis of isolated genomic DNA from different plant samples using NucleoSpin® Plant II. 100 mg plant material and either Buffer PL1 or PL2 were used for lysis. PCR analysis was performed using 1–2 µL of purified DNA as template with primers against chloroplast tRNA. The amplicons were loaded on a 1 % TAE agarose gel.
Lane M: marker, lane 1–18: analyzed samples: willow, rose, fir needles, wheat, sugar beet, spruce needles, cherry tree, grass, elder bush, geranium, yew, stinging nettle, dragon tree, yellow soy bean, corn salad, garden cress, maize, and gladiolus.

Ordering information

Product	Preps	REF
NucleoSpin® Plant II	10 / 50 / 250	740770.10 / .50 / .250

NucleoSpin® Plant II Midi / Maxi

Large-scale DNA isolation from plant materials

For rapid medium and large scale preparation of genomic DNA from plants

Choose NucleoSpin® Plant II Midi for up to 400 mg or NucleoSpin® Plant II Maxi for up to 1500 mg plant material

Improved buffer chemistry for highest yield and purity

Two alternative lysis buffers included

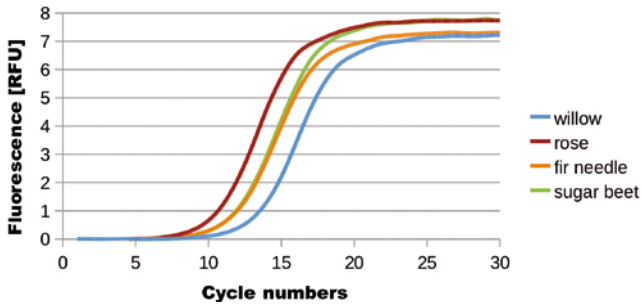
NucleoSpin® Filters L / XL included

Easy lysate clarification with NucleoSpin® Filters L / XL

RNase A included

Optimal RNA contamination removal

Application data



Purity of isolated DNA from different plant species
qPCR of DNA purified by NucleoSpin® Plant II Maxi. Primers against conserved 18S rRNA show reliable quality of the DNA isolated from willow, rose, fir needle, and sugar beet.

Ordering information

Product	Preps	REF
NucleoSpin® Plant II Midi	20	740771.20
NucleoSpin® Plant II Maxi	10	740772.10

NucleoSpin® 8 / 96 Plant II

DNA isolation from plant material in 8-well strip and 96-well plate format

Flexible lysis system allows processing of a broad range of starting materials

Two different Lysis Buffers, PL1 (CTAB lysis method) and PL2 (SDS lysis method), for optimal isolation depending on starting material

Reliable quality

MN Wash Plate minimizes risk of cross-contamination

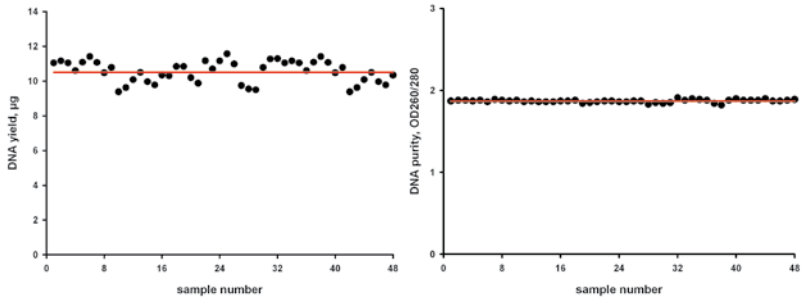
Processing under vacuum or by centrifugation

Suitable for manual and automated processing

NucleoSpin® 8 / 96 Plant II Core Kit:

Kits with basic content focused on automation platforms – additional accessories can be combined as needed.

Application data



Automated DNA isolation from wheat leaves using the NucleoSpin® 96 Plant II kit: DNA yield (left) and purity (right).
To study yield and reproducibility of the DNA extraction method with NucleoSpin® 96 Plant II, genomic DNA was isolated from a master lysate representing 50 mg of frozen wheat leaf tissue per extraction (n=48) according to the standard protocol by the epMotion® 5075 VAC plus TMX robot.

Ordering information

Product	Preps	REF
NucleoSpin® 8 Plant II	12 x 8 / 60 x 8	740669 / .5
NucleoSpin® 8 Plant II Core Kit	48 x 8	740467.4
NucleoSpin® 96 Plant II	2 x 96 / 4 x 96 / 24 x 96	740663.2 / .4 / .24
NucleoSpin® 96 Plant II Core Kit	4 x 96	740468.4

NucleoMag® 96 Plant

Magnetic bead-based DNA isolation from plant materials

One-tube processing minimizes risk of cross-contamination

Highly concentrated DNA

Small elution volumes ≥ 50 µL – yield is not affected by different elution volumes

Magnetic solution for automated high throughput (see page 3)

Ordering information

Product	Preps	REF
NucleoMag® 96 Plant	1 x 96 / 4 x 96 / 24 x 96	744400.1 / .4 / .24

NucleoSpin® Soil

DNA isolation from diverse environmental samples

Flexible lysis system: wide range of sample types possible

Two alternative lysis buffers and a special additive (Enhancer SX) for optimal processing of various soil samples (e.g., potting, forest, cropping soils, sludge, sediment, water)

High lysis efficiency for superior DNA yield

Ceramic beads included for most efficient cell disruption of all varieties of microorganisms present in soil samples

High purity, complete removal of PCR inhibitors

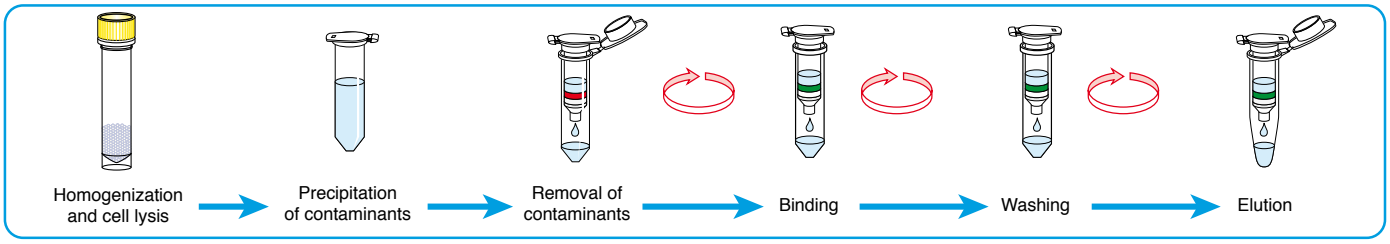
NucleoSpin® Inhibitor Removal Column for efficient removal of PCR inhibitors such as humic acids

Genomic DNA isolation from the microbial communities

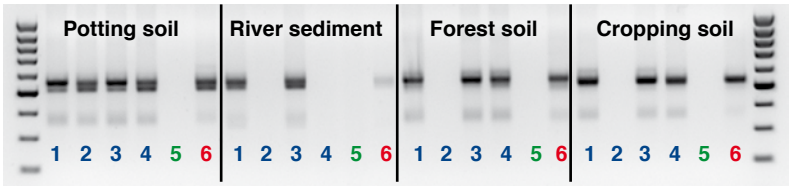
Gram-positive / -negative bacteria, archaea, yeast, fungi, and algae

NucleoSpin® 96 Soil: 96-well plate format available on request

Procedure



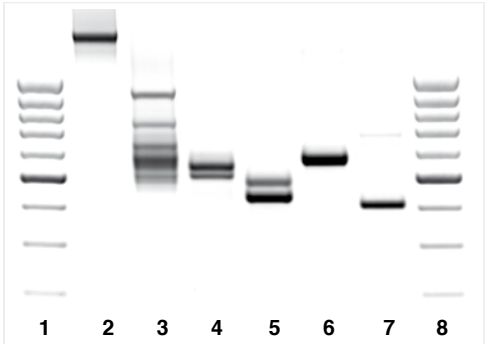
Application data



lane 1: NucleoSpin® Soil (SL1)
lane 2: NucleoSpin® Soil (SL1+SX)
lane 3: NucleoSpin® Soil (SL2)
lane 4: NucleoSpin® Soil (SL2+SX)
lane 5: Competitor MP
lane 6: Competitor MO

Complete removal of PCR inhibitors for high PCR sensitivity

DNA was purified with NucleoSpin® Soil using Lysis Buffers SL1 or SL2 (with or without Enhancer SX) and with kits from competitor MP and MO. 2 µL of undiluted eluate were used as PCR template with fungi specific internal transcribed spacer (ITS) primers. Competitor MP failed to yield DNA pure enough to be used in PCR. DNA and inhibitor concentration were both low for competitor MO, but the PCR from river sediment samples was still strongly inhibited. With NucleoSpin® Soil there were at least two conditions for each soil type yielding plenty of DNA and working undiluted in PCR. Thus, there was a complete removal of PCR inhibitors possible.



Efficient lysis system for processing various samples

Total DNA from 400 mg cropping soil was purified with NucleoSpin® Soil using Lysis Buffer SL2 in combination with Enhancer SX. 2 µL of undiluted eluates were analyzed in PCR using order specific primer systems.
Lane 1: 1 kbp DNA Ladder (Fermentas)
Lane 2: Prokaryotes (16S rRNA gene)
Lane 3: Eukaryotes (ITS)
Lane 4: Fungi (ITS)
Lane 5: Fungi (s-Tubulin)
Lane 6: Algae, protozoae, fungi (18S rRNA)
Lane 7: Gram+ (*B. subtilis*, *cerA*)
Lane 8: 1 kb DNA Ladder (Fermentas)

Ordering information

Product	Preps	REF
NucleoSpin® Soil	10 / 50 / 250	740780.10 / .50 / .250

NucleoSpin® Food

DNA isolation from food or feed

DNA extraction from various sample materials

For processed food, soy (milk and flour), chocolate, cereals, meat, animal feed

Successful lysis by efficient Lysis Buffer CF for food matrices

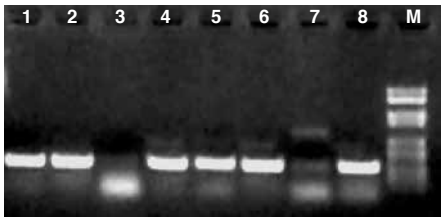
Complete removal of PCR inhibitors

High-quality DNA for sensitive downstream applications such as real-time PCR

Even low amounts of partially degraded DNA can be purified from complex matrices

Fast and easy procedure

Application data



Beef detection in sausage products

DNA preparation was done according to the NucleoSpin® Food standard protocol. Aliquots of the 100 µL eluates were amplified with primers and components of a commercial kit (CIBUS, Germany). Bovine DNA could be detected in several products, even in strongly processed samples.

1: bovine steak, unprocessed	2: roast beef	3: sausage without beef
4: corned beef	5: beef salami	6: veal
7: turkey	8: pâté	M: marker

Sample 8 was declared to be prepared from duck meat only, but clearly showed presence of beef. Samples 3 and 7 did not contain detectable amounts of bovine DNA.
Data kindly provided by GEN-IAL, Troisdorf, Germany

Ordering information

Product	Preps	REF
NucleoSpin® Food	10 / 50 / 250	740945.10 / .50 / .250

NucleoSpin® 8 / 96 Food

DNA isolation from food or feed in 8-well strip and 96-well plate format

Complete removal of PCR inhibitors

For high reliability of DNA detection

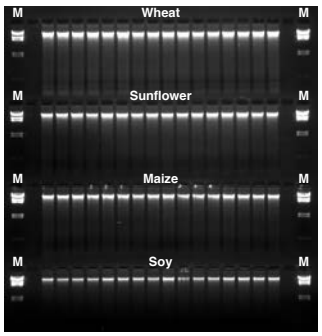
Successful lysis of complex matrices (e.g., maize, cereals, biscuits, meat)

Efficient Lysis Buffer CF for food matrices

Processing under vacuum or by centrifugation

Suitable for manual and automated processing

Application data



10 µL eluate
20 µL eluate
20 µL eluate
30 µL eluate

Isolation of genomic DNA from different kinds of shredded grains

Genomic DNA was isolated from 200 mg shredded wheat, sunflower seeds, grains of maize and soy. Indicated aliquots have been taken from 120 µL eluates and analyzed on a 1 % agarose gel (marker M: Lambda *Hind*III). The average yield for wheat, sunflower, maize, and soy was 10.28 µg, 4.77 mg, 0.58 µg and 2.54 µg.

Ordering information

Product	Preps	REF
NucleoSpin® 8 Food	12 x 8 / 60 x 8	740975 / .5
NucleoSpin® 96 Food	2 x 96 / 4 x 96 / 24 x 96	740976.2 / .4 / .24

Ordering information I

Genomic DNA from blood and biological fluids	Preps	REF
NucleoSpin® Blood	10 / 50 / 250	740951.10 / .50 / .250
NucleoSpin® Dx Blood	50 / 250	740899.50 / .250
NucleoSpin® Blood QuickPure	10 / 50 / 20	740569.10 / .50 / .250
NucleoSpin® Blood L	20	740954.20
NucleoSpin® Blood XL	10 / 50	740950.10 / .50
NucleoSpin® 8 Blood	12 x 8 / 60 x 8	740664 / .5
NucleoSpin® 8 Blood Core Kit	48 x 8	740455.4
NucleoSpin® 96 Blood	1 x 96 / 4 x 96 / 24 x 96	740665.1 / .4 / .24
NucleoSpin® 96 Blood Core Kit	4 x 96	740456.4
NucleoSpin® 8 Blood QuickPure	12 x 8 / 60 x 8	740666 / .5
NucleoSpin® 96 Blood QuickPure	2 x 96 / 4 x 96 / 24 x 96	740667.2 / .4 / .24
NucleoMag® Blood 200 µL	1 x 96 / 4 x 96	744501.1 / .4
NucleoMag® Blood 3 mL	2 x 96 / 4 x 96 / 24 x 96	744502.1

Genomic DNA from plasma	Preps	REF
NucleoSpin® Plasma XS	10 / 50 / 250	740900.10 / .50 / .250

Genomic DNA from tissue and cells	Preps	REF
NucleoSpin® Tissue	10 / 50 / 250	740952.10 / .50 / .250
NucleoSpin® Tissue XS	10 / 50 / 20	740901.10 / .50 / .250
NucleoSpin® 8 Tissue	12 x 8 / 60 x 8	740740 / .5
NucleoSpin® 8 Tissue Core Kit	48 x 8	740453.4
NucleoSpin® 96 Tissue	2 x 96 / 4 x 96 / 24 x 96	740741.2 / .4 / .24
NucleoSpin® 96 Tissue Core Kit	4 x 96	740454.4
NucleoMag® 96 Tissue	1 x 96 / 4 x 96 / 24 x 96	744300.1 / .4 / .24

Genomic DNA from FFPE samples	Preps	REF
NucleoSpin® FFPE DNA	10 / 50 / 250	740980.10 / .50 / .250

Genomic DNA from forensic samples	Preps	REF
NucleoSpin® DNA Trace	4 / 25	740942.4 / .25
NucleoSpin® DNA Trace Bone Buffer Set	1 set	740943.25
NucleoSpin® 8 Trace	12 x 8 / 60 x 8	740722.1 / .5
NucleoSpin® 96 Trace	2 x 96 / 4 x 96	740726.2 / .4
NucleoMag® 96 Trace	1 x 96 / 4 x 96 / 24 x 96	744600.1 / .4 / .24

Genomic DNA from plants and fungi	Preps	REF
NucleoSpin® Plant II	10 / 50 / 250	740770.10 / .50 / .250
NucleoSpin® Plant II Midi	20	740771.20
NucleoSpin® Plant II Maxi	10	740772.10
NucleoSpin® 8 Plant II	12 x 8 / 60 x 8	740669 / .5
NucleoSpin® 8 Plant II Core Kit	48 x 8	740467.4
NucleoSpin® 96 Plant II	2 x 96 / 4 x 96 / 24 x 96	740663.2 / .4 / .24
NucleoSpin® 96 Plant II Core Kit	4 x 96	740468.4
NucleoMag® 96 Plant	1 x 96 / 4 x 96 / 24 x 96	744400.1 / .4 / .24

Ordering information II

Genomic DNA from soil	Preps	REF
NucleoSpin® Soil	10 / 50 / 250	740780.10 / .50 / .250

Genomic DNA from food and feed	Preps	REF
NucleoSpin® Food	10 / 50 / 250	740945.10 / .50 / .250
NucleoSpin® 8 Food	12 x 8 / 60 x 8	740975 / .5
NucleoSpin® 96 Food	2 x 96 / 4 x 96 / 24 x 96	740976.2 / .4 / .24

Related Products

Enzymes	Vol.	REF
Proteinase K	100 mg	740506
RNase A	50mg / 100 mg	740505.50 / 740505

Filters	Pack of	REF
NucleoSpin® Filters	50	740606
NucleoSpin® Trace Filter Plate	20	740677
Receiver Plates 20 µm hydrophilized	4	740687.4

Your local distributor

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