

MACHEREY-NAGEL

Bioanalysis



DNA, RNA, and protein purification

MACHEREY-NAGEL

www.mn-net.com



Dear reader,

We are pleased to introduce you our new MN Bioanalysis catalog. All of our products can be found divided into the main chapters Plasmid DNA, Clean up, RNA, DNA, and Protein. Further subsections depending on application, guide you to the product for your needs.

We are a successful manufacturer of a comprehensive range of ready to use kits for nucleic acid and protein purification. All over the world people work successfully with MN products based on e.g., silica membrane, anion exchange, and magnetic bead technology. A continuous development has always been important to us to meet your today's and future needs.

If you need support, our dedicated team of scientists and product specialists will assist you with professional customer service and technical advice. Take advantage of our experience.

Technical Support and Customer Service

Telephone: +49 24 21 969-270

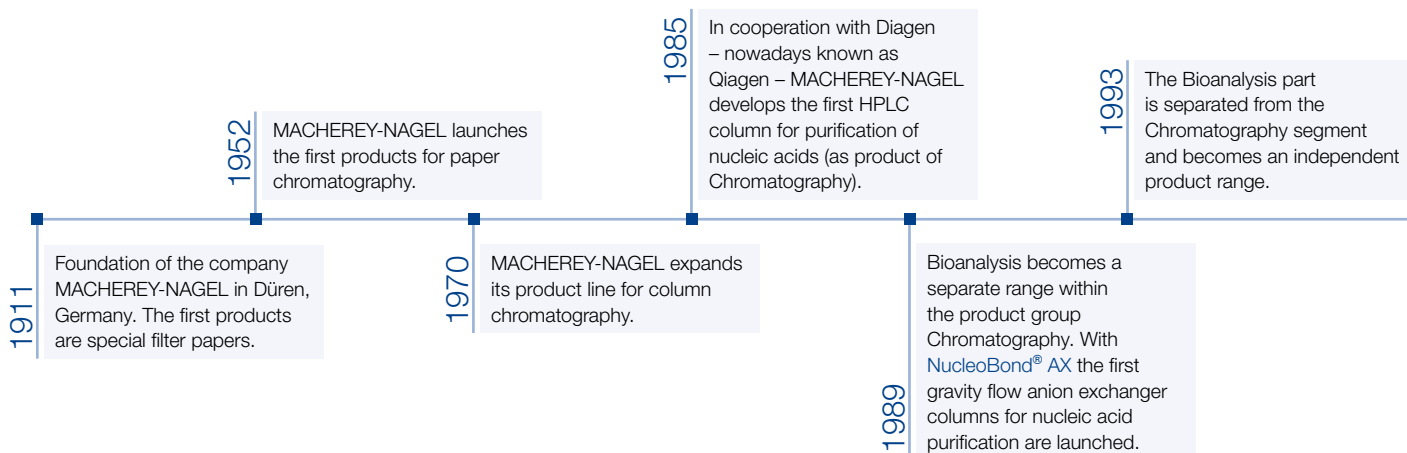
E-mail: tech-bio@mn-net.com

Homepage: www.mn-net.com

MACHEREY-NAGEL

Since its foundation in 1911, the roots of MACHEREY-NAGEL have been in the field of Filtration (cellulose and glass fibre filters, membranes), Testing, and Chromatography (e.g., chemically bonded silica gels and polymeric phases). This knowledge in analytical separation materials and methods prepared the basis for the company's involvement in nucleic acid purification.

Operational headquarters, R&D, production, and central marketing are located in Düren, Germany. Subsidiaries focused on local sales and marketing are located in the USA, France, and Switzerland. The worldwide distribution of products is ensured by a net of specialized distributors in more than 150 countries. As a result, our customers can benefit from the advantages of the company's technologies and products all over the world.



MACHEREY-NAGEL Bioanalysis – Pioneers in RNA, DNA, and protein purification

Since 1993 MN develops and manufactures a comprehensive range of ready to use kits for nucleic acid (RNA and DNA) and protein purification. MACHEREY-NAGEL has become an important brand of high quality products in sample preparation. Our products cover a broad range of applications and are highly esteemed in leading laboratories worldwide.

The following technologies are the core of an extensive portfolio of ready to use kits and consumables suitable for manual and automated isolation of highly pure DNA, RNA, and proteins.

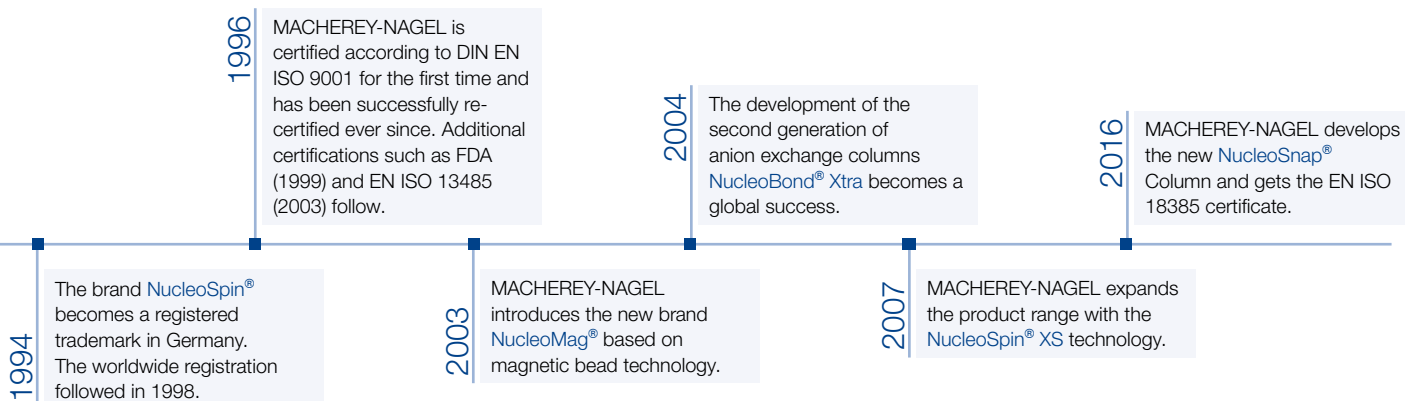
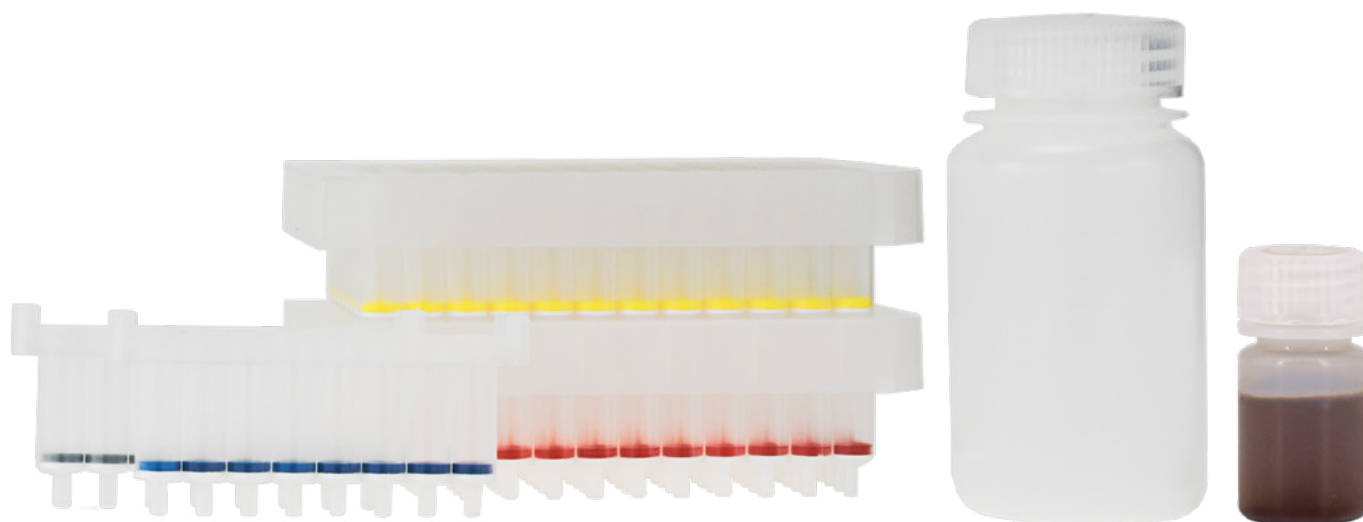
- Silica based anion exchanger, NucleoBond®
- Silica based membrane technology, NucleoSpin® and NucleoSnap®
- Ultrafiltration, NucleoFast®
- Magnetic beads, NucleoMag®
- Gel filtration, NucleoSEQ®
- Affinity chromatography, Protino®

A broad range of different formats is provided with these technologies encompassing single to high throughput and very small to very large scale. Thus offering the right solution for all individual needs.

- XS, Mini, Midi, Maxi, Mega, and Giga preps
- Single, 8-well, 24-well, and 96-well preps

MACHEREY-NAGEL has been certified under the EN ISO 9001 norm since 1996 and for medical devices under the EN ISO 13485 norm since 2001. The certification for forensic quality EN ISO 18385 followed in 2016.

MACHEREY-NAGEL is focused on proprietary technologies, innovation in product development, production expertise, and outstanding product quality with high quality control standards. These core values increase the efficiency of daily laboratory work, facilitate fast and reliable performance, and have established MN as a dependable and respected partner within science and medical communities worldwide.





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Rapid and easy preparation of DNA and RNA

Features

- Chaotropic salt based silica membrane purification
- Tailored purification systems for low (single columns), medium (8-well strips) or high throughput (96-well plates) approaches
- Easy procedure from extra small (XS) to large scale (Maxi)

NucleoSpin® principle

Binding

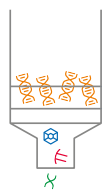
DNA / RNA is bound to the silica membrane under high salt conditions

Interaction between DNA / RNA (hydrate shell is reversibly removed by chaotropic salt) and silica membrane



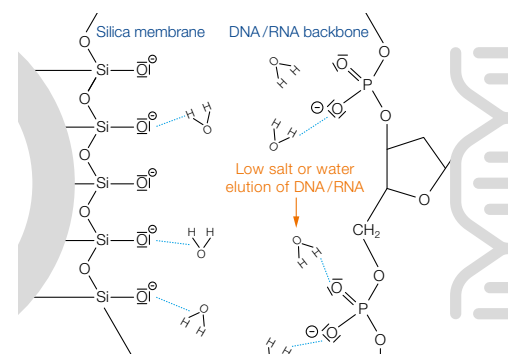
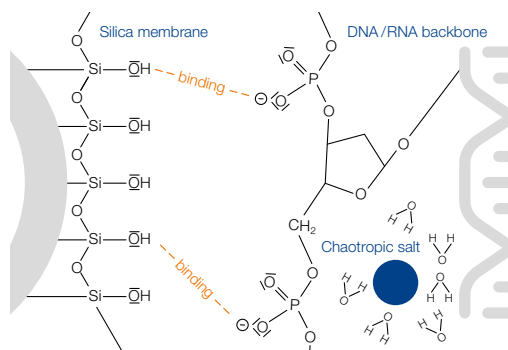
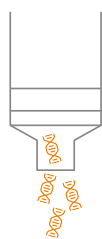
Washing

Contaminants are washed away under high salt and/or ethanolic conditions to keep the DNA / RNA bound to the membrane

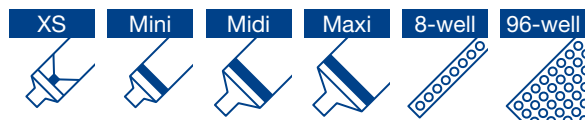


Elution

DNA / RNA is eluted in low salt buffer or water, DNA / RNA is ready to use for downstream applications

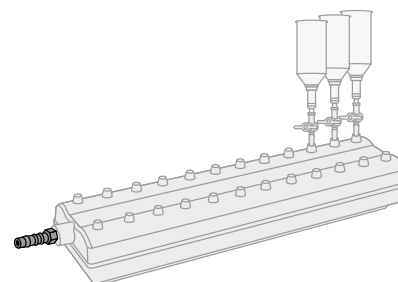


Available formats



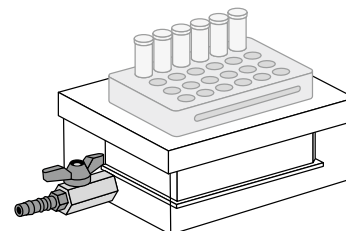
Required hardware for vacuum processing of NucleoSpin® Mini kits

Product	REF
NucleoVac Vacuum Regulator For controlling vacuum	740641
NucleoVac 24 Vacuum Manifold Vacuum manifold for processing 1–24 NucleoSpin® or NucleoSnap® columns, manifold, NucleoVac Mini Adapters, Luer plugs, tubing connection, closing plug	740299
NucleoVac Valves Valves for handling different flow rates of NucleoSpin® Mini and NucleoSnap® Columns on a NucleoVac 24 Vacuum Manifold	740298.24



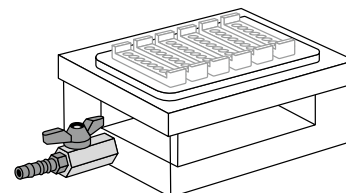
Required hardware for vacuum processing of NucleoSpin® Midi / L kits

Product	REF
Starter Set Midi For processing NucleoSpin® Midi / L Columns (e.g., NucleoSpin® Blood L, NucleoSpin® cfDNA Midi) under vacuum on NucleoVac 96 Vacuum Manifold or similar manifolds, contains 1 Column Holder Midi, 1 Wash Plate Midi, 1 Elution Tube Holder, 24 Dummy Columns Midi	740744
NucleoVac Vacuum Regulator For controlling vacuum	740641
NucleoVac 96 Vacuum Manifold Vacuum manifold, consists of manifold base and lid, a spacer set, and a waste container set, for use of NucleoSpin® Midi / L Columns Starter Set Midi is required	740681



Required hardware for vacuum processing of NucleoSpin® 8 / 96 kits

Product	REF
Starter Set A For processing NucleoSpin® 8-well strips under vacuum on NucleoVac 96 Vacuum Manifold or similar manifolds, contains 2 Column Holders A, NucleoSpin® Dummy Strips	740682
NucleoVac Vacuum Regulator For controlling vacuum	740641
NucleoVac 96 Vacuum Manifold Vacuum manifold, consists of manifold base and lid, a spacer set, and a waste container set, for use of NucleoSpin® 8-well strips Starter Set A is required	740681



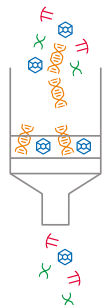
NucleoBond® Xtra/PC technology

Highest DNA purity for plasmid DNA purification

Features

- Solid phase anion exchange chromatography
- Modified, macroporous silica gel with MAE (methylaminoethanol) as positively charged functional anion exchanger group
- Gravity flow columns: Mini, Midi, Maxi, Mega, Giga, 96-well plate, and preparative scale

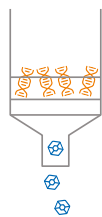
NucleoBond® principle



Binding

DNA is bound to the anion exchange matrix under low pH conditions

Interaction between positively charged anion exchanger group and negatively charged DNA backbone



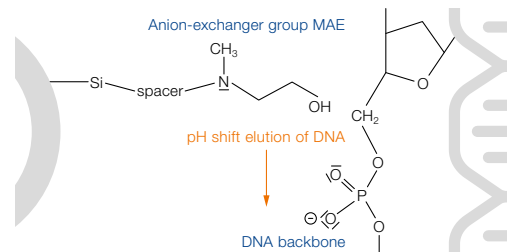
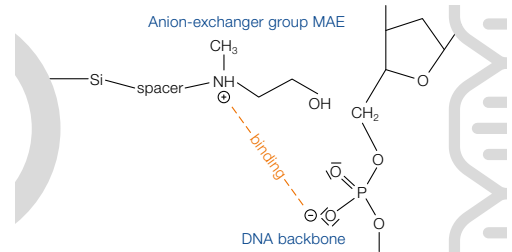
Washing

Stringent washing with increasing salt concentration to remove contaminants



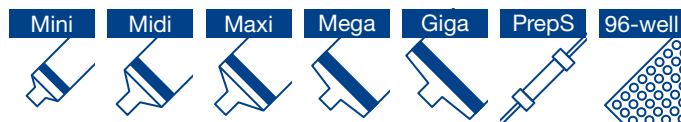
Elution

DNA is eluted with high pH buffer



Exemplary presentation of NucleoBond® Xtra resin.

Available formats

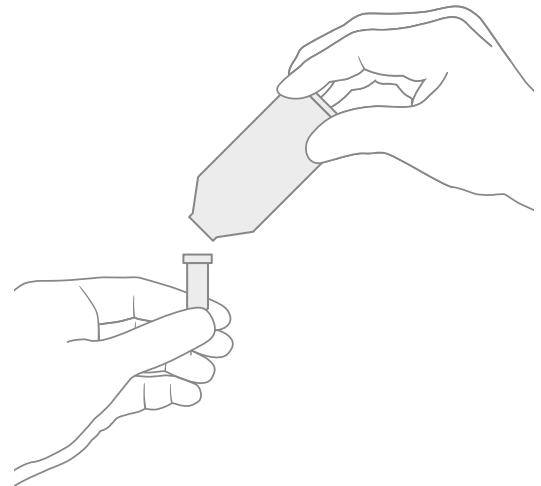
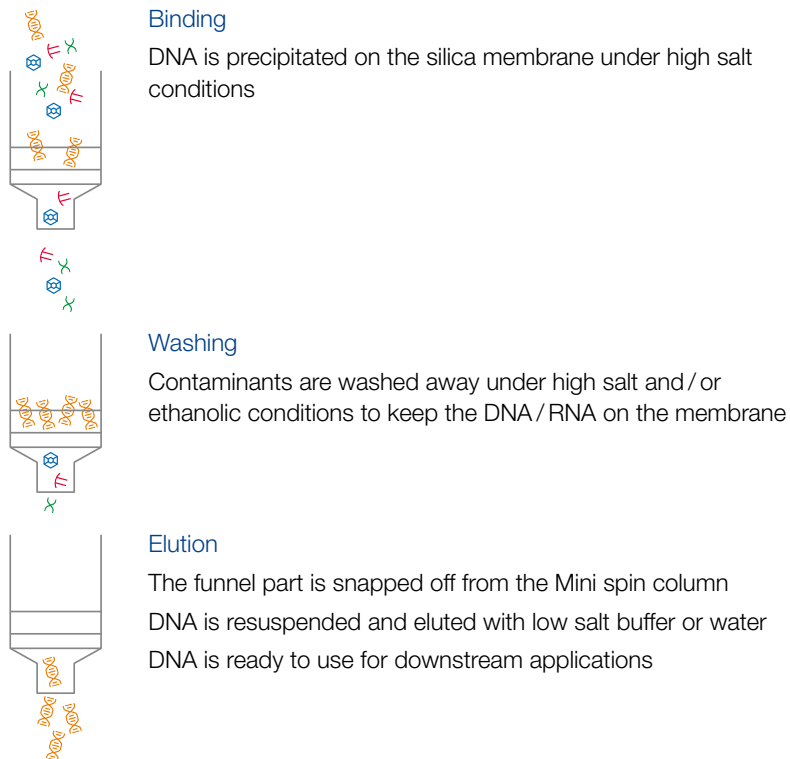


Vacuum processing of large sample volumes

Features

- Chaotropic salt supported precipitation and filtration
- Snap off column design to process large sample volumes easily

NucleoSnap® principle



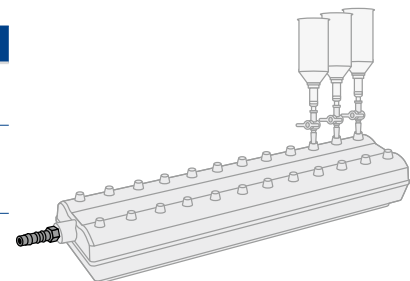
Available format

Snap



Required hardware

Product	REF
NucleoVac Vacuum Regulator For controlling vacuum	740641
NucleoVac 24 Vacuum Manifold Vacuum manifold for processing 1–24 NucleoSpin® or NucleoSnap® Columns, manifold, NucleoVac Mini Adapter, Luer plugs, tubing connection, closing plug	740299
NucleoVac Valves Valves for handling different flow rates of NucleoSpin® Mini and NucleoSnap® Columns on a NucleoVac 24 Vacuum Manifold	740298.24

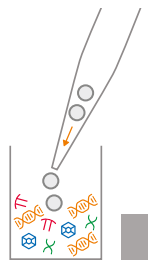


Magnetic bead based preparation of RNA / DNA

Features

- Adsorption of DNA / RNA in the presence of chaotropic salts to super-paramagnetic beads
- Highly pure ready to use nucleic acids
- Easy adaption for automated use

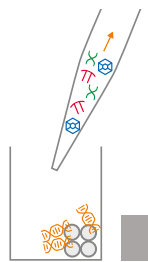
NucleoMag[®] principle



Binding

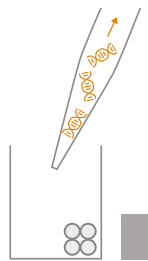
NucleoMag[®] Beads and binding buffer are added to the sample

DNA / RNA is bound to the NucleoMag[®] Beads



Washing

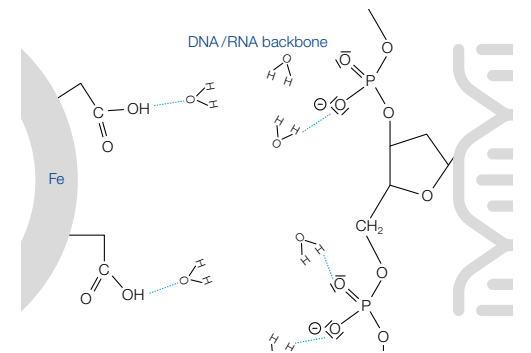
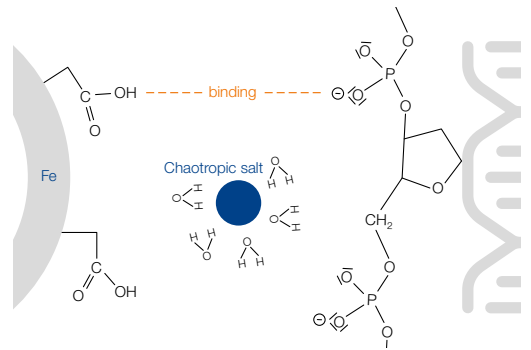
Beads are held in the well by the magnet while contaminants are washed away



Elution

DNA / RNA is eluted from the beads and recovered, while beads are held in the well by the magnet

DNA / RNA is ready to use in downstream applications



Available format

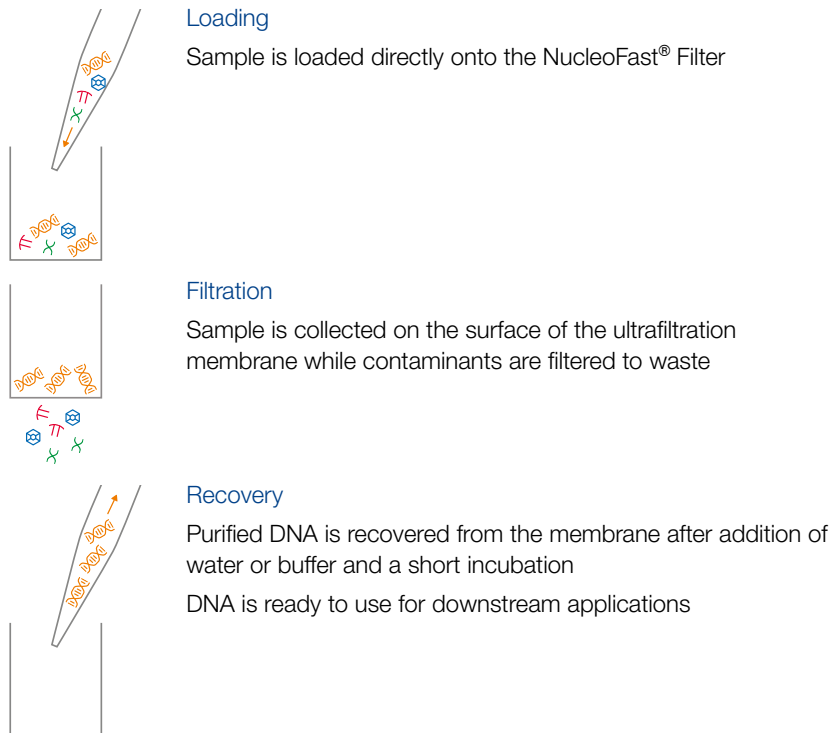


Easy DNA clean up with ultrafiltration

Features

- Retention of DNA fragments > 150 bp by filtration
- Contaminants are filtered to waste
- Recovery of DNA from the membrane

NucleoFast® principle



Available format

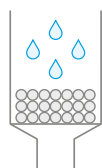


Efficient DNA clean up by size exclusion

Features

- Efficient removal of sequencing dye terminators by filtration technology
- No alcohol precipitation
- Direct recovery of the purified sequencing sample by only one centrifugation step

NucleoSEQ[®] principle



Hydration

Gel resin is hydrated by addition of water



Loading

Sample is loaded onto the column



Recovery

Purified DNA is recovered by centrifugation



Exemplary presentation of dye removal

Available format

Mini



Sample prep combined with HotStart PCR

Features

- Fast genotyping from unpurified samples with HotStart PCR
- Tailored buffer chemistry for high efficient DNA release and amplification
- Different protocols (optional with pretreatment procedures) for flexibility use of the method of choice

NucleoType® principle



Pretreatment (if applicable / optional)

DNA is released and subsequent PCR is enhanced (e.g., PCR inhibitor removal) by tailored pretreatment tools



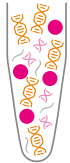
Transfer

The sample (either directly or pretreated) is transferred into the PCR mix and target primers (not included)



Amplification

DNA fragment of interest is amplified



Available format

PCR



Protino® Ni-NTA – Purification of polyhistidine (His)-tagged proteins

Features

- Highest protein yield and high purity
- 6 % beaded agarose (crosslinked), precharged with Ni²⁺
- Ready to use and cost saving

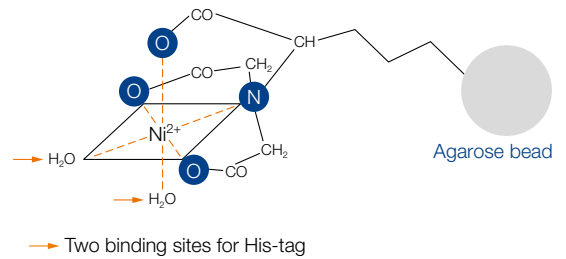
Protino® Ni-NTA principle

Binding

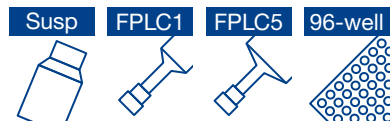
Interaction between the His-tag of the recombinant protein and immobilized Ni²⁺ ions

Elution

Elution with imidazole (structure analogon of histidine, replacement reaction)



Available formats



Protino® Ni-TED – Purification of polyhistidine (His)-tagged proteins

Features

- Highest purity of isolated protein
- Macroporous silica with immobilized Ni²⁺
- Dry material for fast and easy handling

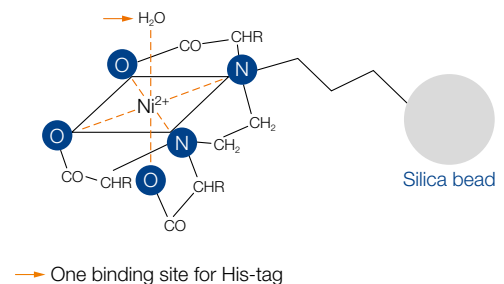
Protino® Ni-TED principle

Binding

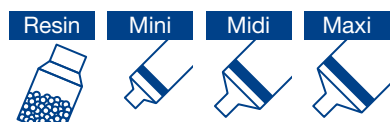
Interaction between the His-tag of the recombinant protein and immobilized Ni²⁺ ions

Elution

Elution with imidazole (structure analogon of histidine, replacement reaction)



Available formats



Protino® Ni-IDA – Purification of polyhistidine (His)-tagged proteins

Features

- High protein yield and high purity
- Macroporous silica with immobilized Ni²⁺
- Storage at room temperature

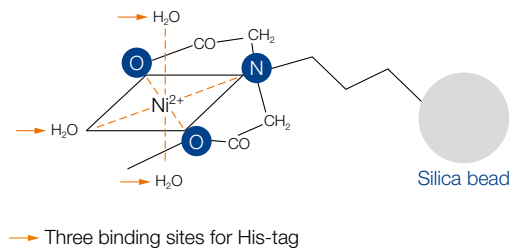
Protino® Ni-IDA principle

Binding

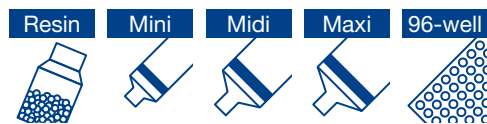
Interaction between the His-tag of the recombinant protein and immobilized Ni²⁺ ions

Elution

Elution with imidazole (structure analogon of histidine, replacement reaction)



Available formats



Protino® Glutathione Agarose – Purification of Glutathione-S-transferase (GST)-tagged proteins

Features

- Highest performance and cost saving, equivalent to Glutathione Sepharose™ 4B
- 4 % beaded agarose with immobilized glutathione
- Suitable for small proteins, large protein complexes, proteins with low expression rates

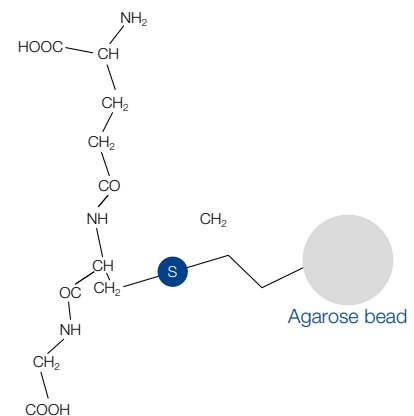
Protino® Glutathione Agarose 4B principle

Binding

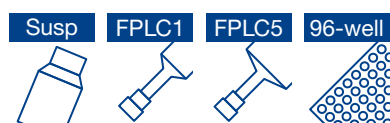
Interaction between the GST-tag of the recombinant protein and immobilized glutathione

Elution

Elution with free glutathione (substrate of Glutathione-S-transferase)



Available formats





Plasmid DNA

Molecular biology-grade plasmid DNA.....	18
Transfection-grade plasmid DNA	20
Endotoxin-free plasmid DNA.....	25
Plasmid DNA concentration and desalting	27



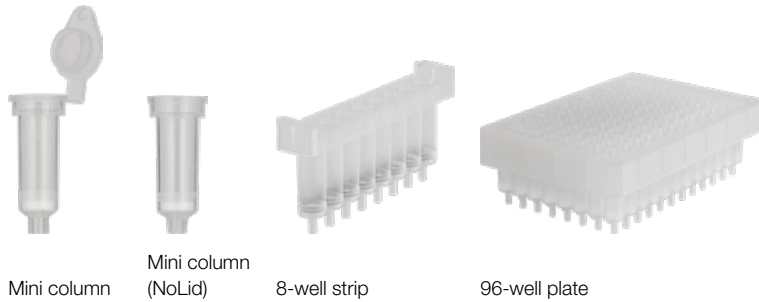
NucleoSpin® Plasmid

Rapid preparation of plasmid DNA from low to high throughput

Features

- High capacity – up to 50 µg of plasmid DNA
- Flexible solutions for full automation available
- Optional washing step for highest plasmid DNA quality

Available formats



Ordering information

Product	Preps	REF
NucleoSpin® Plasmid (including binding columns with lid)	10/50/250	740588.10/.50/.250
NucleoSpin® Plasmid (NoLid) (including binding columns without lid)	10/50/250	740499.10/.50/.250
NucleoSpin® 8 Plasmid	12 x 8/60 x 8	740621/.5
NucleoSpin® 8 Plasmid Core Kit**	48 x 8	740461.4
NucleoSpin® 96 Plasmid	1 x 96/4 x 96/24 x 96	740625.1/.4/.24
NucleoSpin® 96 Plasmid Core Kit**	4 x 96	740616.4
Related product	Pack of	REF
NucleoSpin® Plasmid Buffer Set (for isolation of low copy plasmids, use with single column kits)	1	740953

Applications

- High and low* copy plasmid DNA purification from *E. coli* cultures and Gram-positive bacteria
- Plasmid DNA clean up from reaction mixtures

Specifications

- Technology: Silica membrane technology
- Endotoxin level: >> 50 EU/µg DNA

NucleoSpin® Plasmid Mini
NucleoSpin® Plasmid (NoLid)

- Processing: Manual (centrifugation or vacuum)
- Starting material: 1–5 mL (high copy plasmid), 6–10 mL (low copy plasmid)
- Vector size: < 25 kbp
- Typical yield: 25–45 µg
- Elution volume: 50 µL
- Theoretical binding capacity: 60 µg
- Processing time: 20 min/6 preps

NucleoSpin® 8 Plasmid 8-well

- Processing: Manual or automated
- Sample material: 1–5 mL
- Vector size: < 25 kbp
- Typical yield: 4–30 µg
- Elution volume: 75–150 µL
- Theoretical binding capacity: 30 µg
- Processing time: 45 min/6 strips

NucleoSpin® 96 Plasmid 96-well

- Processing: Manual or automated
- Sample material: 1–5 mL
- Vector size: < 25 kbp
- Typical yield: 4–30 µg
- Elution volume: 75–150 µL
- Theoretical binding capacity: 30 µg
- Processing time: 45 min/plate

Starter Set C and other equipment



▶ See page 120

* Increased buffer volumes required, please see "Ordering information – Related products" or refer to the corresponding user manual.

** Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



Molecular biology-grade plasmid DNA

NucleoSpin® Plasmid EasyPure

Fast and practical small scale preparation of plasmid DNA

Features

- Ultrafast procedure with one combined washing and drying step
- Liquid RNase A – easy handling without dissolving
- LyseControl for visualization of completed alkaline lysis

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® Plasmid EasyPure	10/50/250	740727.10/ .50/ .250
Related product	Pack of	REF
NucleoSpin® Plasmid Buffer Set (for isolation of low copy plasmids)	1	740953

Applications

- High copy plasmid DNA purification from *E. coli* cultures

Specifications

- Technology: Silica membrane technology

NucleoSpin® Plasmid EasyPure

- Endotoxin level: >> 50 EU/μg DNA
- Vector size: < 25 kbp
- Sample material: 1–5 mL
- Typical yield: 15–30 μg
- Elution volume: 50 μL
- Theoretical binding capacity: 35 μg
- Processing time: 14 min/6 preps





Transfection-grade plasmid DNA

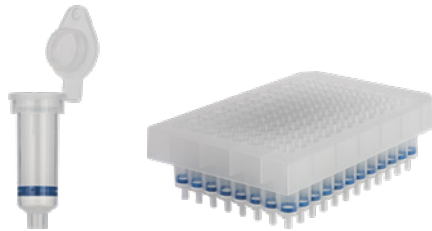
NucleoSpin® Plasmid Transfection-grade

A fast way to purify plasmids for transfections

Features

- Novel technology to diminish endotoxin content (< 50 EU/μg DNA) for successful transfections (patented)
- Purification of transfection-grade DNA in Mini format simplifies your workflow
- 96-well version for high throughput applications available

Available formats



Mini column 96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® Plasmid Transfection-grade	10 / 50 / 250	740490.10 / .50 / .250
NucleoSpin® 96 Plasmid Transfection-grade	1 x 96 / 4 x 96 / 24 x 96	740491.1 / .4 / .24
NucleoSpin® 96 Plasmid Transfection-grade Core Kit	4 x 96	740492.4

Applications

- High copy plasmid DNA purification from *E. coli* cultures

Specifications

- Technology: Silica membrane technology and endotoxin reduction technology
- Endotoxin level: < 50 EU/μg DNA
- Sample material: 1–5 mL
- Vector size: < 25 kbp

NucleoSpin® Plasmid Transfection-grade

Mini

- Typical yield: 15–30 μg
- Elution volume: 30–50 μL
- Theoretical binding capacity: 35 μg
- Processing time: 20 min/6 preps



NucleoSpin® 96 Plasmid Transfection-grade

96-well

- Processing: Manual or automated
- Typical yield: 5–20 μg
- Elution volume: 100–200 μL
- Theoretical binding capacity: 20 μg
- Processing time: 45 min/plate



NucleoVac Vacuum Regulator and other equipment



▶ See page 120



Transfection-grade plasmid DNA

NucleoSnap® Plasmid Midi

Ultrafast plasmid Midi prep due to vacuum processing

Features

- New column design (snap off column) for vacuum processing of large sample volumes
- Isolate up to 250 µg plasmid DNA in only 35 minutes
- No need for time consuming DNA precipitation

Available format



Snap column

Ordering information

Product	Preps	REF
NucleoSnap® Plasmid Midi	10 / 50	740494.10 / .50
Related product	Pack of	REF
NucleoVac 24 Vacuum Manifold	1	740299
NucleoVac Mini Adapter	100	740297.100
NucleoVac Valves	24	740298.24
NucleoVac Vacuum Regulator	1	740641

NucleoVac 24 Vacuum Manifold and other equipment

▶ See page 120



Applications

- High and low copy plasmid DNA purification from *E. coli* cultures

Specifications

- Technology: Precipitation and filtration

NucleoSnap® Plasmid Midi

- Processing: Vacuum processing, centrifugation for elution
- Endotoxin level: < 50 EU/µg DNA
- Sample material: ≤ 50 mL
- Vector size: < 25 kbp
- Typical yield: 250 µg
- Elution volume: 200–500 µL
- Theoretical binding capacity: 1.5 mg
- Processing time: 35 min/6 preps





Transfection-grade plasmid DNA

NucleoBond® Xtra

2nd generation anion exchanger for fast purification of plasmid DNA

Features

- Column filter for fast and easy lysate clarification included – high filter flow rates, parallel lysate clearing and loading onto the column
- Midi and Maxi preps with extremely high yield
- NucleoSpin® Finishers, NucleoSnap® Finishers, and NucleoBond® Finalizers are available as separate tools to avoid time consuming centrifugation for plasmid precipitation (see pages 27, 28, 29)

Available formats



Midi column Maxi column

Ordering information

Product	Preps	REF
NucleoBond® Xtra Midi	10 / 50 / 100	740410.10 / .50 / .100
NucleoBond® Xtra Midi Plus (including NucleoBond® Finalizers)	10 / 50	740412.10 / .50
NucleoBond® Xtra Maxi	10 / 50 / 100	740414.10 / .50 / .100
NucleoBond® Xtra Maxi Plus (including NucleoBond® Finalizers Large)	10 / 50	740416.10 / .50
Related product	Pack of	REF
NucleoBond® Xtra Buffer Set I (for isolation of low copy plasmids and large constructs e.g., BACs)	1	740417
NucleoBond® Xtra Combi Rack	1	740415
NucleoBond® Smart Rack	1	740413

Applications

- High and low* copy plasmid DNA purification from *E. coli* cultures

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Endotoxin level: 1–10 EU/µg DNA
- Vector size: < 300 kbp

NucleoBond® Xtra Midi

Midi

- Sample material: < 200 mL (high copy plasmid), < 400 mL (low copy plasmid)
- Typical yield: 500 µg
- Theoretical binding capacity: 800 µg
- Processing time: 70 min/prep (NucleoBond® Xtra Midi), 30 min/prep (NucleoBond® Xtra Midi Plus, incl. NucleoBond® Finalizer)



NucleoBond® Xtra Maxi

Maxi

- Sample material: < 600 mL (high copy plasmid), < 1200 mL (low copy plasmid)
- Typical yield: 1000 µg
- Theoretical binding capacity: 2000 µg
- Processing time: 75 min/prep (NucleoBond® Xtra Maxi), 35 min/prep (NucleoBond® Xtra Maxi Plus, incl. NucleoBond® Finalizer Large)



*Increased buffer volumes required, please see "Ordering information – Related products" or refer to the corresponding user manual.



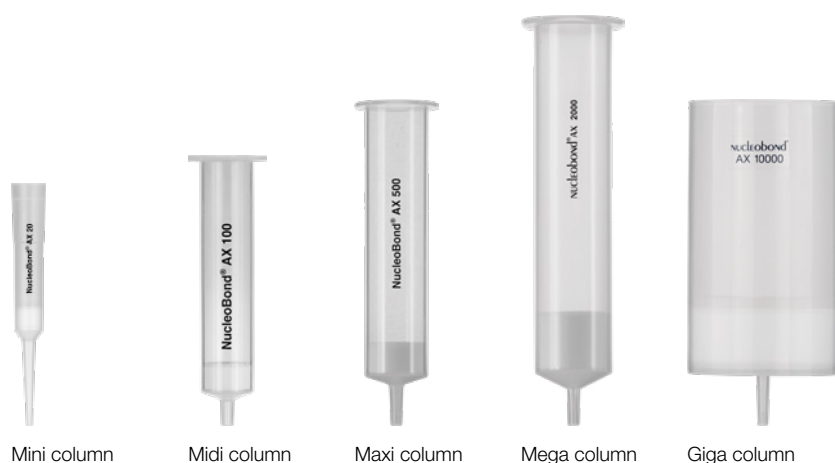
NucleoBond® PC

1st generation anion exchanger for purification of plasmid DNA from Mini to Giga scale

Features

- Clarification of lysates with NucleoBond® Folded Filters, no centrifugation required, no shearing forces
- NucleoSpin® Finishers, NucleoSnap® Finishers, and NucleoBond® Finalizers are available as separate tools to avoid time consuming centrifugation for plasmid precipitation (see pages 27, 28, 29)
- Separate kit components available: NucleoBond® AX Columns, RNase, and buffers

Available formats



Ordering information

Product	Preps	REF
NucleoBond® PC 20	20 / 100	740571 / .100
NucleoBond® PC 100	20 / 100	740573 / .100
NucleoBond® PC 500	10 / 25 / 50 / 100	740574 / .25 / .50 / .100
NucleoBond® PC 2000	5	740576
NucleoBond® PC 10000	5	740593
Related product	Pack of	REF
NucleoBond® Buffer Set I (for isolation of low copy plasmids and large constructs e.g., BACs)	1	740601
NucleoBond® Rack Small	1	740562
NucleoBond® Xtra Combi Rack	1	740415
NucleoBond® Smart Rack	1	740413
NucleoBond® AX Columns	Pack of	REF
NucleoBond® AX 20	20	740511
NucleoBond® AX 100	20 / 100	740521 / .100
NucleoBond® AX 500	10 / 50	740531 / .50
NucleoBond® AX 2000	10	740525
NucleoBond® AX 10000	5	740534

Applications

- High and low* copy plasmid DNA purification from *E. coli* cultures

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Endotoxin level: 1–10 EU/μg DNA

NucleoBond® PC 20

Mini

- Sample material: 1–5 mL (high copy plasmid), 3–10 mL (low copy plasmid)
- Typical yield: 3–20 μg
- Theoretical binding capacity: 20 μg
- Processing time: 60 min/4–6 preps



NucleoBond® PC 100

Midi

- Sample material: 5–30 mL (high copy plasmid), 10–100 mL (low copy plasmid)
- Typical yield: 20–100 μg
- Theoretical binding capacity: 100 μg
- Processing time: 65 min/4–6 preps



NucleoBond® PC 500

Maxi

- Sample material: 30–150 mL (high copy plasmid), 100–500 mL (low copy plasmid)
- Typical yield: 400–500 μg
- Theoretical binding capacity: 500 μg
- Processing time: 80–90 min/4 preps



NucleoBond® PC 2000

Mega

- Sample material: 150–500 mL (high copy plasmid), 500–2000 mL (low copy plasmid)
- Typical yield: 500–2000 μg
- Theoretical binding capacity: 2000 μg
- Processing time: 90–120 min/4–6 preps



NucleoBond® PC 10000

Giga

- Sample material: 500–2000 mL (high copy plasmid), 1–4 L (low copy plasmid)
- Typical yield: 2000–10000 μg
- Theoretical binding capacity: 10000 μg
- Processing time: 120–150 min/2 preps



*Increased buffer volumes required, please see “Ordering information – Related products” or refer to the corresponding user manual.



Transfection-grade plasmid DNA

NucleoBond® Xtra BAC

2nd generation anion exchange technology for large construct plasmid DNA

Features

- Optimized column design – one prep in less than 75 min
- Column filter for lysate clarification included – parallel lysate clearing and loading onto the column ensures fast processing
- Optimized silica material – yields up to 150 µg

Available format



Maxi column

Ordering information

Product	Preps	REF
NucleoBond® Xtra BAC	10/25	740436.10/.25
Related product	Pack of	REF
NucleoBond® Xtra BAC Buffer Set (for isolation of low copy plasmids)	1	740437
NucleoBond® Xtra Combi Rack	1	740415
NucleoBond® Smart Rack	1	740413

Applications

- Large construct (P1, BACs, PACs) plasmid purification from *E. coli* cultures

Specifications

- Technology: Anion exchange chromatography, gravity flow columns

NucleoBond® Xtra BAC

- Endotoxin level: 1–10 EU/µg DNA
- Sample material: 250–750 mL
- Vector size: < 300 kbp
- Typical yield: 10–150 µg
- Theoretical binding capacity: 150 µg
- Processing time: 75 min/4 preps





Endotoxin-free plasmid DNA

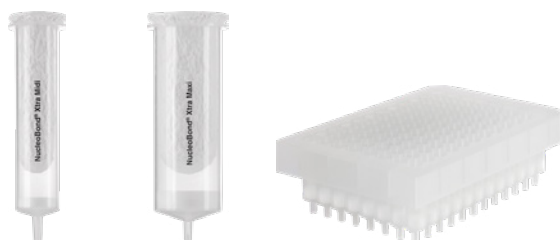
NucleoBond® Xtra EF

2nd generation anion exchange technology for time saving endotoxin-free plasmid DNA

Features

- Plasmid DNA with less than 0.05 EU/μg for transfection of highly sensitive cells (e.g., primary cells, stem cells)
- Patented endotoxin removal by additional washing step
- Column filter included in Midi/Maxi columns – high filter flow rates, parallel lysate clearing and loading onto the column ensures fast processing

Available formats



Midi column Maxi column 96-well plate

Ordering information

Product	Preps	REF
NucleoBond® Xtra Midi EF	10 / 50	740420.10 / .50
NucleoBond® Xtra Midi Plus EF (including NucleoBond® Finalizers)	10 / 50	740422.10 / 50
NucleoBond® Xtra Maxi EF	10 / 50	740424.10 / .50
NucleoBond® Xtra Maxi Plus EF (including NucleoBond® Finalizers Large)	10 / 50	740426.10 / .50
NucleoBond® 96 Xtra EF	1 x 96 / 4 x 96	740430.1 / .4
Related product	Pack of	REF
NucleoBond® Xtra EF Buffer Set I (for isolation of Low copy plasmids and large constructs, e.g., BACs)	1	740427
NucleoBond® Xtra Combi Rack	1	740415
NucleoBond® Smart Rack	1	740413

Applications

- High and low copy plasmid DNA purification from *E. coli* culture

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Processing: Manual

NucleoBond® Xtra Midi EF

Midi

- Technology: Anion exchange chromatography, gravity flow columns
- Plasmid type: High, low* copy
- Sample material: < 200 mL (high copy plasmid), < 400 mL (low copy plasmid)
- Vector size: < 300 kbp
- Typical yield: 500 μg
- Theoretical binding capacity: 800 μg
- Processing time: 85 min/prep, 45 min/prep (NucleoBond® Xtra Midi Plus EF)
- Endotoxin level: < 0.05 EU/μg DNA

NucleoBond® Xtra Maxi EF

Maxi

- Technology: Anion exchange chromatography, gravity flow columns
- Plasmid type: High, low* copy
- Sample material: < 600 mL (high copy), < 1200 mL (low copy)
- Vector size: < 300 kbp
- Typical yield: 1000 μg
- Theoretical binding capacity: 2000 μg
- Processing time: 90 min/prep, 50 min/prep (NucleoBond® Xtra Maxi Plus EF)
- Endotoxin level: < 0.05 EU/μg DNA

NucleoBond® 96 Xtra EF

96-well

- Technology: Anion exchange chromatography
- Sample material: 1–5 mL
- Plasmid type: High copy
- Vector size: < 25 kbp, < 300 kbp (without NucleoBond® Finalizer Plate)
- Typical yield: 2–4 μg (1.5 mL culture in 96-well plate), 10–50 μg (5 mL culture in glass tube)
- Theoretical binding capacity: 50 μg
- Processing time: 120 min/plate
- Endotoxin level: < 0.1 EU/μg DNA

NucleoVac 96 Vacuum Manifold and other equipment



▶ See page 120

*Increased buffer volumes required, please see "Ordering information – Related products" or refer to the corresponding user manual.



Endotoxin-free plasmid DNA

NucleoBond® PC EF

1st generation anion exchange technology for endotoxin-free plasmid DNA from Maxi to preparative scale

Features

- Clarification of lysates by NucleoBond® Folded Filters or Bottle Top Filters, no centrifugation required, no shearing forces
- NucleoSnap® Finishers, NucleoSpin® Finishers, and NucleoBond® Finalizers are available as separate tool to avoid time consuming centrifugation for plasmid precipitation (see pages 27, 28, 29)
- Separate kit components available: NucleoBond® AX Columns, RNase, and buffers

Available formats



Applications

- High and low* copy plasmid purification from *E. coli* culture

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Vector size: 300 kbp
- Endotoxin level: < 0.1 EU/μg DNA

NucleoBond® PC 500 EF

- Sample material: 30–150 mL
- Typical yield: 100–500 μg
- Theoretical binding capacity: 500 μg
- Processing time: 100 min/2 preps



NucleoBond® PC 2000 EF

- Sample material: 150–500 mL
- Typical yield: 500–2000 μg
- Theoretical binding capacity: 2000 μg
- Processing time: 150 min/2 preps



NucleoBond® PC 10000 EF

- Sample material: 500–2000 mL
- Typical yield: 2000–10000 μg
- Theoretical binding capacity: 10000 μg
- Processing time: 180 min/2 preps



NucleoBond® PC Prep 100

- Sample material: 5–20 L
- Typical yield: 80–100 mg
- Theoretical binding capacity: 100 mg
- Processing time: 20 h/rep



Ordering information

Product	Preps	REF
NucleoBond® PC 500 EF	10	740550
NucleoBond® PC 2000 EF	5	740549
NucleoBond® PC 10000 EF	5	740548
NucleoBond® PC Prep 100	1	740594
Related product	Pack of	REF
NucleoBond® Xtra Combi Rack	1	740415
NucleoBond® Smart Rack	1	740413
NucleoBond® AX Columns	Pack of	REF
NucleoBond® AX 500	10 / 50	740531 / .50
NucleoBond® AX 2000	10	740525
NucleoBond® AX 10000	5	740534



Plasmid DNA concentration and desalting

NucleoSnap® Finisher

The fastest way to desalt and concentrate DNA after your NucleoBond® plasmid preparations

Features

- No time consuming isopropanol precipitation
- New column design (snap off column) for vacuum processing of large sample volumes
- Process 12 samples in less than 10 minutes without any plasmid DNA loss

Available format



Snap column

Ordering information

Product	Preps	REF
NucleoSnap® Finisher Midi	10 / 50	740434.10 / .50
NucleoSnap® Finisher Maxi	10 / 50	740435.10 / .50
Related product	Pack of	REF
NucleoVac 24 Vacuum Manifold	1	740299
NucleoVac Mini Adapter	100	740297.100
NucleoVac Valves	24	740298.24
NucleoVac Vacuum Regulator	1	740641

NucleoVac Vacuum Regulator and other equipment

▶ See page 120



Applications

- Concentration and desalting of anion exchange plasmid eluates

Specifications

- Technology: Precipitation and filtration
- Processing: Vacuum processing (e.g., using NucleoVac 24 Vacuum Manifold), centrifugation for elution
- Sample material: DNA eluates from e.g., anion exchange purification kits
- Vector size: < 25 kbp
- Typical recovery: 90–100 %
- Elution volume: ≥ 100 µL
- Theoretical binding capacity: 1.5 mg
- Processing time: < 10 min/12 preps

NucleoSnap® Finisher Midi

- Compatibility: Eluates from NucleoBond® Xtra Midi (EF), NucleoBond® PC 20 / 100



NucleoSnap® Finisher Maxi

- Compatibility: Eluates from NucleoBond® Xtra Maxi (EF), NucleoBond® PC 500 (EF)





Plasmid DNA concentration and desalting

NucleoSpin® Finisher Midi

Fast concentration and desalting of plasmid DNA by centrifugation

Features

- No time consuming isopropanol precipitation
- Used for precipitation of DNA eluates from anion exchange eluates (NucleoBond® preparations)
- No loss of plasmid DNA

Available format



Funnel column

Ordering information

Product	Preps	REF
NucleoSpin® Finisher Midi	10 / 50	740439.10 / .50
Related product	Pack of	REF
Buffer FB (for use with NucleoBond® Xtra Maxi EF / PC 500 EF)	1000 mL	740438.1000

Applications

- Concentration and desalting of anion exchange plasmid eluates

Specifications

- Technology: Precipitation and filtration
- Processing: Centrifugation
- Sample material: DNA eluates from e.g., anion exchange purification kits
- Vector size: < 25 kbp
- Typical recovery: 90–100 %
- Elution volume: ≥ 100 µL
- Theoretical binding capacity 1.5 mg
- Processing time: 15 min/6 preps

NucleoSpin® Finisher Midi

- Compatibility: Eluates from NucleoBond® Xtra Midi / Maxi (EF), NucleoBond® PC 20 / 100 / 500 (EF)

Funnel





Plasmid DNA concentration and desalting

NucleoBond® Finalizer

Proven syringe filters for speeding up anion exchange plasmid preparations

Features

- Eliminates centrifugation steps for precipitation – time saving from > 1 h to only 5 min
- Two sizes available, to be combined with Midi and Maxi preparations
- No loss of DNA pellets or incomplete solubilization of hardly visible precipitates

Available formats



Syringe filter



Syringe filter large

Ordering information

Product	Preps	REF
NucleoBond® Finalizer (20 Finalizers, 4 syringes)	20	740519.20
NucleoBond® Finalizer Plus (20 Finalizers, 40 syringes)	20	740520.20
NucleoBond® Finalizer Large (20 Finalizers Large, 4 syringes)	20	740418.20
NucleoBond® Finalizer Large Plus (20 Finalizers Large, 40 syringes)	20	740419.20

Applications

- Concentration and desalting of anion exchange plasmid eluates

Specifications

- Technology: Filtration
- Sample material: Plasmid DNA eluates
- Vector size: 2–50 kbp
- Typical recovery: 60–90 %
- Processing time: 5 min/prep
- Residual chloride concentration: < 0.3 µg/µL

NucleoBond® Finalizer

- Elution volume: 200–800 µL
- Theoretical binding capacity: 500 µg
- Compatibility: Eluates from NucleoBond® Xtra Midi (EF), NucleoBond® PC 100 / 500 (EF)

Filter



NucleoBond® Finalizer Large

- Elution volume: 400–1000 µL
- Theoretical binding capacity: 2000 µg
- Compatibility: Eluates from NucleoBond® Xtra Maxi (EF), NucleoBond® PC 2000 (EF)

Filter





Clean up

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PCR clean up and gel extraction

NucleoSpin® Gel and PCR Clean-up

PCR clean up and gel extraction – the two in one kit

Features

- High recoveries for small fragments down to 50 bp
- Minimized elution volume of 15 µL – highly concentrated DNA
- Separate buffers for single stranded DNA/RNA or SDS containing samples available

Available formats



Mini column Midi column Maxi column

Ordering information

Product	Preps	REF
NucleoSpin® Gel and PCR Clean-up	10 / 50 / 250	740609.10 / .50 / .250
NucleoSpin® Gel and PCR Clean-up Midi	20	740986.20
NucleoSpin® Gel and PCR Clean-up Maxi	20	740610.20
Related product	Pack of	REF
Buffer NTB (for clean up of SDS containing samples)	150 mL	740595.150
Buffer NTC (for clean up of single stranded DNA)	125 mL	740654.100

Applications

- Purification of PCR products
- Extraction of DNA/RNA from agarose and polyacrylamide gels

Specifications

- Technology: Silica membrane technology
- Fragment size: 50 bp–approx. 20 kbp

NucleoSpin® Gel and PCR Clean-up

Mini

- Processing: Centrifugation or vacuum (elution in centrifuge)
- Sample material: PCR reaction mixture (< 400 µL), TAE/TBE agarose gel (< 400 mg)
- Typical recovery: 70–95 %
- A_{260}/A_{280} : 1.8–1.9
- Elution volume: 15–30 µL
- Theoretical binding capacity: 25 µg
- Processing time: 10 min/6 preps



NucleoSpin® Gel and PCR Clean-up Midi

Midi

- Processing: Centrifugation
- Sample material: PCR reaction mixture (< 4 mL), TAE/TBE agarose gel (< 4 mg)
- Typical recovery: 70–95 %
- A_{260}/A_{280} : 1.75–1.85
- Elution volume: 200–400 µL
- Theoretical binding capacity: 75 µg
- Processing time: 25 min/6 preps



NucleoSpin® Gel and PCR Clean-up Maxi

Maxi

- Processing: Centrifugation
- Sample material: PCR reaction mixture (< 10 mL), TAE/TBE agarose gel (< 10 mg)
- Typical recovery: 70–95 %
- A_{260}/A_{280} : 1.75–1.85
- Elution volume: 1000 µL
- Theoretical binding capacity: 250 µg
- Processing time: 30 min/6 preps





PCR clean up

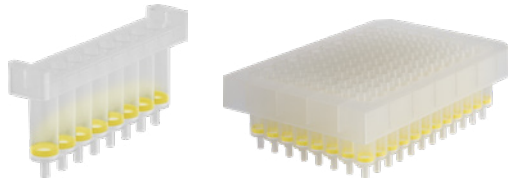
NucleoSpin® 8/96 PCR Clean-up

Time saving medium to high throughput PCR clean up

Features

- Complete removal of primers and primer dimers
- Flexible 8-well strip format and 96-well plates available
- Scripts for full automation available

Available formats



8-well strip

96-well plate

Applications

- Purification of PCR products

Specifications

- Technology: Silica membrane technology
- Processing: Manual or automated
- Sample material: PCR reaction mixture (< 100 µL)
- Fragment size: 50 bp–approx. 10 kbp
- Typical recovery: 75–95 %
- A_{260}/A_{280} : 1.7–1.8
- Elution volume: 75–150 µL
- Theoretical binding capacity 15 µg

NucleoSpin® 8 PCR Clean-up

- Processing time: 30 min/6 strips



NucleoSpin® 96 PCR Clean-up

- Processing time: 45 min/plate

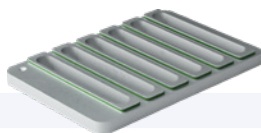


Ordering information

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

Starter Set A
and other equipment

▶ See page 120



*Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.





PCR clean up

NucleoFast® 96 PCR

Cost and time efficient 96-well ultrafiltration kit for PCR clean up

Features

- Ready to use DNA for sequencing and microarray spotting
- No well to well cross-contamination
- Separate plates available

Available format



96-well plate

Applications

- Purification of PCR products > 150 bp

Specifications

- Technology: Ultrafiltration

NucleoFast® 96 PCR

96-well



- Processing: Manual or automated
- Sample material: PCR reaction mixture (20–300 µL)
- Fragment size: > 150 bp
- Typical recovery: 40–95 %
- A₂₆₀/A₂₈₀: 1.7–1.8
- Recovery volume: 25–100 µL
- Processing time: 20 min/plate (for typical PCR reactions of 25 µL)

Ordering information

Product	Preps	REF
NucleoFast® 96 PCR Clean-up Kit (kit including plates and buffer)	4 x 96	743500.4
NucleoFast® 96 PCR Plates (plates only)	10 x 96 / 50 x 96	743100.10 / .50

Square-well Blocks and other consumables



▶ See page 123





PCR clean up

NucleoMag® PCR

Magnetic bead based PCR clean up for highest flexibility

Features

- Small elution volumes for high nucleic acid concentrations
- Easily adaptable for automated use
- PCR fragment recovery up to 95 %

Available format



Magnetic beads

Ordering information

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

Applications

- Manual or automated PCR clean up

Specifications

- Technology: Magnetic bead technology

NucleoMag® PCR

- Processing: Manual or automated
- Sample material: PCR reaction mixture (< 50 µL)
- Fragment size: 150 bp–approx. 10 kbp
- Typical recovery: 80–95 %
- A₂₆₀/A₂₈₀: 1.7–1.9
- Elution volume: 25–100 µL
- Theoretical binding capacity: 0.3 µg/µL beads
- Processing time: 40–120 min/96 preps*



NucleoMag® SEP and other accessories



▶ See page 120

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



NGS clean up and size selection

NucleoMag® NGS Clean-up and Size Select

Clean up and size selection of Next Generation Sequencing library preparation reactions

Features

- Easily adjustable for different applications or workflows
- Tunable size selection from 150 bp to 800 bp – highest flexibility for customer specific applications
- Magnetic bead technology allows scalability in manual and automated workflows

Available format



Magnetic beads

Ordering information

Product	Pack of	REF
NucleoMag® NGS Clean-up and Size Select	5 / 50 / 500 mL	744970.5 / .50 / .500

Applications

- Clean up / size selection of NGS library preparation reactions
- PCR clean up

Specifications

- Technology: Magnetic bead technology

NucleoMag® NGS Clean-up and Size Select



- Processing: Manual or automated
- Sample material: Reaction mixtures from NGS library kits
- Amount of sample material: 17.5 pg–5 µg
- Fragment size: 150–800 bp (tunable)
- Input volume: 50–150 µL
- Typical recovery: ≥ 80 %
- Elution volume: 10–100 µL
- Processing time: 45–60 min/96 preps*

NucleoMag® SEP Mini and other accessories



▶ See page 120

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



Genomic DNA clean up

NucleoSpin® gDNA Clean-up

Effective post clean up and concentration of DNA

Features

- Highly pure genomic DNA for successful downstream applications
- Easier and faster DNA concentration compared to microdialysis filtration units
- NucleoSpin® gDNA Clean-up XS recommended for small samples – elution in as little as 6 µL

Available formats



XS column

Mini column

Ordering information

Product	Preps	REF
NucleoSpin® gDNA Clean-up XS	10/50/250	740904.10/.50/.250
NucleoSpin® gDNA Clean-up	10/50/250	740230.10/.50/.250

Applications

- Clean up and concentration of pre-purified DNA (e.g., from organic extractions) and DNA from enzymatic reactions

Specifications

- Technology: Silica membrane technology
- Fragment size: 100 bp–approx. 50 kbp
- A_{260}/A_{280} : 1.8–1.9

NucleoSpin® gDNA Clean-up XS



- Sample material: Aqueous DNA solution (< 400 µL incl. < 2 µg DNA)
- Typical recovery: 60–70 %
- Elution volume: 6–10 µL
- Theoretical binding capacity: 3 µg
- Processing time: 20 min/6 preps

NucleoSpin® gDNA Clean-up



- Sample material: Aqueous DNA solution (< 150 µL incl. < 25 µg DNA)
- Typical recovery: 80–90 %
- Elution volume: 50–100 µL
- Theoretical binding capacity: 50 µg
- Processing time: 15 min/6 preps





NucleoSpin® RNA Clean-up

Highly efficient clean up and concentration of RNA samples

Features

- Efficient removal of RT-PCR inhibitors
- Time saving procedure based on NucleoSpin® RNA, without DNase digestion and homogenization steps
- Elution in as little as 5 µL possible with NucleoSpin® RNA Clean-up XS
- As much as 35 mg RNA from up to 7.5 mL solution can be cleaned up with NucleoSpin® RNA Clean-up Maxi

Available formats



Ordering information

Product	Preps	REF
NucleoSpin® RNA Clean-up XS	10 / 50 / 250	740903.10 / .50 / .250
NucleoSpin® RNA Clean-up	10 / 50 / 250	740948.10 / .50 / .250
NucleoSpin® RNA Clean-up Maxi	20	740910.20

Applications

- RNA clean up of pre-purified RNA (e.g., TRIzol®), reaction mixtures, modified RNA

Specifications

- Technology: Silica membrane technology
- Fragment size: > 200 bp
- A₂₆₀/A₂₈₀: 1.9–2.1

NucleoSpin® RNA Clean-up XS

XS

- Sample material: RNA solution (< 300 µL incl. < 90 µg RNA)
- Typical recovery: 85–95 %
- Elution volume: 5–30 µL
- Theoretical binding capacity: 110 µg
- Processing time: 20 min/6 preps



NucleoSpin® RNA Clean-up

Mini

- Sample material: Phenol / chloroform extract (< 200 µL), reaction mixture, cells (< 10⁹)
- Typical recovery: 85–95 %
- Elution volume: 40–120 µL
- Theoretical binding capacity: 200 µg
- Processing time: 20 min/6 preps



NucleoSpin® RNA Clean-up Maxi

Maxi

- Sample material: RNA solution (< 7.5 mL incl. < 35 mg RNA)
- Typical recovery: 85–95 %
- Elution volume: 3–5 mL
- Theoretical binding capacity: 35 mg
- Processing time: 30 min/6 preps





Dye terminator removal

NucleoSEQ®

Prefilled single spin columns for dye terminator removal

Features

- Efficient removal of dye terminators without ethanol precipitation
- Convenient spin column format for fast sample processing
- Long term storage at room temperature

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSEQ®	10/50/250	740523.10/.50/.250
Related product	Pack of	REF
Receiver Columns 35 µm	10/50/250	740524.10/.50/.250

Applications

- Removal of dye terminators (e.g., BigDye® terminators)

Specifications

- Technology: Gel filtration

NucleoSEQ®

- Sample material: Sequencing reaction mixture (20 µL)
- Processing time: 5 min/prep (without hydration of matrix)





RNA

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RNA from cells and tissue

NucleoSpin® RNA Plus

Ultrafast and convenient RNA isolation kit

Features

- Lysate clearing and gDNA removal with one column only
- No time consuming rDNase digestion necessary
- New efficient lysis buffer, no β -mercapthoethanol or TCEP necessary

Available formats



XS columns



Mini columns

Ordering information

Product	Preps	REF
NucleoSpin® RNA Plus XS	10/50/250	740990.10/.50/.250
NucleoSpin® RNA Plus	10/50/250	740984.10/.50/.250

Applications

- RNA isolation from cultured / bacterial / yeast cells, human / animal tissue

Specifications

- Technology: Silica membrane technology (1. column for DNA removal and lysate clearing, 2. column for RNA isolation)
- A_{260}/A_{280} : 1.9–2.1

NucleoSpin® RNA Plus XS

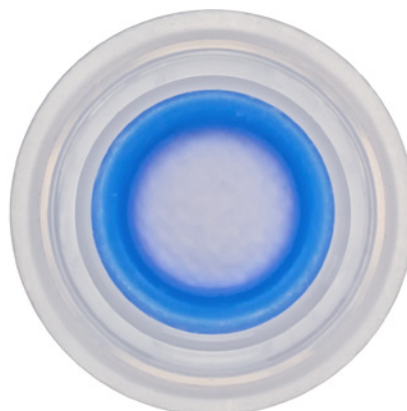
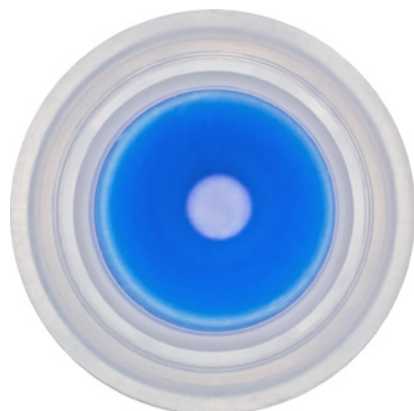


- Sample material: Cultured cells ($1-10^5$), human / animal tissue (< 5 mg)
- Fragment size: > 100 nt
- Typical yield: HeLa cells (10^7): 0.05–0.2 ng, HeLa cells (10^5): 0.5–2.0 μ g, mouse liver (0.5 μ g): 2.5–8 ng, mouse brain (0.5 μ g): 0.1–0.5 ng
- Elution volume: 5–30 μ L
- Theoretical binding capacity: 110 μ g
- Processing time: 18 min/6 preps

NucleoSpin® RNA Plus



- Sample material: Cultured cells (< 10^7), bacterial cells (< 10^9), yeast cells (< 10^8), human / animal tissue (< 30 mg)
- Fragment size: > 200 nt
- Typical yield: 40–100 μ g
- Elution volume: 30–120 μ L
- Theoretical binding capacity: 200 μ g
- Processing time: 20 min/6 preps





RNA from cells and tissue

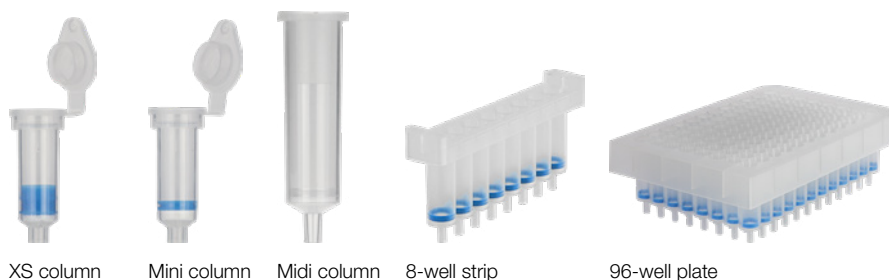
NucleoSpin® RNA

RNA isolation kits from small to large scale

Features

- High integrity RNA from various sample types
- NucleoSpin® Filters included for efficient sample homogenization
- Kits with 8-well strips and 96-well plates for medium and high throughput applications available

Available formats



Ordering information

Product	Preps	REF
NucleoSpin® RNA XS	10 / 50 / 250	740902.10 / .50 / .250
NucleoSpin® RNA	10 / 50 / 250	740955.10 / .50 / .250
NucleoSpin® RNA Midi	20	740962.20
NucleoSpin® 8 RNA	12 x 8 / 60 x 8	740698 / .5
NucleoSpin® 8 RNA Core Kit*	48 x 8	740465.4
NucleoSpin® 96 RNA	2 x 96 / 4 x 96 / 24 x 96	740709.2 / .4 / 24
NucleoSpin® 96 RNA Core Kit*	4 x 96	740466.4

Starter Set C
and other equipment

▶ See page 120



Applications

- RNA isolation from cultured / bacterial / yeast cells, human / animal tissue, biological fluids, samples stored in RNAlater®, NucleoProtect® RNA, saliva (collected with Oragene®), cryosections, laser captured cells

Specifications

- Technology: Silica membrane technology
- Fragment size: > 200 nt
- A_{260}/A_{280} : 1.9–2.1

NucleoSpin® RNA XS



- Processing: Centrifugation
- Sample material: Cultured cells ($1-10^6$), human / animal tissue (< 5 mg)
- Typical yield: HeLa cells (10^7): 0.1–1.5 ng, HeLa cells (10^8): 1–1.5 µg
- Elution volume: 5–30 µL
- Theoretical binding capacity: 110 µg
- Processing time: 35 min/6 preps

NucleoSpin® RNA



- Processing: Centrifugation
- Sample material: Cultured cells (< 5×10^6), bacterial cells (< 10^9), yeast cells (< 10^8), Human / animal tissue (< 30 mg)
- Typical yield: HeLa cells (10^6): 14 µg, bacterial cells (10^9): 70 µg
- Elution volume: 30–120 µL
- Theoretical binding capacity: 200 µg
- Processing time: 35 min/6 preps

NucleoSpin® RNA Midi



- Processing: Centrifugation
- Sample material: Cultured cells (< 5×10^7), bacterial cells (< 10^{10}), yeast cells (< 3×10^8), human / animal tissue (< 200 mg)
- Typical yield: 180 µg (10^7 HeLa cells), HeLa cells (4×10^7): 620 µg
- Elution volume: 500–1000 µL
- Theoretical binding capacity: 700 µg
- Processing time: 80 min/4 preps

NucleoSpin® 8 RNA



- Processing: Manual or automated
- Sample material: Cultured cells (< 2×10^6), human / animal tissue (< 20 mg)
- Typical yield: 20 µg
- Elution volume: 50–130 µL
- Theoretical binding capacity: 100 µg
- Processing time: 45 min/6 strips

NucleoSpin® 96 RNA



- Processing: Manual or automated
- Sample material: Cultured cells (< 2×10^6), human / animal tissue (< 20 mg)
- Typical yield: 20 µg
- Elution volume: 50–130 µL
- Theoretical binding capacity: 100 µg
- Processing time: 70 min/plate

*Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



RNA from cells and tissue

NucleoZOL

Total RNA extraction from all kind of samples

Features

- No chloroform, no phase separation: easy and safe procedure
- High RNA yield and separation of small and large RNA possible
- Combination with NucleoSpin® RNA Columns possible

Available format



Reagent

Ordering information

Product	Pack of	REF
NucleoZOL	200 mL	740404.200
Related product	Preps	REF
NucleoSpin® RNA Set for NucleoZOL	10 / 50	740406.10 / .50

Applications

- RNA isolation from cultured / bacterial / yeast cells, human / animal / plant tissue, (viral) fluids

Specifications

- Technology: Liquid one phase extraction

NucleoZOL

Reag



- Sample material (per mL NucleoZOL): Cultured cells ($2-10^6$), human / animal / plant tissue (<math>< 100\text{ mg}</math>), (viral) fluids (<math>< 0.4\text{ mL}</math>)
- Fragment size: Total RNA: > 10 nt, small RNA: 10–200 nt, large RNA: > 200 nt
- Typical yield (total RNA): 1–8 μg RNA/mg sample
- A_{260}/A_{280} : 1.8–2.1
- Elution volume: Flexible
- Processing time: <math>< 1\text{ h}</math>





NucleoSpin® RNA Set for NucleoZOL

Mini spin kit for the isolation of RNA from NucleoZOL lysates

Features

- Total RNA including miRNA with a simple bind-wash-elute procedure
- Superior RNA yields due to the efficient NucleoZOL lysis
- Save time and benefit from the standardized NucleoSpin® handling

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® RNA Set for NucleoZOL*	10/50	740406.10/50
Related product	Pack of	REF
NucleoZOL	200 mL	740404.200

Applications

- NucleoZOL lysates (< 500 µL)
- RNA isolation with NucleoZOL combined with NucleoSpin® Columns

Specifications

- Technology: Silica membrane technology

NucleoSpin® RNA Set for NucleoZOL



- Sample material: NucleoZOL sample (< 500 µL)
- Fragment size: Total RNA (> 10 nt), small RNA: 10–200 nt, large RNA: > 200 nt
- Typical recovery: 85–95 %
- Elution volume: 60 µL
- Theoretical binding capacity: 200 µg
- Processing time: < 1 h

*NucleoZOL is not included.



NucleoBond® RNA/DNA

Anion exchange chromatography for nucleic acids of highest integrity

Features

- Ultrapure RNA from different samples
- Separate elution of large fragment genomic DNA
- Anion exchange technology allows nucleic acid purification without shearing forces

Available formats



Midi column Maxi column

Ordering information

Product	Preps	REF
NucleoBond® RNA/DNA 80	25	740650
NucleoBond® RNA/DNA 400	10	740651
Related product	Pack of	REF
NucleoBond® Rack Small	1	740562
NucleoBond® Rack Large	1	740563

Applications

- RNA isolation from cultured / bacterial / yeast cells, human / animal tissue

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Fragment size: 50 nt–300 knt
- A_{260}/A_{280} : 1.8–1.95
- Processing time: 1.5–2.5 h

NucleoBond® RNA/DNA 80

Midi

- Sample material: Cultured cells ($< 5 \times 10^8$), human / animal tissue (< 20 mg), bacterial / yeast cells ($< 5 \times 10^7$)
- Typical yield: 30–70 μ g
- Theoretical binding capacity: 80 μ g



NucleoBond® RNA/DNA 400

Maxi

- Sample material: Cultured cells ($< 2 \times 10^7$), human / animal tissue (< 100 mg), bacterial / yeast cells ($< 2 \times 10^9$)
- Typical yield: 150–300 μ g, bacterial cells (2×10^9): 200 μ g
- Theoretical binding capacity: 400 μ g





NucleoMag® RNA

Flexible magnetic bead based isolation of RNA from tissue and cell samples

Features

- Recombinant DNase included
- Reducing agent TCEP included, no β-mercaptoethanol necessary
- Suitable for manual and automated processing

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® RNA	1 x 96 / 4 x 96	744350.1 / .4

Applications

- RNA isolation from cultured / bacterial / yeast cells (< 2 x 10⁶), human / animal tissue (< 20 mg)

Specifications

- Technology: Magnetic bead technology

NucleoMag® RNA

- Processing: Manual or automated
- Sample material: Cells (< 2 x 10⁶), human / animal tissue (< 20 mg)
- Fragment size: > 200 nt
- Typical yield: < 30 µg
- Elution volume: 50–200 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps* (excl. lysis)



Square-well Blocks and other consumables



▶ See page 123

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



NucleoProtect® RNA

RNA stabilization reagent for cells and tissue

Features

- Preserves RNA integrity in cell and tissue samples
- Compatible with common RNA purification methods (incl. NucleoSpin® RNA kits, NucleoMag® RNA, and NucleoZOL)
- Suitable for sample storage and shipment at ambient temperature (up to one week at 18–25 °C)

Available format



Reagent

Ordering information

Product	Pack of	REF
NucleoProtect® RNA	50 / 250 / 500 mL	740400.50 / .250 / .500
Related product	Pack of	REF
NucleoSpin® RNA Plus	10 / 50 / 250	740984.10 / .50 / .250
NucleoSpin® RNA	10 / 50 / 250	740955.10 / .50 / .250
NucleoSpin® RNA Plus XS	10 / 50 / 250	740990.10 / .50 / .250
NucleoMag® RNA	1 x 96 / 4 x 96	744350.1 / .4
NucleoZOL	200 mL	740404.200

Applications

- RNA stabilization in human / animal cell and tissue samples

Specifications

- Technology: Stabilization reagent

NucleoProtect® RNA



- Processing: Manual (add 10 volumes NucleoProtect® RNA to sample)
- Sample material: Human / animal cells and tissues (max. 5 mm diameter)
- Sample storage time: ≤ 7 days at 18–25 °C, ≤ 1 month at 4 °C, long term at -20 / -80 °C
- Typical RIN after RNA isolation: 10 for cultured mammalian cells, > 9 for mammalian tissues



NucleoSpin® miRNA

Parallel isolation of small and large RNA from various sample types

Features

- Excellent RNA recovery and purity by chaotropic salt lysis without phenol / chloroform (patent pending)
- Additional isolation of total protein fraction ready to use for SDS-PAGE and Western blot analysis
- Separation of small and large RNA possible

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® miRNA	10 / 50 / 250	740971.10 / .50 / .250

Applications

- Small and large RNA isolation from cultured / bacterial / yeast cells, human / animal / plant tissue, reaction mixtures

Specifications

- Technology: Silica membrane technology

NucleoSpin® miRNA

Mini



- Sample material: Cells ($< 10^7$), human / animal tissue (< 30 mg), plant tissue (< 50 mg), reaction mixtures (< 150 μ L)
- Fragment size: ≥ 18 nt
- Typical yield: HeLa cells (10^7): 10 μ g small RNA, 90 μ g large RNA
- Elution volume: 30–100 μ L
- Theoretical binding capacity: 200 μ g
- Processing time: 45 min/6 preps (small and large RNA), 35 min/6 preps (small RNA only)





NucleoSpin® miRNA Plasma

Isolation of total circulating RNA including miRNA from blood plasma and serum

Features

- Processing of up to 900 µL sample volume possible
- Optional co-isolation of cfDNA
- Simple and fast procedure without phenol/chloroform

Available format



Mini column

Applications

- miRNA isolation from plasma/serum

Specifications

- Technology: Silica membrane technology

NucleoSpin® miRNA Plasma

Mini

- Sample material: Plasma/serum (< 300 µL, < 900 µL with multiple loading steps)
- Fragment size: ≥ 18 nt
- Elution volume: 20–50 µL
- Theoretical binding capacity: 200 µg
- Processing time: 40 min/10 preps, 70 min/10 preps (incl. DNA digestion)

Ordering information

Product	Preps	REF
NucleoSpin® miRNA Plasma	10/50/250	740981.10/.50/.250
Related product	Preps	REF
Exosome Precipitation Solution (Serum/Plasma)	2 mL/12 mL/60 mL	740398.2/.12/.60
Exosome Precipitation Solution (Urine)	12 mL/50 mL/250 mL	740399.12/.50/.250



Total RNA

Exosome Precipitation Solution (Serum/Plasma)

Exosome Precipitation Solution (Urine)

Exosome enrichment for most efficient total RNA isolation from body fluids

Features

- Simple and fast exosome precipitation without tedious ultra-centrifugation
- Flexible sample amount – procedure can be scaled up or down depending on sample volume
- Achieve highest RNA recoveries in combination with NucleoSpin® miRNA Plasma

Available formats



Buffer

Buffer

Applications

- Exosome enrichment from serum / plasma, urine, other body fluids and (cell-free) cell culture supernatants

Specifications

- Technology: Precipitation solution
- Processing time: 45 min/6 preps

Exosome Precipitation Solution (Serum/Plasma)

Buffer



- Sample material: Serum / plasma (0.1–1 mL)

Exosome Precipitation Solution (Urine)

Buffer



- Sample material: Urine (1–10 mL)

Ordering information

Product	Pack of	REF
Exosome Precipitation Solution (Serum/Plasma)*	2 mL / 12 mL / 60 mL	740398.2 / .12 / .60
Exosome Precipitation Solution (Urine)*	12 mL / 50 mL / 250 mL	740399.12 / .50 / .250
Related product	Preps	REF
NucleoSpin® miRNA Plasma	10 / 50 / 250	740981.10 / .50 / .250



*Not available in the USA.



NucleoSpin® TriPrep

Parallel isolation of high quality RNA, DNA, and protein from precious samples

Features

- Convenient one column preparation of RNA, DNA, and protein
- Easy and accurate protein quantification using the MACHEREY-NAGEL Protein Quantification Assay (page 55)
- Complete kit including NucleoSpin® Filters (shredders) for efficient lysis, rDNase for on-column DNA digestion, and Protein Solving Buffer

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® TriPrep	10 / 50 / 250	740966.10 / .50 / .250
Related product	Preps	REF
Protein Quantification Assay	50 / 250	740967.50 / .250

Applications

- Parallel isolation of RNA, DNA, and protein from undivided samples from cultured / bacteria / yeast cells, human / animal / plant tissue

Specifications

- Technology: Silica membrane technology

NucleoSpin® TriPrep

Mini



- Sample material: Cells ($< 5 \times 10^6$), human / animal tissue (< 30 mg), plant tissue (< 100 mg)
- Fragment size: RNA: > 200 nt, DNA: < 30 kbp, protein: 15–300 kDa
- Typical yield: RNA: < 70 μ g, DNA: < 6 μ g, protein: < 1200 μ g
- A_{260}/A_{280} : RNA: 1.9–2.1, DNA: 1.7–1.9
- Elution volume: RNA: 40–120 μ L, DNA: 100 μ L, protein: 10–100 μ L
- Theoretical binding capacity: 200 μ g
- Processing time: RNA: 30 min/6 preps, RNA + DNA: 45 min/6 preps, protein: + 35 min/6 preps



NucleoSpin® RNA/Protein

Parallel isolation of high quality RNA and protein from undivided samples

Features

- No splitting of precious samples for reliable analysis of RNA and protein extracted from one sample
- Easy and accurate protein quantification using the MACHEREY-NAGEL Protein Quantification Assay (page 55)
- Complete mini kit with NucleoSpin® Filters (shredders) and recombinant DNase

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® RNA/Protein	10 / 50 / 250	740933.10 / .50 / .250
Related product	Preps	REF
Protein Quantification Assay	50 / 250	740967.50 / .250

Applications

- Parallel isolation of RNA and protein from undivided samples from cultured / bacteria / yeast cells, human / animal / plant tissue

Specifications

- Technology: Silica membrane technology

NucleoSpin® RNA/Protein

Mini



- Sample material: Cells ($< 5 \times 10^6$), human / animal tissue (< 30 mg), plant tissue (< 100 mg)
- Fragment size: RNA: > 200 nt, protein: 15–300 kDa
- Typical yield: RNA: < 70 μ g, protein: < 1200 μ g
- A_{260}/A_{280} : RNA: 1.9–2.1
- Elution volume: RNA: 40–120 μ L, protein: 10–100 μ L
- Theoretical binding capacity: RNA: 200 μ g
- Processing time: RNA: 30 min/6 preps, protein: + 35 min/6 preps





NucleoSpin® RNA/DNA Buffer Set

Parallel isolation of RNA and DNA in one procedure

Features

- To be used in combination with NucleoSpin® RNA, NucleoSpin® RNA XS, NucleoSpin® miRNA, NucleoSpin® RNA Blood, NucleoSpin® RNA Plant, NucleoSpin® RNA/Protein kits
- No need to split samples, e. g., precious samples like biopsy material
- High quality DNA and RNA from one sample, suitable for PCR, RT-PCR, real-time PCR

Available format



Buffer set

Ordering information

Product	Preps	REF
NucleoSpin® RNA/DNA Buffer Set (sufficient for 100 DNA isolations)	100	740944

Applications

- Parallel isolation of RNA and DNA from undivided samples (see NucleoSpin® RNA, NucleoSpin® RNA XS, NucleoSpin® miRNA, NucleoSpin® RNA Blood, NucleoSpin® RNA Plant, NucleoSpin® RNA/Protein)

NucleoSpin® RNA/DNA Buffer Set

Buffer

- DNA fragment size: < 30 kbp
- Typical DNA yield: HeLa cells (10⁶): 5 µg, pig liver (30 mg): 16 µg, Maize leaf (100 mg): 5 µg
- A₂₆₀/A₂₈₀: 1.7–2.0
- DNA Elution volume: 100 µL
- RNA yield and purity: Identical to used NucleoSpin® RNA kit
- Processing time: DNA: 5 min/6 preps, RNA: see NucleoSpin® RNA kits





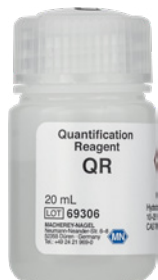
Protein Quantification Assay

Fast, sensitive, and convenient assay for protein quantification

Features

- Reducing agent and detergent compatible
- The perfect addition to NucleoSpin® TriPrep, NucleoSpin® RNA/Protein, and NucleoSpin® miRNA
- Reference protein (BSA) included

Available format



Reagent set

Applications

- Protein quantification assays in microplates, microcuvettes, semi-microcuvettes, low-volume photometer

Protein Quantification Assay

Reag



- Sample size: < 600 μ L containing 0.6–200 μ g protein (BSA equivalents)
- Protein concentration: 10–20000 ng/ μ L
- Sample type: Protein dissolved in Protein Solving Buffer PSB, Laemmli buffer, or equivalent, preferable free of nucleic acids
- Correlation coefficient: 0.97–1.00
- Wavelength for light extinction measurement: 570 nm (530–700 nm)
- Assay time: 40 min

Ordering information

Product	Preps	REF
Protein Quantification Assay	50 / 250	740967.50 / .250
Related product	Preps	REF
NucleoSpin® TriPrep	10 / 50 / 250	740966.10 / .50 / .250
NucleoSpin® RNA/Protein	10 / 50 / 250	740933.10 / .50 / .250

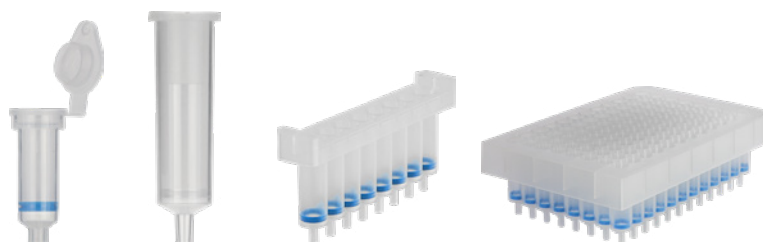
NucleoSpin® RNA Blood

Isolation of RNA from whole blood from single prep to high throughput

Features

- Direct total blood lysis enables a very simple and convenient handling
- Complete processing at room temperature
- Efficient on-column DNA removal for reliable downstream applications
- Compatible with common blood collection tubes and anticoagulants, e.g., EDTA, citrate, and heparin

Available formats



Mini column Midi column 8-well strip 96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® RNA Blood	10 / 50	740200.10 / .50
NucleoSpin® RNA Blood Midi	20	740210.20
NucleoSpin® 8 RNA Blood	12 x 8 / 60 x 8	740220 / .5
NucleoSpin® 96 RNA Blood	2 x 96 / 4 x 96	740225.2 / .4

Applications

- Isolation of RNA from fresh or frozen whole blood (human or animal)

Specifications

- Technology: Silica membrane technology
- A_{260}/A_{280} : 1.9–2.1
- Fragment size: > 200 nt

NucleoSpin® RNA Blood

Mini

- Processing: Centrifugation
- Sample material: < 400 μ L blood
- Typical yield: Blood (400 μ L): 1–8 μ g*
- Elution volume: 40–120 μ L
- Theoretical binding capacity: 200 μ g
- Processing time: 55 min/6 preps



NucleoSpin® RNA Blood Midi

Midi

- Processing: Centrifugation
- Sample material: 400–1300 μ L blood
- Typical yield: Blood (1300 μ L): 4–26 μ g*
- Elution volume: 200–400 μ L
- Theoretical binding capacity: 700 μ g
- Processing time: 75 min/6 preps



NucleoSpin® 8 RNA Blood

8-well

- Processing: Manual or automated
- Sample material: < 400 μ L blood
- Typical yield: Blood (400 μ L): 1–8 μ g*
- Elution volume: 50–130 μ L
- Theoretical binding capacity: 100 μ g
- Processing time: 60 min/6 strips



NucleoSpin® 96 RNA Blood

96-well

- Processing: Manual or automated
- Sample material: < 400 μ L blood
- Typical yield: Blood (400 μ L): 1–8 μ g*
- Elution volume: 50–130 μ L
- Theoretical binding capacity: 100 μ g
- Processing time: 100 min/plate



NucleoVac Vacuum Regulator and other equipment



▶ See page 120

*RNA yield strongly depends on the leukocyte number in each individual blood sample.



Total RNA from FFPE samples

NucleoSpin® totalRNA FFPE

Isolation of small and large RNA from formalin-fixed, paraffin-embedded samples

Features

- Patented blue colored Paraffin Dissolver included for convenient paraffin removal without xylene
- Efficient removal of crosslinks
- rDNase included – efficient on-column DNA removal
- XS kit available for minute sample amounts

Available formats



XS column

Mini column

Applications

- Isolation total RNA (e.g., miRNA) from formalin-fixed, paraffin-embedded samples

Specifications

- Technology: Silica membrane technology
- Typical yield: Depending on amount and quality of the sample
- Processing time: 70 min/6 preps (90 min incl. optional rDNase digest)

NucleoSpin® totalRNA FFPE XS

XS

- Sample material: < 10 sections (10 µm) with < 5 mg of tissue
- Elution volume: 5–30 µL
- Theoretical binding capacity: 100 µg



NucleoSpin® totalRNA FFPE

Mini

- Sample material: < 10 sections (10 µm) with < 50 mg of tissue
- Elution volume: 30–50 µL
- Theoretical binding capacity: 200 µg



Ordering information

Product	Preps	REF
NucleoSpin® totalRNA FFPE XS	10/50/250	740969.10/.50/.250
NucleoSpin® totalRNA FFPE	10/50/250	740982.10/.50/.250





NucleoSpin® RNA Plant

Isolation of RNA from plant tissue

Features

- rDNase included for on-column digestion – avoid DNA contamination
- NucleoSpin® Filters (shredders) included – efficient sample homogenization and reduction of viscosity
- Parallel purification of genomic DNA possible by using the NucleoSpin® RNA/DNA Buffer Set

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® RNA Plant	10 / 50 / 250	740949.10 / .50 / .250
Related products	Preps	REF
NucleoSpin® RNA/DNA Buffer Set	100	740944

Applications

- Plant cells and tissue (< 100 mg)

Specifications

- Technology: Silica membrane technology

NucleoSpin® RNA Plant

- Sample material: < 100 mg plant / fungal material
- Fragment size: > 200 nt
- Typical yield: 3–70 µg
- A_{260}/A_{280} : 1.9–2.1
- Elution volume: 40–60 µL
- Binding capacity: 200 µg
- Processing time: 30 min/6 preps



RNA from plant and fungi

NucleoSpin® RNA Plant and Fungi

Isolation of RNA from challenging plant material and fungi

Features

- New buffer chemistry – optimized lysis procedure
- NucleoSpin® Plant Filters included – efficient sample homogenization and reduction of viscosity
- Up to 70 µg ready to use RNA

Available format



Mini column

Applications

- Plant cells and tissue (< 500 mg)
- Filamentous fungi

Specifications

- Technology: Silica membrane technology

NucleoSpin® RNA Plant and Fungi



- Sample material: < 500 mg plant / fungal material
- Fragment size: > 200 nt
- Typical yield: 20–70 µg
- A₂₆₀/A₂₈₀: 1.9–2.1
- Elution volume: 50 µL
- Theoretical binding capacity: 200 µg
- Processing time: 25 min/6 preps

Ordering information

Product	Preps	REF
NucleoSpin® RNA Plant and Fungi	10 / 50	740120.10 / .50
Related product	Preps	REF
MN Bead Tubes Type G*	50	740817.50



*For detailed information regarding the MN Bead Tubes, please refer to page 121.

NucleoBond® RNA Soil

Easy handling and superior speed for metagenomic soil analysis

Features

- Fast and convenient procedure
- Parallel preparation of RNA and DNA* in one hour
- High quality nucleic acids – suitable for metagenomic studies
- Optional enhancer for high recovery of nucleic acids even from clay and other predominantly mineral soil matrices

Available format



Mini column Midi column

Ordering information

Product	Preps	REF
NucleoBond® RNA Soil Mini	10 / 50	740142.10 / 50
NucleoBond® RNA Soil	20	740140.20
Related product		
DNA Set for NucleoBond® RNA Soil Mini	10 / 50	740143.10 / 50
DNA Set for NucleoBond® RNA Soil	20	740141.20
MN Bead Tubes Type A	50	740786.50
MN Bead Tube Holder	1	740469

Applications

- RNA and DNA* from soil for metagenomic analysis

Specifications

- Technology: Anion exchange chromatography, gravity flow columns combined with MN Bead Tubes Type A**
- Fragment size: > 100 nt

NucleoBond® RNA Soil Mini



- Sample material: Soil (0.25–0.5 g)
- Typical yield: 0.25–2.5 µg
- A_{260}/A_{280} : 1.5–2.0
- RIN: > 7.0
- Elution volume: 50–100 µL
- Theoretical binding capacity: 30 µg
- Processing time: 60 min/12 preps

NucleoBond® RNA Soil



- Sample material: Soil (< 2 g)
- Typical yield: 1–10 µg
- A_{260}/A_{280} : 1.7–2.1
- RIN: > 8.5
- Elution volume: 100 µL
- Theoretical binding capacity: 600 µg
- Processing time: 60 min/6 preps



*For isolation of DNA, DNA Set for NucleoBond® RNA Soil / NucleoBond® RNA Soil Mini is required.

**For detailed information regarding the MN Bead Tubes, please refer to page 121.



RNA from soil and stool

NucleoSpin® RNA Stool

Speedy isolation of total RNA from various stool specimen

Features

- Suitable for herbivore, omnivore, and carnivore stool samples
- Fastest RNA isolation kit on the market
- Protocol adaptation for various stool sample types

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® RNA Stool	10/50	740130.10/.50
Related product		
NucleoZOL	200 mL	740404.200
MN Bead Tubes Type A	50	740786.50
MN Bead Tube Holder	1	740469

Applications

- Total RNA from stool samples for metatranscriptomic analysis

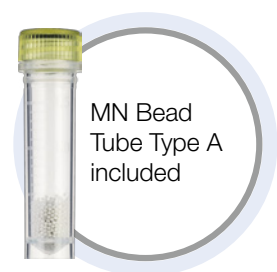
Specifications

- Technology: Silica membrane technology combined with MN Bead Tubes Type A*

NucleoSpin® RNA Stool Kit



- Sample material: Fresh or frozen stool samples (180–220 mg; for animal stool lower amounts may be required for optimal results)
- Fragment size: ≥ 18 nt
- Typical yield: 10–30 μg (varies by sample and protocol used)
- A_{260}/A_{280} : 1.9–2.1
- RIN: > 7.5
- Elution volume: 100 μL
- Theoretical binding capacity: 200 μg
- Processing time: 70 min/10 preps



*For detailed information regarding the MN Bead Tubes, please refer to page 121.



DNA

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DNA from blood and biological fluids

NucleoSpin® Blood

For versatile purification of high quality DNA from blood

Features

- Efficient removal of PCR inhibitors allows reliable processing
- All purpose effectiveness compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)
- Pathogen detection by isolation of viral DNA or bacterial DNA from blood samples

Available formats



Mini column Midi column Maxi column 8-well strip 96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® Blood	10 / 50 / 250	740951.10 / .50 / .250
NucleoSpin® Blood L	20 / 100	740954.20 / .100
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

Applications

- DNA isolation from whole blood (fresh, frozen, or stabilized), serum, plasma, buffy coat, platelets, body fluids (e.g., amniotic fluid), cultured cells

Specifications

- Technology: Silica membrane technology

NucleoSpin® Blood



- Processing: Centrifugation
- Sample material: Blood / serum / plasma (5–200 µL), human / animal cells (< 5 x 10⁶)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 4–6 µg (200 µL blood)
- Elution volume: 60–200 µL
- Theoretical binding capacity: 60 µg
- Processing time: 30 min/prep

NucleoSpin® Blood L



- Processing: Centrifugation*
- Sample material: Blood / serum / plasma (0.2–2 mL), human / animal cells (2 x 10⁷)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 40–60 µg (2 mL blood)
- Elution volume: 120–200 µL
- Theoretical binding capacity: 250 µg
- Processing time: 60 min/prep

NucleoSpin® Blood XL



- Processing: Centrifugation*
- Sample material: Blood / serum / plasma (2–10 mL), human / animal cells (10⁸)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 200–300 µg (10 mL blood)
- Elution volume: 600–2000 µL
- Theoretical binding capacity: 700 µg
- Processing time: 60 min/prep

NucleoSpin® 8 Blood



- Processing: Manual or automated
- Sample material: Blood / serum / plasma (< 200 µL), human / animal cells (2 x 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 4–6 µg
- Elution volume: 100 µL
- Theoretical binding capacity: 20 µg
- Processing time: 35 min/6 strips (excl. lysis)

NucleoSpin® 96 Blood



- Processing: Manual or automated
- Sample material: Blood / serum / plasma (< 200 µL), human / animal cells (2 x 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 4–6 µg
- Elution volume: 100 µL
- Theoretical binding capacity: 20 µg
- Processing time: 70 min/plate (excl. lysis)

NucleoVac 96 Vacuum Manifold and other equipment



▶ See page 120

*Centrifugation with a swing-out rotor.

**Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



DNA from blood and biological fluids

NucleoSpin® Dx Blood

For certified purification of high quality DNA from blood

Features

- CE-IVD certification in compliance with EU directive 98/79/EC for *in-vitro* diagnostic applications*
- Suitable for EDTA, citrate, and heparin blood from common blood collection systems
- For fresh and frozen blood samples
- Reproducible results for reliable downstream analysis

Available format



Mini column

Ordering information

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

Applications

- Isolation of genomic DNA from human whole blood samples for subsequent *in-vitro* diagnostic purposes

Specifications

- Technology: Silica membrane technology

NucleoSpin® Dx Blood



- Sample material: Human whole blood (200 µL)
- Typical yield: 3–5 µg (depending on individual blood sample)
- Elution volume: 50–200 µL
- Processing time: 30 min/prep



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



DNA from blood and biological fluids

NucleoSpin® Blood L Vacuum

DNA purification from up to 2 mL whole blood using vacuum filtration

Features

- Parallel purification of 24 samples for time saving workflows
- Efficient removal of PCR inhibitors allows reliable downstream analysis
- All purpose effectiveness compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)

Available format



Midi column

Applications

- DNA isolation from whole blood

Specifications

- Technology: Silica membrane technology

NucleoSpin® Blood L Vacuum



- Processing: Vacuum
- Sample material: Whole blood (1–2 mL)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 50–80 µg (2 mL blood)
- Elution volume: 2 x 300 µL
- Theoretical binding capacity: 250 µg
- Processing time: 75 min/24 preps

Ordering information

Product	Preps	REF
NucleoSpin® Blood L Vacuum	24	740954.24
Related product	Pack of	REF
Starter Set Midi (for processing NucleoSpin® Midi / L Columns under vacuum on NucleoVac 96 Vacuum Manifold or similar manifolds)	1	740744
NucleoVac 96 Vacuum Manifold	1	740681
NucleoVac Regulator Vacuum	1	740641

Starter Set Midi
and other equipment

▶ See page 120





DNA from blood and biological fluids

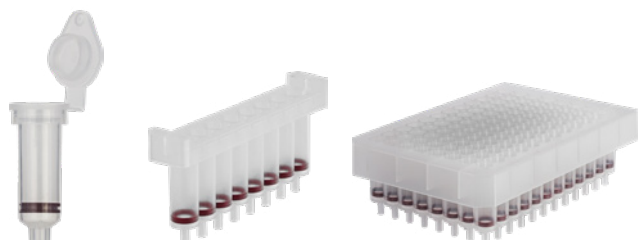
NucleoSpin® Blood QuickPure

For ultrafast purification of highly concentrated DNA from blood

Features

- Ultrafast procedure for time saving workflows
- Easy handling due to combined washing and drying in one step
- Highly concentrated DNA, ready to use for sensitive downstream applications

Available formats



Mini column 8-well strip 96-well plate

Ordering information

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

Related product	Pack of	REF
Buffer BQ1	125 mL	740923

Applications

- DNA from whole blood (human or animal, fresh or frozen, treated with citrate, EDTA, heparin, CPDA), buffy coat, platelets, body fluids (e.g., amniotic fluid), cultured cells

Specifications

- Technology: Silica membrane technology
- Typical yield: 4–6 µg (200 µL blood)

NucleoSpin® Blood QuickPure Mini

- Processing: Centrifugation
- Sample material: Blood / serum / plasma (5–200 µL), human / animal cells (5 x 10⁶)
- Fragment size: 200 bp–approx. 50 kbp
- Elution volume: 30–50 µL
- Theoretical binding : 50 µg
- Processing time: 25 min/prep

NucleoSpin® 8 Blood QuickPure 8-well

- Processing: Centrifugation
- Sample material: Blood / serum / plasma (< 300 µL)*, human / animal cells (5 x 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 75–100 µL
- Theoretical binding : 60 µg
- Processing time: 60 min/12 strips

NucleoSpin® 96 Blood QuickPure 96-well

- Processing: Centrifugation
- Sample material: Blood / serum / plasma (< 300 µL)*, human / animal cells (5 x 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 75–100 µL
- Theoretical binding : 60 µg
- Processing time: 60 min/2 plates

Starter Set C and other equipment



▶ See page 120

*For preparation of 200–300 µL samples, increased volumes of Binding Buffer BQ1 are required. Please refer to the corresponding user manual.



DNA from blood and biological fluids

NucleoBond® CB

The anion exchanger for purification of up to 500 µg genomic DNA from whole blood and cultured cells

Features

- Isolation of ultrapure DNA by anion exchange technology supports sensitive downstream applications like NGS
- Extraction of high molecular weight DNA for applications like third generation sequencing

Available formats



Mini column Midi column Maxi column

Applications

- Isolation of genomic DNA from whole blood, buffy coat, cultured cells

Specifications

- Technology: Anion exchange chromatography
- Fragment size: 500 bp–300 kbp
- Typical yield: Depending on sample type and amount
- Processing time: 4–5 h

NucleoBond® CB 20

Mini

- Sample material: Blood (0.1–1 mL), buffy coat (< 50 µL), cultured cells (5×10^6)
- Theoretical binding capacity: 20 µg



NucleoBond® CB 100

Midi

- Sample material: Blood (2–5 mL), buffy coat (< 250 µL), cultured cells (2×10^7)
- Theoretical binding capacity: 100 µg



NucleoBond® CB 500

Maxi

- Sample material: Blood (5–20 mL), buffy coat (< 1 mL), cultured cells (10^8)
- Theoretical binding capacity: 500 µg



Ordering information

Product	Preps	REF
NucleoBond® CB 20	20	740507
NucleoBond® CB 100	20	740508
NucleoBond® CB 500	10	740509
NucleoBond® AXG columns without buffers	Pack of	REF
NucleoBond® AXG 20	20	740544
NucleoBond® AXG 100	20	740545
NucleoBond® AXG 500	10	740546
Related product	Pack of	REF
NucleoBond® Rack Small	1	740562
NucleoBond® Rack Large	1	740563



DNA from blood and biological fluids

NucleoMag® Blood

Magnetic bead based isolation of genomic DNA from whole blood

Features

- Small elution volumes: > 50 µL (NucleoMag® Blood 200 µL), > 1 mL (NucleoMag® Blood 3 mL)
- Complete processing at room temperature and easy adaption to automated use

Available format



Magnetic beads

Ordering information

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

Applications

- Genomic DNA from whole blood (fresh or frozen, EDTA, citrate treated)

Specifications

- Technology: Magnetic bead technology
- Fragment size: 300 bp–approx. 50 kbp
- Theoretical binding capacity: 0.4 µg/µL beads

NucleoMag® Blood 200 µL

- Processing: Manual or automated
- Sample material: Blood (< 200 µL)
- Typical yield: 2–8 µg (200 µL blood)
- Elution volume: 50–100 µL
- Processing time: 40–120 min/96 preps*



NucleoMag® Blood 3 mL

- Processing: Manual or automated
- Sample material: Blood (< 3 mL)
- Typical yield: 100–130 µg (3 mL blood)
- Elution volume: 1000 µL
- Processing time: 60 min/24 preps*



NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



cfDNA from plasma

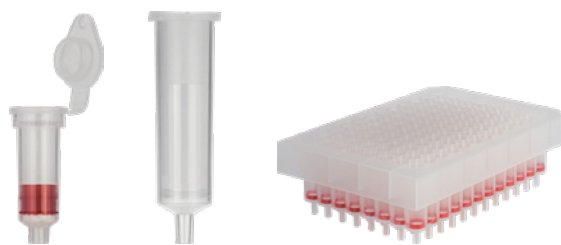
NucleoSpin® cfDNA

Efficient isolation of cell-free DNA from single spin to high throughput format

Features

- High recovery of fragmented DNA > 50 bp
- No need for Carrier RNA
- Flexible sample input volumes

Available formats



XS column Midi column 96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® cfDNA XS	10 / 50 / 250	740900.10 / .50 / .250
NucleoSpin® cfDNA Midi	48	740303.48
NucleoSpin® cfDNA Midi Core Kit*	48	740302.48
NucleoSpin® 96 cfDNA	1 x 96 / 4 x 96	740873.1 / .4
NucleoSpin® 96 cfDNA Core Kit*	1 x 96 / 4 x 96	740874.1 / .4

Related product	Pack of	REF
Starter Set Midi (for processing NucleoSpin® Midi / L Columns under vacuum on NucleoVac 96 Vacuum Manifold or similar manifolds)	1	740744
NucleoVac 96 Vacuum Manifold	1	740681
NucleoVac Regulator Vacuum	1	740641

Applications

- Circulating DNA from plasma, serum, and cell-free biological fluids
- Blood draw tubes: EDTA, Cell-free DNA BCT® (Streck)

Specifications

- Technology: Silica membrane technology
- Fragment size: ≥ 50 bp

NucleoSpin® cfDNA XS XS

- Processing: Centrifugation
- Sample size: Plasma / serum (< 240 µL; < 720 µL with multiple loading steps)
- Elution volume: 5–30 µL
- Processing time: 20 min/6 preps (rapid procedure)

NucleoSpin® cfDNA Midi Midi

- Processing: Vacuum
- Sample size: Plasma (1–5 mL)
- Processing time: 90 min/24 preps (EDTA plasma)

NucleoSpin® 96 cfDNA 96-well

- Processing: Manual or automated
- Sample size: Plasma (0.5–2 mL)
- Processing time: 90 min/plate (EDTA plasma)

NucleoVac Vacuum Regulator and other equipment



▶ See page 120



*Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



cfDNA from plasma

NucleoSnap® cfDNA

Isolation of cell-free DNA from large volumes of blood plasma or urine

Features

- New column design (snap off column) for quick vacuum processing of large sample volumes
- No need for Carrier RNA
- Optimized protocol for Cell-free DNA BCT® (Streck)

Available format



Snap column

Ordering information

Product	Preps	REF
NucleoSnap® cfDNA	10 / 50	740300.10 / .50
Related product	Pack of	REF
NucleoVac 24 Vacuum Manifold	1	740299
NucleoVac Mini Adapter	100	740297.100
NucleoVac Valves	24	740298.24
NucleoVac Vacuum Regulator	1	740641
Buffer VL	200 mL	740833.200
Liquid Proteinase K	5 mL	740396

Applications

- Circulating DNA from plasma or urine
- Blood draw tubes: EDTA, Cell-free DNA BCT® (Streck)

Specifications

- Technology: Precipitation and filtration

NucleoSnap® cfDNA

- Processing: Vacuum processing, centrifugation for elution
- Sample size: Plasma / urine (1–10* mL)
- Fragment size: ≥ 50 bp
- Typical yield: Depending on sample source, storage, and quality
- Elution volume: 20–100 µL
- Processing time: 45 min/6 preps (EDTA plasma)



NucleoVac 24 Vacuum Manifold and other equipment



▶ See page 120

* For processing volumes larger than 5 mL, additional lysis buffer and Proteinase K have to be ordered separately. Please refer to the corresponding user manual.



cfDNA from plasma

NucleoMag® cfDNA

Magnet bead based isolation of cell-free DNA from 1–10 mL blood plasma

Features

- Consistent cfDNA recovery from 1–10 mL plasma samples
- Efficient purification of fragmented DNA as small as 50 bp
- No PCR inhibition regardless of your preferred sample volume

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® cfDNA	1 x 96 / 4 x 96	744550.1 / .4

Applications

- Circulating cell-free DNA from human plasma and serum
- Blood draw tubes: EDTA, Cell-Free DNA BCT® (Streck)
- Specifications
- Technology: Magnetic bead technology

NucleoMag® cfDNA

- Processing: Manual or automated
- Sample material: Human plasma (1–10 mL)
- Fragment size: ≥ 50 bp
- Typical yield: Depending on sample source, storage, and quality
- Elution volume: 50–200 μ L
- Theoretical binding capacity: 0.3 μ g/ μ L beads
- Processing time: 60 min/24 preps (excl. lysis)*



NucleoMag® SEP and other accessories

▶ See page 120

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



DNA from tissue and cells

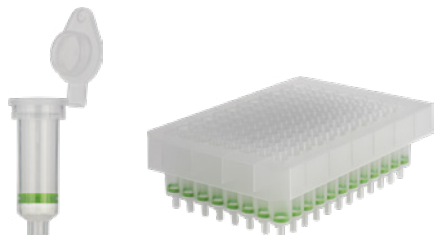
NucleoSpin® DNA RapidLyse

For rapid extraction of total DNA from tissue and organs

Features

- Unique lysis chemistry to efficiently release gDNA from tissues, and organs
- Powerful lysis in one hour or less
- Superior gDNA yields compared to standard extraction methods

Available formats



Mini column 96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® DNA RapidLyse	10/50/250	740100.10/.50/.250
NucleoSpin® 96 DNA RapidLyse	1 x 96/4 x 96	740110.1/.4
Related product**	Pack of	REF
MN Bead Tubes Type F	50	740816.50
MN Bead Tube Holder	1	740469

Applications

- Total DNA from tissue (fresh, frozen, dried, and ethanol preserved organs, tail, and ear clippings)

Specifications

- Technology: Silica membrane technology
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 1–30 µg (depending on sample source)

NucleoSpin® DNA RapidLyse

Mini

- Processing: Centrifugation
- Sample material: Tissue (< 40 mg fresh weight), cells (< 10⁹)
- Elution volume: 60–100 µL
- Theoretical binding capacity: 60 µg
- Processing time: 25 min/6 preps (excl. lysis)



NucleoSpin® 96 DNA RapidLyse

96-well

- Processing: Manual and automated
- Sample material: Tissue (< 30 mg fresh weight), cells (< 10⁹)
- Elution volume: 100 µL
- Theoretical binding capacity: 40 µg
- Processing time: 60 min/96 preps (excl. lysis)*



Square-well Blocks and other consumables



▶ See page 123



* Depending on instrument type/ setup/ configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.

** For detailed information regarding the MN Bead Tubes, please refer to page 121.



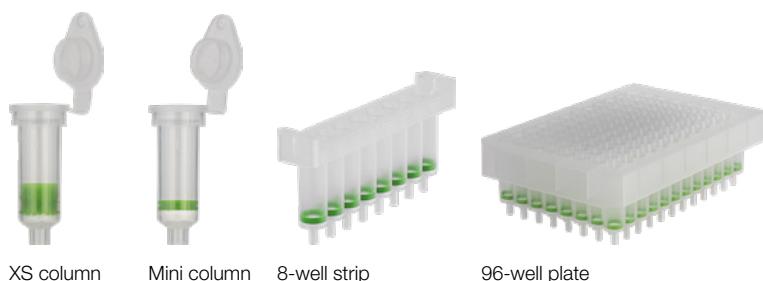
NucleoSpin® Tissue

Allround kits for the purification of DNA from a broad range of samples

Features

- From Mini XS columns for > 0.025 mg sample material to high throughput formats
- Sustainable kit optimization guarantees reliable DNA purification and reproducible results
- Allrounder with more than 16 supplementary protocols for a huge variety of starting materials

Available formats



Ordering information

Product	Preps	REF
NucleoSpin® Tissue XS	10 / 50 / 250	740901.10 / .50 / .250
NucleoSpin® Tissue	10 / 50 / 250	740952.10 / .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

Starter Set C
and other equipment



▶ See page 120


Applications

- Total DNA from tissue (e.g., mouse tails), cells (e.g., eukaryotic cells, bacteria, yeast), clinical samples (e.g., stool, urine, biopsies), forensic samples (e.g., dried blood spots, hair, buccal swabs, cigarette filters), blood sample storage cards


Specifications

- Technology: Silica membrane technology


NucleoSpin® Tissue XS XS

- Processing: Centrifugation 
- Sample material: Tissue (0.025–10 mg), blood (1–30 µL), cells (10–10⁶), Guthrie cards (5–30 mm²)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 0.1–0.5 ng (10² HeLa cells), 10–50 ng (10⁴ HeLa cells)
- Elution volume: 5–30 µL
- Theoretical binding capacity: 50 µg
- Processing time: 20 min/prep (excl. lysis)


NucleoSpin® Tissue Mini

- Processing: Centrifugation 
- Sample material: Tissue (< 25 mg), cells (10²–10⁷)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 20–35 µg (25 mg mouse sample)
- Elution volume: 60–100 µL
- Theoretical binding capacity: 60 µg
- Processing time: 20 min/prep (excl. lysis)

NucleoSpin® 8 Tissue 8-well

- Processing: Manual or automated 
- Sample material: Tissue (< 20 mg), cells (< 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 15–25 µg (20 mg human / animal tissue)
- Elution volume: 100–200 µL
- Theoretical binding capacity: 40 µg
- Processing time: 20 min/6 strips (excl. lysis)

NucleoSpin® 96 Tissue 96-well

- Processing: Manual or automated 
- Sample material: Tissue (< 20 mg), cells (< 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 15–25 µg (20 mg human / animal tissue)
- Elution volume: 100–200 µL
- Theoretical binding capacity: 40 µg
- Processing time: 60 min/plate (excl. lysis)

*Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



DNA from tissue and cells

NucleoMag® Tissue

Magnetic bead based isolation of DNA from human or animal tissue, cells, or bacteria

Features

- Superparamagnetism of beads to avoid clumping
- Scalable magnetic bead technology facilitates automation

Available format



Magnetic beads

Ordering information

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

Applications

- DNA from tissue (human / animal) and cultured cells (eukaryotic / bacterial)

Specifications

- Technology: Magnetic bead technology

NucleoMag® Tissue

- Processing: Manual or automated
- Sample material: Tissue (< 20 mg), cells (< 10⁶)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 10–20 µg (20 mg tissue)
- Elution volume: 50–200 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps (excl. lysis)*



NucleoMag® SEP and other accessories



See page 120

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



DNA from tissue and cells

NucleoMag® DNA Swab

Magnetic bead based isolation of DNA from swabs

Features

- Isolation of genomic DNA from swabs for genetic testing
- Validated with cotton and synthetic swabs
- Combine with NucleoSpin® Forensic Filters for most convenient sample prep

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® DNA Swab	1 x 96 / 4 x 96 / 24 x 96	744600.1 / .4 / .24
Related product	Pack of	REF
NucleoSpin® Forensic Filters (filters blistered together with collection tubes)	10 / 50 / 250	740988.10 / .50 / 250

Applications

- DNA from cotton and synthetic swabs (e.g., COPAN FLOQSwabs™, Puritan HydraFlock® swabs, or similar)

Specifications

- Technology: Magnetic bead technology

NucleoMag® Tissue

- Processing: Manual or automated
- Sample material: 300 µL reconstituted swabs (cotton or synthetic) lysate
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 1–3 µg DNA (depending on sample amount and quality)
- Typical concentration: 10–30 ng/µL
- Elution volume: 50–100 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 30–120 min/96 preps (excl. lysis)*



DNA

NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



DNA from tissue and cells

NucleoSpin® DNA Lipid Tissue

Isolation of DNA from lipid rich tissue

Features

- Special buffer composition for complete removal of lipids
- MN Bead Tubes for efficient lysis included – compatible with the most common disruption devices
- Fast and convenient procedure without RNA contamination

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® DNA Lipid Tissue	10/50	740471.10/.50
Related product	Pack of	REF
MN Bead Tubes Type D	50	740814.50
MN Bead Tube Holder	1	740469

Applications

- Genomic DNA from fresh or frozen, lipid rich tissue: brain, adipose tissue, fatty fish tissue

Specifications

- Technology: Silica membrane technology combined with with MN Bead Tubes Type D*

NucleoSpin® DNA Lipid Tissue

Mini

- Sample material: Lipid rich tissue (< 40 mg)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: Depends on sample type, quality, and water content
- Elution volume: 25–200 µL
- Theoretical binding capacity: 60 µg
- Processing time: 35 min/6 preps



*For detailed information regarding the MN Bead Tubes, please refer to page 121.



DNA from tissue and cells

NucleoSpin® DNA Insect

Isolation of DNA from insects, crustaceans, and arachnids

Features

- Allround kit, suitable for any insect, crustacean, or arachnid sample – high quality DNA from fresh, frozen, dried or ethanol preserved specimen
- MN Bead Tubes for efficient lysis of exoskeletons – compatible with the most common disruption devices

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® DNA Insect	10 / 50	740470.10 / .50
Related product	Pack of	REF
MN Bead Tubes Type D	50	740814.50
MN Bead Tube Holder	1	740469

Applications

- DNA from fresh, frozen, dried, or ethanol preserved insect, crustacean, and arachnid samples

Specifications

- Technology: Silica membrane technology combined with MN Bead Tubes Type D*

NucleoSpin® DNA Insect



- Sample material: Insect / crustacean / arachnid sample (< 40 mg)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: < 25 µg (varies by sample and disruption device)
- Elution volume: 25–200 µL
- Theoretical binding capacity: 60 µg
- Processing time: 35 min/6 preps



*For detailed information regarding the MN Bead Tubes, please refer to page 121.



DNA from microorganisms

NucleoSpin® Microbial DNA

Isolation of total DNA from hard to lyse microorganisms

Features

- High quality DNA from Gram-positive / Gram-negative bacteria, yeast*, or fungi with one procedure
- Efficient sample homogenization by included MN Bead Tubes Type B
- Small diameter glass beads for mechanical lysis exhibit a large surface area to disrupt even small microorganisms by grinding – compatible with common disruption devices
- Liquid Proteinase K included – convenient handling

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® Microbial DNA	10 / 50 / .250	740235.10 / .50 / .250
Related products	Pack of	REF
MN Bead Tubes Type A	50	740786.50
MN Bead Tubes Type B	50	740812.50
MN Bead Tubes Type C	50	740813.50
MN Bead Tube Holder	1	740469

Applications

- DNA from hard to lyse microorganisms: Gram-positive / Gram-negative bacteria, yeast*, fungi

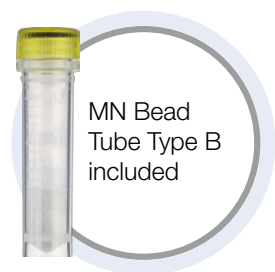
Specifications

- Technology: Silica membrane technology combined with MN Bead Tubes Type B*

NucleoSpin® Microbial DNA



- Sample material: Bacterial, yeast*, fungi (< 40 mg, wet weight cell pellet)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 5–25 µg (30 mg wet weight; depending on sample type and disruption)
- Elution volume: 100–200 µL
- Theoretical binding capacity: 60 µg
- Processing time: 35 min/prep



*For detailed information regarding the MN Bead Tubes, please refer to page 121.



DNA from microorganisms

NucleoMag® DNA Bacteria

Magnetic bead based kit for automated genomic DNA isolation from bacteria and yeast

Features

- Buffers completely free of harmful and corrosive chaotropic salts
- Suitable for high throughput sample disruption using the novel MN 96 Bead Plates
- Liquid Proteinase K and Liquid RNase A included

Available format



Magnetic beads

Applications

- Genomic DNA from Gram-positive / Gram-negative bacteria and yeast

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA Bacteria

- Processing: Manual or automated
- Sample material: Microbial cell culture pellets of Gram-positive and Gram-negative bacteria and yeast, mold (< 40 mg wet weight)
- Fragment size: 300 bp-approx. 50 kbp
- Typical yield: 5–25 µg (30 mg wet weight; depending on sample type and disruption)
- Elution volume: 50–200 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 30–120 min/96 preps (excl. lysis)*



Ordering information

Product	Preps	REF
NucleoMag® DNA Bacteria	1 x 96 / 4 x 96	744310.1 / .4
Related product**	Pack of	REF
MN Bead Tubes Type B	50	740812.50
MN Bead Tubes Type D	50	740814.50
MN Bead Tube Holder	1	740469
MN 96 Bead Plate Type B	4 / 24	740851.4 / .24
MN 96 Bead Plate Type D	4 / 24	740853.4 / .24

NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.

** For detailed information regarding the MN Bead Tubes, please refer to page 121.



DNA from FFPE samples

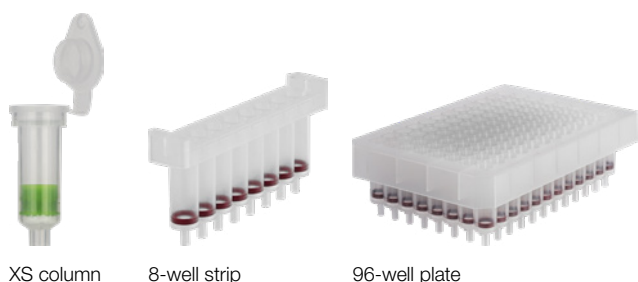
NucleoSpin® DNA FFPE

DNA recovery from formalin-fixed, paraffin-embedded samples

Features

- Odorless paraffin removal by patented Paraffin Dissolver
- No use of xylene needed
- Efficient removal of crosslinks promotes compatibility with downstream enzymatic reactions
- Minimal elution volumes of 5 µL for highly concentrated DNA

Available formats



Ordering information

Product	Preps	REF
NucleoSpin® DNA FFPE XS	10 / 50 / 250	740980.10 / .50 / .250
NucleoSpin® 8 DNA FFPE	12 x 8 / 60 x 8	740242 / .5
NucleoSpin® 96 DNA FFPE	1 x 96 / 4 x 96	740240.1 / .4
Related product	Pack of	REF
Paraffin Dissolver	25 mL	740968.25

Applications

- DNA from formalin-fixed, paraffin-embedded samples and sections

Specifications

- Technology: Silica membrane technology
- Yield and quality: Depending on sample amount and quality

NucleoSpin® DNA FFPE XS XS

- Processing: Centrifugation
- Sample material: ≤ 7 sections (10 µm) of 250 mm² total area (< 15 mg paraffin*)
- Fragment size: 50 bp–approx. 50 kbp
- Elution volume: 5–30 µL
- Theoretical binding capacity: 50 µg
- Processing time: 70 min/6 preps (excl. lysis)

NucleoSpin® 8 DNA FFPE 8-well

- Processing: Manual or automated
- Sample material: Tissue (< 10 mg), paraffin (< 15 mg)
- Fragment size: 50 bp–approx. 5 kbp
- Elution volume: 100 µL
- Theoretical binding capacity: 20 µg
- Processing time: 60 min/6 strips (excl. lysis)

NucleoSpin® 96 DNA FFPE 96-well

- Processing: Manual or automated
- Sample material: Tissue (< 10 mg), paraffin (< 15 mg)
- Fragment size: 50 bp–approx. 5 kbp
- Elution volume: 100 µL
- Theoretical binding capacity: 20 µg
- Processing time: 60 min/plate (excl. lysis)

NucleoVac 96 Vacuum Manifold and other equipment

▶ See page 120

*When using the standard protocol with Paraffin Dissolver. Larger quantities can be processed by using additional Paraffin Dissolver.



DNA from FFPE samples

NucleoMag® DNA FFPE

Isolation of DNA from formalin-fixed, paraffin-embedded samples with magnetic bead technology

Features

- Paraffin Dissolver facilitates odorless paraffin removal without xylene
- Superparamagnetism of beads to avoid clumping
- Scalable magnetic beads facilitate automation

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® DNA FFPE	1 x 96 / 4 x 96	744320.1 / .4

Applications

- DNA from formalin-fixed, paraffin-embedded samples and sections

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA FFPE

- Processing: Manual or automated
- Sample material: Tissue (≤ 5 mg), paraffin (< 15 mg)
- Fragment size: 300 bp–approx. 5 kbp
- Typical yield and quality: Strongly depending on sample amount and quality
- Elution volume: > 25 μ L
- Theoretical binding capacity: 0.4 μ g/ μ L beads
- Processing time: 40–120 min/96 preps (excl. lysis)*



Square-well Blocks and other consumables



▶ See page 123

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



DNA from forensic samples

NucleoSpin® Forensic Filters

Incubation of forensic specimen for lysis and subsequent lysate separation

Features

- Lysis and lysate separation in a one tube reaction – no sample transfer, no extra pipetting steps
- Collection Tube with lid – no cross-contamination

Available format



Mini filter

Ordering information

Product	Preps	REF
NucleoSpin® Forensic Filters (filters blistered together with collection tubes)	10 / 50 / 250	740988.10 / .50 / .250
NucleoSpin® Forensic Filters (Bulk) (filters bulk packed)	50 / 250 / 1000	740988.50B / .250B / .1000B
Related product	Pack of	REF
NucleoSpin® DNA Forensic	10 / 50 / 250	740840.10 / .50 / .250
NucleoMag® DNA Forensic	1 x 96 / 4 x 96	744660.1 / .4
NucleoMag® DNA Swab	1 x 96 / 4 x 96 / 24 x 96	744600.1 / .4 / .24

Applications

- DNA from swabs, denim, cigarette butts, other solid sample carriers

Specifications

- Technology: Semi-permeable basket

NucleoSpin® Forensic Filters

- Maximal volume: 800 µL
- Forensic quality: Ethylene oxide treated
- Typical downstream applications: DNA purification (e.g., with NucleoSpin® Tissue / Tissue XS, NucleoSpin® DNA Forensic, NucleoMag® DNA Forensic, NucleoMag® DNA Swab)





DNA from forensic samples

NucleoSpin® DNA Forensic

Isolation of DNA from forensic samples

Features

- Conformity to ISO18385 guarantees absence of foreign DNA and thereby enables reliable profiling
- Highest flexibility in format – shared buffer chemistry with NucleoMag® DNA Forensic
- Supplementary protocol for isolation of DNA from human bones*

Available format



Mini column

Applications

- DNA from forensic samples, blood spots, chewing gum, cigarette filters

Specifications

- Technology: Silica membrane technology

NucleoSpin® DNA Forensic

- Processing: Vacuum or centrifugation
- Typical yield: 1–3 µg from buccal swab
- Typical concentration 10–30 ng/µL
- Elution volume: 50–100 µL
- Theoretical binding capacity: 7 µg
- Processing time: 20 min/prep (excl. lysis)



Ordering information

Product	Preps	REF
NucleoSpin® DNA Forensic	10 / 50 / 250	740840.10 / 50 / .250
Related product	Pack of	REF
NucleoSpin® Forensic Filters (filters blistered together with collection tubes)	10 / 50 / 250	740988.10 / .50 / .250
NucleoSpin® DNA Trace Bone Buffer Set	1 set	740943.25



* Additional NucleoSpin® DNA Forensic Bone Buffer Set required (see “Ordering information – Related products”).



DNA from forensic samples

NucleoMag® DNA Forensic

Magnetic bead based isolation of genomic DNA from traces

Features

- Conformity to ISO 18385 guarantees absence of foreign DNA and thereby enables reliable profiling
- Highest flexibility in format – shared buffer chemistry with NucleoSpin® DNA Forensic
- Superparamagnetism of beads to avoid clumping
- Scalable magnetic bead technology facilitates automation

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® DNA Forensic	1 x 96 / 4 x 96	744660.1 / .4
Related product	Pack of	REF
NucleoSpin® Trace Filter Plate	20	740677
NucleoSpin® Forensic Filters (filters blistered together with collection tubes)	10 / 50 / 250	740988.10 / .50 / .250

NucleoMag® SEP and other accessories



▶ See page 120

Applications

- DNA from forensic samples, mainly buccal swabs

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA Forensic



- Processing: Manual or automated
- Typical yield: e.g., 1–3 µg from buccal swab
- Typical concentration: < 1 ng/µL
- Elution volume: 25–50 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps (excl. lysis)*



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



DNA from plant and fungi

NucleoSpin® Plant II

Rapid isolation of DNA from a multitude of plant samples

Features

- Compatibility with diverse plant materials due to a selectable lysis buffer chemistry including CTAB or SDS
- NucleoSpin® Filters eliminate the risk of column clogging
- Highly active RNase A included

Available formats



Mini column Midi column Maxi column 8-well strip 96-well plate

Ordering information

Product	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

Applications

- DNA from plant cells and tissue

Specifications

- Technology: Silica membrane technology
- Fragment size: 50 bp–approx. 50 kbp

NucleoSpin® Plant II

Mini

- Processing: Centrifugation
- Sample material: Plant tissue (< 100 mg wet weight, 20 mg dry weight)
- Typical yield: 1–30 µg (100 mg plant tissue, wet weight)
- Elution volume: 50–100 µL
- Theoretical binding capacity: 50 µg
- Processing time: 30 min/prep



NucleoSpin® Plant II Midi

Midi

- Processing: Centrifugation
- Sample material: Plant tissue (< 400 mg wet weight, 80 mg dry weight)
- Typical yield: 10–100 µg (400 mg plant tissue, wet weight)
- Elution volume: 200–400 µL
- Theoretical binding capacity: 200 µg
- Processing time: 90 min/prep



NucleoSpin® Plant II Maxi

Maxi

- Processing: Centrifugation
- Sample material: Plant tissue (< 1500 mg wet weight, 300 mg dry weight)
- Typical yield: 50–300 µg (1500 mg plant tissue, wet weight)
- Elution volume: 1000–2000 µL
- Theoretical binding capacity: 500 µg
- Processing time: 90 min/prep



NucleoSpin® 8 Plant II

8-well

- Processing: Manual or automated
- Sample material: Plant tissue (20–100 mg wet weight)
- Typical yield: Up to 30 µg (100 mg plant tissue, wet weight)
- Elution volume: 100–200 µL
- Theoretical binding capacity: 30 µg
- Processing time: 60 min/48 preps (excl. lysis)



NucleoSpin® 96 Plant II

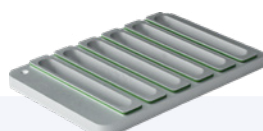
96-well

- Processing: Manual or automated
- Sample material: Plant tissue (20–100 mg wet weight)
- Typical yield: Up to 30 µg (100 mg plant tissue, wet weight)
- Elution volume: 100–200 µL
- Theoretical binding capacity: 30 µg
- Processing time: 60 min/96 preps (excl. lysis)



Starter Set A
and other equipment

▶ See page 120



*Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



DNA from plant and fungi

NucleoMag® Plant

Magnetic bead based isolation of DNA from plant tissue

Features

- Efficient plant tissue lysis by optimized CTAB buffer chemistry
- Small elution volumes $\geq 50 \mu\text{L}$ possible for convenient downstream processes
- Scalable magnetic bead technology facilitates automation

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® Plant	1 x 96 / 4 x 96 / 24 x 96	744400.1 / .4 / .24
NucleoMag® 384 Plant	1 x 384 / 4 x 384	744402.1 / .4

Applications

- DNA from plant tissue

Specifications

- Technology: Magnetic bead technology
- Fragment size: 300 bp–approx. 50 kbp

NucleoMag® Plant



- Processing: Manual or automated
- Sample material: Plant tissue (20–50 mg, wet weight)
- Typical yield: 10–20 μg (50 mg plant tissue, wet weight)
- Elution volume: 50–200 μL
- Theoretical binding capacity: 0.4 $\mu\text{g}/\mu\text{L}$ beads
- Processing time: 40–120 min/96 preps (excl. lysis)*

NucleoMag® 384 Plant



- Sample material: Plant tissue (< 30 mg, wet weight)
- Typical yield: Depending on sample source, storage, and quality
- Elution volume: 40–100 μL
- Theoretical binding capacity: 0.2 $\mu\text{g}/\mu\text{L}$ beads
- Processing time: 40–120 min/96 preps (excl. lysis)*, 60 min/384 preps (excl. lysis)*

DNA

NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



DNA from soil and stool

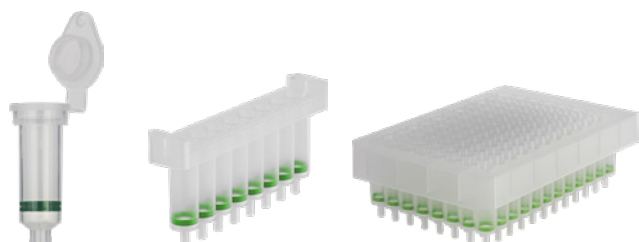
NucleoSpin® Soil

Isolation of total DNA from diverse soil types

Features

- Comprehensive compatibility with diverse soil types due to an adaptable lysis buffer chemistry
- Mechanical lysis is carried out with high density ceramic beads that disrupt soil ingredients of various texture – compatible with common disruption devices
- NucleoSpin® Inhibitor Removal Column to remove PCR inhibitors completely – DNA is ready to use for any enzymatic reaction

Available formats



Mini column 8-well strip 96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® Soil	10 / 50 / 250	740780.10 / .50 / .250
NucleoSpin® 8 Soil	12 x 8	740779 / .2
NucleoSpin® 96 Soil	2 x 96 / 4 x 96	740787.2 / .4
Related product	Pack of	REF
MN Bead Tubes Type A	50	740786.50
MN Bead Tube Holder	1	740469

Applications

- DNA from soil, sludge, sediment

Specifications

- Technology: Silica membrane technology combined with MN Bead Tubes Type A*
- Sample material: Soil, sludge, sediment (< 500 mg)
- Fragment size: 50 bp–approx. 50 kbp
- Typical yield: 2–10 µg (500 mg soil)
- Theoretical binding capacity: 50 µg

NucleoSpin® Soil

- Processing: Centrifugation
- Elution volume: 30–100 µL
- Processing time: 90 min/10 preps



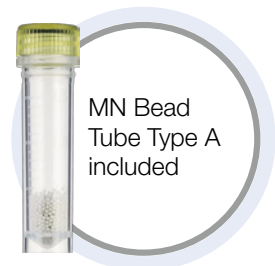
NucleoSpin® 8 Soil

- Processing: Vacuum
- Elution volume: 100–200 µL
- Processing time: 150 min/6 strips



NucleoSpin® 96 Soil

- Processing: Vacuum
- Elution volume: 100–200 µL
- Processing time: 150 min/plate



NucleoVac Vacuum Regulator and other equipment



▶ See page 120

*For detailed information regarding the MN Bead Tubes, please refer to page 121.



DNA from soil and stool

NucleoSpin® DNA Stool

Isolation of DNA from stool samples

Features

- Proven suitability for any stool sample – compatible with stool samples from carnivores, omnivores, and herbivores
- Mechanical lysis is carried out with high density ceramic beads that disrupt stool components of various texture
- NucleoSpin® Inhibitor Removal Column to remove PCR inhibitors completely – DNA is ready to use for any enzymatic reaction

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® DNA Stool	10 / 50 / 250	740472.10 / .50 / .250
Related product	Pack of	REF
MN Bead Tubes Type A	50	740786.50
MN Bead Tube Holder	1	740469

Applications

- DNA from bacterial and host DNA from stool samples

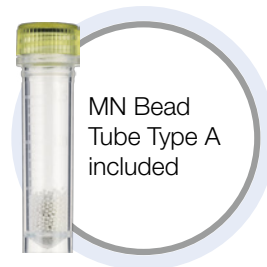
Specifications

- Technology: Silica membrane technology combined with MN Bead Tubes Type A*

NucleoSpin® DNA Stool



- Sample material: Stool samples, fresh or frozen (180–220 mg)**
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 2–10 µg (depending on sample and disruption device)
- Elution volume: 30–100 µL
- Theoretical binding capacity: 50 µg
- Processing time: 60 min/10 preps



* For detailed information regarding the MN Bead Tubes, please refer to page 121.

** For human stool samples, approx. 200 mg should be used. For animal stool samples – depending on the species – a lower amount of sample material may be required for optimal results.



DNA from water

NucleoMag® DNA/RNA Water

Isolation of microbial DNA and RNA from water and air samples

Features

- Suitable for diverse salty and fresh water samples, ranging from turbid to clear as well as with air filters
- Minimized inhibition for reliable results
- Compatible with a variety of filters and filtration systems
- Can be additionally combined with two different sizes of ceramic bead tubes for optimal sample lysis

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® DNA/RNA Water	1 x 96 / 4 x 96	744220.1 / .4
Related product**	Pack of	REF
MN Bead Tubes Type A	50	740786.50
MN Bead Tubes Type A (5 mL)	50	740799.50
MN Bead Tube Holder	1	740469
MN Bead Tube Holder (5 mL)	1	740459

Applications

- Microbial DNA and RNA from filtered water and air samples

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA/RNA Water

- Processing: Manual or automated
- Sample material: Water and air samples
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 50–200 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps (excl. lysis)*



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.

** For detailed information regarding the MN Bead Tubes, please refer to page 121.





DNA from food and feed

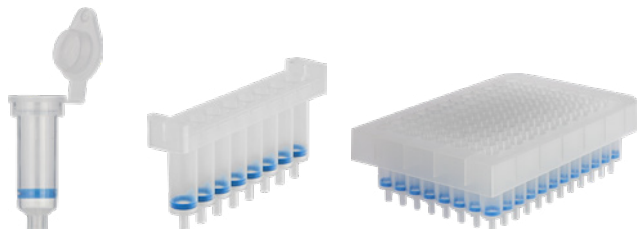
NucleoSpin® Food

For rapid isolation of DNA from food and feed

Features

- Removal of PCR inhibitors – get high quality DNA
- Even low amounts of partially degraded DNA can be purified from complex matrices
- DNA from various sample materials – highest flexibility

Available formats



Mini column

8-well strip

96-well plate

Ordering information

Product	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	740976.2 / .4

Applications

- DNA from complex matrices: processed food, soy (milk and flour), chocolate, cereals, meat, animal feed

Specifications

- Technology: Silica membrane technology
- Sample material: < 200 mg
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 0.1–10 µg (200 mg food)
- Theoretical binding capacity: 30 µg

NucleoSpin® Food

Mini

- Processing: Centrifugation
- Elution volume: 100 µL
- Processing time: 30 min/6 preps



NucleoSpin® 8 Food

8-well

- Processing: Manual or automated
- Elution volume: 100–200 µL
- Processing time: 60 min/6 strips (excl. lysis)



NucleoSpin® 96 Food

96-well

- Processing: Manual or automated
- Elution volume: 100–200 µL
- Processing time: 120 min/plate (excl. lysis)



Square-well Blocks and other consumables



▶ See page 123



DNA from food and feed

NucleoMag® DNA Food

Flexible DNA isolation from various food and feed samples

Features

- Removal of PCR inhibitors for enhanced results
- Get even low amounts of partially degraded DNA from complex matrices
- Suitable for species identification, GMO detection
- Extraction of DNA from contaminating bacteria (food safety)
- Kit chemistry allows full sample flexibility

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® DNA Food	1 x 96 / 4 x 96	744945.1 / .4

Applications

- DNA from food and feed

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA Food

- Processing: Manual or automated
- Sample material: < 200 mg
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 0.1–10 µg (depending on sample type)
- Elution volume: 50–200 µL
- Theoretical binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps (excl. lysis)*



DNA

NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



High molecular weight DNA

NucleoBond® HMW DNA

Large amounts of ultrapure, high molecular weight DNA fragments from diverse samples suitable for long read sequencing

Features

- High quality, high molecular weight (HMW) DNA up to 200 kbp
- Minimized DNA shearing due to established anion exchange technology
- Validated with diverse samples and sequencing platforms

Available format



Midi column

Ordering information

Product	Preps	REF
NucleoBond® HMW DNA	2 / 20	740160.2 / .20
Related product	Pack of	REF
NucleoSnap® Finisher Midi	10 / 50	740434.10 / .50
NucleoSpin® Finisher Midi	10 / 50	740439.10 / .50
NucleoVac 24 Vacuum Manifold	1	740299
NucleoVac Mini Adapter	100	740297.100
NucleoVac Valves	24	740298.24
MN Bead Tube Holder	1	740469
MN Bead Tubes Type A-G	See page 121.	

Applications

- High molecular weight DNA from mammalian tissues, blood samples, invertebrates, plants, bacteria, and yeast

Specifications

- Technology: Anion exchange chromatography, gravity flow columns

NucleoBond® HMW DNA



- Sample material: Plant leaves (< 1.5 g, ground under liquid nitrogen), cultured cells (< 10⁷, enzymatic lysis), tissue (< 300 mg, cut into small pieces and lysed enzymatically), yeast or bacteria (< 30 mg, ground under liquid nitrogen, < 300 mg lysed enzymatically or by bead beating), liquid sample (< 2 mL)
- Fragment size: > 200 kbp with > 90 % depletion of fragments < 10 kbp
- Typical yield: Depending on the sample amount and type
- Elution volume: 50–250 µL
- Theoretical binding capacity: 800 µg
- Processing time: 2 h/12 preps (incl. 30 min lysis)



Direct PCR

NucleoType Blood PCR

Kit for fast genotyping from human and animal blood samples and blood dried on blood cards

Features

- Direct blood handling with the Blood Transfer Tool and DNA preparation within 1 minute
- Inhibitor Removal Pearls for superior PCR results for challenging blood samples
- No step for lysis, disruption, or dilution of blood samples required

Available format



PCR

Ordering information

Product	Preps	REF
NucleoType Blood PCR	25 / 100 / 500	743201.25 / .100 / .500
Related product	Pack of	REF
NucleoType HotStart PCR Master Mix (2x)	2 x 1.25 mL	743215
NucleoCard®*	10 / 100 cards	740403.10 / .1000

Applications

- Typing of whole blood from e.g., human, mouse, rat, cat, chicken, rabbit, guinea pig, sheep, or cow treated with EDTA, citrate, or heparin
- Punches from blood storage cards (e.g., NucleoCard® or FTA).

Specifications

- Technology: Direct PCR

NucleoType Blood PCR



- Sample material: Whole blood from human and animal samples/punches from blood storage cards
- Procedure: Blood pretreatment with Inhibitor Removal Pearls for 50–500 µL blood (optional) and transfer of blood aliquot with the Blood Transfer Tool into PCR mix
- Amplicon size: Recommended for < 1 kbp
- PCR volume: 10 µL (optional up to 50 µL)
- Processing time: < 1 min, 30–90 min PCR cycling (depending on cyclor protocol)

*NucleoCard® cards are not intended for diagnostic and therapeutic use. Not available in the USA.



NucleoType Mouse PCR

Kit for rapid mouse typing experiments with common samples such as tail clips, ear punch, hair, and blood

Features

- DNA preparation within 5 minutes
- Loading dye included for subsequent gel electrophoresis
- Designed for tail, ear, blood, and even hair samples

Available format



PCR

Ordering information

Product	Preps	REF
NucleoType Mouse PCR	25 / 100 / 500	743200.25 / .100 / .500
Related product	Pack of	REF
NucleoType HotStart PCR Master Mix (2x)	2 x 1.25 mL	743215
Lysis Buffer M	250 mL	743210.250

Applications

- Typing of mouse tail clipping, mouse ear punch, mouse blood, mouse hairs

Specifications

- Technology: Sample preparation and PCR

NucleoType Mouse PCR



- Sample material: Mouse tail clipping (1 mm), mouse ear punch (Ø 1 mm), mouse blood (1 µL), mouse hairs (3–30)
- Procedure: Quick sample lysis (recommended) and transfer of aliquot into PCR mix (optional direct PCR)
- Amplicon size: Recommended for < 1 kbp
- PCR volume: 10 µL (optional up to 50 µL)
- Processing time: 5 min/prep (DNA release), 30–90 min PCR cycling (depending on cyclor protocol)





Direct PCR

NucleoType Plant PCR

Kit for rapid typing of plant leaves

Features

- Special coating of the Plant Transfer Tool (patent pending) inactivates PCR inhibitors during sample uptake and transfer
- < 1 min for DNA preparation: No step for lysis, disruption, or dilution of plant samples required
- Transfer sample material directly into the PCR mix at the plant growing site

Available format



PCR

Ordering information

Product	Preps	REF
NucleoType Plant PCR	25 / 100 / 500	743202.25 / .100 / .500
Related product	Pack of	REF
NucleoType HotStart PCR Master Mix (2x)	2 x 1.25 mL	743215

Applications

- Direct HotStart PCR analysis from plant leaf material (e.g., corn, soybean, wheat, *Arabidopsis*, tobacco, cotton, grape wine, cress, as well as from kiwi, banana, and avocado fruit flesh)

Specifications

- Technology: Direct PCR

NucleoType Plant PCR



- Sample material: Plant leaf material
- Procedure: Transfer of plant leaf aliquot with Plant Transfer Tool (PTT) directly into PCR mix
- Amplicon size: Recommended for < 1 kbp
- Processing time: 1 min/prep , 30–90 min PCR cycling (depending on cyler protocol)





Direct PCR

NucleoType Seed PCR

Kit for rapid typing of seed samples

Features

- Preparation within 5 minutes – No need for DNA purification
- Loading dye and Proteinase K included
- Easy genotyping of whole and ground seeds

Available format



PCR

Ordering information

Product	Preps	REF
NucleoType Seed PCR	25 / 100 / 500	743203.25 / .100 / .500
Related product	Pack of	REF
NucleoType HotStart PCR Master Mix (2x)	2 x 1.25 mL	743215
Lysis Buffer P	250 mL	743211.250

Applications

- Direct HotStart PCR analysis from hard plant material (e.g., seeds from soybean, wheat, corn, rice, as well as from moss, fern leaf, and fir needle)

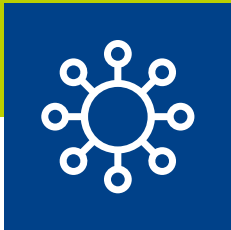
Specifications

- Technology: Sample preparation and PCR

NucleoType Seed PCR



- Sample material: Hard plant material
- Procedure: Quick sample lysis and transfer of aliquot into PCR mix
- Amplicon size: > 2000 bp
- Processing time: < 5 min/prep (DNA release), 30–90 min PCR cycling (depending on cyclor protocol)



Viral RNA and DNA

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Viral RNA and DNA from biological fluids

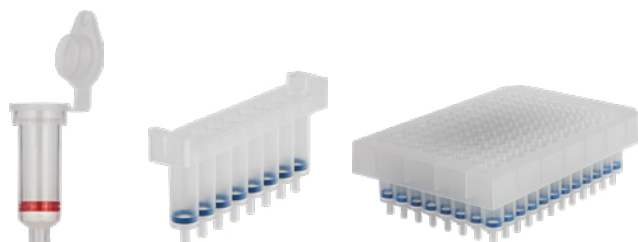
NucleoSpin® Virus

Time saving parallel isolation of viral RNA / DNA from biological fluids

Features

- Convenient and highly efficient sample lysis by liquid Proteinase K
- Reliable virus detection from fresh or frozen serum / plasma treated with EDTA / citrate
- Highest sensitivity for DNA and RNA viruses e.g., Blue Tongue Virus and Cytomegalovirus

Available formats



Mini column

8-well strip

96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® Virus	10 / 50 / 250	740983.10 / .50 / .250
NucleoSpin® 8 Virus	12 x 8 / 60 x 8	740643 / .5
NucleoSpin® 8 Virus Core Kit*	48 x 8	740451.4
NucleoSpin® 96 Virus	2 x 96 / 4 x 96	740691.2 / .4
NucleoSpin® 96 Virus Core Kit*	4 x 96	740452.4
Related product	Pack of	REF
Liquid Proteinase K	5 mL	740396

Applications

- Purification of human or animal viral RNA and DNA from serum, plasma, swab, and tissue homogenates

Specifications

- Technology: Silica membrane technology
- Fragment size: 100 bp–approx. 50 kbp

NucleoSpin® Virus

Mini

- Processing: Centrifugation
- Sample material: Cell-free biological fluids, swabs, and tissue homogenates (< 200 µL; < 400 µL with two loading steps)
- Elution volume: 30 µL
- Binding capacity: 25 µg
- Processing time: 50 min/6 preps



NucleoSpin® 8 Virus

8-well

- Processing: Manual or automated
- Sample material: Biological fluids (< 150 µL)
- Typical recovery: > 90 %
- Elution volume: 70–100 µL
- Binding capacity: 40 µg
- Processing time: 60 min/6 strips



NucleoSpin® 96 Virus

96-well

- Processing: Manual or automated
- Sample material: Cell-free biological fluids (< 150 µL)
- Typical recovery: > 90 %
- Elution volume: 70–100 µL
- Binding capacity: 40 µg
- Processing time: 60 min/plate



Starter Set C and other equipment



▶ See page 120

*Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.



NucleoSpin® Dx Virus

CE-IVD marked mini spin kit* for the isolation of viral RNA / DNA from human plasma and serum samples

Features

- CE-IVD certification in compliance with EU directive 98/79/EC for *in-vitro* diagnostic applications*
- Sensitive detection of DNA / RNA viruses from fresh / frozen serum / plasma treated with EDTA / citrate

Available format



Mini column

Ordering information

Product	Preps	REF
NucleoSpin® Dx Virus	50	740895.50

Applications

- Isolation of viral RNA and / or viral DNA from 150 µL human plasma or serum* for subsequent *in-vitro* diagnostic purposes
- Isolation of viral RNA and / or viral DNA from animal samples, swabs, plasma, or serum (fresh or frozen, EDTA or citrate treated)**

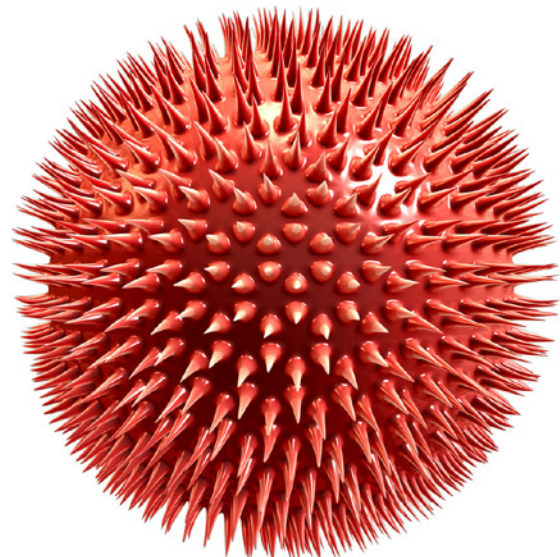
Specifications

- Technology: Silica membrane technology

NucleoSpin® Dx Virus



- Sample material: Plasma / serum (150 µL)
- Fragment size: 100 bp–approx. 50 kbp
- Elution volume: 50 µL
- Binding capacity: 40 µg
- Processing time: 30 min/6 preps



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

** Out of the scope of the IVD Directive 98/79/EC.



Viral RNA and DNA from biological fluids

NucleoMag® Virus

Magnetic bead based isolation of viral RNA and DNA from biological fluids for flexible high throughput processing

Features

- Elution in minimal volume to achieve highest sensitivities for virus detection
- Complete processing at room temperature facilitates automation

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® Virus	1 x 96 / 4 x 96	744800.1 / .4

Applications

- Extraction of viral DNA and RNA from biological fluids (e.g., serum, plasma)

Specifications

- Technology: Magnetic bead technology

NucleoMag® Virus

- Processing: Manual or automated
- Sample material: Biological fluids (< 200 µL)
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 50–100 µL
- Binding capacity: 0.2 µg/µL beads
- Processing time: 40–120 min/96 preps*



NucleoMag® SEP and other accessories



▶ See page 120

* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



Viral RNA / DNA and bacterial DNA from clinical samples

NucleoMag® Pathogen

Magnetic bead based isolation of viral RNA / DNA and bacterial DNA

Features

- One kit for any common clinical sample type
- High sensitivity
- Reliable nucleic acid isolation - suitable even for low viral titers

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® Pathogen	1 x 96 / 4 x 96	744210.1 / .4

Applications

- Extraction of viral DNA / RNA and microbial DNA from clinical samples

Specifications

- Technology: Magnetic bead technology

NucleoMag® Pathogen

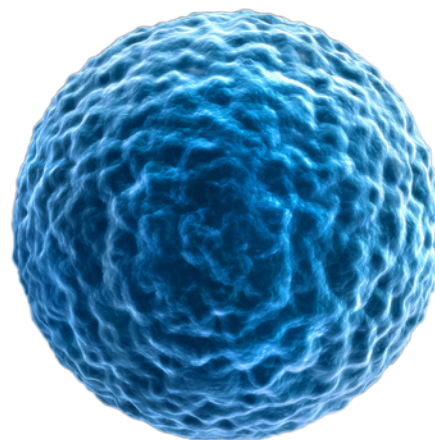
- Processing: Manual or automated
- Sample material: Whole blood / serum / plasma / swab wash solution / feces (< 200 µL), tissue (< 25 mg)
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 50–100 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps*



NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



Viral RNA / DNA and bacterial DNA from veterinary samples

NucleoMag® VET

Magnetic bead based DNA and RNA isolation from veterinary samples

Features

- Small elution volumes for highly concentrated RNA and DNA for maximal sensitivity

Available format



Magnetic beads

Ordering information

Product	Preps	REF
NucleoMag® VET	1 x 96 / 4 x 96	744200.1 / .4

Applications

- Extraction of viral RNA and DNA from veterinary samples
- Veterinary testing applications

Specifications

- Technology: Magnetic bead technology

NucleoMag® VET

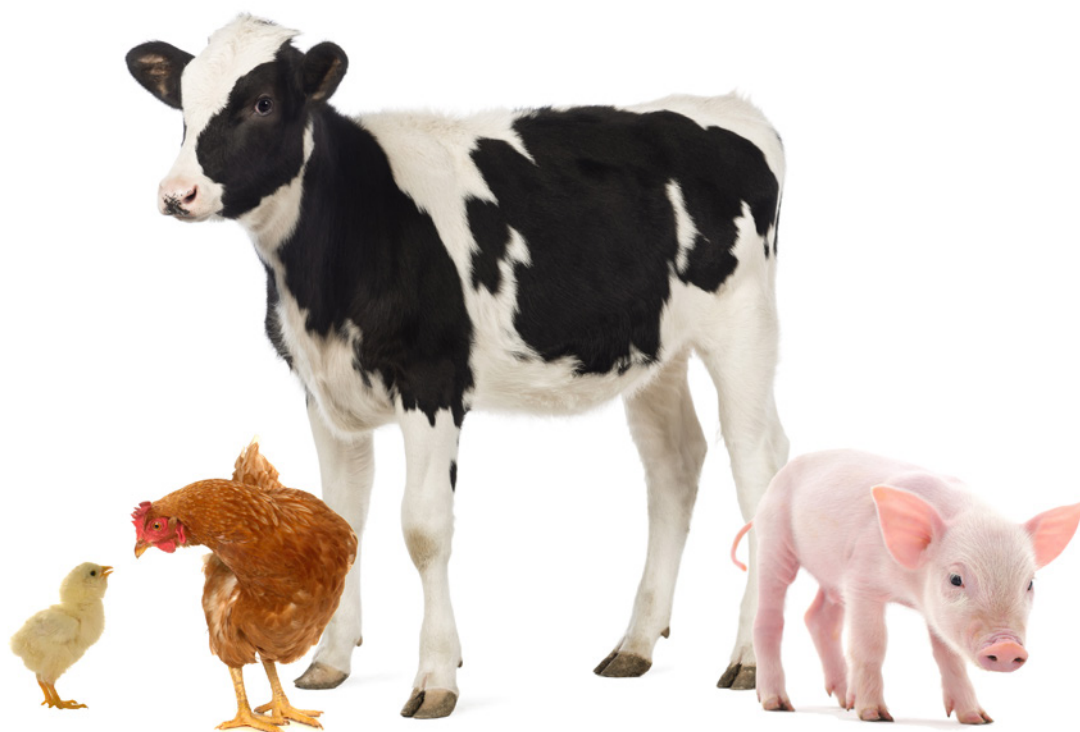
- Processing: Manual or automated
- Sample material: Whole blood / serum / plasma (< 200 µL), tissue (10–30 mg), feces (< 200 µL), swab wash solution (< 200 µL)
- Maximum amount of starting material: 200 µL liquid / homogenized sample
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 50–100 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 40–120 min/96 preps*



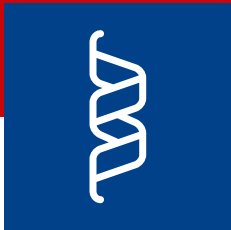
NucleoMag® SEP and other accessories



▶ See page 120



* Depending on instrument type / setup / configuration. For more detailed information regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at www.mn-net.com.



Protein

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Purification of His-tag proteins

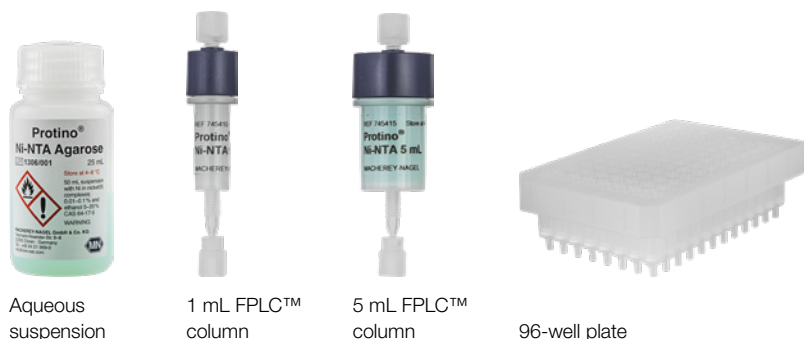
Protino® Ni-NTA

Method of choice for His-tag protein purification with best performance

Features

- Universal use – suitable for small proteins, large protein complexes, proteins with low expression rates
- High capacity and high affinity
- Purification under native and denaturing conditions
- Highest flexibility of applications – choose the format of need
- Protino® 96 Ni-NTA: Unique Protino® Purification Plate for leak-free handling of 96 samples

Available formats



Aqueous suspension

1 mL FPLC™ column

5 mL FPLC™ column

96-well plate

Ordering information

Product	Pack of / Preps	REF
Protino® Ni-NTA Agarose	25 / 100 / 500 mL	745400.25 / .100 / .500
Protino® Ni-NTA Columns 1 mL	5	745410.5
Protino® Ni-NTA Columns 5 mL	1 / 5	745415.1 / .5
Protino® 96 Ni-NTA (Protino® Ni-NTA Agarose, Protino® Purification Plate)	1 x 96 / 4 x 96	745425.1 / .4
Related product	Pack of	REF
Protino® Columns 14 mL (empty gravity flow columns)	10	745250.10
Protino® Columns 35 mL (empty gravity flow columns)	10	745255.10
Protino® Purification Plate (leakfree, suitable for vacuum or centrifugation)	1 / 4	745426.1 / .4
NucleoVac 96 Vacuum Manifold	1	740681
NucleoVac Vacuum Regulator	1	740641
MN Shaker Frame (shaking frame for e.g., Protino® Purification Plate)	1	740489

Applications

- Purification of polyhistidine-tagged proteins
- Batch binding, gravity flow column chromatography, MPLC / FPLC™ applications

Specifications

- Technology: IMAC (immobilized metal ion affinity chromatography)
- Chelating ligand: NTA (nitrilotriacetic acid)
- Matrix: 6 % beaded agarose (crosslinked), precharged with Ni²⁺
- Storage temperature: 4–8 °C

Protino® Ni-NTA Agarose

Susp

- Format: Aqueous suspension (50 % (v/v), containing 30 % ethanol)
- Processing: Batch binding, gravity flow, and FPLC™
- Bead size: 45–165 µm
- Binding capacity*: 50 mg/mL



Protino® Ni-NTA Columns 1 mL

FPLC1

- Processing: FPLC™
- Bead size: 45–165 µm
- Binding capacity*: 50 mg



Protino® Ni-NTA Columns 5 mL

FPLC5

- Processing: FPLC™
- Bead size: 45–165 µm
- Binding capacity*: 250 mg



Protino® 96 Ni-NTA

96-well

- Processing: Manual and automated
- Volume capacity per well: 1.4 mL
- Sample volume: < 750 µL/well, sufficient for 96 preps with 50 µL of settled agarose beads per well
- Bed volume: Variable (50 µL recommended)
- Reproducibility between wells: ± 5 % in yield
- Binding capacity*: 2 mg per well (using 50 µL of settled agarose)



* Binding capacity will vary for each polyhistidine-tagged protein.

Purification of His-tag proteins

Protino® Ni-TED

The matrix of choice for highest protein purity

Features

- Highest binding specificity – less unspecific binding of contaminating proteins compared to other common IMAC matrices
- Minimum metal-ion leaching due to high stability against reducing or chelating agents
- Purification under native and denaturing conditions
- Dry resin – storage at room temperature

Available formats



Ordering information

Product	Pack of / Preps	REF
Protino® Ni-TED Resin	5/30/120/600 g	745200.5/.30/.120/.600
Protino® Ni-TED 150 Packed Columns	10/50	745100.10/.50
Protino® Ni-TED 1000 Packed Columns	5/50	745110.5/.50
Protino® Ni-TED 2000 Packed Columns	5/25	745120.5/.25
Related product	Pack of	REF
Protino® Columns 14 mL (empty gravity flow columns)	10	745250.10
Protino® Columns 35 mL (empty gravity flow columns)	10	745255.10

Applications

- Purification of polyhistidine-tagged proteins
- Batch binding, gravity flow column chromatography, MPLC/FPLC™ applications

Specifications

- Technology: IMAC (immobilized metal ion affinity chromatography)
- Chelating ligand: TED (tris(carboxymethyl)ethylene diamine)
- Matrix: Macroporous silica
- Physical form: Dry matrix, precharged with Ni²⁺

Protino® Ni-TED Resin

Resin

- Format: Bulk material
- Processing: Batch binding, gravity flow, and FPLC™
- Binding capacity*: 10 mg/g resin (5 mg/mL bed volume)
- Max. pressure: 145 psi (10 bar)



Protino® Ni-TED 150 Packed Columns

Mini

- Processing: Gravity flow columns
- Amount of resin per column: 40 mg
- Bed volume: 80 µL
- Binding capacity*: 400 µg



Protino® Ni-TED 1000 Packed Columns

Midi

- Processing: Gravity flow columns
- Amount of resin per column: 250 mg
- Bed volume: 500 µL
- Binding capacity*: 2.5 mg



Protino® Ni-TED 2000 Packed Columns

Maxi

- Processing: Gravity flow columns
- Amount of resin per column: 500 mg
- Bed volume: 1000 µL
- Binding capacity*: 5 mg



* Binding capacity will vary for each polyhistidine-tagged protein.



Purification of His-tag proteins

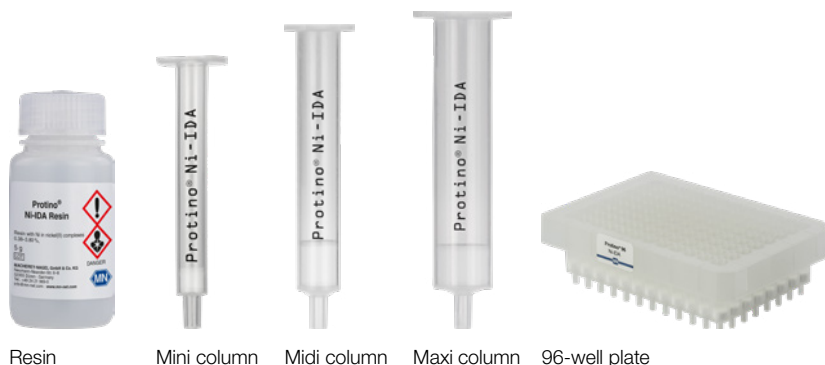
Protino® Ni-IDA

Solution for good ratio of His-tag protein yield and purity

Features

- High protein recovery even from diluted samples due to three selective binding sites for His-tag binding
- Purification under native and denaturing conditions
- Dry resin – storage at room temperature

Available formats



Ordering information

Product	Pack of / Preps	REF
Protino® Ni-IDA Resin	5/30/120/600 g	745210.5 / .30 / .120 / .600
Protino® Ni-IDA 150 Packed Columns	10/50	745150.10 / .50
Protino® Ni-IDA 1000 Packed Columns	5/50	745160.5 / .50
Protino® Ni-IDA 2000 Packed Columns	5/25	745170.5 / .25
Protino® 96 Ni-IDA	1 x 96 / 4 x 96	745300.1 / .4
Related product	Pack of	REF
Protino® Columns 14 mL (empty gravity flow columns)	10	745250.10
Protino® Columns 35 mL (empty gravity flow columns)	10	745255.10

Applications

- Purification of polyhistidine-tagged proteins
- Batch binding, gravity flow column chromatography, MPLC / FPLC™ applications

Specifications

- Technology: IMAC (immobilized metal ion affinity chromatography)
- Chelating ligand: IDA (iminodiacetic acid)
- Matrix: Macroporous silica
- Physical form: Dry matrix, precharged with Ni²⁺

Protino® Ni-IDA Resin

Resin

- Format: Bulk material
- Processing: Batch binding, gravity flow, and FPLC™
- Binding capacity*: 20 mg/g resin (10 mg/mL bed volume)
- Max. pressure: 145 psi (10 bar)



Protino® Ni-IDA 150 Packed Columns

Mini

- Processing: Gravity flow columns
- Amount of resin per column: 40 mg
- Bed volume: 80 µL
- Binding capacity*: 800 µg



Protino® Ni-IDA 1000 Packed Columns

Midi

- Processing: Gravity flow columns
- Amount of resin per column: 250 mg
- Bed volume: 500 µL
- Binding capacity*: 5 mg



Protino® Ni-IDA 2000 Packed Columns

Maxi

- Processing: Gravity flow columns
- Amount of resin per column: 500 mg
- Bed volume: 1000 µL
- Binding capacity*: 10 mg



Protino® 96 Ni-IDA

96-well

- Processing: Gravity flow plate
- Amount of resin per column: 50 mg
- Bed volume: 100 µL
- Binding capacity*: 1 mg/well



*Binding capacity will vary for each polyhistidine-tagged protein.



Purification of GST-tag proteins

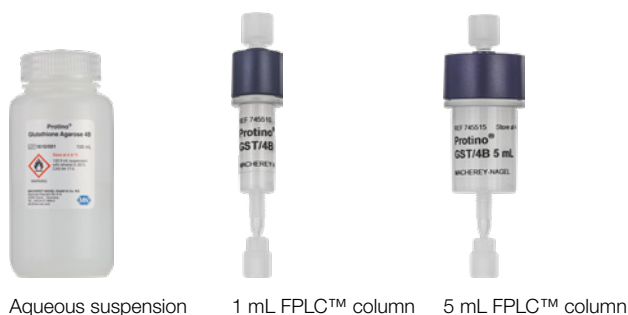
Protino® Glutathione Agarose 4B

Best choice for cost effective GST-tag protein purification

Features

- Highest performance equivalent to Glutathione Sepharose™ 4B/GSTrap™ 4B columns
- Simply replace your current products without optimization or protocol change
- Suitable for small proteins, large protein complexes, or proteins with low expression rates – universal use

Available formats



Ordering information

Product	Pack of /Preps	REF
Protino® Glutathione Agarose 4B	10 / 100 mL	745500.10 / .100
Protino® GST/4B Columns 1 mL	5	745510.5
Protino® GST/4B Columns 5 mL	1 / 5	745515.1 / .5
Related product	Pack of	REF
Protino® Columns 14 mL (empty gravity flow columns)	10	745250.10
Protino® Columns 35 mL (empty gravity flow columns)	10	745255.10

Applications

- Purification of GST-tagged proteins
- Batch binding, gravity flow column chromatography, MPLC / FPLC™ applications

Specifications

- Technology: Affinity chromatography
- Chelating ligand: Glutathione, linked via sulfur atom
- Matrix: 4 % beaded agarose
- Bead size: 90 µm
- Max. linear flow rate: 250 cm/h
- Storage temperature: 4–8 °C

Protino® Glutathione Agarose 4B



- Format: Aqueous suspension (75 % (v/v), containing 20 % ethanol)
- Processing: Batch binding, gravity flow, and FPLC™
- Binding capacity*: 8 mg/mL

Protino® GST/4B Columns 1 mL



- Processing: FPLC™
- Binding capacity*: 10 mg

Protino® GST/4B Columns 5 mL



- Processing: FPLC™
- Binding capacity*: 50 mg



* Binding capacity will vary for each GST-tagged protein.



HTP

Automated DNA, RNA, and protein purification.....	112
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Applications.....	114
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MACHEREY-NAGEL – your partner for automated medium to high throughput solutions

MN offers a variety of kits for medium (MTP) and high throughput (HTP) nucleic acid and protein purification. Our solutions are based on different technologies.

For RNA and DNA purification, we offer

- NucleoBond®: anion exchange chromatography
- NucleoSpin®: silica membrane technology
- NucleoFast®: ultrafiltration
- NucleoMag®: magnetic bead technology

For protein purification, we offer

- Protino®: affinity chromatography

Kits for all applications are available for both manual and automated use on common laboratory robotic platforms. The NucleoSpin® 8/96 kits are offered as ready to go solutions including all consumables, but are also available as “Core Kits” containing no plastic material in order to provide a high flexibility for automation.

Individual support by MACHEREY-NAGEL experts

For more than 20 years MN develops and produces a large portfolio of purification technologies and formats to meet your everyday needs. During this time, we gained a lot of experience and created a large knowledge data base to resort to. Thus, we offer an extensive troubleshooting by our MN experts in case special support is needed for your application.

Furthermore, we supply validated and proven basic scripts on request. Our specialists from R&D assist you to generate customized scripts for different robotic platforms if needed.

MN experts help you to optimize or adjust your existing scripts on request e.g., to process new sample material.

Technical Support and Customer Service

Tel.: +49 24 21 969-270/271

E-mail: tech-bio@mn-net.com

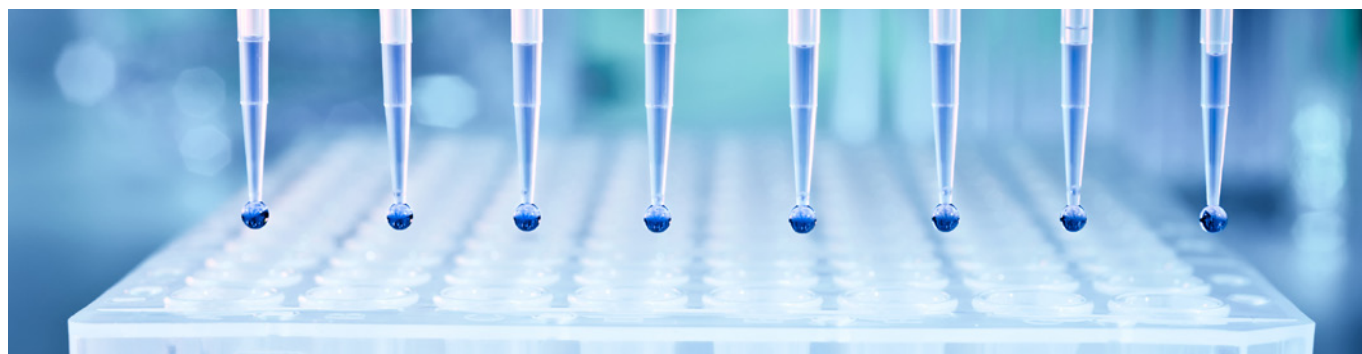
Product Management HTP

Tel.: +49 24 21 969-286

E-mail: pm-bio@mn-net.com

Application notes by MACHEREY-NAGEL

MN offers a broad range of application notes. These application notes contain detailed descriptions on how to use low, medium, and high throughput kits from MN on different robotic platforms. The number of available application notes increases continuously. For detailed information please visit: www.mn-net.com





Eppendorf

- Easy and reliable Plug'n'Prep® solution for nucleic acid extraction or protein purification
- Flexible processing of MN kits (1 to 96 samples) using epMotion® 5073m or 5073t (low to medium throughput) or the epMotion® 5075t (high throughput).
- Vacuum based extraction for NucleoSpin® 8 / 96 kits using the 5075v, minimized risk of cross-contamination due to Eppendorf's channeling plate
- Vacuum or gravity flow based 96-well protein purification using the Protino® 96 Ni-NTA or Ni-IDA kit
- Easy implementation of ready to use methods due to standardized configurations
- Optimized Plug'n'Prep® scripts or flexible customization available on request for NucleoSpin®, NucleoBond®, NucleoMag® and Protino® kits

Hamilton

- Genomic STARlet™ multiple preinstalled application packages and configurations validated together with Hamilton
- Intuitive graphical interface Setup with predefined protocols for, e.g., NucleoSpin® and NucleoFast® kits
- Optimized configurations to save time and minimize tip consumption.
- Protocols and application packages can be provided by Hamilton
- Automated purification of NucleoSpin® 96 kits using the [MPE]² positive pressure module eliminating the possibility of uneven flow through by maintaining equal pressure across the NucleoSpin® Plates

Tecan

- Flexible and versatile nucleic acid extraction and protein purification on the Tecan Freedom EVO® or related platforms
- Vacuum based extraction using the Te-VacS™ for NucleoSpin® 8 / 96 kits
- Minimized risk of cross-contamination due to MNs unique Wash Plate
- Suitable for higher sample volumes using the NucleoSpin® L / Midi kits
- Magnetic bead based extraction for NucleoMag® kits using the NucleoMag® SEP and the Te-Shake™
- Vacuum or gravity flow based 96-well protein purification using the Protino® 96 Ni-NTA or Ni-IDA kit
- Optimized basics scripts and protocols for several NucleoSpin®, NucleoMag®, and Protino® kits

Thermo Fisher Scientific

- Fast and flexible nucleic acid extraction using NucleoMag® kits
- Magnetic bead based isolation of RNA / DNA for a broad sample spectrum
- Suitable for low to high throughput extractions
- Convenient processing of high sample volumes (e.g., NucleoMag® Blood 3 mL, NucleoMag® cfDNA)
- Validated and optimized scripts available for all NucleoMag® kits
- Scripts available for different Thermo Scientific™ KingFisher® platforms
- Flexible customization of scripts can be requested at MN Technical Support

Andrew Alliance

- Automated processing of anion exchange plasmid midi preps using a novel robotic system
- Labor saving approach, reliably high quality
- Especially suitable for low to medium throughput applications
- Up to six NucleoBond® Xtra Midi preps in parallel on the Andrew+ platform
- Flexible working deck and tools thanks to an ever-expanding range of dominos: a modular solution that enables Andrew+ to use a broad range of consumables.
- Protocol integration into the OneLab software environment for optimal traceability
- Seamless protocol integration between automated plasmid preparation and up- and downstream manual processing

Others

The MN low to high throughput kits are very flexible and widely applicable.

The NucleoSpin®, NucleoFast®, and Protino® kits can be processed on any other platform which works with vacuum or positive pressure. The NucleoMag® kit can be automated on platforms with automated magnetic separators or with static magnetic pins combined with a suitable shaker.

Get an overview about suitable platforms and refer to the application notes at www.mn-net.com.



Medium to high throughput applications with MN products

The tables below present an overview about applications which can be performed with MTP and HTP kits from MACHEREY-NAGEL.

HTP

	NucleoSpin® 8 / 96 Plasmid	NucleoSpin® 96 Plasmid Transfection-grade	NucleoBond® 96 Xtra EF	NucleoSpin® 8 / 96 PCR Clean-up	NucleoFast® 96 PCR	NucleoMag® NGS Clean-up and Size select	NucleoSpin® 8 / 96 RNA Blood	NucleoSpin® 8 / 96 Blood	NucleoSpin® Blood L Vacuum	NucleoSpin® 8 / 96 Blood QuickPure	NucleoMag® Blood 200 µL	NucleoSpin® cfDNA Midi	NucleoSpin® 96 cfDNA	NucleoMag® cfDNA	NucleoSpin® 8 / 96 Virus	NucleoMag® Virus
Plasmid purification																
Transfection of sensitive cells			■													
Transfection of common cells		■	■													
Cloning and sequencing	■	■	■													
Large constructs																
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Clean up and size selection																
PCR clean up				■	■	■										
Challenging enzymatic reactions				■		■										
High speed purification					■											
Small fragments < 150 bp				■												
Flexible size selection						■										
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Body fluids																
RNA							■								■	■
DNA								■	■	■	■	■	■	■	■	■
cfDNA												■	■	■		
Viral nucleic acids															■	■
Blood							■	■	■	■	■					
Plasma							■	■		■	■	■	■	■	■	■
Serum							■	■		■					■	■
Urine							■			■			■		■	■
Saliva								■	■	■					■	■
Buffy coat							■	■		■						
Large volume									■		■					■
Fast procedure										■						
Page							56	64	66	67	69	70	70	72	100	102



	NucleoSpin® 8/96 RNA	NucleoMag® RNA	NucleoSpin® 96 DNA RapidLyse	NucleoSpin® 8/96 Tissue	NucleoMag® Tissue	NucleoMag® DNA Swab	NucleoMag® DNA Bacteria	NucleoSpin® 8/96 DNA FFPE	NucleoMag® DNA FFPE	NucleoMag® DNA Forensic	NucleoSpin® 8/96 Plant II	NucleoMag® Plant/384 Plant	NucleoSpin® 96 Soil	NucleoMag® DNA/RNA Water	NucleoSpin® 8/96 Food	NucleoMag® DNA Food	NucleoMag® Pathogen	NucleoMag® VET	Protino® 96 Ni-NTA	Protino® 96 Ni-IDA
Tissue and cells																				
DNA			■	■	■	■	■	■	■				■	■			■			
RNA	■	■												■			■			
Common tissue	■	■	■	■	■															
Cells	■	■	■	■	■		■							■				■		
Tumor biopsies	■	■	■	■	■			■	■									■		
Stool													■					■		
FFPE								■	■											
Swabs				■	■	■												■		
Forensic samples										■										
Page	43	47	73	74	75	76	80	81	82	85			88	90			103			
Veterinary testing																				
DNA				■	■		■												■	
RNA																			■	
Liquid biopsies																			■	
Solid tissue				■	■														■	
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Environmental testing																				
Soil													■							
Plant											■	■								
Fungi							■			■										
Food and feed														■	■					
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Protein purification																				
High binding capacity																			■	
Maximal purity																				■
Native or denaturing purification																			■	■
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Gravity flow

The following technologies can be processed by gravity flow

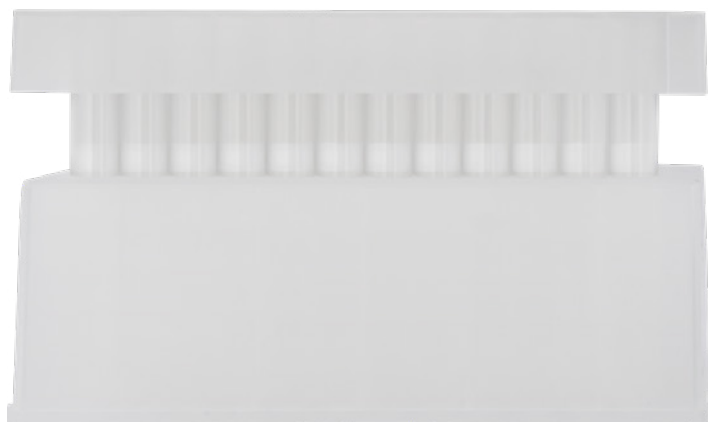
Technology	Format	Special aspects
NucleoBond®	96-well	The NucleoBond® Xtra EF Plate is processed under gravity flow. The filtration step (NucleoBond® Filter Plate) and the precipitation step (NucleoBond® Finalizer Plate) can be processed by centrifugation or by vacuum.
Protino® 96 Ni-IDA	96-well	For robotic applications or more convenient handling, the MN Shaker Frame (740489, see page 120) is recommended.

Centrifugation

For centrifugation, a microplate centrifuge is required. The centrifuge has to accommodate the sandwich of the 8-well strips / 96-well plates stack on a block or tube strips (bucket height: up to 85 mm) and should reach accelerations of 5600–6000 x g.

The following technologies can be processed by centrifugation

Technology	Format	Special aspects
NucleoSpin®	8-well	Starter Set C (740684, see page 120) is required. Use MN Square-well Block (740481, see page 123) or Rack of Tube Strips (740477, see page 123) with Starter Set C.
	96-well	
NucleoBond®	96-well	The NucleoBond® Xtra EF Plate is processed under gravity flow. The filtration step (NucleoBond® Filter Plate) and the precipitation step (NucleoBond® Finalizer Plate) can be processed by centrifugation.
NucleoFast®	96-well	Max. accelerations of 4,500 x g are needed.
Protino® 96 Ni-NTA	96-well	





Vacuum

For processing under vacuum, a NucleoVac 96 Vacuum Manifold (740681, see page 120), NucleoVac 24 Vacuum Manifold (740299, see page 120), or any other suitable vacuum manifold is required. Positive pressure systems can be used for processing of NucleoSpin® kits as an alternative to vacuum manifolds.

The following technologies can be processed by vacuum or positive pressure

Technology	Format	Special aspects
NucleoSpin®	L/Midi	Starter Set Midi (740744, see page 120) is required.
	8-well	Starter Set A is required (740682, see page 120). MN Wash Plate minimizes risk of cross-contamination (740479, see page 124).
	96-well	MN Wash Plate minimizes risk of cross-contamination (740479, see page 124). Positive pressure: MN Positive Pressure Frame (740474, see page 120) is recommended for direct filtration of crude lysate from NucleoSpin® Filter Plates into NucleoSpin® Binding Plates.
NucleoSnap®	Snap	Starter Set Midi is required (740744, see page 120).
NucleoBond®	96-well	NucleoBond® Xtra EF Plate is processed under gravity flow. The filtration step (NucleoBond® Filter Plate) and the precipitation step (NucleoBond® Finalizer Plate) can be processed by vacuum.
NucleoFast®	96-well	
Protino® 96 Ni-NTA	96-well	For robotic applications or more convenient handling, the MN Shaker Frame (740489, see page 120) is recommended.





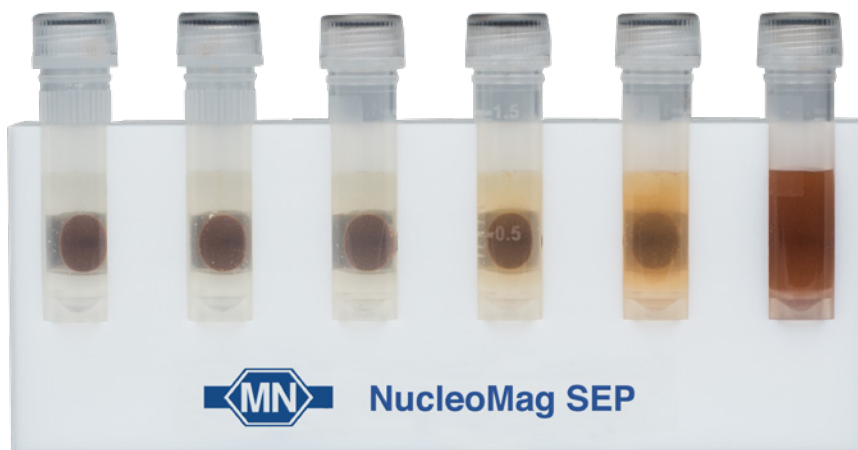
Magnetic beads

For manual and automated processing of NucleoMag[®] kits, a suitable magnetic separator is required, e.g., NucleoMag[®] SEP (744900, see page 120) or NucleoMag[®] SEP 24 (744903, see page 120).

The following technology is based on processing of magnetic beads

Technology	Format	Special aspects
NucleoMag [®]	Mini	Use of magnetic separator NucleoMag [®] SEP Mini (744901, see page 120) for use with 1.5 mL or 2 mL reaction tubes is required.
	Maxi	Use of magnetic separator NucleoMag [®] SEP Maxi (744902, see page 120) for use with 50 mL tubes is required.
	24-well plates	Use of magnetic separator NucleoMag [®] SEP 24 (744903, see page 120) is required.
	96-well plates	Use of magnetic separator NucleoMag [®] SEP (744900, see page 120) is required. Square-well Block (740481, see page 123) is recommended as separation plate for use with NucleoMag [®] SEP (744900).
	384-well plates	Use of a common 384-well plate magnetic separator is recommended.

For use of NucleoMag[®] kits on KingFisher[®] platforms, please see page 126 for available accessories.





Accessories

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Centrifuge processing

Product	Pack of	Specification	REF
MN Reaction Tube Rack	5	For use with 80 reaction tubes (1.5 mL and 2 mL)	740736.5
NucleoSpin® Dummy Strips	6	For sealing unused rows of Column Holders A, B, and C using NucleoSpin® 8-well kits	740685
Starter Set C	1 set	For processing NucleoSpin® 8-well strips under centrifugation; contains 2 Column Holders C, 2 MN Square-well Blocks, 2 Racks of Tube Strips	740684
MN Shaker Frame	1	Adapter frame for shaking Protino® and NucleoSpin® 96-well plates	740489

Vacuum and positive pressure processing

Product	Pack of	Specification	REF
NucleoVac 96 Vacuum Manifold	1	Vacuum manifold; consists of manifold base and lid, a spacer set, and a waste container set; for use of NucleoSpin® 8-well strips, NucleoSpin® 96-well plates, and NucleoSpin® Midi/L Columns (see required Starter Sets A/B/Midi below)	740681
NucleoVac 96 Spacer Set	1 set	4 x 2 spacer for processing of Square-well Block, Round-well Block, MN Wash Plate/Elution Plate/Microtiter Plate, or Rack of Tube Strips on NucleoVac 96 Vacuum Manifold	740247
NucleoVac Vacuum Regulator	1	For adjusting of vacuum	740641
MN Frame	1	For optimized handling of 96-well plates with a vacuum manifold on BioRobot® 9600/9604/3000 (Qiagen), MultiPROBE® II/Janus (PerkinElmer), Biomek® 2000/3000 and FX/NX (Beckman Coulter)	740680
MN Shaker Frame	1	Adapter frame for shaking Protino® and NucleoSpin® 96-well plates	740489
NucleoSpin® Dummy Strips	6	For sealing unused rows of Column Holders A, B, and C using NucleoSpin® 8-well kits	740685
Starter Set A	1 set	For processing NucleoSpin® 8-well strips under vacuum on NucleoVac 96 Vacuum Manifold or similar manifolds; contains 2 Column Holders A, 12 NucleoSpin® Dummy Strips	740682
Starter Set B	1 set	For processing NucleoSpin® 8-well strips on BioRobot® 9600/9604/3000 (Qiagen); contains 1 Column Holder B, 1 Column Holder D, 6 NucleoSpin® Dummy Strips	740683
Starter Set Midi	1 set	For processing NucleoSpin® Midi/L Columns under vacuum on NucleoVac 96 Vacuum Manifold or similar manifolds; contains 1 Column Holder Midi, 1 Wash Plate Midi, 1 Elution Tube Holder, 24 Dummy Columns Midi	740744
NucleoVac 24 Vacuum Manifold	1	Vacuum manifold; consists of manifold with 24 outlets, NucleoVac Mini Adapters, Luer plugs, tubing connections, and closing plug for use of NucleoSpin® Mini or NucleoSnap® Columns	740299
NucleoVac Mini Adapters	100	Luer adapters to prevent contamination of NucleoSpin® Mini or NucleoSnap® Column outlets when placed on a NucleoVac 24 Vacuum Manifold	740297.100
NucleoVac Valves	24	Valves for handling different flow rates of NucleoSpin® Mini and NucleoSnap® Columns on a NucleoVac 24 Vacuum Manifold	740298.24
MN Positive Pressure Frame	1	Adaptor frame for the direct filtration of crude lysate from NucleoSpin® Filter Plates into NucleoSpin® Binding Plates	740474

Magnetic bead technology

Product	Pack of	Specification	REF
NucleoMag® SEP	1	Magnetic separator; for use with 96-well plates (e.g., REF 740481)	744900
NucleoMag® SEP 24	1	Magnetic separator; for use with 24-well plates (e.g., REF 740448.4/.24)	744903
NucleoMag® SEP Mini	1	Magnetic separator; for use with 1.5 mL or 2 mL reaction tubes (12 positions)	744901
NucleoMag® SEP Maxi	1	Magnetic separator; for use with 50 mL tubes (4 positions)	744902

Gravity flow processing

Product	Pack of	Specification	REF
NucleoBond® Rack Small	1	For use with NucleoBond® AX 20 Columns	740562
NucleoBond® Rack Large	1	For use with NucleoBond® AX 100/AX 500/AX 2000/AX 10000/BAC 100/Xtra Midi Columns	740563
NucleoBond® Xtra Combi Rack	1	For use with NucleoBond® Xtra Midi/Xtra Maxi/Xtra BAC/AX 100/AX 500/AX 2000/AX 10000/BAC 100 Columns	740415
NucleoBond® Smart Rack	1	For use with NucleoBond® Xtra Midi/Xtra Maxi/Xtra BAC/AX 100/AX 500/AX 2000/AX 10000/BAC 100 Columns	740413
MN Shaker Frame	1	Adapter frame for shaking Protino® and NucleoSpin® 96-well plates	740489



Sample homogenization

Product	Pack of	Specification	REF
Single tube format			
MN Bead Tubes Type A	50	2 mL tubes with 0.6–0.8 mm ceramic beads For homogenization of soil, sediments, and stool; to be used with NucleoSpin® Soil, NucleoSpin® DNA Stool, NucleoBond® RNA Soil, NucleoSpin® RNA Stool, NucleoMag® DNA/RNA Water (optional) in conjunction with MN Bead Tube Holder or mixer mill*	740786.50
MN Bead Tubes Type A (5 mL)	50	5 mL tubes with 0.6–0.8 mm ceramic beads For homogenization of round filters; to be used with NucleoMag® DNA/RNA Water (optional) in conjunction with MN Bead Tube Holder (5 mL) or mixer mill*	740799.50
MN Bead Tubes Type B	50	2 mL tubes with 40–400 µm glass beads For homogenization of Gram-positive and Gram-negative bacteria; to be used with NucleoSpin® Microbial (included) in conjunction with MN Bead Tube Holder or mixer mill*	740812.50
MN Bead Tubes Type C	50	2 mL tubes with 1–3 mm corundum beads For homogenization of yeast and fungi; to be used with NucleoSpin® Microbial (not included) in conjunction with MN Bead Tube Holder or mixer mill*	740813.50
MN Bead Tubes Type D	50	2 mL tubes with 3 mm steel beads For homogenization of insects, crustaceans, lipid rich tissue; to be used with NucleoSpin® DNA Insect, NucleoSpin® DNA Lipid Tissue (included) in conjunction with MN Bead Tube Holder or mixer mill*	740814.50
MN Bead Tubes Type E	50	2 mL tubes with 3 mm steel beads and 40–400 µm glass beads For homogenization of bacteria within insects or tissue samples; to be used with NucleoSpin® DNA Insect (included), NucleoSpin® DNA Lipid Tissue (optional) in conjunction with MN Bead Tube Holder or mixer mill*	740815.50
MN Bead Tubes Type F	50	2 mL tubes with 1–3 mm corundum and 3 mm steel beads For homogenization of challenging tissues (e.g., spleen, lung tissue); to be used with NucleoSpin® DNA RapidLyse (optional) in conjunction with MN Bead Tube Holder only!	740816.50
MN Bead Tubes Type G	50	2 mL tubes with 5 mm steel beads For homogenization of plant material; to be used with NucleoSpin® RNA Plant and Fungi (optional) in conjunction with mixer mill*	740817.50
In conjunction with single tubes			
MN Bead Tube Holder	1	For up to 12 x 2 mL bead tubes Used in combination with a Vortex-Genie® instrument	740469
MN Bead Tube Holder (5 mL)	1	For up to 8 x 5 mL bead tubes Used in combination with a Vortex-Genie® instrument	740459

* If using a bead mill, respect warnings, in the MN Bead Tubes user manual!

** In our MN Bead Tubes Type B (740812.50) we provide a mixture of different glass bead populations which together contribute to optimal sample lysis / homogenization. In order to approximate that bead size distribution, we recommend mixing 100 µL of Type B1 material with 500 µL of Type B2 material for each bead tube. When mixed in this way, the supplied Type B1 glass beads (740809.B.5000) suffice for approximately 5000 bead tubes while the supplied Type B2 glass beads (740812.B.1000) suffice for a 1000 bead tubes.





Product	Pack of	Specification	REF
Bulk format			
MN Beads Type A (bulk)	400 g	0.6–0.8 mm ceramic beads in bulk Amount equivalent to 250 MN Bead Tubes Type A (2 mL tubes, see page 121)	740786.B.250
MN Beads Type B1 (bulk)	750 g	40–70 µm glass beads in bulk Amount equivalent to 5000 MN Bead Tubes Type B (2 mL tubes, see page 121) when combined with MN Beads Type B2 (bulk)**	740809.B.5000
MN Beads Type B2 (bulk)	750 g	0.3–0.4 mm glass beads in bulk Amount equivalent to 5000 MN Bead Tubes Type B (2 mL tubes, see page 121) when combined with MN Beads Type B1 (bulk)**	740812.B.1000
MN Beads Type C (bulk)	200 g	1–3 mm corundum beads in bulk Amount equivalent to 250 MN Bead Tubes Type C (2 mL tubes, see page 121)	740813.B.250
MN Beads Type D (bulk)	500 g	3 mm steel beads in bulk Amount equivalent to 1000 MN Bead Tubes Type D (2 mL tubes, see page 121)	740814.B.1000
MN Beads Type G (bulk)	500 g	5 mm steel beads in bulk Amount equivalent to 250 MN Bead Tubes Type G (2 mL tubes, see see page 121)	740817.B.250
96-well format			
MN 96 Bead Plate Type B	4 / 24 sets	Rack of prefilled tube strips sealed with cap strips containing 40–400 µm glass beads; 1 set consists of 1 rack, 12 strips with 8 tubes each For homogenization of Gram-positive and Gram-negative bacteria; to be used with NucleoSpin® 8 / 96 Tissue (optional), NucleoSpin® 96 DNA RapidLyse (optional), NucleoMag® DNA Bacteria (optional) in conjunction with mixer mill*	740851.4 / .24
MN 96 Bead Plate Type D	4 / 24 sets	Rack of prefilled tube strips sealed with cap strips containing 3 mm steel beads; 1 set consists of 1 rack, 12 strips with 8 tubes each For homogenization of insects, crustaceans, lipid rich tissue; to be used with NucleoSpin® 8 / 96 Tissue (optional), NucleoSpin® 96 DNA RapidLyse (optional), NucleoSpin® 8 / 96 Plant (optional), NucleoMag® Plant (optional), NucleoMag® DNA Bacteria (optional) in conjunction with mixer mill*	740853.4 / .24

* If using a bead mill, respect warnings, in the MN Bead Tubes user manual!

** In our MN Bead Tubes Type B (740812.50) we provide a mixture of different glass bead populations which together contribute to optimal sample lysis / homogenization. In order to approximate that bead size distribution, we recommend mixing 100 µL of Type B1 material with 500 µL of Type B2 material for each bead tube. When mixed in this way, the supplied Type B1 glass beads (740809.B.5000) suffice for approximately 5000 bead tubes while the supplied Type B2 glass beads (740812.B.1000) suffice for a 1000 bead tubes.





Sample preparation and lysis

Product	Pack of	Specification	REF
Single prep format			
NucleoSpin® Funnel Columns	30 sets	1 set consists of 1 NucleoSpin® Funnel Column, 1 Collection Tube (50 mL), and 1 Collection Tube (0.5 mL) For the isolation of small amounts of DNA; included in NucleoSpin® DNA Trace; the columns are treated with ethylene	740959
Snap Tubes 15 mL	10/50	50 mL conical centrifuge tubes with snap lid For sample lysis and storage; easy one-handed use with snap lid	740823.10/.50
Snap Tubes 50 mL	10/50	15 mL conical centrifuge tubes with snap lid For sample lysis and storage; easy one-handed use with snap lid, ideal for plasmid preparations or large scale lysis reactions	740822.10/.50
24-well format			
24-Square-well Block U-bottom	4/24	24-well blocks with 10 mL u-bottom square wells For sample lysis; wells can be closed with silicone lid	740448.4/.24
Silicone Lid 24-Square-well	4/24	Silicone lid For sealing of 24 square-well blocks	740449.4/.24
24-Square-well Block 10 mL	4	24-well blocks with 10 mL v-bottom square wells and silicone lid For sample lysis; wells can be closed with silicone lid	740679.4
8-well/96-well format			
Rack of Tube Strips	5 sets	1 set consists of 1 rack, 12 strips with 8 tubes each For sample lysis, mixing steps, and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum or centrifugation; strips can be closed with cap strips	740637
Rack of Tube Strips with Cap Strips	4/24 sets	1 set consists of 1 rack, 12 strips with 8 tubes each, and 12 cap strips For sample lysis, mixing steps, and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum or centrifugation; strips can be closed with cap strips	740477/.24
Round-well Block	20	96-well blocks with 1.2 mL round wells For sample lysis, mixing steps, and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum; wells can be closed with cap strips	740671
Round-well Block with Cap Strips	4/24 sets	1 set consists of 1 Round-well Block and 12 Cap Strips For sample lysis, mixing steps, and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum; wells can be closed with cap strips	740475/.24
Cap Strips	48/288	Strips of 8 caps each For sealing of Tube Strips and Round-well Blocks	740478/.24
Square-well Block	4/24	96-well blocks with 2.1 mL u-bottom square wells For use as separation plate for magnetic bead separation with the NucleoMag® SEP; sample lysis and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum	740481/.24
MN Square-well Block	4/24	96-well blocks with 2.1 mL square wells For mixing steps and waste collection using NucleoSpin® 8-well strips/96-well plates under vacuum or centrifugation	740476/.24
Culture Plate	4/24	Square-well Blocks with 2.1 mL square wells, including Gas-permeable Foil For cultivation of bacteria in 96-well format	740488/.24
Gas-permeable Foil	50	Gas-permeable, self-adhering foil To cover square-well blocks during incubation of bacterial cultures	740675
Lysis Block	4	96-well blocks For use with NucleoSpin® 96 Blood kits	740484



Filtration

Product	Pack of	Specification	REF
Single prep format			
NucleoSpin® Filters	50	Mini column filters with Collection Tubes (2 mL) For filtration of cell and tissue homogenates and separation of solution from swabs	740606
Collection Tubes (2 mL)	1000	Collection tubes For collection of flowthrough; used with NucleoSpin® Mini Columns / Filters and NucleoSEQ® Columns	740600
NucleoSpin® Midi Filters	50	Midi column filters For filtration of cell and tissue homogenates and separation of solution from swabs	740607
NucleoBond® Midi Filters	100	Midi column filters For lysate clarification; used with NucleoBond® Xtra Midi or NucleoBond® PC 500 Columns	740.411.100
Protino® Columns 14 mL	10	Empty 14 mL gravity flow columns with an inserted frit of 50 µm pore size For retaining chromatographic matrices (e.g., Protino® Ni-TED / IDA Resin, Protino® Ni-NTA Agarose, Protino® Glutathione Agarose 4B)	745250.10
Protino® Columns 35 mL	10	Empty 35 mL gravity flow columns with an inserted frit of 50 µm pore size For retaining chromatographic matrices (e.g., Protino® Ni-TED / IDA Resin, Protino® Ni-NTA Agarose, Protino® Glutathione Agarose 4B)	745255.10
Receiver Columns 35 µm	10 / 50 / 250	Mini spin columns with inserted hydrophobic frit of 35 µm pore size; the columns are delivered with capped outlets, inserted into Collection Tubes (2 mL) For general filtration purposes as well as for retaining chromatographic resins, suitable for centrifugation	740524.10 / .50 / .250
8-well / 96-well format			
MN Wash Plate	4 / 24	96-well plates with funnel shaped wells To minimize the risk of cross-contamination using NucleoSpin® 8-well strips / 96-well plates under vacuum or gravity flow	740479 / .24
NucleoSpin® Plasmid Filter Strips	48	8-well strips For clarification of lysates, for use under vacuum or centrifugation	740730.48F
NucleoSpin® RNA Filter Strips	12 / 60	8-well strips For filtration of cell and tissue homogenates; for use under vacuum or centrifugation	740699.12F / .60F
NucleoSpin® RNA Filter Plate	4	96-well plates For filtration of cell and tissue homogenates; for use under vacuum or centrifugation	740711
NucleoSpin® Trace Filter Plate	20	96-well plates For lysis of samples and subsequent removal of particulate matter; for use under vacuum or centrifugation	740677
Protino® Purification Plate	1 / 4	96-well plates with special leak-free filter frits of 20 µm pore size Purification plate for retaining chromatographic matrices (e.g., Protino® Ni-NTA, Protino® Glutathione Agarose 4 B); suitable for centrifugation and use under vacuum and positive pressure	745426.1 / .4
Receiver Plates 35 µm	4	96-well plates with inserted filter frits of 35 µm pore size For general filtration purposes as well as for retaining chromatographic resins; suitable for centrifugation and use under vacuum	740512.4
Receiver Plates 35 µm hydrophilized	4	96-well plates with inserted hydrophilized filter frits of 35 µm pore size For general filtration purposes as well as for retaining chromatographic resins; suitable for gravity flow, centrifugation, and use under vacuum	740513.4
Receiver Plates 50 µm	4	96-well plates with inserted filter frits of 50 µm pore size For general filtration purposes as well as for retaining chromatographic resins; suitable for centrifugation and use under vacuum	740688.4
Receiver Plates 50 µm hydrophilized	4	96-well plates with inserted hydrophilized filter frits of 50 µm pore size For general filtration purposes as well as for retaining chromatographic resins; suitable for gravity flow, centrifugation, and use under vacuum	740689.4
Receiver Plates 10 µm	4	96-well plates with inserted filter frits of 10 µm pore size For general filtration purposes as well as for retaining chromatographic resins; suitable for centrifugation and use under vacuum	740989.4



Binding / washing

Product	Pack of	Specification	REF
Single prep format			
Collection Tubes (2 mL)	1000	Collection tubes For collection of flowthrough; used with NucleoSpin® Mini Columns / Filters and NucleoSEQ® Columns	740600
8-well / 96-well format			
MN Wash Plate	4 / 24	96-well plates with funnel shaped wells To minimize the risk of cross-contamination using NucleoSpin® 8-well strips / 96-well plates under vacuum or gravity flow	740479 / .24
Square-well Block	4 / 24	96-well blocks with 2.1 mL u-bottom square wells For use as separation plate for magnetic bead separation with the NucleoMag® SEP, sample lysis, and collection of elution fractions using NucleoSpin® 8-well strips / 96-well plates under vacuum	740481 / .24
MN Square-well Block	4 / 24	96-well blocks with 2.1 mL square wells For mixing steps and waste collection using NucleoSpin® 8-well strips / 96-well plates under vacuum or centrifugation	740476 / .24





Elution

Product	Pack of	Specification	REF
8-well/96-well format			
Rack of Tube Strips	5 sets	1 set consists of 1 rack, 12 strips with 8 tubes each For sample lysis and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum or centrifugation; strips can be closed with cap strips	740637
Rack of Tube Strips with Cap Strips	4/24 sets	1 set consists of 1 rack, 12 strips with 8 tubes each, and 12 cap strips For sample lysis and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum or centrifugation; strips can be closed with cap strips	740477/.24
Round-well Block	20	96-well blocks with 1.2 mL round wells For mixing steps and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum; wells can be closed with cap strips	740671
Round-well Block with Cap Strips	4/24 sets	1 set consists of 1 Round-well Block and 12 Cap Strips For mixing steps and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum; wells can be closed with cap strips	740475/.24
Cap Strips	48/288	Strips with 8 caps each For sealing of Tube Strips and Round-well Blocks	740478/.24
Round-well Block Low	4	96-well blocks with 0.8 mL v-bottom round wells For elution using NucleoSpin® 8-well strips/96-well plates under vacuum	740485
Round-well Block Low U-bottom	4/20 sets	96-well microplates with 1.25 mL u-bottom round wells For collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum	740482/.20
Round-well Block Low U-bottom	4/24 sets	96-well microplates with 1.25 mL u-bottom round wells, including Self-adhering Foil For collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum	740487/.24
Elution Plate U-bottom	24	96-well microplates with 300 µL u-bottom wells, including Self-adhering Foil For collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum and for collection of elution fractions after magnetic separation	740486.24
Elution Plate Flat-bottom	20	96-well microplates with 370 µL flat-bottom wells For collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum and for collection of elution fractions after magnetic separation	740673
Square-well Block	4/24	96-well blocks with 2.1 mL u-bottom square wells For use as separation plate for magnetic bead separation with the NucleoMag® SEP; sample lysis and collection of elution fractions using NucleoSpin® 8-well strips/96-well plates under vacuum	740481/.24
Self-adhering PE Foil	50	Adhesive tape foils For air-tight sealing and storage of 96-well elution plates	740676

Automation

Product	Pack of	Specification	REF
24-well format			
KingFisher® 24 Accessory Kit	1 set	35 KingFisher® 24 Deep-well Blocks, 5 KingFisher® Flex 24 Tip Combs For 5 x 24 preps with NucleoMag® Blood 3 mL/DNA Plasma using a KingFisher® Flex platform	744953
KingFisher® Duo Prime Accessory Kit B	1 set	16 KingFisher® 24 Deep-well Blocks, 8 KingFisher® Duo 6 Tip Combs For 8 x 6 preps with NucleoMag® Blood 3 mL/DNA Plasma using a KingFisher® Duo/Duo Prime platform	744954
High throughput (HTP) format			
KingFisher® Accessory Kit A	1 set	16 KingFisher® Deep-well Blocks, 4 KingFisher® Deep-well Tip Combs, 4 KingFisher® Elution Plates For 4 x 96 NucleoMag® PCR/Tissue/Trace/Forensic/DNA Food/DNA Forensic/DNA Swab/DNA/RNA Water/Pathogen/Virus/VET preps using KingFisher® Flex/96 platform	744950
KingFisher® Accessory Kit B	1 set	20 KingFisher® Deep-well Blocks, 4 KingFisher® Deep-well Tip Combs, 4 KingFisher® Elution Plates For 4 x 96 NucleoMag® Blood 200 µL and NucleoMag® Plant/RNA preps using KingFisher® Flex/96 platform	744951
KingFisher® Duo Accessory Kit	1 set	8 KingFisher® Deep-well Blocks, 8 KingFisher® Duo 12 Tip Combs, 8 KingFisher® Duo Elution Strips For 8 x 12 NucleoMag® PCR/RNA/Blood/Tissue/DNA FFPE/DNA Food/DNA Forensic/DNA Swab/DNA/RNA Water/Plant/Trace/Forensic/Pathogen/Virus/VET preps using KingFisher® Duo/Duo Prime platform	744952



Plasmid DNA purification

Product	Pack of	Specification	REF
NucleoBond® Xtra EF			
Buffer RES-EF	1000 / 3000 mL	Resuspension buffer, without RNase A	740386.1000 / .3000
Buffer LYS-EF	1000 / 3000 mL	Lysis buffer	740387.1000 / .3000
Buffer NEU-EF	1000 / 3000 mL	Neutralization buffer	740388.1000 / .3000
Buffer EQU-EF	1000 / 3000 mL	Equilibration buffer	740389.1000 / .3000
Buffer FIL-EF	600 / 3000 mL	Wash buffer	740390.600 / .3000
Buffer ENDO-EF	1000 / 3000 mL	Wash buffer	740391.1000 / .3000
Buffer WASH-EF	1000 / 3000 mL	Wash buffer	740392.1000 / .3000
Buffer ELU-EF	900 / 3000 mL	Elution buffer	740393.900 / .3000
NucleoBond® Xtra EF Buffer Set I	1 set	150 mL of buffers RES-EF, LYS-EF, NEU-EF, and RNase A; sufficient for 20 NucleoBond® Xtra Midi EF and 10 NucleoBond® Xtra Maxi EF preps of low-copy plasmids	740427
NucleoBond® Xtra			
Buffer RES	1000 mL	Resuspension buffer, without RNase A	740363.1000
Buffer LYS	1000 mL	Lysis buffer	740329.1000
Buffer NEU	1000 mL	Neutralization buffer	740348.1000
Buffer EQU	1000 mL	Equilibration buffer	740317.1000
Buffer WASH	1000 mL	Wash buffer	740375.1000
Buffer ELU	600 mL	Elution buffer	740316.600
NucleoBond® Xtra Buffer Set I	1 set	150 mL of buffers RES, LYS, NEU, and RNase A; sufficient for 20 NucleoBond® Xtra Midi and 10 NucleoBond® Xtra Maxi preps of low-copy plasmids	740417
NucleoBond® PC EF			
Buffer S1-EF	1000 mL	Resuspension buffer, without RNase A	740790.1
Buffer S2-EF	1000 mL	Lysis buffer	740791.1
Buffer S3-EF	1000 mL	Neutralization buffer	740792.1
Buffer N2-EF	1000 mL	Equilibration buffer	740793.1
Buffer N3-EF	1000 mL	Wash buffer	740794.1
Buffer N4-EF	1000 mL	Wash buffer	740795.1
Buffer N5-EF	1000 mL	Elution buffer	740796.1
Buffer TE-EF	1000 mL	Redissolving buffer	740797.1
NucleoBond® PC / BAC 100			
Buffer S1	500 mL	Resuspension buffer, without RNase A	740516.1
Buffer S2	500 mL	Lysis buffer	740517.1
Buffer S3	500 mL	Neutralization buffer	740518.1
Buffer N2	500 mL	Equilibration buffer	740527.1
Buffer N3	1000 mL	Wash buffer	740528.1
Buffer N5	500 mL	Elution buffer	740529.1
NucleoBond® Buffer Set I	1 set	Sufficient to process, e.g., 35 NucleoBond® PC 20 preps	740601
NucleoBond® Xtra BAC			
Buffer WASH-BAC	1000 mL	Wash buffer	740444
Buffer ELU-BAC	600 mL	Elution buffer	740445
NucleoBond® Xtra BAC Buffer Set	1 set	1000 mL of buffers RES-BAC, LYS-BAC, NEU-BAC, and RNase A; sufficient for 15 NucleoBond® Xtra BAC preps	740437



Product	Pack of	Specification	REF
NucleoSpin®			
Buffer A1	75 / 1000 / 3000 mL	Resuspension buffer, without RNase A	740911.75 / .1 / .3
Buffer A2	1000 / 3000 mL	Lysis buffer	740912.1 / .3
Buffer A2 with Lyse Control	100 mL	Lysis buffer with Lyse Control	740328.100
Buffer A3	1000 / 3000 mL	Neutralization buffer	740913.1 / .3
Buffer AE	1000 / 3000 mL	Elution buffer	740917.1 / .3
Buffer AQ Concentrate	25 mL	Wash buffer concentrate for 125 mL Buffer AQ	740995
Buffer A4 Concentrate	25 / 200 / 600 mL	Wash buffer concentrate for 125 / 1000 / 3000 mL Buffer A4	740914 / .1 / .3
Buffer AW	1000 / 3000 mL	Wash buffer	740916.1 / .3
Buffer ERB	1000 mL	Detoxification buffer	740495.1000
NucleoSpin® Plasmid Buffer Set	1 set	75 mL of buffers A1, A2, 100 mL of Buffer A3, RNase A; sufficient for 300 NucleoSpin® Plasmid preps of low copy plasmids	740953

Clean up

Product	Pack of	Specification	REF
Buffer DB	25 / 1000 mL	Binding buffer	740323.25 / .1000
Buffer DE	1000 mL	Elution buffer	740326.1000
Buffer DW	200 mL	Wash buffer concentrate, for 1000 mL Buffer DW	740324.200
Buffer NT1	200 mL	Binding buffer	740305.120
Buffer NT	75 mL	Binding buffer	740614.100
Buffer NT1	100 mL	Binding buffer	740596.100
Buffer NT2	100 mL	Binding / wash buffer	740597
Buffer NT3 Concentrate	25 mL	Wash buffer concentrate, for 125 mL Buffer NT3	740598
Buffer NTB	150 mL / 1000 mL	Binding buffer, for clean up of SDS containing samples	740595.150 / .1
Buffer NTC	125 mL	Binding buffer, for clean up of single stranded DNA	740654.100





RNA isolation

Product	Pack of	Specification	REF
Binding Solution BS	30 mL	Binding buffer	740907.30
Binding Solution BSXS	50 mL	Binding buffer	740370.50
Buffer DL	100 mL	Lysis buffer	740202.32
Buffer LB1	30 mL	Lysis buffer	740368.30
Buffer LB2	30 mL	Lysis buffer	740369.30
Buffer LBP	125 mL	Lysis buffer	740906.125
Buffer ML	30 mL	Lysis buffer	740973.30
Buffer MLP	75 mL	Lysis buffer	740365.75
Buffer MP	20 / 100 mL	Protein precipitation buffer	740407.20 / .100
Buffer MPP	25 mL	Lysis buffer	740367.25
Buffer MR3	320 mL	Wash buffer	744353.500
Buffer MW2	100 mL	Wash buffer concentrate, for 500 mL Buffer MW2	740994.100
Buffer MX	60 mL	Binding buffer	740405.60
Buffer PFL	30 mL	Lysis buffer	740122.30
Buffer PFN	5 mL	Neutralization buffer	740121.5
Buffer PFR	5 mL	Reduction buffer	740123.5
Buffer PFW2	12 mL	Wash buffer concentrate, for 60 mL Buffer PFW2	740124.12
Buffer RA1	60 / 500 mL	Lysis buffer	740961 / .500
Buffer RAP	50 / 500 mL	Lysis buffer	740936.50 / .500
Buffer RL1	125 mL	Lysis buffer	740385.125
Buffer RP1	50 / 500 mL	Lysis buffer	740934.50 / .500
Buffer RAW2	80 mL	Wash buffer	740364.80
Paraffin Dissolver (blue)	60 mL	Blue colored Paraffin Dissolver for the removal of paraffin from FFPE sections; applicable with NucleoSpin® totalRNA FFPE or NucleoSpin® totalRNA FFPE XS kits	740343.60
Protein Solving Buffer Set PSB / TCEP	1 set	7.5 mL Buffer PSB and 107 mg TCEP (Reducing Agent); applicable with NucleoSpin® RNA/Protein, NucleoSpin® TriPrep, and NucleoSpin® miRNA kits	740941

DNA isolation

Product	Pack of	Specification	REF
Buffer B3	100 mL	Lysis buffer	740920
Buffer B5 Concentrate	25 mL	Wash buffer concentrate, for 125 mL Buffer B5	740921
Buffer BB	110 mL	Binding buffer	740394.110
Buffer BE	125 mL	Elution buffer	740306.100
Buffer BQ1	125 mL	Binding buffer	740923
Buffer BW	100 mL	Wash buffer	740922
Buffer C1	60 mL	Lysis buffer	740930
Buffer Set C2 / C3	1 set	Binding buffer, for 125 mL Buffer C4	740935
Buffer C4	250 mL	Binding buffer	740366.250
Buffer CF	1000 mL	Lysis buffer	740946
Buffer CW	100 mL	Wash buffer	740932
Buffer M	250 mL	Lysis buffer	743210.250
Buffer MBL3	1000 mL	Binding buffer	744848.1000
Buffer P	250 mL	Lysis buffer	743211.250
Buffer PC	125 mL	Binding buffer	740937
Buffer PL1	125 mL	Lysis buffer	740918
Buffer Set PL2 / PL3	1 set	Lysis buffers, 100 mL Buffer PL2 and 25 mL Buffer PL3	740919



Product	Pack of	Specification	REF
Buffer PMB	250 mL	Binding buffer	740836.250
Buffer PML	125 mL	Lysis buffer	740835.125
Buffer PW1	125 mL	Wash buffer	740938
Buffer PW2 Concentrate	50 mL	Wash buffer concentrate, for 250 mL Buffer PW2	740939
Buffer RLY	70 mL	Lysis buffer	740101.70
Buffer SB	60 mL	Binding buffer	740785.50
Buffer SL1	30 mL	Lysis buffer	740781.30
Buffer SL2	30 mL	Lysis buffer	740782.30
Buffer SL3	50 mL	Lysis buffer	740783.50
Buffer T1	50 mL	Lysis buffer	740940.25
Enhancer SX	50 mL	Additive	740784.50
NucleoSpin® DNA Trace Bone Buffer Set	1 set	For isolation of DNA from bones, applicable with NucleoSpin® DNA Trace / DNA Forensic, and NucleoMag® DNA Forensic kits	740943.25
NucleoType HotStart PCR Master Mix	2 x 1.25 mL	PCR Master Mix containing polymerase, dNTPs, buffer, enhancer, stabilizer	743215
Paraffin Dissolver	25 mL	For the removal of paraffin from FFPE sections, applicable with NucleoSpin® DNA FFPE XS kits	740968.25

Viral RNA and DNA isolation

Product	Pack of	Specification	REF
Buffer MV4	300 mL	Wash buffer	744869.300
Buffer VEB	110 mL	Binding buffer	744202.110
Buffer VL1	100 mL	Lysis buffer	744201.100
Buffer VL	200 mL	Lysis buffer	740833.100
Buffer VW1	500 mL	Wash buffer	740830.500
Buffer VW2	100 mL	Wash buffer concentrate, for 500 mL Buffer VW2	740831.100

Enzymes

Product	Pack of	Specification	REF
Proteinase K	100 mg	Lyophilized enzyme	740506
Buffer PB	15 mL	Buffer for dissolving of Proteinase K	740515.15
Liquid Proteinase K	5 mL	Enzyme solution	740396
RNase A	50 / 100 mg	Lyophilized enzyme	740505.50 / 740505
Liquid RNase A	2.5 mL	Enzyme solution	740397
rDNase Set	1 set	Recombinant DNase and Reaction Buffer for rDNase	740963
Reaction Buffer for rDNase	60 mL	Reaction buffer for rDNase	740834.60



Auxiliary tools

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Blood sample storage cards

NucleoCard®

Blood sample storage card for subsequent DNA extraction

Features

- Convenient storage of blood samples at room temperature*
- Easy extraction of DNA with the NucleoSpin® Tissue kit significantly reduces failure rates
- Suitable for use in real-time PCR assays

Available format



Filter card

Applications

- Long term storage of < 200 µL blood samples at 18–25 °C
- Stabilizes samples and prevents damage upon long term storage
- Ideal for shipping of blood samples
- Custom configurations available on request.

Specifications

- Technology: Impregnated specialized filter paper

NucleoCard®

- Sample material to be stored: Blood (< 200 µL)
- Storage temperature: 18–25 °C
- Storage life: 10 years and counting



Ordering information

Product	Pack of	REF
NucleoCard®*	10 / 100	740403.10 / .100
Related product	Preps	REF
NucleoSpin® Tissue	10 / 50 / 250	740952.10 / .50 / .250
NucleoType Blood PCR	25 / 100 / 500	743202.25 / .100 / .500
NucleoMag® Tissue	1 x 96 / 4 x 96 / 24 x 96	744300.1 / .4 / .24
NucleoSpin® 8 Tissue	12 x 8 / 60 x 8	740740 / .5
NucleoSpin® 96 Tissue	2 x 96 / 4 x 96 / 24 x 96	740741.2 / .4 / .24



*NucleoCard® cards are not intended for diagnostic and therapeutic use. Not available in the USA.



Sterile filtration

MN Sterilizer CA

Highest quality syringe filter for fast flow sterile filtration of aqueous solutions

Features

- Safe removal of particles > 0.2 µm
- Robust membrane enables high stability
- Low protein binding

Available format



Syringe filter

Ordering information

Product	Pack of	REF
MN Sterilizer CA	50	740401.50

Applications

- Sterile filtration and removal of particles from aqueous solutions

Specifications

- Housing material: Methyl methacrylate-butadiene-styrene polymer (MBS)

MN Sterilizer CA

Filter

- Membrane material: Cellulose acetate
- Nominal pore size: 0.2 µm
- Filter diameter: 28 mm
- Effective filtration area: 6.2 cm²
- Hold-up volume (after air purge): 150 µL
- Inlet connection: Female luer lock
- Outlet connection: Male slip luer
- Maximum pressure: 4.5 bar
- Maximum temperature: 50 °C
- Sterilization method: Pre-sterilized with ethylene oxide





Decontamination

BondEX EtBr

Fast and easy decontamination of ethidium bromide containing solutions

Features

- High ethidium bromide binding capacity for safe decontamination and hazardous waste reduction
- Indicator cartridge that indicates column saturation
- Gravity flow cartridges – no need for additional tools, such as syringes or pumps

Available format



Cartridge

Ordering information

Product	Pack of	REF
BondEX Starter Kit (2 cartridges, 6 indicator cartridges, 1 liter funnel with adaptor, 1 adaptor for connection to container, 10 folded filters, 1 plastic funnel)	1 kit	740701
BondEX 50 (each set consists of 1 cartridge with 2 end caps, hazard label, supporting ring, 3 indicator cartridges, and 2 folded filters)	5 sets	740703
Related product	Pack of	REF
BondEX Folded Filters XL	50	740705

Applications

- Decontamination of solutions containing fluorescent staining agents EtBr or SYBR® Green

Specifications

- Technology: HIC (hydrophobic interaction chromatography)

BondEX

- Processing: Gravity flow columns
- Sample material: Solutions containing up to 50 mg EtBr or SYBR® Green (< 50 L)
- Filtration of solutions: BondEX Folded Filters XL (provided)
- Binding capacity: 50 mg EtBr or SYBR® Green



BIO-LAB-TOP

Protection of laboratory surfaces from spills

Features

- Absorbent top layer of filter paper backed with waterproof polyethylene
- Protects benches, floors, table-tops, fume cupboards etc. from soiling and possible damage
- Available as sheets and as a role

Available formats



Roll



Sheet

Ordering information

Product	Pack of	REF
BIO-LAB-TOP	50 sheets (48 cm x 60 cm)	740800
BIO-LAB-TOP	100 sheets (48 cm x 60 cm)	740801
BIO-LAB-TOP	1 roll (48 cm x 50 m)	740810
BIO-LAB-TOP	1 roll (60 cm x 50 m)	740820
BIO-LAB-TOP	1 roll (60 cm x 100 m)	740821

Applications

- Protection of surfaces from radioactive, toxic, colored, and sticky substances

Specifications

- Material: Filter paper, one side coated with polyethylene

BIO-LAB-TOP

- Weight per surface area: 140 g/m²
- Thickness: 0.22 mm
- Water absorption: 210–230 mL/m²





Transfer membranes

Porablot membranes

High quality transfer membranes for biomolecule analysis

Features

- Cost effective membranes for nucleic acid and protein transfer
- High binding capacities allow for sensitive biomolecule detection
- Outstanding band resolution due to uniform, carefully controlled pore structure and size

Available formats



Roll



Sheet

Ordering information

Product	Pack of	REF
Porablot NCP	1 roll (0.3 m x 3 m)	741280
Porablot NCL	1 roll (0.3 m x 3 m)	741290
Porablot NCL	10 sheets (200 mm x 200 mm)	741291
Porablot PVDF	1 roll (0.25 m x 3 m)	741260

Application overview

Application	Method mean pore size →	Porablot PVDF 0.2 µm	Porablot NCP 0.45 µm	Porablot NCL 0.45 µm
DNA	Southern capillary transfer	–	++	+++
	Vacuum transfer	–	+	++
	Electrotransfer	–	+	+
	Serum dot blot	–	++	+++
	Dot blot, slot blot	–	++	++
	Chemiluminescence detection	–	+	+
RNA	Northern capillary transfer	–	++	+++
	Electrotransfer	–	++	++
	Vacuum transfer	–	+	++
	Dot blot, slot blot	–	++	++
Bacterial colonies	Colony and plaque lifts	–	+	+++
	Replica plating	–	+	+++
Proteins	Direct staining with anionic dyes**	+++	++	++
	Immunochemical staining	+++	++	++
	Chemiluminescence detection	+++	+	+
	Western transfer	+++	++	++
	Dot blot, slot blot	+++	++	++
	Sequencing	+++	–	–

+++ optimal membrane, ++ good sensitivity with different detection methods, + applicable, however with low sensitivity, – not recommended

*For large, globular proteins, such as immunoglobulins, for smaller peptides the binding capacity is correspondingly larger.

**Typical anionic dyes are Coomassie® blue, Ponceau S, and amido black.

Applications

- Transfer of proteins and nucleic acids: Southern, Northern, Western blotting, colony and plaque transfer, dot blotting, protein binding assays, protein sequencing

Specifications

- Membrane character: Hydrophilic

Porablot NCP

- Membrane material: 100 % nitrocellulose
- Pore size: 0.45 µm
- Binding capacity: 100 µg/cm²

Porablot NCL

- Membrane material: 100 % nitrocellulose with inert supporting tissue
- Pore size: 0.45 µm
- Binding capacity: 100 µg/cm²

Porablot PVDF

- Membrane material: Polyvinylidene difluoride (PVDF)
- Pore size: 0.20 µm
- Binding capacity: 50–100 µg/cm²*



Blotting papers

Market leading paper quality for reliable biomolecule blottings

Features

- Available in sheets up to size 580 x 600 mm
- Smooth surface, ensuring high, uniform absorptivity
- Different thicknesses, degrees of absorptivity, and resulting filtration speeds

Available format



Sheet

Ordering information

Product	Pack of	REF
MN 218 B		
MN 218 B	100 sheets (580 mm x 600 mm)	742111
MN 218 B	100 sheets (300 mm x 600 mm)	742112
MN 218 B	100 sheets (570 mm x 460 mm)	742113
MN 218 B	100 sheets (200 mm x 200 mm)	742115
MN 218 B	100 sheets (150 mm x 200 mm)	742138
MN 218 B	100 sheets (70 mm x 100 mm)	742139
MN 218 B	100 sheets (210 mm x 90 mm)	742131
MN 218 B	100 sheets (93 mm x 80 mm)	742137
MN 827 B		
MN 827 B	100 sheets (580 mm x 600 mm)	742118
MN 827 B	100 sheets (200 mm x 200 mm)	742120
MN 827 B	100 sheets (160 mm x 160 mm)	742128
MN 440 B		
MN 440 B	100 sheets (580 mm x 600 mm)	742125

Applications

- Slot and dot blots (MN 827 B, MN 218 B)
- Capillary transfer (MN 827 B, MN 440 B)
- Electroblothing procedures: Tank blot (MN 218 B), semi-dry blotting (MN 827 B, MN 440 B)
- Vacuum blotting (MN 218 B, MN 827 B)

Specifications

MN 218 B

- Speed: Slow
- Weight: 180 g/m²
- Thickness: 0.36 mm
- Migration acc. to Klemm: 55–65 mm/10 min
- Comparable to: Schleicher & Schüll GB 002, Whatman 3MM Chr

MN 227 B

- Speed: Fast
- Weight: 270 g/m²
- Thickness: 0.7 mm
- Migration acc. to Klemm: 130–140 mm/10 min
- Comparable to: Schleicher & Schüll GB 003

MN 440 B

- Speed: Medium fast
- Weight: 400 g/m²
- Thickness: 1 mm
- Migration acc. to Klemm: 130–145 mm/10 min
- Comparable to: Schleicher & Schüll GB 004, Whatman 17 Chr

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MACHEREY-NAGEL products are intended for GENERAL LABORATORY USE ONLY!

MACHEREY-NAGEL products are suited for QUALIFIED PERSONNEL ONLY!

MACHEREY-NAGEL products shall in any event only be used wearing adequate PROTECTIVE CLOTHING.

For detailed information please refer to the respective Material Safety Data Sheet of the product!

MACHEREY-NAGEL products shall exclusively be used in an ADEQUATE TEST ENVIRONMENT.

MACHEREY-NAGEL does not assume any responsibility for damages due to improper application of our products in other fields of application.

Application on the human body is STRICTLY FORBIDDEN. The respective user is liable for any and all damages resulting from such application.

DNA/RNA/PROTEIN purification products of MACHEREY-NAGEL are suitable for IN-VITRO-USES ONLY! ONLY MACHEREY-NAGEL products specially labeled as IVD are also suitable for IN-VITRO-diagnostic use. Please pay attention to the package of the product.

Safety information

Products can contain harmful substances which must be labelled as hazardous. For detailed information please see Safety Data Sheets (www.mn-net.com).

IN-VITRO-diagnostic products are expressly marked as IVD on the packaging.

IF THERE IS NO IVD SIGN, THE PRODUCT SHALL NOT BE SUITABLE FOR IN-VITRO-DIAGNOSTIC USE!





















ALL OTHER PRODUCTS NOT LABELED AS IVD ARE NOT SUITED FOR ANY CLINICAL USE (INCLUDING, BUT NOT LIMITED TO DIAGNOSTIC, THERAPEUTIC, AND/OR PROGNOSTIC USE).

No claim or representations are intended for its use to identify any specific organism or for clinical use (included, but not limited to diagnostic, prognostic, therapeutic, or blood banking). It is rather in the responsibility of the user or – in any case of resale of the products – in the responsibility of the reseller to inspect and assure the use of the DNA/RNA/protein purification products of MACHEREY-NAGEL for a well-defined and specific application.

MACHEREY-NAGEL shall only be responsible for the product specifications and the performance range of MN products according to the specifications of MN in-house quality control, product documentation, and marketing material.

For detailed information on product use restriction and warranty, please refer to the respective user manuals.

Icon annotation

 XS	Mini spin column for microcentrifuge tubes (1.5 mL or 2 mL) with a funnel shaped thrust ring for extra small elution volumes	 PrepS	NucleoBond® PC Prep 100 Column for preparative scale	 Snap	Disposable funnel container combined with a mini spin column for vacuum processing and subsequent centrifugation for elution	 8-well	Mini spin columns in 8-well strip format
 Mini	Mini spin column for microcentrifuge tubes (1.5 mL or 2 mL)	 Reag	Liquid reagent solution	 Funnel	NucleoSpin® Funnel Column for concentration of large volumes	 96-well	Mini spin columns in 96-well plate format
 Midi	Midi column for gravity flow (NucleoBond® Xtra / NucleoBond® PC technology) or 15 mL midi spin columns for centrifuges	 Resin	Insoluble bead based resin matrix	 PCR	Sample preparation and PCR		
 Maxi	NucleoBond® Xtra Maxi / NucleoBond® AX 500 Column for gravity flow or 50 mL NucleoSpin® Maxi Column for centrifuges	 Buffer	Buffer	 Filter	Filter		
 Mega	NucleoBond® AX 2000 Columns for gravity flow	 Susp	Suspension	 FPLC1	Ready to use and prefilled 1 mL column for fast protein liquid chromatography (FPLC)		
 Giga	NucleoBond® AX 10000 Columns for gravity flow	 Mag	Superparamagnetic beads	 FPLC5	Ready to use and prefilled 5 mL column for fast protein liquid chromatography (FPLC)		

MACHEREY-NAGEL trademarks

NucleoBond®	Kits and cartridges for nucleic acid purification (anion exchange chromatography)
NucleoCard®	Blood sample storage cards
NucleoFast®	Kits for PCR clean up (ultrafiltration)
NucleoMag®	Kits for purification of DNA and RNA (magnetic bead technology)
NucleoProtect®	Reagent for nucleic acid stabilization
NucleoSEQ®	Kits for dye-terminator removal (gel filtration)
NucleoSnap®	Kits for purification of DNA and RNA (silica membrane technology)
NucleoSpin®	Kits for purification of DNA and RNA (silica membrane technology)
Protino®	Kits for purification of recombinant proteins (affinity chromatography)

Registered trademarks of other companies

BigDye®	Applied Biosystems (USA)
Cell-free DNA BCT®	Streck Inc. (USA)
Coomassie®	ICI Organics Inc. (USA)
epMotion®	Eppendorf AG (Germany)
Freedom EVO®	Tecan Group Ltd. (Switzerland)
Hydra Flock®	Puritan Medical Products Co. LLC (USA)
KingFisher®	Thermo Fisher Scientific Inc. (USA)
Oragene®	Genotek Inc.
Plug'n'Prep®	Eppendorf AG (Germany)
RNAlater®	Ambion Inc. (USA)
SYBR®	Molecular Probes Inc. (USA)
TRIzol®	Molecular Research Center, Inc.

Trademarks of other companies

Sepharose™	Molecular Probes Inc. (USA)
FLOQSwabs™	COPAN Diagnostics Inc. (USA)
FPLC™	Amersham Biosciences Corp.
Genomic STARlet™	Hamilton Company (USA)
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Te-VacS™	Tecan Group Ltd. (Switzerland)
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