MACHEREY-NAGEL

Bioanalysis

DNA, RNA, and protein purification

Welcome

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 Proteins. 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

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E-mail: techbio@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.

1911 Foundation of the company MACHEREY-NAGEL in Düren, Germany. The first products are special filter papers.

1952 MACHEREY-NAGEL launches the first products for paper chromatography.

1970 MACHEREY-NAGEL expands its product line for column chromatography.

1985 In cooperation with Diagen – nowadays known as Qiagen – MACHEREY-NAGEL develops the first HPLC column for purification of nucleic acids (as product of Chromatography).

1989 Bioanalysis becomes a separate range within the product group Chromatography. With NucleoBond® AX the first gravity flow anion exchanger columns for nucleic acid purification are launched.

1993 The Bioanalysis part is separated from the Chromatography segment and becomes an independent product range.

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.

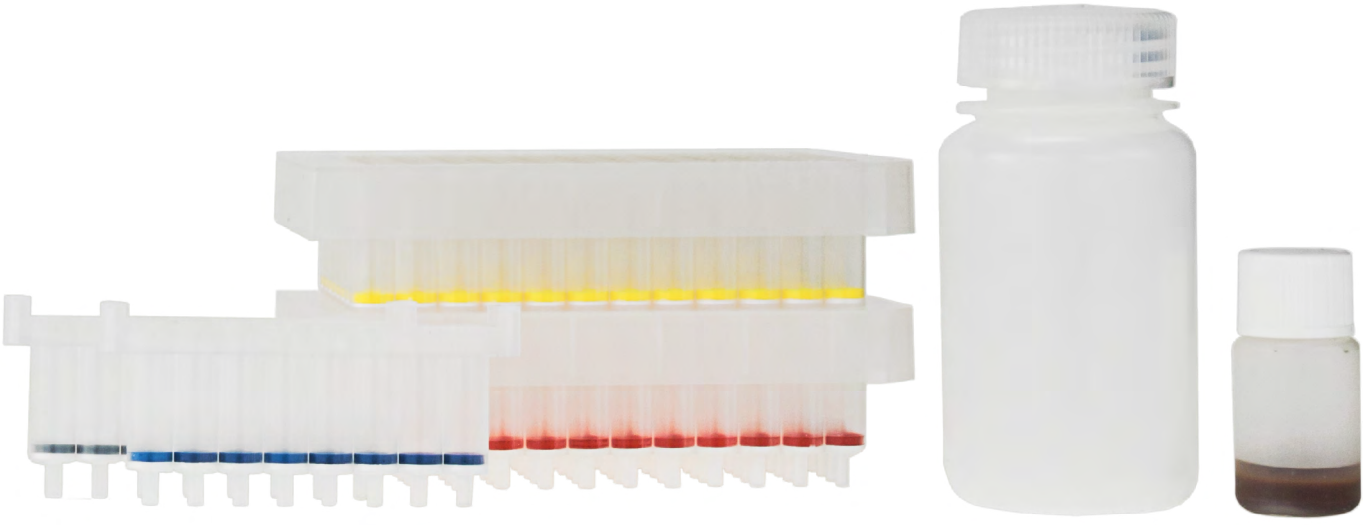
- Silica based anion exchanger, NucleoBond®
- Silica based membrane technology, NucleoSpin® and NucleoSnap®
- Beads based on silica or latex, NucleoTrap®
- Ultrafiltration, NucleoFast®
- Magnetic beads, NucleoMag®
- Gel filtration, NucleoSEQ®
- Affinity chromatography, Protino®

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.



1994 The brand NucleoSpin® becomes a registered trademark in Germany. The worldwide registration followed in 1998.

1996 MACHEREY-NAGEL is certified according to DIN EN ISO 9001 for the first time and has been successfully re-certified ever since. Additional certifications such as FDA (1999) and EN ISO 13485 (2003) follow.

2003 MACHEREY-NAGEL introduces the new brand NucleoMag® based on magnetic bead technology.

2004 The development of the second generation of anion exchange columns NucleoBond® Xtra becomes a global success.

2007 MACHEREY-NAGEL expands the product range with the NucleoSpin® XS technology.

2016 MACHEREY-NAGEL develops the new NucleoSnap® Column and gets the EN ISO 18385 certificate.

Contents

Contents

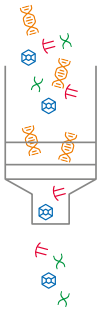
NucleoSpin® technology

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)

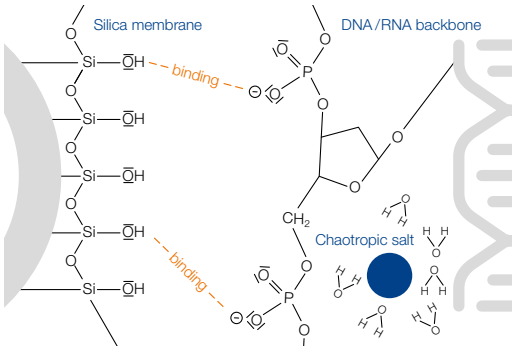
NucleoSpin® principle

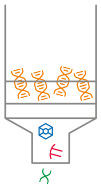


Binding

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



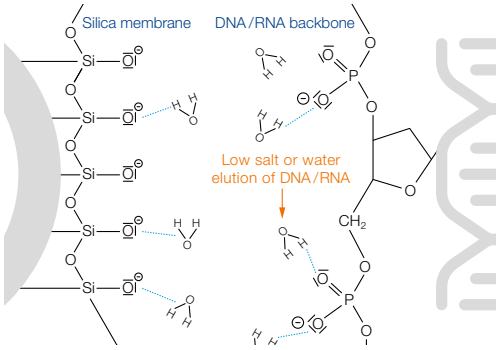


Washing

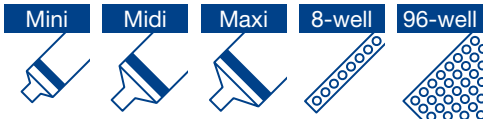
Contaminants are washed away under high salt and / or ethanolic conditions to keep the DNA / RNA bound to the membrane

Elution

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



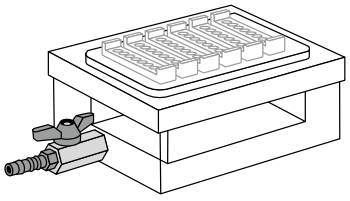
Available formats



DNA / RNA, contaminants

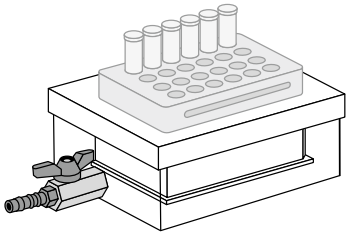
Required hardware for vacuum processing of NucleoSpin® 8 / 96 kits

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



Required hardware for vacuum processing of NucleoSpin® Blood L kits

Product	REF
Starter Set Midi 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 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 on Starter Set A is required	740681



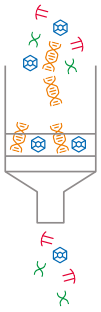
NucleoBond® Xtra / PC technology

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

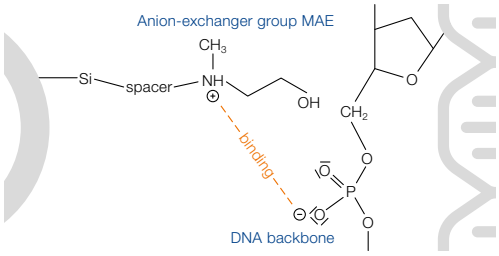
NucleoBond® principle

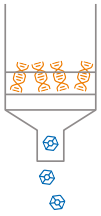


Binding

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

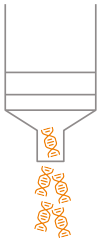
Interaction between positively charged anion exchanger group and negatively charged DNA backbone





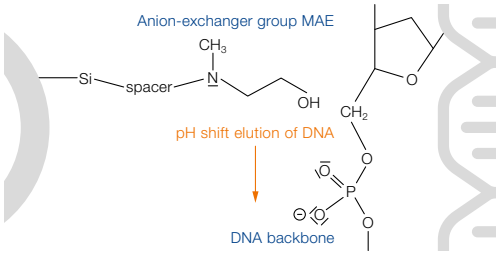
Washing

Stringent washing with increasing salt concentration to remove contaminants



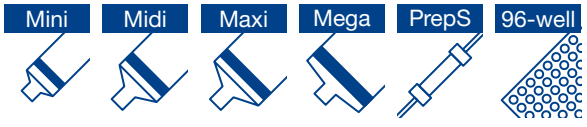
Elution

DNA is eluted with high pH buffer



Exemplary presentation of NucleoBond® Xtra resin.

Available formats



DNA, contaminants

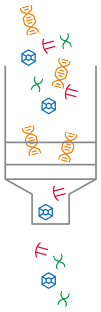
NucleoSnap® technology

Vacuum processing of large sample volumes

Features

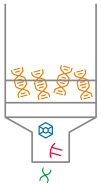
- Chaotropic salt supported precipitation and filtration
- Snap off column design to process large sample volumes easily

NucleoSnap® principle



Binding

DNA is precipitated on the silica membrane under high salt conditions



Washing

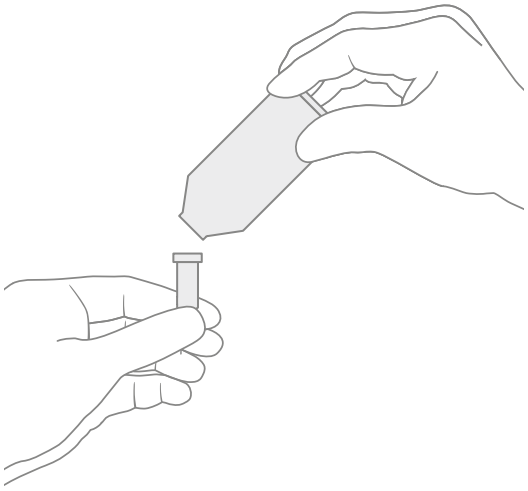
Contaminants are washed away under high salt and / or ethanolic conditions to keep the DNA / RNA on the membrane

Elution

The funnel part is snapped off from the Mini spin column

DNA is resuspended and eluted with low salt buffer or water

DNA is ready to use for downstream applications

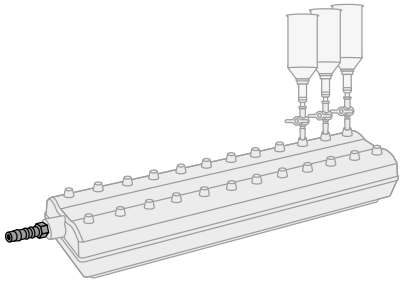


Available format

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



DNA, contaminants

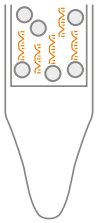
NucleoTrap® technology

Nucleic acid purification with bead suspension

Features

- Efficient high salt washing steps to remove contaminants
- Ready to use poly(A) mRNA

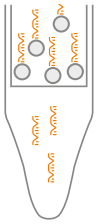
NucleoTrap® mRNA principle



Binding

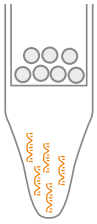
Poly(A) mRNA is hybridized under high salt conditions on oligo(dT) latex beads

Poly(A) RNA binding to latex bead



Washing

Contaminants are washed away under high salt conditions



Elution

Poly(A) mRNA is eluted with water at elevated temperature

Available format

Susp

RNA, beads

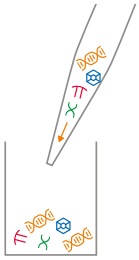
NucleoFast® technology

Easy DNA clean up with ultrafiltration

Features

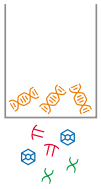
- Retention of DNA fragments > 150 bp by filtration
- Contaminants are filtered to waste
- Recovery of DNA from the membrane

NucleoFast® principle



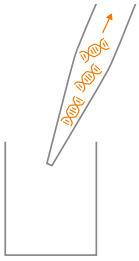
Loading

Sample is loaded directly onto the NucleoFast® Filter



Filtration

Sample is collected on the surface of the ultrafiltration membrane while contaminants are filtered to waste



Recovery

Purified DNA is recovered from the membrane after addition of water or buffer and a short incubation

DNA is ready to use for downstream applications

Available format

DNA, contaminants

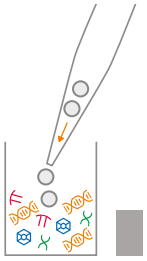
NucleoMag® technology

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

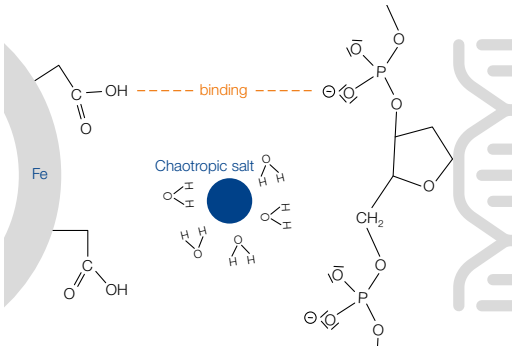
NucleoMag® principle

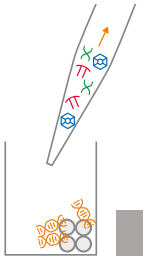


Binding

NucleoMag® Beads and binding buffer are added to the sample

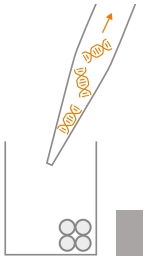
DNA / RNA is bound to the NucleoMag® Beads





Washing

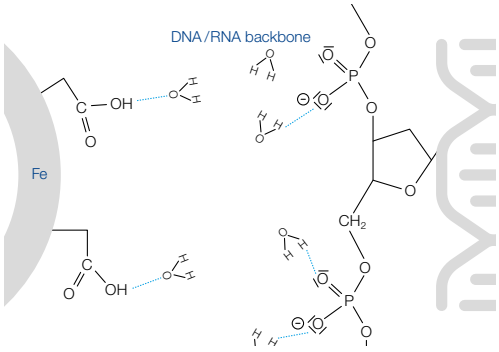
Beads are held in the well by the magnet while contaminants are washed away



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

Mag

DNA / RNA, contaminants, magnetic beads, magnet

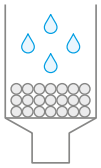
NucleoSEQ® technology

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

DNA, dyes

Protino® technology

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

Features

- Highest protein yield and high purity
- 6 % beaded agarose (crosslinked), precharged with Ni^{2+}
- Ready to use and cost saving

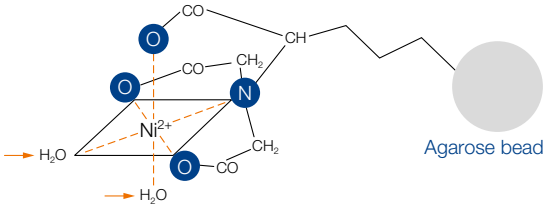
Protino® Ni-NTA principle

Binding

Interaction between the His-tag of the recombinant protein and immobilized Ni^{2+} ions

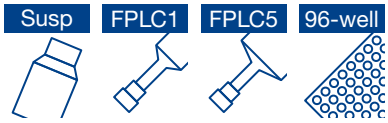
Elution

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



Two binding sites for His-tag

Available formats



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

Features

- Highest purity of isolated protein
- Macroporous silica with immobilized Ni^{2+}
- Dry material for fast and easy handling

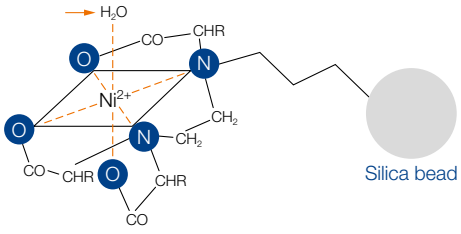
Protino® Ni-TED principle

Binding

Interaction between the His-tag of the recombinant protein and immobilized Ni^{2+} ions

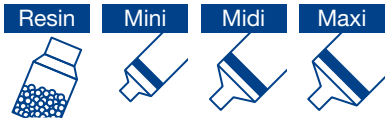
Elution

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



One binding site for His-tag

Available formats



Protino® technology

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

Features

- High protein yield and high purity
- Macroporous silica with immobilized Ni^{2+}
- Storage at room temperature

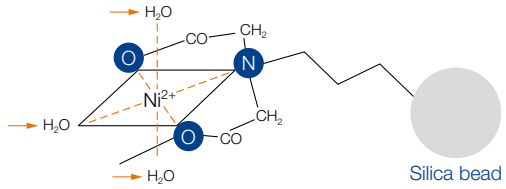
Protino® Ni-IDA principle

Binding

Interaction between the His-tag of the recombinant protein and immobilized Ni^{2+} ions

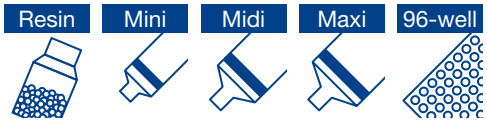
Elution

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



Three binding sites for His-tag

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

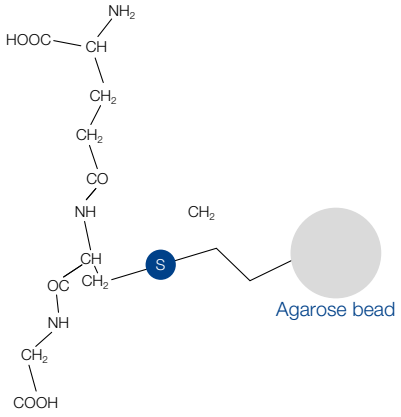
Protino® Glutathione Agarose 4B principle

Binding

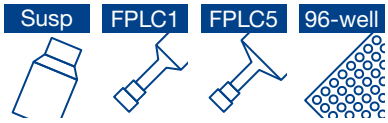
Interaction between the GST-tag of the recombinant protein and immobilized glutathione

Elution

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



Available formats



Plasmid DNA

Molecular biology-grade plasmid DNA

NucleoSpin® Plasmid

Rapid preparation of plasmid DNA from low to high throughput

Features

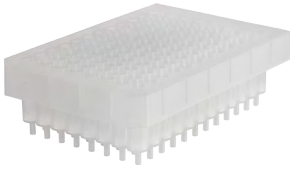
- High capacity – up to 50 µg of plasmid DNA
- Flexible solutions for full automation available
- Optional washing step for highest plasmid DNA quality

Available formats

Mini column

Mini column (NoLid)

8-well strip



96-well plate

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	740625.1 / .4
NucleoSpin® 96 Plasmid Core Kit**	4 x 96	740616.4
Related products	**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
NucleoSpin® Plasmid (NoLid)

Mini

- Processing: Manual (centrifugation or vacuum)
- Sample material: 2–5 mL (high-copy plasmid), 5–10 mL (low-copy plasmid)
- Vector size: < 25 kbp
- Typical yield: 25–45 µg
- Elution volume: 50 µL
- Binding capacity: 50 µg
- Processing time: 25 min/6 preps

NucleoSpin® 8 Plasmid

8-well

- Processing: Manual or automated
- Sample material: 1–5 mL
- Vector size: < 15 kbp
- Typical yield: 5–20 µg
- Elution volume: 75–150 µL
- Binding capacity: 20 µg
- Processing time: 45 min/48 preps

NucleoSpin® 96 Plasmid

96-well

- Processing: Manual or automated
- Sample material: 1–5 mL
- Vector size: < 15 kbp
- Typical yield: 5–20 µg
- Elution volume: 75–150 µL
- Binding capacity: 20 µg
- Processing time: 45 min/96 preps

Starter Set C
and other equipment

▶ See page 110

* 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.

NucleoSpin® Plasmid EasyPure

Ultrafast and ease of use small scale preparation of plasmid DNA

Features

- Only one combined washing and drying step enables time saving procedure
- Liquid RNase A – easy handling without dissolving
- LyseControl for visualization of completed alkaline lysis

Available format

Mini column

Applications

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

Specifications

- Technology: Silica membrane technology

NucleoSpin® Plasmid EasyPure — Mini

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

Ordering information

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

Molecular biology-grade plasmid DNA

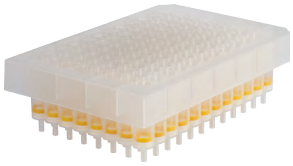
NucleoSpin® 96 Flash

High throughput purification of small and large constructs

Features

- Cost-efficient solution for plasmid DNA isolation
- Protocol for large, low-copy constructs available

Available format



96-well plate

Ordering information

Product	Preps	REF
NucleoSpin® 96 Flash	2 x 96 / 4 x 96	740618.2 / .4

NucleoVac 96 Vacuum Manifold and other equipment

▶ See page 111

Applications

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

Specifications

- Technology: Alkaline lysis with subsequent filtration and precipitation

NucleoSpin® 96 Flash

96-well

- Endotoxin level: >> 50 EU/µg DNA
- Processing: Manual or automated
- Sample material: 1.1–1.3 mL (high-copy plasmid), 1.1–3.9 mL (low-copy plasmid)
- Vector size: < 250 kbp
- Typical yield: 8 µg (1.3 mL high-copy plasmid), 1 µg (1.3 mL low-copy plasmid)
- Processing time: 90 min/184 preps

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 (patent pending)
- Purification of transfection-grade DNA in mini-format simplifies your work-flow
- 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	740491.1 / .4
NucleoSpin® 96 Plasmid Transfection-grade Core Kit	4 x 96	740492.4

NucleoVac Vacuum Regulator and other equipment

See page 111

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: < 5 mL
- Vector size: < 15 kbp

NucleoSpin® Plasmid Transfection-grade Mini

- Typical yield: 15–30 µg
- Elution volume: 30–50 µL
- Binding capacity: 35 µg
- Processing time: 14 min/6 preps

NucleoSpin® 96 Plasmid Transfection-grade 96-well

- Processing: Manual or automated
- Typical yield: 5–20 µg
- Elution volume: 100–200 µL
- Binding capacity: 20 µg
- Processing time: 45 min/96 preps

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 700 µg plasmid DNA in only 35 minutes
- No need for time consuming DNA precipitation

Available format

Snap column

Applications

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

Specifications

- Technology: Precipitation and filtration

NucleoSnap® Plasmid Midi Snap

- Processing: Vacuum processing, centrifugation for elution
- Endotoxin level: < 50 EU/µg DNA
- Sample material: ≤ 50 mL
- Vector size: < 25 kbp
- Typical yield: 400–700 µg
- Elution volume: 200–500 µL
- Binding capacity: 1.5 mg
- Processing time: 35 min/6 preps

Ordering information

Product	Preps	REF
NucleoSnap® Plasmid Midi	10 / 50	740494.10 / .50
Related products	**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 116

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 29, 30, 31)

Available formats

Midi column Maxi column

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® Xtra Midi Midi

- Sample material: < 200 mL (high-copy plasmid), < 400 mL (low-copy plasmid)
- Typical yield: 400 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
- Processing time: 75 min/prep (NucleoBond® Xtra Maxi), 35 min/prep (NucleoBond® Xtra Maxi Plus, incl. NucleoBond® Finalizer Large)

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 products	**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

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

Transfection-grade plasmid DNA

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 29, 30, 31)
- Separate kit components available: NucleoBond® AX Columns, RNase, and buffers

Available formats

Mini column | Midi column | Maxi column | Mega column | Giga column

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 products	**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
- Binding capacity: 20 µg

NucleoBond® PC 100 — Midi

- Sample material: 5–30 mL (high-copy plasmid), 10–100 mL (low-copy plasmid)
- Typical yield: 20–100 µg
- Binding capacity: 100 µg

NucleoBond® PC 500 — Maxi

- Sample material: 30–150 mL (high-copy plasmid), 100–500 mL (low-copy plasmid)
- Typical yield: 400–500 µg
- Binding capacity: 500 µg

NucleoBond® PC 2000 — Mega

- Sample material: 150–500 mL (high-copy plasmid), 500–2000 mL (low-copy plasmid)
- Typical yield: 500–2000 µg
- Binding capacity: 2000 µg

NucleoBond® PC 10000 — Giga

- Sample material: 500–2000 mL (high-copy plasmid), 1–4 L (low-copy plasmid)
- Typical yield: 2000–10000 µg

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

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 products	**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

Maxi

- Endotoxin level: 1–10 EU/µg DNA
- Sample material: 250–750 mL
- Vector size: < 300 kbp
- Typical yield: 10–150 µg
- Binding capacity: 150 µg
- Processing time: 75 min/2–4 preps

Transfection-grade plasmid DNA

NucleoBond® BAC 100

1st generation anion exchange technology for large construct plasmid DNA

Features

- Suitable for constructs up to 300 kbp
- Optimized lysis buffer volumes for large bacterial cultures
- NucleoBond® Folded Filters included for gentle lysate clarification without shearing of large constructs

Available format

Maxi column

Applications

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

Specifications

- Technology: Anion exchange chromatography, gravity flow columns

NucleoBond® BAC 100 Maxi

- Endotoxin level: 1–10 EU/µg DNA
- Sample material: 100–500 mL
- Vector size: < 300 kbp
- Typical yield: 10–100 µg
- Binding capacity: 100 µg
- Processing time: 120 min/2–4preps

Ordering information

Product	Preps	REF
NucleoBond® BAC 100	10	740579
Related products	**Pack of**	**REF**
NucleoBond® Buffer Set I (for isolation of low-copy plasmids)	1	740601
NucleoBond® Xtra Combi Rack	1	740415
NucleoBond® Smart Rack	1	740413

NucleoBond® Xtra EF

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

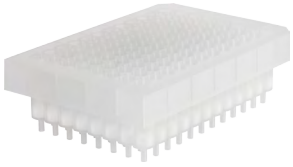
Features

- 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 – no extra ice incubation necessary
- 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 products	**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-copy and low-copy plasmid DNA purification from *E. coli* culture

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Processing: Manual
- Endotoxin level: < 0.05 EU/µg DNA

NucleoBond® Xtra Midi EF

Midi

- Plasmid type: High-, low-copy*
- Sample material: < 200 mL (high-copy plasmid), < 400 mL (low-copy plasmid)
- Vector size: < 300 kbp
- Typical yield: 400 µg
- Processing time: 85 min/prep, 45 min/prep (NucleoBond® Xtra Midi Plus EF)

NucleoBond® Xtra Maxi EF

Maxi

- Plasmid type: High-, low-copy*
- Sample material: < 600 mL (high-copy), < 1200 mL (low-copy)
- Vector size: < 300 kbp
- Typical yield: 1000 µg
- Processing time: 90 min/prep, 50 min/prep (NucleoBond® Xtra Maxi Plus EF)

NucleoBond® 96 Xtra EF

96-well

- Processing: Manual or automated
- Sample material: 1–5 mL
- Plasmid type: High-copy
- Vector size: < 15 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)
- Elution volume: 100–200 µL
- Binding capacity: 50 µg
- Processing time: 120 min/96 preps

NucleoVac 96 Vacuum Manifold and other equipment

▶ See page 111

* 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 29, 30, 31)
- Separate kit components available: NucleoBond® AX Columns, RNase, and buffers

Available formats

Maxi column | Mega column | Giga column | Preparative scale

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 products	**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

Applications

- High-copy 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 — Maxi
- Sample material: 30–150 mL
- Typical yield: 100–500 µg
- Processing time: 100 min/2 preps

NucleoBond® PC 2000 EF — Mega
- Sample material: 150–500 mL
- Typical yield: 500–2000 µg
- Processing time: 150 min/2 preps

NucleoBond® PC 10000 EF — Giga
- Sample material: 500–2000 mL
- Typical yield: 2000–10000 µg
- Processing time: 180 min/2 preps

NucleoBond® PC Prep 100 — PrepS
- Sample material: 5–20 L
- Typical yield: 80–100 mg
- Processing time: 2 h/prep

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

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
- Binding capacity: 1.5 mg
- Processing time: < 10 min/12 preps

NucleoSnap® Finisher Midi Snap

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

NucleoSnap® Finisher Maxi Snap

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

Ordering information

Product	Preps	REF
NucleoSnap® Finisher Midi	10 / 50	740434.10 / .50
NucleoSnap® Finisher Maxi	10 / 50	740435.10 / .50

Related products	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 116

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
- Binding capacity: 1.5 mg
- Processing time: 15 min/6 preps

NucleoSpin® Finisher Midi

Funnel

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

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 site: 2–50 kbp
- Typical recovery: 40–90 %
- Processing time: 5 min/prep
- Residual chloride concentration: < 0.3 µg/µL

NucleoBond® Finalizer — Filter

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

NucleoBond® Finalizer Large — Filter

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

Clean-up

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

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
Related products	**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

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)
- Fragment size: 50 bp–approx. 20 kbp
- Typical recovery: 70–95 %
- A_{260}/A_{280}: 1.8–1.9
- Elution volume: 15–30 µL
- 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)
- Fragment size: 50 bp–approx. 20 kbp
- Typical recovery: 70–95 %
- A_{260}/A_{280}: 1.75–1.85
- Elution volume: 200–400 µL
- Binding capacity: 75 µg
- Processing time: 25 min/6 preps

NucleoSpin® 8 / 96 PCR Clean-up

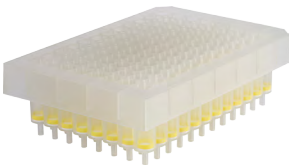
Time saving medium to high throughput PCR clean up

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
- Binding capacity: 15 µg

NucleoSpin® 8 PCR Clean-up 8-well
- Processing time: 30 min/48 preps

NucleoSpin® 96 PCR Clean-up 96-well
- Processing time: 45 min/96 preps

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 111

* 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 %
- A_{260}/A_{280}: 1.7–1.8
- Recovery volume: 25–100 µL
- Processing time: 20 min/96 preps (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 110

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

NucleoMag® SEP and other accessories

See page 112

Applications

- Manual or automated PCR clean up

Specifications

- Technology: Magnetic bead technology

NucleoMag® PCR

Mag

- Processing: Manual or automated
- Sample material: PCR reaction mixture (< 50 µL)
- Fragment size: 150 bp–approx. 10 kbp
- Typical recovery: 80–95 %
- A_{260}/A_{280}: 1.7–1.9
- Elution volume: 25–100 µL
- Binding capacity: 0.3 µg/µL beads
- Processing time: 30–45 min/96 preps*

* Established on KingFisher® Flex

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 XS

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

NucleoSpin® gDNA Clean-up Mini

- Sample material: Aqueous DNA solution (< 150 µL incl. < 25 µg DNA)
- Typical recovery: 80–90 %
- Elution volume: 50–100 µL
- Binding capacity: 50 µg
- Processing time: 10 min/6 preps

NucleoSpin® RNA Clean-up

Highly efficient clean up and concentration of RNA samples

Features

- Complete 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

Available formats

XS column

Mini column

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

Applications

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

Specifications

- Technology: Silica membrane technology
- Fragment size: > 200 bp
- A_{260}/A_{280}: 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
- 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 (< 10^5)
- Typical recovery: 85–95 %
- Elution volume: 40–120 µL
- Binding capacity: 200 µg
- Processing time: 20 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 formats

Mini column

Ordering information

Product	Preps	REF
NucleoSEQ®	10 / 50 / 250	740523.10 / .50 / .250
Related product	**Pack of**	**REF**
Receiver Columns 20 µm	10 / 50 / 250	740522.10 / .50 / .250

Applications

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

Specifications

- Technology: Gel filtration

NucleoSEQ®

Mini

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

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

NucleoMag® SEP
and other accessories

See page 112

Applications

- Clean up / size selection of NGS library preparation reactions

Specifications

- Technology: Magnetic bead technology

NucleoMag® NGS Clean-up and Size Select

Mag

- Processing: Manual or automated
- Sample material: Reaction mixtures from NGS library kits
- Amount of sample material: 7.5 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

RNA

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 ß-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

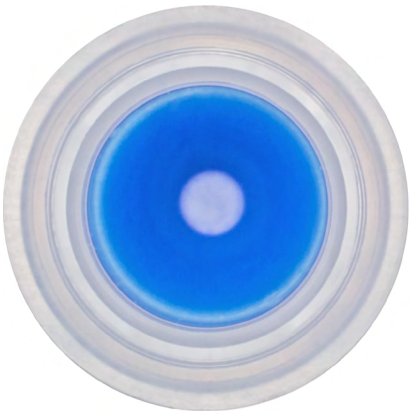
XS

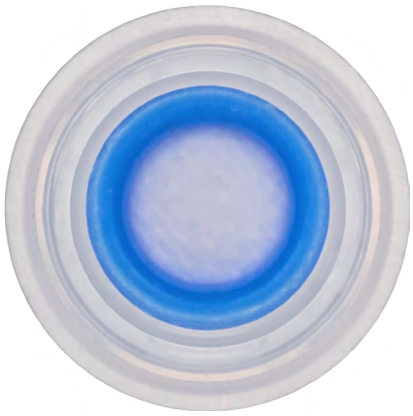
- Sample material: Cultured cells (1–10^5), human / animal tissue (< 5 mg)
- Fragment size: > 100 nt
- Typical yield: HeLa cells (10^1): 0.05–0.02 ng, HeLa cells (10^5): 0.5–2.0 µg, mouse liver (0,5 µg): 2.5–8 ng, mouse brain (0.5 µg): 0.1–0.5 ng
- Elution volume: 5–30 µL
- Binding capacity: 110 µg
- Processing time: 18 min/6 preps

NucleoSpin® RNA Plus

Mini

- 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 µg
- Elution volume: 30–120 µL
- Binding capacity: 200 µg
- Processing time: 20 min/6 preps





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

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

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 110

Applications

- RNA isolation from cultured / bacterial / yeast cells, human / animal tissue, biological fluids, samples stored in RNA*later*®, 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 — XS

- Processing: Centrifugation
- Sample material: Cultured cells (1–10^5), human / animal tissue (< 5 mg)
- Typical yield: HeLa cells (10^2): 0.1–1.5 ng, HeLa cells (10^5): 1–1.5 µg
- Elution volume: 5–30 µL
- Binding capacity: 110 µg
- Processing time: 35 min/6 preps

NucleoSpin® RNA — Mini

- Processing: Centrifugation
- Sample material: Cultured cells (< 5 x 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
- Binding capacity: 200 µg
- Processing time: 35 min/6 preps

NucleoSpin® RNA Midi — Midi

- Processing: Centrifugation
- Sample material: Cultured cells (< 5 x 10^7), bacterial cells (< 10^{10}), yeast cells (< 3 x 10^8), human / animal tissue (< 20 mg)
- Typical yield: 180 µg (10^7 HeLa cells), HeLa cells (4 x 10^7): 620 µg
- Elution volume: 500–1000 µL
- Binding capacity: 700 µg
- Processing time: 80 min/4 preps

NucleoSpin® 8 RNA — 8-well

- Processing: Manual or automated
- Sample material: Cultured cells (< 2 x 10^6), human / animal tissue (< 20 mg)
- Typical yield: 20 µg
- Elution volume: 50–130 µL
- Binding capacity: 100 µg
- Processing time: 45 min/48 preps

NucleoSpin® 96 RNA — 96-well

- Processing: Manual or automated
- Sample material: Cultured cells (< 2 x 10^6), human / animal tissue (< 20 mg)
- Typical yield: 20 µg
- Elution volume: 50–130 µL
- Binding capacity: 100 µg
- Processing time: 70 min/96 preps

* 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	**Pack of**	**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

- Fragment size: 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: < 1 h

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 Mini

- Fragment size: Small RNA: 10–200 nt, large RNA: > 200 nt
- Typical recovery: 85–95 %
- Elution volume: 60 µL
- Binding capacity: 200 µg
- Processing time: < 1 h

* NucleoZOL is not included.

RNA from cells and tissue

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 products	**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 x 10^6), human / animal tissue (< 20 mg), bacterial / yeast cells (< 5 x 10^7)
- Typical yield: 30–70 µg
- Binding capacity: 80 µL

NucleoBond® RNA/DNA 400

Maxi

- Sample material: Cultured cells (< 2 x 10^7), human / animal tissue (< 100 mg), bacterial / yeast cells (< 2 x 10^9)
- Typical yield: 150–300 µg, bacterial cells (2 x 10^9): 200 µg
- Binding capacity: 400 µL

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

Square-well Blocks
and other consumables

See page 112

Applications

- RNA isolation from cultured / bacterial / yeast cells (< 2 x 10^6), human / animal tissue (< 20 mg)

Specifications

- Technology: Magnetic bead technology

NucleoMag® RNA

Mag

- Processing: Manual or automated
- Sample material: Cells (< 2 x 10^6), tissue (< 20 mg)
- Fragment size: < 200 kbp
- Typical yield: < 30 µg
- Elution volume: 50–200 µL
- Binding capacity: 0.3 µg/µL beads
- Processing time: 60 min/96 preps*

* Established on KingFisher® Flex.

MicroRNA

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

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 µL)
- Fragment size: ≥ 18 nt
- Typical yield: HeLa cells (10^7): 10 µg small RNA, 95 µg large RNA
- Elution volume: 30–100 µL
- Binding capacity: 200 µg
- Processing time: < 45 min/6 preps total RNA)

Ordering information

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

NucleoSpin® miRNA Plasma

Isolation of RNA including circulating miRNA from blood plasma and serum

Features

- Processing of up to 900 µL sample volume possible
- Optional on-column DNA digest for increased sensitivity in down-stream applications
- Simple and fast procedure without phenol / chloroform

Available format

Mini column

Ordering information

Product	Preps	REF
NucleoSpin® miRNA Plasma	10 / 50 / 250	740981.10 / .50 / .250
Related products	**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

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
- Binding capacity: 200 µg
- Processing time: 40 min/10 preps (without rDNase digestion), 70 min/10 preps (with rDNase digestion)

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

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

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)

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 56)
- 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 x 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 µg, DNA: < 6 µg, protein: < 1200 µg
- A_{260}/A_{280}: RNA: 1.9–2.1, DNA: 1.7–1.9
- Elution volume: RNA: 40–120 µL, DNA: 100 µL, protein: 10–100 µL
- Binding capacity: RNA: 200 µg, DNA: 10 µg*
- Processing time: RNA: 30 min/6 preps, RNA + DNA: 45 min/6 preps, RNA + DNA + protein: 35 min/6 preps

* Binding capacity of DNA < 10 µg, strongly depending on RNA amount bound to the membrane.

RNA, DNA, and protein isolation

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 56)
- 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 x 10^6), human / animal tissue (< 30 mg), plant tissue (< 100 mg)
- Fragment size: RNA: > 200 nt, protein: 15–300 kDa
- Typical yield: RNA: < 70 µg, protein: < 1200 µg
- A_{260}/A_{280}: RNA: 1.9–2.1
- Elution volume: RNA: 40–120 µL, protein: 10–100 µL
- Binding capacity: RNA: 200 µg
- Processing time: RNA: 30 min/6 preps, RNA + 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 and Fungi, NucleoSpin® RNA/Protein)

NucleoSpin® RNA/DNA Buffer Set

Buffer

- DNA fragment size: < 30 kbp
- Typical DNA yield: HeLa cells (10^6): 5 µg, pig liver (30 mg): 16 µg, Maize leaf (100 mg): 5 µg
- A_{260}/A_{280}: 1.7–2.0
- DNA Elution volume: 100 µL
- RNA yield and purity: Identical to used NucleoSpin® RNA kit

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

Ordering information

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

Applications

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

Protein Quantification Assay

Reag

- Sample size: < 600 µL containing 0.6–200 µg protein (BSA equivalents)
- Protein concentration: 10–20000 ng/µL
- 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

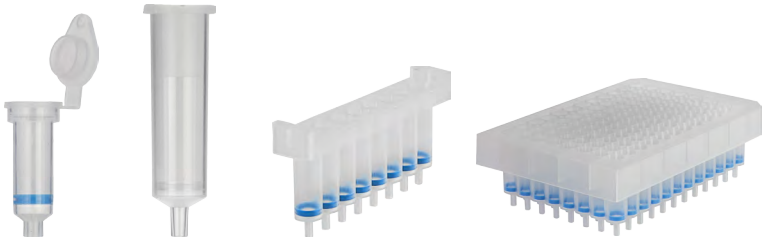
NucleoSpin® RNA Blood

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

NucleoVac Vacuum Regulator and other equipment

See page 111

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 µL blood
- Typical yield: Blood (400 µL): 1–8 µg*
- Elution volume: 40–120 µL
- Binding capacity: 200 µg
- Processing time: 55 min/6 preps

NucleoSpin® RNA Blood Midi — Midi

- Processing: Centrifugation
- Sample material: 400–1300 µL blood
- Typical yield: Blood (1300 µL): 4–26 µg*
- Elution volume: 200–400 µL
- Binding capacity: 700 µg
- Processing time: 75 min/6 preps

NucleoSpin® 8 RNA Blood — 8-well

- Processing: Manual or automated
- Sample material: < 400 µL blood
- Typical yield: Blood (400 µL): 1–8 µg*
- Elution volume: 50–130 µL
- Binding capacity: 100 µg
- Processing time: 60 min/48 preps

NucleoSpin® 96 RNA Blood — 96-well

- Processing: Manual or automated
- Sample material: < 400 µL blood
- Typical yield: Blood (400 µL): 1–8 µg*
- Elution volume: 50–130 µL
- Binding capacity: 100 µg
- Processing time: 100 min/96 preps

* 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
- Complete removal of crosslinks
- rDNase included – efficient on-column DNA removal
- XS kit available for minute sample amounts

Available formats

XS column Mini column

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

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
- Binding capacity: 100 µg

NucleoSpin® totalRNA FFPE Mini

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

RNA from plant and fungi

NucleoSpin® RNA Plant and Fungi

Isolation of RNA from all kinds of 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 (< 100 mg)
- Filamentous fungi

Specifications

- Technology: Silica membrane technology

NucleoSpin® RNA Plant and Fungi Mini

- Sample material: < 500 mg plant / fungal material
- Fragment size: > 200 nt
- Typical yield: 20–70 µg
- A_{260}/A_{280}: 1.9–2.1
- Elution volume: 50 µL
- 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 products	**Preps**	**REF**
NucleoSpin® Bead Tubes Type G	50	740817.50

ENR

RNA from soil

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

Midi column

Applications

- RNA and DNA* from soil for metagenomic analysis

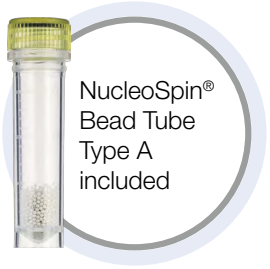
Specifications

- Technology: Anion exchange chromatography, gravity flow columns combined with NucleoSpin® Bead Tubes Type A**

NucleoBond® RNA Soil

Midi

- Sample material: < 2 g of soil
- Fragment size: > 100 nt
- Typical yield: 1–10 µg
- A_{260}/A_{280}: 1.7–2.1
- RIN: > 8.5
- Elution volume: 100 µL
- Binding capacity: 600 µg
- Processing time: 60 min/6 preps



Ordering information

Product	Preps	REF
NucleoBond® RNA Soil	20	740140.20
Related products		
DNA Set for NucleoBond® RNA Soil	20	740141.20
NucleoSpin® Bead Tubes Type A	50	740786.50
MN Bead Tube Holder	1	740469

* For isolation of DNA, DNA Set for NucleoBond® RNA Soil is required.
** For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.

Total RNA from 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 products		
NucleoZOL	200 mL	740404.200
NucleoSpin® Bead Tubes Type A	50	740786.50
MN Bead Tube Holder	1	740469

Applications

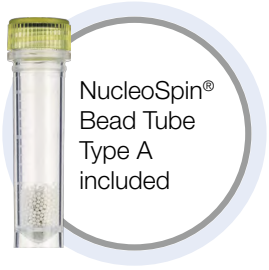
- Total RNA from stool samples for metagenomic analysis

Specifications

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

NucleoSpin® RNA Stool Kit Mini

- Sample material: Fresh or frozen stool samples
- Fragment size: ≥ 18 nt
- Typical yield: 10–30 µg
- A_{260}/A_{280}: 1.9–2.1
- RIN: > 7.5
- Elution volume: 100 µL
- Binding capacity: 200 µg
- Processing time: 70 min/10 preps



* For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.

Poly(A) mRNA isolation from total RNA

NucleoTrap® mRNA

Purification of poly(A) mRNA from total RNA in 30 min only

Features

- Convenient processing by microcentrifugation using NucleoTrap® Microfilters
- Direct mRNA isolation from cells
- High quality poly(A) mRNA without degradation and DNA contamination

Available format

Mini column

Ordering information

Product	Preps	REF
NucleoTrap® mRNA Mini	12	740655
NucleoTrap® mRNA Midi	12	740656

Applications

- Poly(A) mRNA isolation from total RNA
- Clean up of *in-vitro* transcripts
- Direct purification of poly(A) mRNA from cells

Specifications

- Technology: Affinity chromatography
- Format: Oligo(dT) latex bead suspension
- Fragment size: 50 nt–20 knt
- A_{260}/A_{280}: 1.9–2.1
- Elution volume: 10–20 µL
- Binding capacity: 0.25 µg poly(A) mRNA/µL oligo(dT) latex bead suspension
- Processing time: 30 min/6 preps

NucleoTrap® mRNA Mini — Mini

- Sample material: < 250 µg total RNA
- Typical yield: 10 µg mRNA

NucleoTrap® mRNA Midi — Mini

- Sample material: < 1000 µg total RNA
- Typical yield: 40 µg mRNA

DNA

DNA from blood and biological fluids

NucleoSpin® Blood

For versatile purification of high quality DNA from blood

Features

- Complete 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	740954.20
NucleoSpin® Blood XL	10 / 50	740950.10 / .50
NucleoSpin® 8 Blood	12 x 8 / 60 x 8	740664 / .5
NucleoSpin® 8 Blood Core Kit**	48 x 8	740455.4
NucleoSpin® 96 Blood	1 x 96 / 4 x 96	740665.1 / .4
NucleoSpin® 96 Blood Core Kit**	4 x 96	740456.4

NucleoVac 96 Vacuum Manifold and other equipment

▶ See page 111

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 — Mini

- Processing: Centrifugation
- Sample material: Blood (5–200 µL), human / animal cells (< 5 x 10^6)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 4–6 µg (200 µL blood)
- Elution volume: 60–200 µL
- Binding capacity: 60 µg
- Processing time: 30 min/prep

NucleoSpin® Blood L — Midi

- Processing: Centrifugation*
- Sample material: Blood (0.2–2 mL), human / animal cells (2 x 10^7)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 40–60 µg (2 mL blood)
- Elution volume: 120–200 µL
- Binding capacity: 250 µg
- Processing time: 60 min/prep

NucleoSpin® Blood XL — Maxi

- Processing: Centrifugation*
- Sample material: Blood (2–10 mL), human / animal cells (10^8)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 200–300 µg (10 mL blood)
- Elution volume: 600–2000 µL
- Binding capacity: 700 µg
- Processing time: 60 min/prep

NucleoSpin® 8 Blood — 8-well

- Processing: Manual or automated
- Sample material: Blood (< 200 µL), human / animal cells (2 x 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 4–6 µg
- Elution volume: 100 µL
- Binding capacity: 20 µg
- Processing time: 35 min/48 preps

NucleoSpin® 96 Blood — 96-well

- Processing: Manual or automated
- Sample material: Blood (< 200 µL), human / animal cells (2 x 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 4–6 µg
- Elution volume: 100 µL
- Binding capacity: 20 µg
- Processing time: 70 min/96 preps

* Centrifugation with a swing-out rotor.
** Kits with basic content focusing on automatic platforms. Additional accessories can be combined as needed.

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*
- All purpose effectiveness compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin)
- 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

Mini

- Sample material: 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

* 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
- Complete 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

Midi

- Processing: Vacuum
- Sample material: Blood (1–2 mL)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 50–80 µg (2 mL blood)
- Elution volume: 2 x 300 µL
- Binding capacity: 250 µg
- Processing time: 75 min/24 preps

Ordering information

Product	Preps	REF
NucleoSpin® Blood L Vacuum	24	740954.24
Related products	**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 111

NucleoSpin® Blood QuickPure

For ultrafast purification of highly concentrated DNA from blood

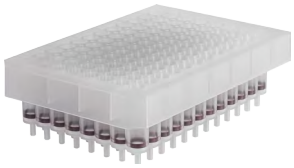
Features

- 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

Starter Set C
and other equipment

See page 110

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 (5–200 µL), human / animal cells (5 x 10^6)
- Fragment size: 200 bp–approx. 50 kbp
- Elution volume: 30–50 µL
- Binding capacity: 50 µg
- Processing time: 25 min/prep

NucleoSpin® 8 Blood QuickPure — 8-well

- Processing: Centrifugation
- Sample material: Blood (< 300 µL)*, human / animal cells (5 x 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 75–100 µL
- Binding capacity: 60 µg
- Processing time: 60 min/96 preps

NucleoSpin® 96 Blood QuickPure — 96-well

- Processing: Centrifugation
- Sample material: Blood (< 300 µL)*, human / animal cells (5 x 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Elution volume: 75–100 µL
- Binding capacity: 60 µg
- Processing time: 60 min/184 preps

* 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

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 products	**Pack of**	**REF**
NucleoBond® Rack Small	1	740562
NucleoBond® Rack Large	1	740563

Applications

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

Specifications

- Technology: Anion exchange chromatography
- Fragment size: 500 bp–300 kbp
- Processing time: 4–5 h

NucleoBond® CB 20

Mini

- Sample material: Blood (0.1–1 mL), buffy coat (< 50 µL), cultured cells (5 x 10^6)
- Typical yield: 20 µg
- Binding capacity: 20 µg

NucleoBond® CB 100

Midi

- Sample material: Blood (2–5 mL), buffy coat (< 250 µL), cultured cells (2 x 10^7)
- Typical yield: 100 µg
- Binding capacity: 100 µg

NucleoBond® CB 500

Maxi

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

NucleoMag® Blood

Magnetic bead based isolation of genomic DNA from whole blood

Features

- Minimal sized beads for prolonged optimized binding and sedimentation
- 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

Applications

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

Specifications

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

NucleoMag® Blood 200 µL Mag

- Processing: Manual or automated
- Sample material: Blood (< 200 µL)
- Typical yield: 2–8 µg (200 µL blood)
- Elution volume: 50–100 µL
- Processing time: 45 min/96 preps*

NucleoMag® Blood 3 mL Mag

- 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*

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

NucleoMag® SEP
and other accessories

See page 112

* Established on KingFisher® Flex.

Circulating DNA from plasma

NucleoSpin® DNA Plasma

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

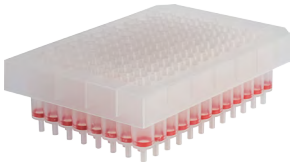
Features

- 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® Plasma XS	10 / 50 / 250	740900.10 / .50 / .250
NucleoSpin® DNA Plasma Midi	48	740303.48
NucleoSpin® DNA Plasma Midi Core Kit*	48	740302.48
NucleoSpin® 96 DNA Plasma	1 x 96 / 4 x 96	740873.1 / .4
NucleoSpin® 96 DNA Plasma Core Kit*	1 x 96 / 4 x 96	740874.1 / .4
Related product	**Pack of**	**REF**
Starter Set Midi	1	740744

NucleoVac Vacuum Regulator and other equipment

▶ See page 111

Applications

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

Specifications

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

NucleoSpin® Plasma XS XS

- Processing: Centrifugation
- Sample size: Plasma / serum (< 240 µL)
- Elution volume: 5–30 µL
- Processing time: >20 min/6 preps (rapid procedure)

NucleoSpin® DNA Plasma Midi Midi

- Processing: Vacuum
- Sample size: Plasma (1–5 mL)
- Elution volume: 200 µL (140 µL final eluate volume)
- Processing time: 90 min/24 preps (EDTA plasma)

NucleoSpin® 96 DNA Plasma 96-well

- Processing: Manual or automated
- Sample size: Plasma (0.5–2 mL)
- Elution volume: 100 µL (70 µL final eluate volume)
- Processing time: 90 min/96 preps (EDTA plasma)

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

NucleoSnap® DNA Plasma

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

Applications

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

Specifications

- Technology: Precipitation and filtration

NucleoSnap® DNA Plasma Snap

- 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)

Ordering information

Product	Preps	REF
NucleoSnap® DNA Plasma	10 / 50	740300.10 / .50
Related products	**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

NucleoVac 24 Vacuum Manifold and other equipment

See page 116

* 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.

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

Square-well Blocks
and other consumables

See page 110

Applications

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

Specifications

- Technology: Silica membrane technology

NucleoSpin® DNA RapidLyse — Mini

- Processing: Centrifugation
- Sample material: Tissue (< 40 mg fresh weight)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: Up to 4 µg DNA/mg tissue
- Elution volume: 60–100 µL
- 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 (< 1 x 10^6)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: Up to 4 µg DNA/mg tissue
- Elution volume: 100 µL
- Binding capacity: 40 µg
- Processing time: 60 min/96 preps (excl. lysis)

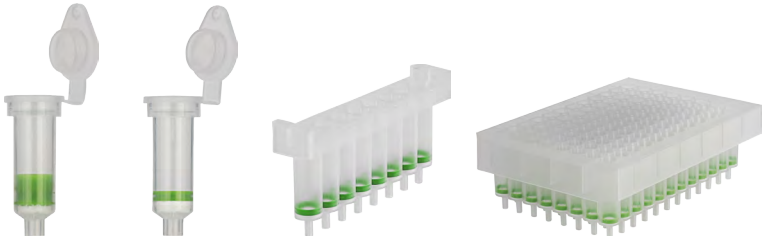
NucleoSpin® Tissue

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

Features

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

Available formats



XS column | Mini column | 8-well strip | 96-well plate

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	740741.2 / .4
NucleoSpin® 96 Tissue Core Kit*	4 x 96	740454.4

Starter Set C
and other equipment

See page 110

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 (< 10^4), Guthrie cards (5–30 mm^2)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: Depending on sample type and amount
- Elution volume: 5–30 µL
- Binding capacity: 50 µg
- Processing time: 40 min/prep (excl. lysis)

NucleoSpin® Tissue

Mini

- Processing: Centrifugation
- Sample material: Tissue (< 25 mg), cells (10^2–10^7)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: 20–35 mg
- Elution volume: 60–100 µL
- 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 (< 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 15–25 µg
- Elution volume: 100–200 µL
- Binding capacity: 40 µg
- Processing time: 20 min/48 preps (excl. lysis)

NucleoSpin® 96 Tissue

96-well

- Processing: Manual or automated
- Sample material: Tissue (< 20 mg), cells (< 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 15–25 µg
- Elution volume: 100–200 µL
- Binding capacity: 40 µg
- Processing time: 60 min/96 preps (excl. lysis)

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

NucleoBond® AXG

Anion exchanger columns for purification of DNA

Features

- Ultrapure genomic DNA from tissue, bacteria, or yeast
- Combine NucleoBond® AXG Columns and the corresponding buffer set for highest flexibility: NucleoBond® AXG Columns + NucleoBond® Buffer Set III – genomic DNA from bacteria and yeast*; NucleoBond® AXG Columns + NucleoBond® Buffer Set IV – genomic DNA from tissue

Available formats

Mini column Midi column Maxi column

Ordering information

Product	Pack of	REF
NucleoBond® AXG Columns (without buffers)		
NucleoBond® AXG 20	20	740544
NucleoBond® AXG 100	20	740545
NucleoBond® AXG 500	10	740546
NucleoBond® buffer sets		
NucleoBond® Buffer Set III (for isolation of genomic DNA from bacteria and yeast*)	1 set	740603
NucleoBond® Buffer Set IV (for isolation of genomic DNA from tissue)	1 set	740604

Applications

- DNA from bacteria, yeast, tissue

Specifications

- Technology: Anion exchange chromatography, gravity flow columns
- Fragment size: 500 bp–300 kbp
- Processing time: 4–5 h

NucleoBond® AXG 20 Mini

- Sample material: Bacterial culture (2–5 mL), yeast cells (< 10^9), tissue (< 20 mg)
- Typical yield: 20 µg
- Binding capacity: 20 µg

NucleoBond® AXG 100 Midi

- Sample material: Bacterial culture (15–20 mL), yeast cells (< 10^{10}), tissue (< 100 mg)
- Typical yield: 100 µg
- Binding capacity: 100 µg

NucleoBond® AXG 500 Maxi

- Sample material: Bacterial culture (60–80 mL), yeast cells (< 10^{11}), tissue (< 400 mg)
- Typical yield: 500 µg
- Binding capacity: 500 µg

* For isolation of genomic DNA from yeast, additional buffers are required. Please refer to the corresponding user manual.

NucleoMag® Tissue

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

Features

- Minimal sized beads for prolonged optimized binding and sedimentation
- 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

NucleoMag® SEP and other accessories

▶ See page 112

Applications

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

Specifications

- Technology: Magnetic bead technology

NucleoMag® Tissue

Mag

- Processing: Manual or automated
- Sample material: Tissue (< 20 mg), cells (< 10^6)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 10–20 µg (20 mg tissue)
- Elution volume: 50–200 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 30 min/96 preps (excl. lysis)*

* Established on KingFisher® Flex.

DNA from lipid rich tissue

NucleoSpin® DNA Lipid Tissue

Isolation of DNA from lipid rich tissue

Features

- Special buffer composition for complete removal of lipids
- NucleoSpin® 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**
NucleoSpin® Bead Tubes Type D	50	740814.50
MN Bead Tube Holder	1	740469

Applications

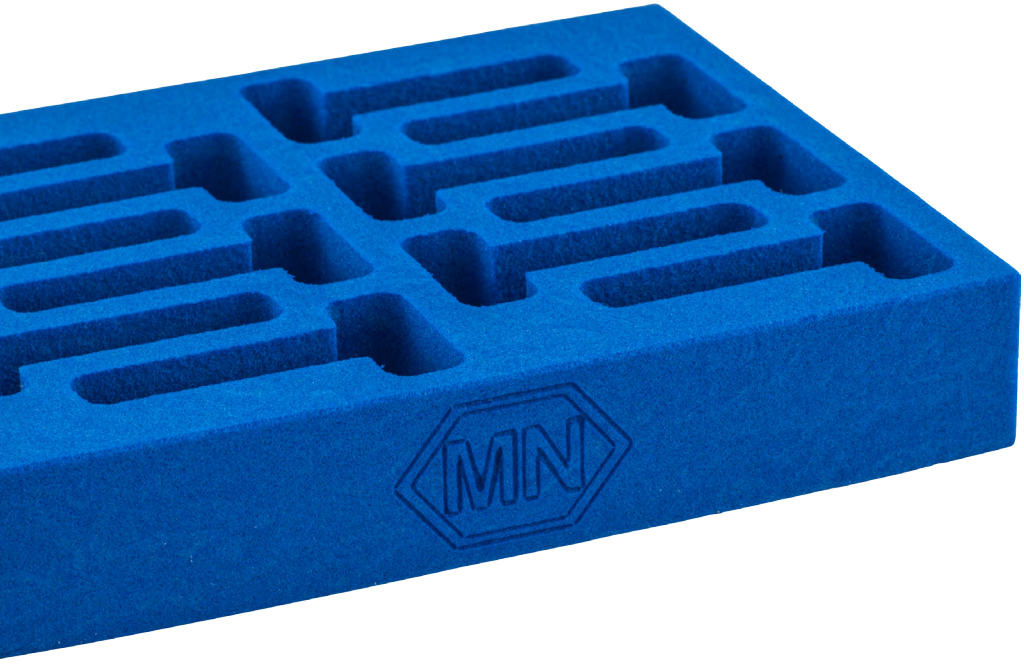
- Genomic DNA from fresh or frozen, lipid-rich tissue: brain, adipose tissue, fatty fish tissue

Specifications

- Technology: Silica membrane technology combined with NucleoSpin® 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
- Binding capacity: 60 µg
- Processing time: 35 min/6 preps



* For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.

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
- NucleoSpin® Bead Tubes for efficient lysis of an exoskeleton – 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**
NucleoSpin® 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 NucleoSpin® Bead Tubes Type D*

NucleoSpin® DNA Insect — Mini

- 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
- Binding capacity: 60 µg
- Processing time: 35 min/6 preps

* For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.

DNA from FFPE samples

NucleoSpin® DNA FFPE

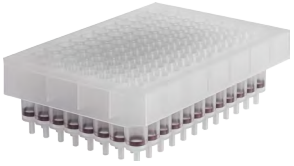
DNA recovery from formalin-fixed, paraffin-embedded samples

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

XS column



96-well plate

Ordering information

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

NucleoVac 96 Vacuum Manifold and other equipment

▶ See page 111

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*)
- Elution volume: 5–30 µL
- Binding capacity: 50 µg
- Processing time: 70 min/6 preps (excl. lysis)

NucleoSpin® 96 DNA FFPE 96-well

- Processing: Manual or automated
- Sample material: Tissue (< 10 mg), paraffin (< 15 mg)
- Fragment size: Up to 5 kbp
- Elution volume: 100 µL
- Binding capacity: 20 µg
- Processing time: 60 min/96 preps (excl. lysis)

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

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
- Minimal sized beads for prolonged optimized binding and sedimentation
- 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

Square-well Blocks
and other consumables

See page 112

Applications

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

Specifications

- Technology: Magnetic bead technology

NucleoMag® Tissue

Mag

- Processing: Manual or automated
- Sample material: Tissue (< 5 mg), paraffin (< 15 mg)
- Fragment size: 50 bp–5 kbp
- Typical yield and quality: Strongly depending on sample amount and quality
- Elution volume: > 25 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 30 min/96 preps (excl. lysis)*

* Established on KingFisher® Flex.

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

Applications

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

Specifications

- Technology: Semi-permeable basket

NucleoSpin® Forensic Filters Mini

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

Certified forensic quality MN ISO 18385

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

NucleoSpin® DNA Forensic

Isolation of DNA from forensic traces 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

Mini

- Processing: Vacuum or centrifugation
- Typical yield: e.g. 1–3 µg from buccal swab
- Typical concentration 10–30 ng/µL
- Elution volume: 50–100 µL
- Binding capacity: 7 µg

Certified forensic quality MN ISO 18385

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
- Minimal sized beads for prolonged optimized binding and sedimentation
- Superparamagnetism of beads to avoid clogging
- Scalable magnetic bead technology facilitates automation

Available format

Magnetic beads

Applications

- DNA from forensic samples, mainly buccal swabs

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA Forensic

Mag

- Processing: Manual or automated
- Typical yield: e.g., 1–3 µg from buccal swab
- Typical concentration: < 1 ng/µL
- Elution volume: 25–50 µL
- Binding capacity: 0.4 µg/µL beads

Certified forensic quality

MN

ISO 18385

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

NucleoMag® SEP and other accessories

See page 112

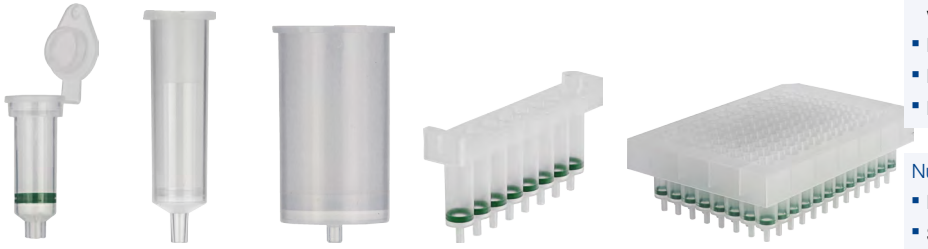
NucleoSpin® Plant II

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

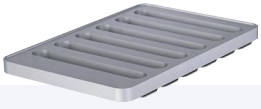


Mini column | Midi column | Maxi column | 8-well strip | 96-well plate

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	740663.2 / .4
NucleoSpin® 96 Plant II Core Kit*	4 x 96	740468.4

Starter Set A
and other equipment



See page 111

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: Up to 30 µg (100 mg plant tissue, wet weight)
- Elution volume: 50–100 µL
- 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: Up to 100 µg (400 mg plant tissue, wet weight)
- Elution volume: 200–400 µL
- 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)

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
- 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
- Binding capacity: 30 µg
- Processing time: 60 min/96 preps (excl. lysis)

* 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 ≥ 50 µL 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® SEP and other accessories

See page 112

Applications

- DNA from plant tissue

Specifications

- Technology: Magnetic bead technology

NucleoMag® Plant

Mag

- Processing: Manual or automated
- Sample material: Plant tissue (20–50 mg, wet weight)
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 10–20 µg (50 mg plant tissue, wet weight)
- Elution volume: 50–200 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 30 min/96 preps*

* Established on KingFisher® Flex.

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 NucleoSpin® Bead Tubes Type A
- 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

Applications

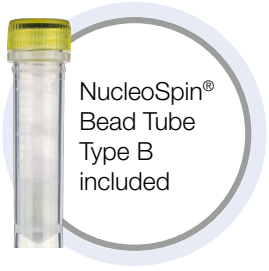
- DNA from hard-to-lyse microorganisms: gram positive / gram negative bacteria, yeast*, fungi

Specifications

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

NucleoSpin® Microbial DNA — Mini

- Sample material: Bacteria, yeast*, fungi (< 40 mg, wet weight)
- Fragment size: 200 bp–approx. 50 kbp
- Typical yield: Up to 25 µg, depending on sample type and disruption method
- Elution volume: 100–200 µL
- Binding capacity: 60 µg
- Processing time: 35 min/prep



Ordering information

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

* For yeast samples, NucleoSpin® Bead Tubes Type C are required.
** For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.

DNA from soil samples

NucleoSpin® Soil

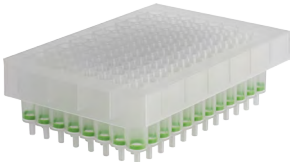
Isolation of total DNA from diverse soil types

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



96-well plate

Ordering information

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

NucleoVac Vacuum Regulator and other equipment

See page 111

Applications

- DNA from soil, sludge, sediment

Specifications

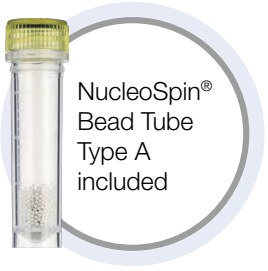
- Technology: Silica membrane technology combined with NucleoSpin® Bead Tubes Type A*
- Sample material: < 500 mg
- Fragment size: 50 bp–approx. 50 kbp
- Typical yield: Up to 10 µg (500 mg soil)
- Binding capacity: 50 µg

NucleoSpin® Soil — Mini

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

NucleoSpin® 96 Soil — 96-well

- Processing: Vacuum
- Elution volume: 100–200 µL
- Processing time: 150 min/96 preps



* For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.

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

Applications

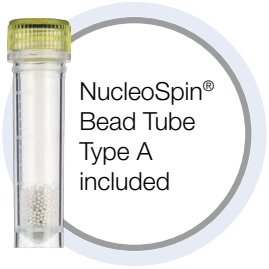
- DNA from bacterial and epithelial cells from stool samples

Specifications

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

NucleoSpin® DNA Stool Mini

- Sample material: Stool samples, fresh or frozen (180–220 mg)**
- Fragment size: 200 bp–approx. 50 kbp
- Elution volume: 30–100 µL
- Binding capacity: 50 µg
- Processing time: 60 min/10 preps



Ordering information

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

* For detailed information regarding the NucleoSpin® Bead Tubes, please refer to page 88.
** 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.

Sample homogenization

NucleoSpin® Bead Tubes

For rapid homogenization of sample material

Features

- Various types of bead tubes to match any application
- Easy and fast sample homogenization
- MN Bead Tube Holder for disruption on a Vortex-Genie® 2, alternatively any common bead mill can be used instead

Available formats

Type A Type B Type C Type D Type E Type F Type G

Ordering information

Product	Preps	REF
NucleoSpin® Bead Tubes Type A	50	740786.50
NucleoSpin® Bead Tubes Type B	50	740812.50
NucleoSpin® Bead Tubes Type C	50	740813.50
NucleoSpin® Bead Tubes Type D	50	740814.50
NucleoSpin® Bead Tubes Type E	50	740815.50
NucleoSpin® Bead Tubes Type F	50	740816.50
NucleoSpin® Bead Tubes Type G	50	740817.50
Related product		
MN Bead Tube Holder	1	740469

Applications

- Sample homogenization of different materials

Specifications

- Format: 2 mL screw cap plastic tubes containing different types of beads
- Processing: MN Bead Tube Holder on a Vortex-Genie®2 or any common bead mill

NucleoSpin® Bead Tubes Type A

- Filling: 0.6–0.8 mm ceramic beads
- Recommended for homogenization of micro-organisms in e.g., soil, sediments, and stool

NucleoSpin® Bead Tubes Type B

- Filling: 40–400 µm glass beads
- Recommended for homogenization of bacteria

NucleoSpin® Bead Tubes Type C

- Filling: 1–3 mm corundum
- Recommended for homogenization of yeast

NucleoSpin® Bead Tubes Type D

- Filling: 3 mm steel beads
- Recommended for homogenization of insects, crustaceans, lipid-rich tissue

NucleoSpin® Bead Tubes Type E

- Filling: 3 mm steel beads and 40–400 µm glass beads
- Recommended for homogenization of bacteria within insects or tissue samples

NucleoSpin® Bead Tubes Type F

- Filling: 1–3 mm corundum and 3 mm steel beads
- Recommended for homogenization of challenging tissues, e.g., spleen, or lung tissue

NucleoSpin® Bead Tubes Type G

- Filling: 5 mm steel beads
- Recommended for homogenization of plant material

DNA from food and feed

NucleoSpin® Food

For rapid isolation of DNA from food and feed

Features

- Complete 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

Square-well Blocks and other consumables

See page 110

Applications

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

Specifications

- Technology: Silica membrane technology
- Fragment size: 300 bp–approx. 50 kbp
- Yield: Depending on individual sample, storage, and processing
- Binding capacity: 30 µg

NucleoSpin® Food — Mini

- Processing: Centrifugation
- Sample material: 5–200 mg
- Elution volume: 100 µL
- Processing time: 30 min/6 preps

NucleoSpin® 8 Food — 8-well

- Processing: Manual or automated
- Sample material: < 200 mg
- Elution volume: 100–200 µL
- Processing time: 60 min/48 preps (excl. lysis)

NucleoSpin® 96 Food — 96-well

- Processing: Manual or automated
- Sample material: < 200 mg
- Elution volume: 100–200 µL
- Processing time: 120 min/96 preps (excl. lysis)

DNA from food and feed

NucleoMag® DNA Food

Flexible DNA isolation from various food and feed samples

Features

- Complete 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

NucleoMag® SEP and other accessories

See page 112

Applications

- DNA from food and feed

Specifications

- Technology: Magnetic bead technology

NucleoMag® DNA Food

Mag

- Processing: Manual or automated
- Sample material: < 200 mg food or feed
- Fragment size: 300 bp–approx. 50 kbp
- Typical yield: 0.1–10 µg
- Elution volume: 50–200 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 120 min/96 preps

Viral RNA and DNA

Viral RNA and DNA

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

Starter Set C
and other equipment

▶ See page 110

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/48 preps

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/96 preps

* 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 biological fluids

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)**

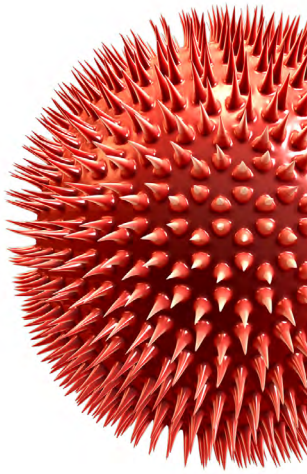
Specifications

- Technology: Silica membrane technology

NucleoSpin® Dx Virus

Mini

- 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 serum and plasma

NucleoSpin® RNA Virus F

Reliable purification of viral RNA and DNA from large volumes of biological fluids

Features

- Proven for a large variety of viruses including influenza viruses, HCV, HBV, HAV, HIV, HSV, HPV, VZV, EBV, parvovirus B19, H5N1, and H1N1
- Carrier RNA included for highest sensitivity in downstream applications
- Patented technology of NucleoSpin® Funnel Columns

Available format

Funnel column

Ordering information

Product	Preps	REF
NucleoSpin® RNA Virus F	25	740958
Related product	**Pack of**	**REF**
Proteinase K	100 mg	740506

Applications

- Purification of viral RNA and DNA from cell-free biological fluids (e.g., serum, plasma)
- Parallel isolation of viral RNA and DNA*

Specifications

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

NucleoSpin® RNA Virus F

Funnel

- Sample material: Cell-free biological fluids (< 1 mL)
- Elution volume: 50–100 µL
- Binding capacity: 30 µg
- Processing time: 45 min/6 preps

* For parallel isolation of viral RNA and DNA, use of Proteinase K is required (not included in the kit).

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

NucleoMag® SEP and other accessories

▶ See page 112

Applications

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

Specifications

- Technology: Magnetic bead technology

NucleoMag® Virus

Mag

- Processing: Manual or automated
- Sample material: Biological fluids (< 200 µL)
- Elution volume: 50–100 µL
- Processing time: 45–120 min/96 preps

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

Applications

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

Specifications

- Technology: Magnetic bead technology

NucleoMag® VET

Mag

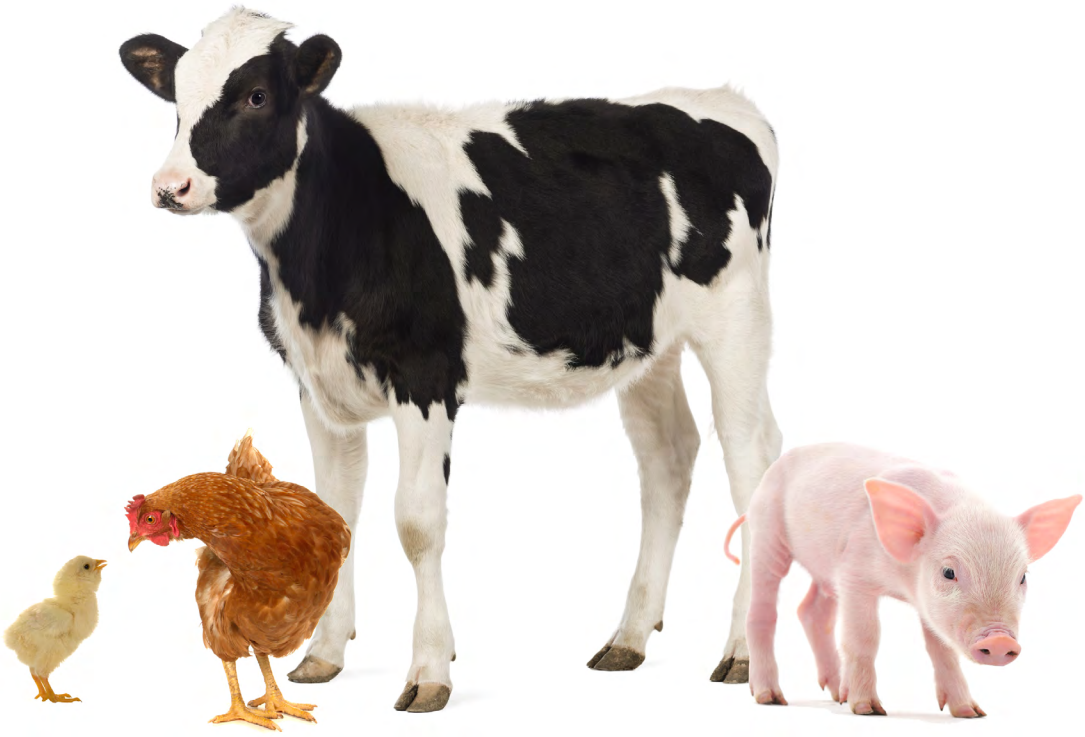
- Processing: Manual or automated
- Sample material: Whole blood / serum / plasma (< 200 µL), tissue (10–30 mg), feces (< 200 µL), swab wash solution (< 200 µL)
- Maximum amount of starting material: 200 µL liquid / homogenized sample
- Fragment size: 100 bp–approx. 50 kbp
- Elution volume: 50–100 µL
- Binding capacity: 0.4 µg/µL beads
- Processing time: 45–120 min/96 preps (45 min for KingFisher® Flex)

Ordering information

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

NucleoMag® SEP and other accessories

▶ See page 112



NucleoSpin® Blood

For rapid isolation of viral DNA from blood and biological fluids

Features

- Highly sensitive detection of viral DNA
- Reliable and reproducible DNA isolation of EDTA, citrate, heparin treated blood samples in less than 30 min
- Complete removal of PCR inhibitors

Available format

Mini column

Ordering information

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

Applications

- Viral DNA from blood, serum, plasma, and biological fluids (e.g., HBV, CMV, HPV, TTV, EBV)
- Genomic and bacterial DNA from blood and biological fluids

Specifications

- Technology: Silica membrane technology

NucleoSpin® Blood

Mini

- Sample material: Blood / serum / plasma (5–200 µL), human / animal cells (< 5 x 10^6)
- Fragment size: 100 bp–approx. 50 kbp
- A_{260}/A_{280}: 1.6–1.9
- Elution volume: 60–200 µL
- Binding capacity: 60 µg
- Processing time: 30 min/prep

Protein

Purification of His-tag proteins

Protino® Ni-NTA

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

Features

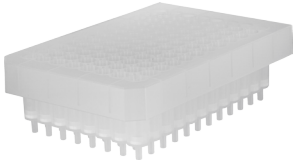
- Universal use – suitable for small proteins, large protein complexes, proteins with low expression rates
- High capacity and high affinity
- Purification under native and denaturing conditions
- Highest flexibility of applications – choose the format of need
- Protino® 96 Ni-NTA: Unique Protino® Purification 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 products	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 Ni^{2+}
- 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

Resin

Midi column

Midi column

Maxi column

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 products	**Pack of**	**REF**
Protino® Columns 14 mL (empty gravity flow coumns)	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 Ni^{2+}

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 — Midi

- 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

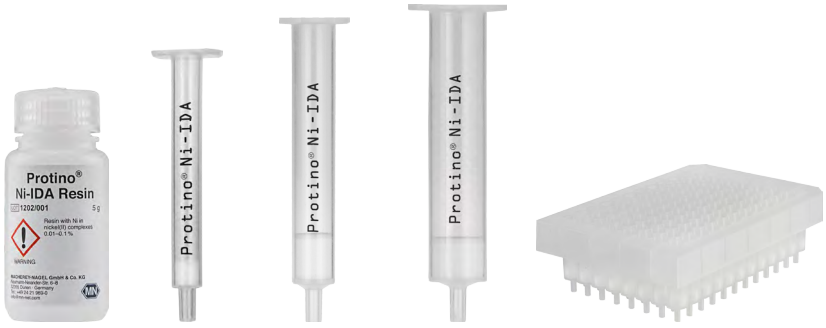
Protino® Ni-IDA

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



Resin | Midi column | Midi column | Maxi column | 96-well plate

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 products	**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 Ni^{2+}

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 — Midi
- 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

Aqueous suspension

1 mL FPLC™ column

5 mL FPLC™ column

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 products	**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 Susp

- 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 FPLC1

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

Protino® GST/4B Columns 5 mL FPLC5

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

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

HTP

MACHEREY-NAGEL – your partner for automated low to high throughput solutions

MN offers a variety of kits for low (LTP), 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 run solutions including all consumables, but are also available as “Core Kits” containing no plastic material in order to provide a high flexibility for automation.

Personal 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 expanded a large knowledge. Thus, we offer an extensive troubleshooting by our MN experts in case special support is needed for your application.

Furthermore, we supply validated and released 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 scripts on request e.g., to process new sample material.

Contact our Technical Support and Customer Service or Product Management:

Technical Support and Customer Service

Tel.: +49 24 21 969-270
E-mail: tech-bio@mn-net.com

Product Management HTP

Tel.: +49 24 21 969-277
E-mail: pm-bio@mn-net.com

Application notes by MACHEREY-NAGEL experts

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 or detailed information please visit:
www.mn-net.com/HTP-application-notes

Automation partners

Eppendorf®

- Easy and reliable Plug'n'Prep® solution for nucleic acid extraction or protein purification
- Convenient nucleic acid extraction with ep*Motion*® 5075 from Eppendorf® using NucleoSpin® or NucleoMag® kits
- Vacuum based extraction for NucleoSpin® 8 / 96 kits using the ep*Motion*® 5075v, minimized risk of cross-contamination due to eppendorf´s channeling plate
- Magnetic bead based extraction for NucleoMag® kits on the ep*Motion*® 5075t
- Vacuum based 96-well protein purification using the Protino® 96 Ni-NTA kit
- Optimized Plug'n'Prep® scripts available on request for NucleoSpin® and NucleoMag® kits
- Easy import of ready to use methods due to standardized configurations, no adjusting of scripts necessary
- Flexible customization of scripts can be requested at MN Technical Support

Hamilton

- Validated Standardization with proven MACHEREY-NAGEL kits
- The NucleoSpin® and NucleoFast® kits are used on the Genomic STARlet™
- NucleoSpin® 8 / 96 kits can be processed on the Genomic STARlet™ platform
- Standard sample input and output lab ware from MN is already predefined
- Optimized and validated configurations to save time and minimize tip consumption.
- Protocols and application packages can be provided by Hamilton

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 based 96-well protein purification using the Protino® 96 Ni-NTA kit
- Optimized basics scripts and protocols are available on request for NucleoMag® and NucleoSpin® kits

Thermo Fisher Scientific

- Fast and flexible nucleic acid extraction using NucleoMag® kit
- 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)
- 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

Others

The MN low to high throughput kits are very flexible and widely applicable. The NucleoSpin®, NucleoFast®, NucleoBond®, and Protino® kits can be processed on any other platform which works with vacuum or positive pressure. The NucleoMag® kit can be automated on a platform with automated magnetic separators or with static magnetic pins combined with a suitable microplate shaker. Even any platform related to the above mentioned platforms can be used to automate MN kits.

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

Take advantage of the MN experts and contact Technical Support

Tel.: +49 24 21 969-270
E-mail: tech-bio@mn-net.com

Low to high throughput applications

Low to high throughput applications with MN products

The tables below present an overview about applications which can be performed with LTP, MTP, and HTP kits from MACHEREY-NAGEL. These tables are updated regularly, so please visit *www.mn-net.com/HTP* for the latest version.

	NucleoSpin® 8/96 Plasmid	NucleoSpin® 96 Flash	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® DNA Plasma Midi	NucleoSpin® 96 DNA Plasma	NucleoSpin® 8/96 Virus	NucleoMag® Virus
Plasmid Purification																
Transfection of sensitive cells				■												
Transfection of common cells			■	■												
Cloning and sequencing	■		■	■												
Large constructs		■														
Page	18	20	21	27												
Clean up and Size Selection																
PCR clean up					■	■										
Challenging enzymatic reactions					■		■									
High speed purification						■										
Small fragments < 150 bp					■											
Flexible size selection							■									
Page					35	36	41									
Body Fluids																
RNA								■							■	■
DNA									■	■	■	■	■	■	■	■
cfDNA													■	■		
Blood								■	■	■	■	■				
Plasma								■	■		■		■	■	■	■
Serum								■	■		■				■	■
Urine								■				■			■	■
Saliva									■	■		■			■	■
Buffy coat								■	■		■					
Large volume										■			■			■
Fast procedure											■					
Page								57	64	66	67	69	70	70	92	95

Low to high throughput applications

	NucleoSpin® 8/96 RNA	NucleoMag® RNA	NucleoSpin® 96 DNA RapidLyse	NucleoSpin® 8/96 Tissue	NucleoMag® Tissue	NucleoSpin® 96 DNA FFPE	NucleoMag® DNA FFPE	NucleoMag® DNA Forensic	NucleoSpin® 8/96 Plant II	NucleoMag® Plant	NucleoSpin® 96 Soil	NucleoSpin® 8/96 Food	NucleoMag® DNA Food	NucleoSpin® 8/96 Virus	NucleoMag® Virus	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	45	49	72	73	75	78	79	82			86							
Veterinary Testing																		
DNA				■	■									■	■	■		
RNA														■	■	■		
Liquid biopsies														■	■	■		
Solid tissue				■	■											■		
Page				73	75									92	95	96		
Environmental Testing																		
Soil											■							
Plant									■	■								
Fungi									■									
Food and feed												■	■					
Page									83	84	86	89	90					
Protein purification																		
High binding capacity																	■	
Maximal purity																		■
Native or denaturing purification																	■	■
Page																	100	102

Equipment for LTP, MTP, and HTP kits

Gravity flow

For processing by gravity flow, generally no additional equipment is needed. The following table shows an overview which technologies are processed by gravity flow and any special aspect which is important for processing.

Technology	Format	Special aspects	REF
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 centrifugation or by vacuum.	740430.1 / .4
Protino® 96 Ni-IDA	96-well	For robotic applications or more convenient handling, the MN Shaker Frame is recommended.	740489

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*.

General consumables for processing by centrifugation

MN product	Pack of	Specifications	REF
Square-well Block	4/24	96-well block for collecting flowthrough, also combinable with 8-well strips	740479 / .24
MN Square-well Block	4/24	96-well block for collecting flowthrough, or for elution	740476 / .24
Rack of Tube Strips	4/24	8-well strip tubes for elution	740477 / .24

The following technologies can be processed by centrifugation. If there are special aspects in regards of processing by centrifugation, they are also mentioned.

Technology	Format	Special aspects	REF
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 centrifugation.	740430.1 / .4
NucleoSpin®	8-well	Starter Set C is required (See page 114). Use MN Square-well Block or Rack of Tube Strips with Starter Set C.	740684
	96-well		
NucleoFast®	96-well	Max. accelerations of 4,500 x *g* are needed.	
Protino® 96 Ni-NTA	96-well		

* Heights depend on application. Please contact Technical Support.

Vacuum

For processing under vacuum, a NucleoVac 96 Vacuum Manifold or any other suitable vacuum manifold is required. Instead of vacuum manifolds, positive pressure systems can be used as an alternative.

General equipment for processing by vacuum

MN product	Pack of	Specifications	REF
NucleoVac 96 Vacuum Manifold	1	vacuum manifold	740681
NucleoVac Vacuum Regulator	1	for controlling vacuum	740641

The following technologies can be processed by vacuum. If there are special aspects in regards of processing by vacuum, please refer to the table below.

Technology	Format	Special aspects	REF
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.	740430.1 / .4
NucleoSpin®	L / Midi	Starter Set Midi is required (See page 114).	740744
	8-well	Starter Set A is required (See page 114). MN Wash Plate minimizes risk of cross-contamination (See page 114).	740682 740479 / .24
	96-well	MN Wash Plate minimizes risk of cross-contamination (See page 114).	740479 / .24
NucleoFast®	96-well		
Protino® 96 Ni-NTA	96-well	For robotic applications or more convenient handling, the MN Shaker Frame is recommended.	740489

Equipment for LTP, MTP, and HTP kits

Magnetic beads

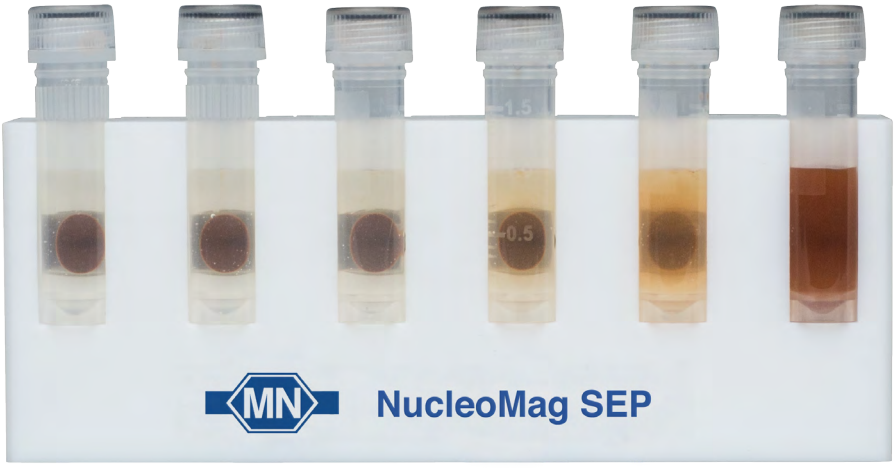
For manual and automated processing of NucleoMag® kits, a suitable magnetic separator is required e.g., NucleoMag® SEP.

General consumables for processing by magnetic beads

MN product	Pack of	Specifications	REF
NucleoMag® SEP	1	magnetic separator, for use with 96-well plates (e.g., REF 740481)	744900
Square-well Block	4/24	96-well block for use with NucleoMag® SEP (744900)	740481 / .24
Elution Plate U-bottom	24	96-well microplates with 300 µL u-bottom wells, including Self-adhering Foil	740486.24
NucleoMag® 24 SEP	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
Snap Tubes 50 mL		50 mL tubes	740822.10/.50

For the use of KingFisher® platforms, the following accessory kits are available.

MN product	Pack of	Specifications	REF
KingFisher® Accessories Kit A	1 set	Square-well Blocks, Deep-well Tip Combs, Elution Plates, for 4 x 96 NucleoMag® Tissue / Trace / Forensic / Virus / VET preps using KingFisher® Flex / 96 platform	744950
KingFisher® Accessories Kit B	1 set	Square-well Blocks, Deep-well Tip Combs, Elution Plates, for 4 x 96 NucleoMag® Blood 200 µL and NucleoMag® Plant / RNA preps using KingFisher® Flex / 96 platform	744951
KingFisher® Duo Accessories Kit	1 set	KingFisher® Deep-well Blocks, KingFisher® Duo 12 Tip Combs, KingFisher® Duo Elution Strips, for 8 x 12 NucleoMag® RNA / Blood / Tissue / DNA FFPE / Trace / Forensic / Virus / VET preps using KingFisher® Duo / Duo Prime platform	744952
KingFisher® 24 Accessories Kit	1 set	KingFisher® 24 Deep-well Plates, KingFisher® Flex 24 Tip Comb, for 5 x 24 preps with NucleoMag® Blood 3 mL using a KingFisher® Flex platform	744953



Accessories

Accessories for LTP, MTP, and HTP

HTP Equipment

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 Starter Set A is required (see below)	740681
NucleoVac 96 Spacer Set	1 set	4 x 2 spacer for processing of Microtube Rack, Square-well Block, Multi 96 Plate MTP, or Deep-well Block on NucleoVac 96 Vacuum Manifold	740247
NucleoVac Vacuum Regulator	1	for adjusting of vacuum	740641
NucleoSpin® Dummy Strips	6	for sealing unused rows of Column Holders A and B during vacuum processing of NucleoSpin® 8-well kits	740685
MN Frame	1	for optimized handling of 96-well plates with a vacuum manifold on BioRobot® 9600, 9604, and 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
NucleoMag® SEP	1	magnetic separator, for use with 96-well plates (e.g., REF 740481)	744900
NucleoMag® 24 SEP	1	magnetic separator, for use with 24-well plates (e.g., REF 740448.4 / .24)	744903
Rubber Pad	2	reusable mat to cover unused rows of a 96-well plate	740640
Starter Set A	1	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
Starter Set B	1	for processing NucleoSpin® 8-well strips on the Qiagen BioRobot® 9600 / 9604 / 3000, contains 1 Column Holder B, 1 Column Holder D, NucleoSpin® Dummy Strips	740683
Starter Set C	1	for processing NucleoSpin® 8-well strips under centrifugation, contains 2 Column Holders C, MN Square-well Blocks, Racks of Tube Strips	740684
Starter Set Midi	1	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

HTP Consumables

Product	Pack of	Specification	REF
96-well format			
MN Wash Plate	4 / 24	96-well funnel plates to minimize the risk of cross-contamination	740479 / .24
Square-well Block	4 / 24	for use with NucleoMag® SEP (744900)	740481 / .24
MN Square-well Block	4 / 24	96-well blocks with 2.1 mL square wells	740476 / .24
Culture Plate	4 / 24	Square-well Blocks with 2.1 mL square wells used for growing, harvesting, or lysing of bacterial cultures, with Gas-permeable Foil	740488 / .24
Round-well Block	20	96-well blocks with 1.2 mL round wells used for, e.g., mixing steps and collecting elution fractions	740671
Round-well Block with Cap Strips	4 / 24 sets	set consists of 1 Round-well Block and 12 Cap Strips	740475 / .24
Round-well Block Low	4	96-well blocks with 0.8 mL round wells	740482
Round-well Block Low	4 / 24 sets	96-well blocks with 0.8 mL round wells, including Self-adhering Foil	740487/.24
Elution Plate U-bottom	24	96-well microplates with 300 µL u-bottom wells, including Self-adhering Foil	740486.24
Elution Plate Flat-bottom	20	96-well microplates with 370 µL flat-bottom wells	740673
Rack of Tube Strips	5 sets	1 set consists of 1 rack, 12 strips with 8 tubes each	740637
	4 / 24 sets	1 set consists of 1 rack, 12 strips with 8 tubes each, and 12 cap strips	740477 / .24
Cap Strips	48 / 288	for sealing of Tube Strips, Round-well Blocks	740478 / .24
Gas-permeable Foil	50	to cover square-well blocks during incubation of bacterial cultures	740675
Self-adhering PE Foil	50	adhesive tape foils for air-tight sealing and storage of 96-well elution plates	740676
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

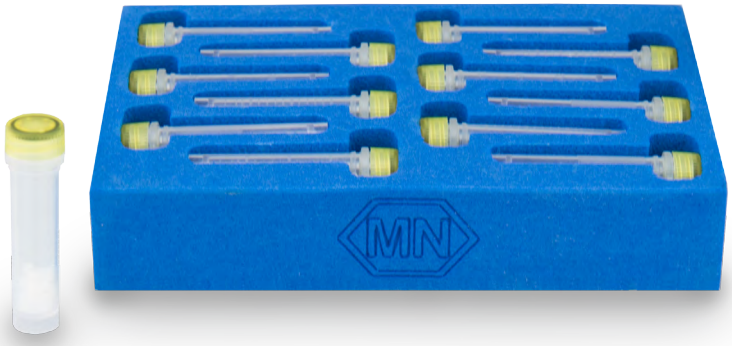
Accessories for LTP, MTP, and HTP

Product	Pack of	Specification	REF
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
Receiver Plates 20 µm	4	96-well plates with inserted filter frits of 20 µm pore size, suitable for centrifugation and vacuum	740686.4
Receiver Plates 20 µm hydrophilized	4	96-well plates with inserted hydrophilized filter frits of 20 µm pore size, suitable for gravity flow, centrifugation, and vacuum	740687.4
Receiver Plates 50 µm	4	96-well plates with inserted filter frits of 50 µm pore size, suitable for centrifugation and vacuum	740688.4
Receiver Plates 50 µm hydrophilized	4	96-well plates with inserted hydrophilized filter frits of 50 µm pore size, suitable for gravity flow, centrifugation, and vacuum	740689.4
Receiver Plates 10 µm	4	96-well plates with inserted filter frits of 10 µm pore size, suitable for centrifugation and vacuum	740989.4
Protino® Purification Plate	1 / 4	96-well plates with special leak-free filter frit, suitable for centrifugation and vacuum	745426.1 / .4
KingFisher® 96 Accessory Kit A	1 set	Square-well Blocks, Deep-well Tip Combs, Elution Plates, for 4 x 96 NucleoMag® Tissue / Trace / Forensic / DNA Food / Virus / VET preps using KingFisher® Flex / 96 platform	744950
KingFisher® 96 Accessory Kit B	1 set	Square-well Blocks, Deep-well Tip Combs, Elution Plates, for 4 x 96 NucleoMag® Blood 200 µL and NucleoMag® Plant / RNA preps using KingFisher® Flex / 96 platform	744951
24-well format			
24-Square-well Block U-bottom	4 / 24	24-well blocks with 10 mL U-bottom square wells	740448.4 / .24
Silicone Lid 24-Square-well	4 / 24	silicone lid for sealing of 24 square-well blocks	740449.4 / .24
KingFisher® Flex 24 Deep-well Block	50	KingFisher® Flex 24 Deep-well Blocks	744958
KingFisher® Flex 24 DW Tip and Block		KingFisher® Flex 24 DW Tips, KingFisher® Flex 24 DW Blocks	744959
KingFisher® Duo Accessory Kit	1 set	KingFisher® Deep-well Blocks, KingFisher® Duo 12 Tip Combs, KingFisher® Duo Elution Strips, for 8 x 12 NucleoMag® RNA / Blood / Tissue / DNA FFPE / Trace / Forensic / DNA Food / Virus / VET preps using KingFisher® Duo / Duo Prime platform	744952
KingFisher® 24 Accessory Kit	1 set	KingFisher® 24 Deep-well Plates, KingFisher® Flex 24 Tip Comb, for 5 x 24 preps with NucleoMag® Blood 3 mL using a KingFisher® Flex platform	744953

Accessories for single preps

Single prep equipment

Product	Pack of	Specification	REF
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 Vacuum Regulator	1	for adjusting of vacuum	740641
NucleoVac Mini Adapters	100	Luer adapters to prevent contamination of NucleoSpin® 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® and NucleoSnap® Columns on a NucleoVac 24 Vacuum Manifold	740298.24
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
MN Bead Tube Holder	1	adapter for processing NucleoSpin® Bead Tubes with Vortex-Genie 2	740469



Accessories for single preps

Single prep consumables

Product	Pack of	Specification	REF
NucleoBond® consumables			
NucleoBond® Midi Filter	100	column filters for NucleoBond® Xtra Midi Columns	740411.100
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, and 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, and 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, and BAC 100 Columns	740413
NucleoSpin® consumables			
Collection Tubes (2 mL)	1000		740600
NucleoSpin® Filters	50	for filtration of cell and tissue homogenates	740606
NucleoSpin® Midi Filters	50	for filtration of cell and tissue homogenates	740607
NucleoSpin® Funnel Columns	30 sets	set of NucleoSpin® Funnel Column, Collection Tube (50 mL), and Collection Tube (0.5 mL)	740959
NucleoSpin® Bead Tubes Type A	50	2 mL tubes with 0.6–0.8 mm ceramic beads, recommended for homogenization of microorganisms in e.g., soil, sediments, and stool	740786.50
NucleoSpin® Bead Tubes Type B	50	2 mL tubes with 40-400 µm glass beads, recommended for homogenization of bacteria	740812.50
NucleoSpin® Bead Tubes Type C	50	2 mL tubes with 1–3 mm corundum, recommended for homogenization of yeast	740813.50
NucleoSpin® Bead Tubes Type D	50	2 mL tubes with 3 mm steel beads, recommended for homogenization of insects, crustaceans, lipid-rich tissue	740814.50
NucleoSpin® Bead Tubes Type E	50	2 mL tubes with 3 mm steel beads and 40–400 µm glass beads, recommended for homogenization of bacteria within insects or tissue samples	740815.50
NucleoSpin® Bead Tubes Type F	50	2 mL tubes with 1–3 mm corundum and 3 mm steel beads, recommended for homogenization of challenging tissues, e.g., spleen, or lung tissue	740816.50
NucleoSpin® Bead Tubes Type G	50	2 mL tubes with 5 mm steel beads, recommended for homogenization of plant material	740817.50
NucleoSnap® consumables			
Snap Tubes	10 / 50	15 mL tubes	740823.10 / .50
Snap Tubes	10 / 50	50 mL tubes	740822.10 / .50
Protino® consumables			
Protino® Columns 14 mL	10	empty columns for use with Protino® Ni-TED / IDA Resin, Protino® Ni-NTA Agarose and Protino® Glutathione Agarose 4B	745250.10
Protino® Columns 35 mL	10		745255.10
Other consumables			
Receiver Columns 20 µm	10 / 50 / 250	mini spin columns with inserted hydrophobic frit of 20 µm pore size, to be used for general filtration purposes as well as for retaining chromatographic resins; the columns are delivered with capped outlets, inserted into Collection Tubes (2 mL)	740522.10 / .50 / .250
MN Reaction Tube Rack	5	for use with 80 reaction tubes (1.5 mL and 2 mL)	740736.5

Buffers

Plasmid DNA purification

Product	Pack of	Specifications	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	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	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	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	1000 mL of buffers RES-BAC, LYS-BAC, NEU-BAC, and RNase A sufficient for 15 NucleoBond® Xtra BAC preps	740437

Buffers

Product	Pack of	Specifications	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 1255 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	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	Specifications	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 NTI	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

Buffers

RNA isolation

Product	Pack of	Specifications	REF
Binding Solution BS	30 mL	binding buffer	740907.30
Buffer DL	100 mL	lysis buffer	740202.32
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	7.5 mL Buffer PSB and 107 mg TCEP (Reducing Agent), applicable with NucleoSpin® RNA/Protein, TriPrep, and miRNA kits	740941

DNA isolation

Product	Pack of	Specifications	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	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 MBL3	1000 mL	binding buffer	744848.1000
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
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

Buffers

Product	Pack of	Specifications	REF
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	for isolation of DNA from bones, applicable with NucleoSpin® DNA Trace / DNA Forensic, and NucleoMag® DNA Forensic kits	740943.25
Paraffin Dissolver	25 mL	for the removal of paraffin from FFPE sections, applicable with NucleoSpin® DNA FFPE XS kits	740968.25

Viral RNA / DNA isolation

Product	Pack of	Specifications	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	Specifications	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	recombinant DNase and Reaction Buffer for rDNase	740963
Reaction Buffer for rDNase	60 mL	reaction buffer for rDNase	740834.60

Auxiliary tools

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® Filter

- Sample material to be stored: Blood (< 200 µL)
- Storage temperature: 18–25 °C
- Storage life: 5 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

* NucleoCard® cards are not intended for diagnostic and therapeutic use; DISTRIBUTION AND USE IN THE USA IS PROHIBITED FOR PATENT REASONS.

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 cm^2
- 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

Applications

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

Specifications

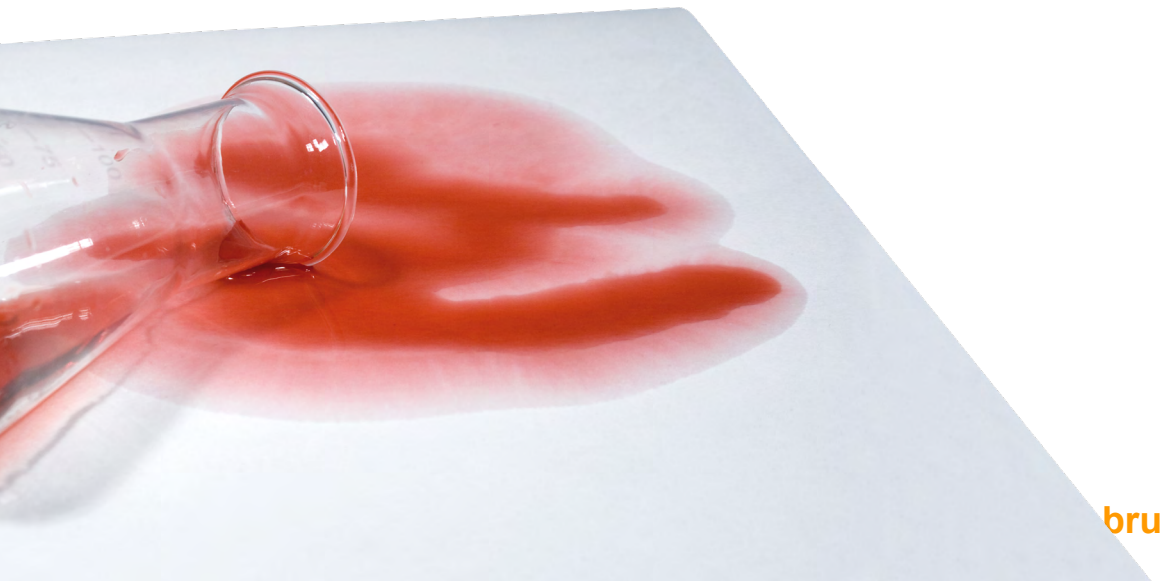
- Material: Filter paper, one side coated with polyethylene

BIO-LAB-TOP

- Weight per surface area: 140 g/m^2
- Thickness: 0.22 mm
- Water absorption: 210–230 mL/m^2

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



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

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/cm^2

Porablot NCL

- Membrane material: 100 % nitrocellulose with inert supporting tissue
- Pore size: 0.45 µm
- Binding capacity: 100 µg/cm^2

Porablot PVDF

- Membrane material: Polyvinylidene difluoride (PVDF)
- Pore size: 0.20 µm
- Binding capacity: 50–100 µg/cm^2*

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.

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)
- Electroblotting 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/m^2
- 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/m^2
- 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/m^2
- Thickness: 1 mm
- Migration acc. to Klemm: 130–145 mm/10 min
- Comparable to: Schleicher & Schüll GB 004, Whatman 17 Chr

Disclaimer

Disclaimer

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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/MSDS*).

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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.

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

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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.

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

Icon annotation

Mini spin column for microcentrifuge tubes (1.5 mL or 2 mL). A funnel shaped thrust ring is holding a silica membrane of 2.0 mm diameter for xtra small elution volumes

Mini spin column for microcentrifuge tubes (1.5 mL or 2 mL)

Midi column for gravity-flow (NucleoBond® Xtra / NucleoBond® PC technology) or 15 mL midi spin columns for centrifuges

NucleoBond® Xtra Maxi / NucleoBond® AX 500 Column for gravity flow or 50 mL NucleoSpin® Maxi Column for centrifuges

Liquid reagent solution

Insoluble bead based resin matrix

Superparamagnetic beads

Disposable funnel container combined with a mini spin column for vacuum processing (e.g., using NucleoVac 24 Vacuum Manifold), and subsequent centrifugation for elution in a microcentrifuge tubes (1.5 mL or 2 mL)

Ready to use and prefilled 1 mL column for fast protein liquid chromatography (FPLC)

Ready to use and prefilled 5 mL column for fast protein liquid chromatography (FPLC)

Mini spin columns in 8-well strip format

Mini spin columns in 96-well plate format

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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)
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)
NucleoTrap®	kits and separation material for purification of nucleic acids (silica matrix technology)
Protino®	kits for purification of recombinant proteins (affinity chromatography)

Registered trademarks of other companies

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