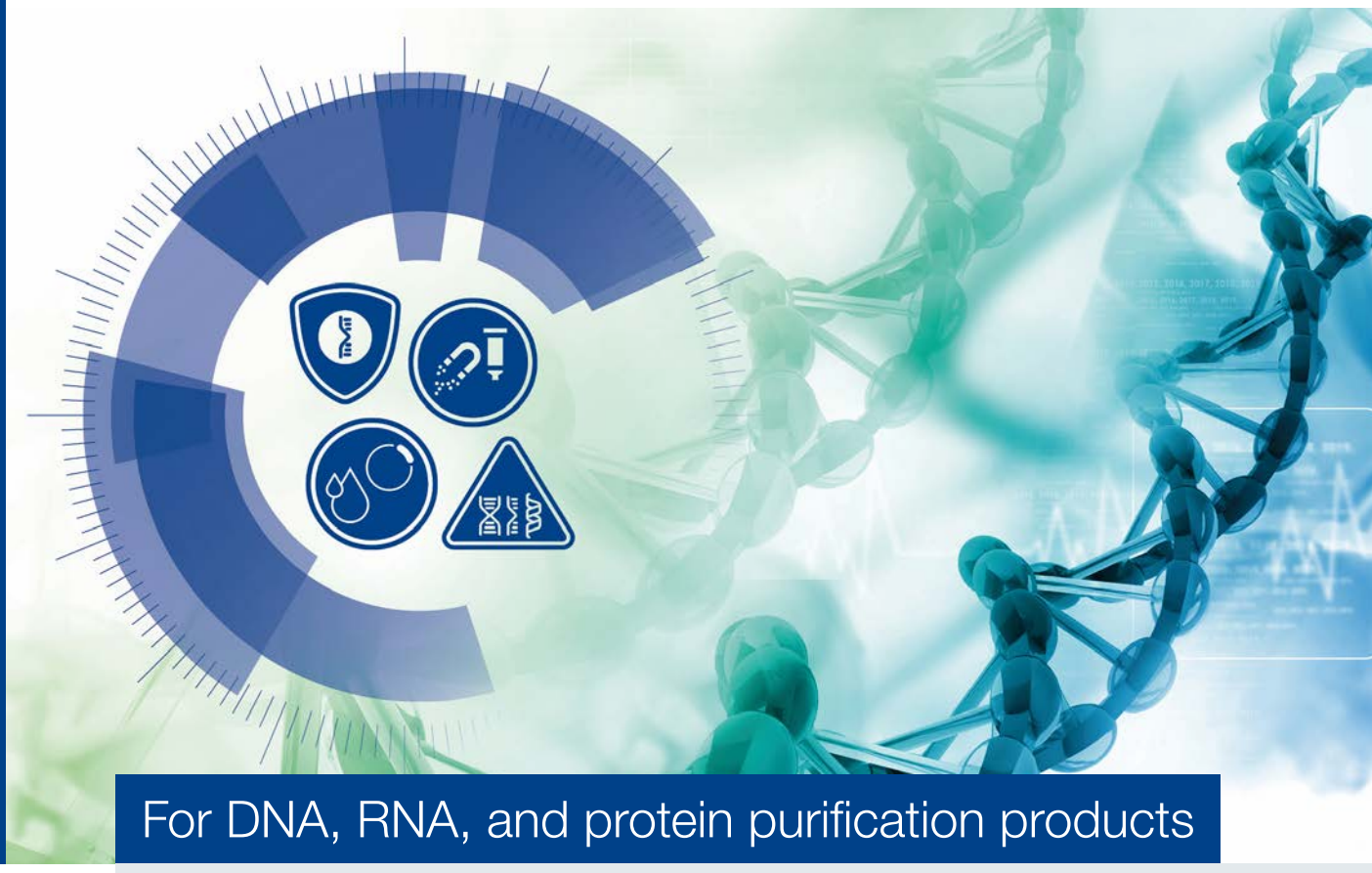
Bioanalysis

MACHEREY-NAGEL

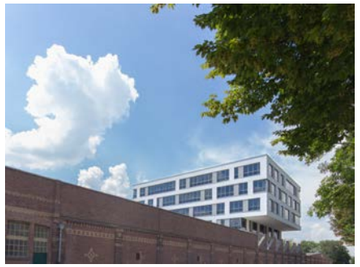
Selection Guide



For DNA, RNA, and protein purification products

- Compact overview of MN Bioanalysis products
- Technical data and product features at a glance
- Select the optimal product for your application

RNA, DNA, and protein purification from MACHEREY-NAGEL



Since 1993 MACHEREY-NAGEL has been successfully developing, producing, and worldwide marketing a comprehensive range of ready to use kits and consumables for purification of nucleic acids (DNA and RNA) and proteins.

The company provides innovative bioseparation technologies and exceptional products for a variety of application areas: academic, industrial, clinical, CROs, veterinary diagnostics and governmental research, genomics, nucleic acid based molecular diagnostics, genetic identity (including forensics, veterinary testing, GMO detection / quantification as well as animal species differentiation), gene expression profiling, gene therapy, and proteomics.

This selection guide presents an overview of the broad portfolio of MN products for DNA, RNA, and protein purification. It serves as a guide to find the most suitable product for every application from our constantly growing range of MN Bioanalysis products.

Why choose MN for your life science application

MN is known as a reliable partner for high quality products in sample preparation. Our products cover a broad range of applications and are highly esteemed in leading laboratories worldwide. The vast experience of our research team allows MN to offer optimal solutions for changing requirements and challenges of today's life science.

How to use the selection guide

The directory on the following page provides a first overview sorted by the preferred target, sample material and intended application.

After identifying the target molecule / starting material of your personal interest, follow the corresponding numbers to select the kits which relate to your lab focus.

Directory

Plasmid DNA

Plasmid DNA

No.	Product	REF	Starting material (*E. coli* culture)	Format	Binding capacity[1]	Typical yield / recovery	Elution volume	Vector size	Approximate processing time	Features
■ Plasmid DNA										
Molecular biology-grade plasmid DNA										
1	NucleoSpin® Plasmid, NucleoSpin® Plasmid (NoLid)	740588.10 / .50 / .250, 740499.10 / .50 / .250	1–5 mL (high copy), 6–10 mL (low copy)	Mini spin column	60 µg	25–45 µg	50 µL	< 25 kbp	20 min/6 preps	Low protein contamination due to Wash Buffer AW
2	NucleoSpin® Plasmid EasyPure	740727.10 / .50 / .250	1–5 mL (high copy)	Mini spin column	35 µg	15–30 µg	50 µL	< 25 kbp	14 min/6 preps	Ultrafast plasmid mini prep | Liquid RNase included
3	NucleoSpin® 8 Plasmid, NucleoSpin® 8 Plasmid Core Kit[2], NucleoSpin® 96 Plasmid, NucleoSpin® 96 Plasmid Core Kit[2]	740621 / .5, 740461.4, 740625.1 / .4 / .24, 740616.4 / .24	1–5 mL	8-well strip, 96-well plate	30 µg	4–30 µg	75–150 µL	< 25 kbp	45 min/6 strips or plate	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible
4	NucleoSpin® 96 Flash	740618.2 / .4 / .24	1.1–1.3 mL (high copy), 1.1–3.9 mL (low copy)	96-well plate		8 µg (high copy), 1 µg (low copy)		< 250 kbp	90 min/2 plates	No BAC shearing
Transfection-grade plasmid DNA										
5	NucleoSpin® Plasmid Transfection-grade	740490.10 / .50 / .250	1–5 mL	Mini spin column	35 µg	15–30 µg	30–50 µL	< 25 kbp	20 min/6 preps	Patented technology for endotoxin removal | Purification in mini format | Ultrafast procedure
6	NucleoSpin® 96 Plasmid Transfection-grade, NucleoSpin® 96 Plasmid Transfection-grade Core Kit[2]	740491.1 / .4 / .24, 740492.4 / .24	1–5 mL	96-well plate	20 µg	5–20 µg	100–200 µL	< 25 kbp	45 min/plate	Novel technology to diminish endotoxin content | Purification in HTP format | Ultrafast procedure
7	NucleoSnap® Plasmid Midi	740494.10 / .50	50 mL	Snap off column (vacuum processing)	1500 µg	250 µg	200–500 µL	< 25 kbp	35 min/6 preps	Ultrafast procedure | New column design (snap off column) for vacuum processing of large sample volumes | Patented technology for endotoxin removal
8	NucleoBond® Xtra Midi, NucleoBond® Xtra Midi Plus	740410.10 / .50 / .100, 740412.10 / .50	< 200 mL (high copy), < 400 mL (low copy)	Midi gravity flow column	800 µg	500 µg	200–800 µL	< 300 kbp	70 min/prep, 30 min/prep	Lysate clarification and binding in one step | NucleoBond® Xtra Midi Plus: NucleoBond® Finalizer for rapid plasmid | Automation possible
9	NucleoBond® Xtra Maxi, NucleoBond® Xtra Maxi Plus	740414.10 / .50 / .100, 740416.10 / .50	< 600 mL (high copy), < 1200 mL (low copy)	Maxi gravity flow column	2000 µg	1000 µg	400–1000 µL	< 300 kbp	35–75 min/prep	Lysate clarification and binding in one step | NucleoBond® Xtra Maxi Plus: NucleoBond® Finalizer for rapid plasmid precipitation
10	NucleoBond® PC 10000	740593	0,5–2 L (high copy), 1–4 L (low copy)	Giga gravity flow column	10000 µg	2000–10000 µg		< 300 kbp	120–150 min/2 preps	Endotoxin level of 1–10 EU/µg DNA
11	NucleoBond® Xtra BAC	740436.10 / .25	250–750 mL (low copy)	Maxi gravity flow column	150 µg	10–150 µg	500–1000 µL	< 300 kbp	75 min/4 preps	Lysate clarification and binding in one step
Endotoxin-free plasmid DNA										
12	NucleoBond® Xtra Midi EF, NucleoBond® Xtra Midi Plus EF	740420.10 / .50, 740422.10 / .50	< 200 mL (high copy), < 400 mL (low copy)	Midi gravity flow column	800 µg	500 µg	200–800 µL	< 300 kbp	85 min/prep, 45 min/prep	Endotoxin level of < 0.05 EU/µg DNA | NucleoBond® Xtra Midi Plus EF: NucleoBond® Finalizer for rapid plasmid precipitation | Automation possible
13	NucleoBond® Xtra Maxi EF, NucleoBond® Xtra Maxi Plus EF	740424.10 / .50, 740426.10 / .50	< 600 mL (high copy), < 1200 mL (low copy)	Maxi gravity flow column	2000 µg	1000 µg	400–1000 µL	< 300 kbp	90 min/prep, 50 min/prep	Endotoxin level of < 0.05 EU/µg DNA | NucleoBond® Xtra Maxi Plus EF: NucleoBond® Finalizer for rapid plasmid precipitation
14	NucleoBond® 96 Xtra EF	740430.1 / .4	1–5 mL	96-well plate	50 µg	2–4 µg (1.5 mL in 96-well plates), 10–50 µg (5 mL in glass tubes)	100–200 µL	< 25 kbp, < 300 kbp (without NucleoBond® Finalizer Plate)	120 min/plate	Endotoxin level of < 0.1 EU/µg DNA | NucleoBond® Filter Plate for lysate clarification, NucleoBond® Finalizer Plate for DNA precipitation
15	NucleoBond® PC 10000 EF	740548	500–2000 mL	Giga gravity flow column	10000 µg	2000–10000 µg		< 300 kbp	180 min/2 preps	Endotoxin level of < 0.1 EU/µg DNA
Plasmid DNA concentration and desalting										
16	NucleoSnap® Finisher Midi, NucleoSnap® Finisher Maxi	740434.10 / .50, 740435.10 / .50	DNA eluate	Snap off column (vacuum processing)	1.5 mg	90–100 %	≥ 100 µL	< 25 kbp	< 10 min/12 preps	No time consuming isopropanol precipitation | New column design (snap off column) for vacuum processing of large sample volumes
17	NucleoSpin® Finisher Midi	740439.10 / .50	DNA eluate	Funnel column (centrifuge processing)	1.5 mg	90–100 %	≥ 100 µL	< 25 kbp	15 min/6 preps	No time consuming isopropanol precipitation
18	NucleoBond® Finalizer, NucleoBond® Finalizer Plus	740519.20 / .100, 740520.20	5 mL DNA eluate	Syringe filter	500 µg	60–90 %	200–800 µL	2–50 kbp	5 min/prep	Fast plasmid precipitation | NucleoBond® Finalizer Plus: additional syringes included
19	NucleoBond® Finalizer Large, NucleoBond® Finalizer Large Plus	740418.20 / .100, 740419.20	15 mL DNA eluate	Syringe filter	2000 µg	60–90 %	400–1000 µL	2–50 kbp	5 min/prep	Fast plasmid precipitation | NucleoBond® Finalizer Large Plus: additional syringes included
20	NucleoMag® Desalting Beads	744410.50	5 mL (NucleoBond® Xtra Midi eluate), scalable	Magnetic Beads	Approx. 400–500 µg per 100 µL	≥ 90 %	200–2000 µL	< 50 kbp	25 min/prep	Convenient and scalable desalting of anion exchange eluates using magnetic beads

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com*

Plasmid DNA

Clean up

Clean up

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1]	Typical recovery	Elution volume	Fragment size	Approximate processing time	Features
■ Clean up										
PCR clean up										
21	NucleoSpin® Gel and PCR Clean up XS	740611.10 / .50 / .250	< 200 µL PCR reaction mixture	XS spin column	5 µg	75–95 %	6–12 µL	50 bp–approx. 20 kbp	15 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction | In XS prep scale
22	NucleoSpin® Gel and PCR Clean up	740609.10 / .50 / .250	< 400 µL PCR reaction mixture	Mini spin column	25 µg	70–95 %	15–30 µL	50 bp–approx. 20 kbp	10 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction
23	NucleoSpin® Gel and PCR Clean up Midi	740986.20	< 4 mL PCR reaction mixture	Midi spin column	75 µg	70–95 %	200–400 µL	50 bp–approx. 20 kbp	25 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction | In Midi prep scale
24	NucleoSpin® Gel and PCR Clean up Maxi	740610.20	< 10 mL PCR reaction mixture	Maxi spin column	250 µg	70–95 %	1000 µL	50 bp–approx. 20 kbp	30 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction | In Maxi prep scale
25	NucleoSpin® 8 PCR Clean up, NucleoSpin® 8 PCR Clean up Core Kit[2], NucleoSpin® 96 PCR Clean up, NucleoSpin® 96 PCR Clean up Core Kit[2]	740668 / .5, 740463.4, 740658.1 / .2 / .4 / .24, 740464.4	< 100 µL PCR reaction mixture	8-well strip, 96-well plate	15 µg	75–95 %	75–150 µL	50 bp–10 kbp	30 min/6 strips, 45 min/plate	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible
26	NucleoFast® 96 PCR Clean up Kit, NucleoFast® 96 PCR Plates	743500.4, 743100.10 / .50	20–300 µL PCR reaction mixture	96-well plate		40–95 %	25–100 µL	> 150 bp	20 min/plate	Fast procedure (vacuum / centrifugation) | Automation possible
27	NucleoMag® NGS Clean up and size selection[6]	744970.5 / .50	7.5 pg – 5 µg nucleic acids	Magnetic beads		≥ 80 %	10–100 µL	> 150 bp-approx. 800 bp	40–120 min/96 preps	Specific protocol for Clean up of PCR reactions
Gel extraction										
28	NucleoSpin® Gel and PCR Clean up XS	740611.10 / .50 / .250	< 200 mg agarose gel	XS spin column	5 µg	75–95 %	6–12 µL	50 bp-approx. 20 kbp	15 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction | In XS prep scale
29	NucleoSpin® Gel and PCR Clean up	740609.10 / .50 / .250	< 400 mg agarose gel	Mini spin column	25 µg	70–95 %	15–30 µL	50 bp–approx. 20 kbp	10 min/6 preps[4]	2 in 1 kit – PCR Clean up and gel extraction
30	NucleoSpin® Gel and PCR Clean up Midi	740986.20	< 4 g TAE / TBE agarose gel	Midi spin column	75 µg	70–95 %	200–400 µL	50 bp–approx. 20 kbp	25 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction | In Midi prep scale
31	NucleoSpin® Gel and PCR Clean up Maxi	740610.20	< 10 g TAE / TBE agarose gel	Maxi spin column	250 µg	70–95 %	1000 µL	50 bp–approx. 20 kbp	30 min/6 preps	2 in 1 kit – PCR Clean up and gel extraction | In Maxi prep scale
NGS clean up and size selection										
32	NucleoMag® NGS Clean up and Size Select	744970.5 / .50 / .500	7.5 pg – 5 µg nucleic acids in NGS reaction mixture	Magnetic beads		≥ 80 %	10–100 µL	Tunable (150–800 bp)	40–120 min/96 preps[3]	Convenient magnetic bead technology | Easy to adjust for specific applications or sequencers | Optimal scalability for manual and automated
Genomic DNA clean up										
33	NucleoSpin® Inhibitor Removal Kit	740408.10 / .50	Contaminated DNA preparations from diverse sample source	Mini spin column	60 µg	> 75 %	50–100 µL	200 bp–approx. 50 kbp	15 min/6 preps	Removal of PCR inhibitors from prepurified DNA eluates
34	NucleoSpin® gDNA Clean up XS	740904.10 / .50 / .250	< 400 µL solution containing < 2 µg DNA	XS spin column	3 µg	60–70 %	6–10 µL	100 bp–approx. 50 kbp	20 min/6 preps	For small amounts of genomic DNA (e.g., forensic samples)
35	NucleoSpin® gDNA Clean up	740230.10 / .50 / .250	< 150 µL solution containing < 25 µg DNA	Mini spin column	50 µg	80–90 %	50–100 µL	100 bp–approx. 50 kbp	15 min/10 preps	Special buffer chemistry for clean up of genomic DNA
RNA clean up										
36	NucleoSpin® RNA Clean up XS	740903.10 / .50 / .250	< 300 µL RNA solution containing < 90 µg RNA	XS spin column	110 µg	85–95 %	5–30 µL	> 200 nt	20 min/6 preps	Easy clean up and concentration of prepurified RNA
37	NucleoSpin® RNA Clean up (NucleoSpin® RNA Midi)	740948.10 / .50 / .250 (740962.20)	< 200 µL phenol / chloroform extract or reaction mixture	Mini spin column (Midi spin column)	200 µg (700 µg)	85–95 %	500 µL	> 200 nt	20 min/6 preps (80 min/4 preps)	Easy clean up of prepurified RNA Support protocol for RNA clean-up available
38	NucleoSpin® RNA Clean up Maxi	740910.20	< 35 mg crude RNA	Maxi spin column	35 mg	85–95 %	3–5 mL	> 200 nt	30 min/6 preps	Simple, fast, and convenient clean up of huge RNA amounts
39	NucleoMag® NGS Clean up and Size Select	744970.5 / .50 / .500	7.5 pg – 5 µg nucleic acids	Magnetic beads		≥ 70 %	10 – 100 µL	> 150 nt	40–120 min/96 preps [3]	Reliable RNA Clean up after RNA purifications or enzymatic reactions, i.e. invitro transcription reactions / certified as RNase-free
Dye terminator removal										
40	NucleoSEQ®	740523.10 / .50 / .250	20 µL sequencing reaction mixture	Mini spin column			20 µL		5 min/prep (excl. hydration)	Efficient dye terminator removal

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com/HTapplications*; [3] Depending on instrument type / setup / configuration. For more detailed infomation regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at *www.mn-net.com*.; [4] Gel melting time excluded; [5] Not available in the USA; [6] Next generation sequencing

DNA

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1]	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
■ DNA										
DNA from blood and biological fluids										
41	NucleoBond® HMW DNA	740160.2 / .20	Depending on sample type	Midi gravity flow column	600 µg	Depending on amount and quality of sample	50–250 µL	2 kbp-approx. 150 kbp (enzymatic lysis)/50 kbp (mechanical lysis)	2 h/12 preps (incl. 30 min lysis)	For purification of high integrity DNA | Compatible with different sample matrices such as tissue, cells, plant leaves, bacteria, yeast, and liquid samples
42	NucleoSpin® Blood	740951.10 / .50 / .250	5–200 µL blood / serum / plasma, < 5 x 10^6 human / animal cells	Mini spin column	60 µg	4–6 µg (200 µL blood)	60–200 µL	200 bp–approx. 50 kbp	30 min/prep	High quality DNA from blood | Also suitable for DNA from plasma, serum, buffy coat, and other body fluids | Compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)
43	NucleoSpin® Dx Blood (CE-IVD)[3]	740899.50 / .250	200 µL human blood (fresh or frozen, EDTA, citrate, or heparin treated)	Mini spin column	60 µg	3–5 µg (200 µL blood)	50–200 µL	200 bp–approx. 50 kbp	30 min/prep	CE-IVD marked isolation of gDNA from blood | Compatible with several blood stabilization substances (citrate, EDTA, heparin)
44	NucleoSpin® Blood QuickPure	740569.10 / .50 / .250	5–200 µL blood / serum / plasma, < 5 x 10^6 human / animal cells	Mini spin column	50 µg	4–6 µg (200 µL blood)	30–50 µL	200 bp–approx. 50 kbp	25 min/prep	Fast procedure | Washing and drying combined in a single step | Compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)
45	NucleoSpin® Blood L	740954.20 / .100	0.2–2 mL blood / serum / plasma, < 2 x 10^7 human / animal cells	Midi spin column	250 µg	40–60 µg (2 mL blood)	120–200 µL	200 bp–approx. 50 kbp	60 min/prep	For processing of larger blood volumes (0.2–2 mL) | Compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)
46	NucleoSpin® Blood L Vacuum	740954.24	1–2 mL whole blood	Midi spin column	250 µg	50–80 µg (2 mL blood)	600 µL	300 bp–approx. 50 kbp	75 min/24 preps	Parallel processing of 24 samples for time saving workflows (vacuum, positive pressure) | Compatible with blood stabilization substances (e.g., citrate, EDTA) | Automation possible
47	NucleoSpin® Blood XL	740950.10 / .50	2–10 mL blood / serum / plasma, < 10^8 human / animal cells	Maxi spin column	700 µg	200–300 µg (10 mL blood)	600–2000 µL	200 bp–approx. 50 kbp	60 min/prep	For processing of large blood volumes (2–10 mL) | Compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)
48	NucleoSpin® 8 Blood, NucleoSpin® 8 Blood Core Kit[2], NucleoSpin® 96 Blood, NucleoSpin® 96 Blood Core Kit[2]	740664 / .5, 740455.4, 740665.1 / .4 / .24, 740456.4	< 200 µL blood / serum / plasma, < 2 x 10^6 human / animal cells	8-well strip, 96-well plate	20 µg	4–6 µg (200 µL blood)	100 µL	300 bp–approx. 50 kbp	35 min/6 strips (excl. lysis), 70 min/plate (excl. lysis)	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible | Compatible with blood stabilization substances (e.g., citrate, EDTA, heparin)
49	NucleoSpin® 8 Blood QuickPure, NucleoSpin® 96 Blood QuickPure	740666 / .5, 740667.2 / .4 / .24	< 200 µL blood / serum / plasma, < 5 x 10^6 human / animal cells	8-well strip, 96-well plate	60 µg	4–6 µg (200 µL blood)	75–100 µL	300 bp–approx. 50 kbp	60 min/12 strips, 60 min/2 plates	Fast procedure and flexible format | Manual processing by centrifuge | Compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA)
50	NucleoMag® Blood 200 µL, NucleoMag® Blood 3 mL	744501.1 / .4, 744502.1	< 200 µL blood (fresh or frozen, EDTA or citrate treated), < 3 mL blood (fresh or frozen, EDTA or citrate treated)	Magnetic beads	0.4 µg/µL beads	2–8 µg (200 µL blood), 100–130 µg (3 mL blood)	50–100 µL, 1000 µL	300 bp–approx. 50 kbp	40–120 min/96 preps[4], 60 min/24 preps[4]	Easily adapted to automated use | Compatible with blood stabilization substances (e.g., citrate, EDTA)
cfDNA from plasma										
51	NucleoSpin® cfDNA XS	740900.10 / .50 / .250	< 240 µL plasma / serum, < 720 µL plasma / serum (multiple loading steps)	XS spin column		25 pg–25 ng (240 µL plasma)	5–30 µL	≥ 50 bp	20 min/6 preps	Special buffer chemistry for cell-free DNA from plasma and serum | XS column design for elution in ≥ 5 µL for highest concentration
52	NucleoSpin® cfDNA Midi, NucleoSpin® cfDNA Midi Core Kit[2]	740303.48, 740302.48	1–5 mL plasma (EDTA, Cell-Free DNA BCT®)	Midi spin column		Depending on sample source, storage, and quality		≥ 50 bp	90 min/24 preps	Superior recovery of fragmented cell-free DNA | Parallel purification of 24 samples | Special adapter set for NucleoVac 96 Vacuum Manifold available | Optimized protocol for Cell-Free DNA BCT® (Streck) | Automation possible
53	NucleoSpin® 96 cfDNA, NucleoSpin® 96 cfDNA Core Kit[2]	740873.1 / .4, 740874.1 / .4	0.5–2 mL plasma	96-well plate		Depending on sample source, storage, and quality		≥ 50 bp	90 min/plate	High throughput solution for cell-free DNA isolation | Optimized protocol for Cell-Free DNA BCT® (Streck) | Manual or automated processing (vacuum / centrifugation / positive pressure)
54	NucleoSnap® cfDNA	740300.10 / .50	1–10 mL plasma (EDTA, Cell-Free DNA BCT®)	Snap off column		Depending on sample source, storage, and quality	20–100 µL	≥ 50 bp	45 min/6 preps	NucleoSnap® column for quick processing of large sample volumes by vacuum | Highly efficient recovery of nucleic acids from "Liquid Biopsies" | No Carrier RNA needed
55	NucleoMag® cfDNA	744550.1 / .4	1–10 mL human plasma (EDTA, Cell-Free DNA BCT®)	Magnetic beads	0.3 µg/µL beads	Depending on sample source, storage, and quality	50–200 µL	≥ 50 bp	60 min/24 preps (excl. lysis)[4]	Consistent cfDNA recovery from 1–10 mL plasma samples | Efficient purification of fragmented DNA as small as 50 bp | Automation possible
DNA from tissue and cells										
56	NucleoSpin® DNA RapidLyse	740100.10 / .50 / .250	< 40 mg fresh weight, < 10^6 cells	Mini spin column	60 µg	1–30 µg (depending on sample source)	60–100 µL	200 bp–approx. 50 kbp	25 min/6 preps (excl. lysis)	Powerful lysis in one hour or less | Unique lysis chemistry for gDNA from cells, tissues, and organs | Superior DNA yields compared to standard extraction methods
57	NucleoSpin® 96 DNA RapidLyse	740110.1 / .4	< 30 mg fresh weight, < 10^6 cells	96-well plate	40 µg	1–30 µg (depending on sample source)	100 µL	200 bp–approx. 50 kbp	60 min/plate (excl. lysis)[4]	Unique lysis chemistry for DNA from a variety of sample materials in one hour or less | Manual or automated processing by vacuum, positive pressure, or centrifugation | Easy automation on robotic platforms
58	NucleoSpin® Tissue XS	740901.10 / .50 / .250	0.025–10 mg human / animal tissue, 10–10^4 human / animal cells, Guthrie cards (5–30 mm^2)	Mini spin column (XS design)	50 µg	0.1–0.5 ng (10^2 HeLa cells), 10–50 ng (10^4 HeLa cells)	5–30 µL	200 bp–approx. 50 kbp	20 min/prep (excl. lysis)	Purification of genomic, bacterial, and viral DNA from smallest samples

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com*; [3] Not available in the USA; [4] Depending on instrument type / setup / configuration. For more detailed infomation regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at *www.mn-net.com*.

DNA

DNA

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1]	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
59	NucleoSpin® Tissue	740952.10 / .50 / .250	< 25 mg human / animal tissue, 10^2–10^7 human / animal cells	Mini spin column	60 µg	20–35 µg (25 mg mouse liver)	60–100 µL	200 bp–approx. 50 kbp	20 min/prep (excl. lysis)	Allround genomic DNA purification kit for purification from clinical and forensic samples, tissues, cells, yeast, bacteria, or viruses
DNA from tissue and cells										
60	NucleoSpin® 8 Tissue, NucleoSpin® 8 Tissue Core Kit[2], NucleoSpin® 96 Tissue, NucleoSpin® 96 Tissue Core Kit[2]	740740 / .5, 740453.4, 740741.2 / .4 / .24, 740454.4	< 20 mg human / animal tissue, < 10^6 human / animal cells	8-well strip, 96-well plate	40 µg	15–25 µg (20 mg human / animal tissue)	100–200 µL	300 bp–approx. 50 kbp	20 min/6 strips (excl. lysis), 60 min/plate (excl. lysis)	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible | Numerous support protocols facilitate processing for challenging sample materials
61	NucleoMag® Tissue	744300.1 / .4 / .24	< 20 mg human / animal tissue, < 10^6 human / animal cells	Magnetic beads	0.4 µg/µL beads	10–20 µg (20 mg human / animal tissue)	50–200 µL	300 bp–approx. 50 kbp	40–120 min/96 preps (excl. lysis)[3]	Efficient lysis and small elution volumes for highest concentrated DNA | Easily adapted to automated use
62	NucleoSpin® DNA Lipid Tissue	740471.10 / .50	< 40 mg lipid rich tissue (e.g., brain, fish, adipose tissue)	Mini spin column	60 µg	Depending on sample type, quality, and water content	25–200 µL	200 bp–approx. 50 kbp	35 min/6 preps	Genomic DNA from tissue with a high lipid content | Special buffer composition for efficient removal of lipids | MN Bead Tubes for efficient lysis included | Fast and convenient procedure without RNA contamination
63	NucleoSpin® DNA Insect	740470.10 / .50	< 40 mg fresh, frozen, dried, or ethanol preserved insect / crustacean sample	Mini spin column	60 µg	< 25 µg (depending on sample and disruption device)	25–200 µL	200 bp–approx. 50 kbp	35 min/6 preps	Suitable for insect or crustacean samples | High quality DNA from fresh, frozen, dried or ethanol preserved specimen | MN Bead Tubes for efficient lysis of an exoskeleton included | Fast and convenient procedure
DNA from FFPE samples										
64	NucleoSpin® DNA FFPE XS	740980.10 / .50 / .250	≤ 7 sections (10 µm) of 250 mm^2 total area, < 15 mg paraffin	XS spin column	50 µg	Depending on sample amount and quality	5–30 µL	50 bp–approx. 50 kbp	70 min/6 preps (excl. lysis)	Odorless paraffin removal by patented Paraffin Dissolver | No use of xylene needed | Efficient removal of crosslinks | Manual or automated processing
65	NucleoSpin® 8 DNA FFPE, NucleoSpin® 96 DNA FFPE	740242 / .5, 740240.1 / .4	≤ 10 mg tissue / 7 sections (10 µm) of 250 mm^2 total area (< 15 mg paraffin)	8-well strip, 96-well plate	20 µg	Depending on amount and quality of sample	100 µL	50 bp–approx. 5 kbp	60 min/6 strips or plate (excl. lysis)	Odorless paraffin removal by patented Paraffin Dissolver | No use of xylene needed | Efficient removal of crosslinks | Manual or automated processing (vacuum / centrifugation / positive pressure)
66	NucleoMag® DNA FFPE	744320.1 / .4	≤ 5 mg tissue (< 15 mg paraffin)	Magnetic beads	0.4 µg/µL beads	Depending on amount and quality of sample	> 25 µL	300 bp–approx. 5 kbp	40–120 min/96 preps (excl. lysis)[3]	Odorless paraffin removal by patented Paraffin Dissolver | No use of xylene needed | Efficient removal of crosslinks | Manual or automated processing
DNA from forensic samples										
67	NucleoSpin® Forensic Filters, NucleoSpin® Forensic Filters (Bulk)	740988.10 / .50 / .250, 740988.50B / .250B / .1000B	Swabs, denim, cigarette butts, and other solid sample carriers	Semipermeable mini spin tube						Semipermeable mini spin tubes for incubation and lysate separation in one tube without buffer leakage (single blistered or bulk)
68	NucleoSpin® DNA Forensic	740840.10 / .50 / .250	Casework samples, contact traces (e.g., dried blood spots, cigarette filters, swabs)	Mini spin column	7 µg	1–3 µg from buccal swabs	50–100 µL		20 min/prep (excl. lysis)	Excellent DNA purity from all casework samples | Uniform buffer system for single sample (NucleoSpin® DNA Forensic) analysis and for high throughput analysis (NucleoMag® DNA Forensic) | Conformity to ISO 18385 for doubtless DNA profiling
69	NucleoSpin® 8 Trace, NucleoSpin® 96 Trace	740722.1 / .5, 740726.2 / .4	Casework samples, contact traces (e.g., dried blood spots, cigarette filters, swabs)	8-well strip, 96-well plate	20 µg	Depending on sample amount and quality	50–100 µL	200 bp–approx. 50 kbp	30 min/6 strips (excl. lysis), 70 min/plate (excl. lysis)	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible
70	NucleoMag® DNA Forensic	744660.1 / .4	Casework samples, contact traces (e.g., dried blood spots, cigarette filters, swabs)	Magnetic beads	0.4 µg/µL beads	1–3 µg from buccal swabs	25–50 µL		40–120 min/96 preps (excl. lysis)[3]	Excellent DNA purity from all casework samples | Uniform buffer system for single sample (NucleoSpin® DNA Forensic) analysis and for high throughput analysis (NucleoMag® DNA Forensic) | Conformity to ISO 18385 for doubtless DNA profiling | Automation possible
DNA from plant and fungi										
71	NucleoSpin® Plant II	740770.10 / .50 / .250	< 100 mg (wet weight), < 20 mg (dry weight) plant tissue	Mini spin column	50 µg	1–30 µg (100 mg plant tissue, wet weight)	50–100 µL	50 bp–approx. 50 kbp	30 min/prep	Two optional lysis buffers (based on CTAB or SDS) for optimal lysis
72	NucleoSpin® Plant II Midi	740771.20	< 400 mg (wet weight), < 80 mg (dry weight) plant tissue	Midi spin column	200 µg	10–100 µg (400 mg plant tissue, wet weight)	200–400 µL	50 bp–approx. 50 kbp	90 min/prep	For processing of large plant samples | NucleoSpin® Midi Filters and RNase A included
73	NucleoSpin® Plant II Maxi	740772.10	< 1500 mg (wet weight), < 300 mg (dry weight) plant tissue	Maxi spin column	500 µg	50–300 µg (1500 mg plant tissue, wet weight)	1000–2000 µL	50 bp–approx. 50 kbp	90 min/prep	For processing of larger plant samples | NucleoSpin® Maxi Filters and RNase A included
74	NucleoSpin® 8 Plant II, NucleoSpin® 8 Plant II Core Kit[2], NucleoSpin® 96 Plant II, NucleoSpin® 96 Plant II Core Kit[2]	740669 / .5, 740467.4, 740663.2 / .4 / .24, 740468.4	20–100 mg (wet weight) plant tissue	8-well strip, 96-well plate	30 µg	1–30 µg (100 mg plant tissue, wet weight)	100–200 µL	50 bp–approx. 50 kbp	60 min/6 strips or plate (excl. lysis)	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible
75	NucleoMag® Plant	744400.1 / .4 / .24	20–50 mg (wet weight) plant tissue	Magnetic bead	0.4 µg/µL beads	10–20 µg (50 mg plant tissue, wet weight)	50–200 µL	300 bp–approx. 50 kbp	40–120 min/96 preps (excl. lysis)[3]	Easily adapted to automated use
76	NucleoMag® 384 Plant	744402.1 / .4	30 mg (wet weight)	Magnetic bead	0.2 µg/µL beads	Depending on sample source	50–200 µL	300 bp–approx. 50 kbp	40–120 min/96 preps, 60 min/384 preps (excl. lysis)[3]	Easily adapted to automated use | Tailored preparation of DNA from plant samples in a 384-well format

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com*; [3] Depending on instrument type / setup / configuration. For more detailed infomation regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at *www.mn-net.com*.

DNA

DNA

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1]	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
DNA from microorganisms										
77	NucleoSpin® Microbial DNA	740235.10 / .50 / .250	< 40 mg wet weight cell pellet (bacteria, yeast, fungi)	Mini spin column	60 µg	Depending on sample type and disruption; approx. 5–25 µg (30 mg wet weight)	100–200 µL	200 bp–approx. 50 kbp	35 min/prep	Suitable for a large variety of starting materials | MN Bead Tubes for efficient lysis included | Fast and easy procedure | Liquid Proteinase K included, no additional enzyme required
78	NucleoSpin® DNA Yeast	740236.10 / .50	< 100 mg wet weight	Mini spin column	60 µg	Up to 20 µg	100–200 µL	200 bp–approx. 50 kbp	35 min/preps	Isoaltion of total DNA from yeast and fungi | MN Bead Tubes Type C included
79	NucleoMag® DNA Bacteria	744310.1 / .4	< 40 mg (10^8–10^9) bacteria, < 30 mg fungi, < 40 mg other tissues	Magnetic Beads	0.4 µg/µL beads	Depending on amount and quality of sample	50–100 µL		40–120 min/96 preps (excl. lysis)	Magnetic bead based kit for the isolation of genomic DNA from bacteria and yeast | Easily adapted to automated use
DNA from soil and stool										
80	NucleoSpin® Soil	740780.10 / .50. / .250	< 500 mg soil / sludge / sediment	Mini spin column	50 µg	2–10 µg (500 mg soil)	30–100 µL	50 bp–approx. 50 kbp	90 min/10 preps	Two lysis buffers and a special additive for optimal lysis and complete removal of inhibitors | MN Bead Tubes and NucleoSpin® Inhibitor Removal Column included
81	NucleoSpin® 8 Soil, NucleoSpin® 96 Soil	740779 740787.2 / .4	< 500 mg soil / sludge / sediment	8-well strip, 96-well plate	50 µg	2–10 µg (500 mg soil)	100–200 µL	50 bp–approx. 50 kbp	150 min/6 strips or plate	MN Bead Tubes and NucleoSpin® Inhibitor Removal Strips / Plate included
82	NucleoSpin® DNA Stool	740472.10 / .50 / .250	180–220 mg fresh or frozen human stool (for animal stool lower amounts may be required for optimal results)	Mini spin column	50 µg	2–10 µg (depending on sample and disruption device)	30–100 µL	200 bp–approx. 50 kbp	60 min/10 preps	Suitable for any stool sample – high quality DNA from stool from carnivores, omnivores, and herbivores | MN Bead Tubes for efficient lysis included | NucleoSpin® Inhibitor Removal Columns ensure highest purity of the isolated DNA
83	NucleoMag® DNA Microbiome	744330.1 / .4	(50–200 mg) Biofilm samples (incl. swabs), Soil, Stool	Magnetic Beads	0.4 µg/µL beads	Depending on amount and quality of sample	50–200 µL		40–120 min/96 preps, depending on instruments/ automation used	Isolation of genomic DNA from microorganisms in soil, stool and biofilm (swab) samples | Easily adapted to automated use
DNA from food and feed										
84	NucleoSpin® Food	740945.10 / .50 / .250	< 200 mg food / feed	Mini spin column	30 µg	0.1–10 µg (200 mg food)	100 µL	300 bp–approx. 50 kbp	30 min/6 preps	Suitable for complex food matrices | Removal of PCR inhibitors
85	NucleoSpin® 8 Food, NucleoSpin® 96 Food	740975 / .5, 740976.2 / .4	< 200 mg food / feed	8-well strip, 96-well plate	30 µg	0.1–10 µg (200 mg food)	100–200 µL	300 bp–approx. 50 kbp	60 min/6 strips (excl. lysis), 120 min/plate (excl. lysis)	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible | Removal of PCR inhibitors
86	NucleoMag® DNA Food	744945.1 / .4	< 200 mg food / feed	Magnetic beads	0.4 µg/µL beads	0.1–10 µg (depending on sample type)	50–200 µL	300 bp–approx. 50 kbp	40–120 min/96 preps (excl. lysis)[3]	Suitable for species identification / GMO detection | Extraction of DNA from contaminating bacteria (food safety) | Kit chemistry allows full sample flexibility | Removal of PCR inhibitors for enhanced results | Get even low amounts of partially degraded DNA from complex matrices | Easily adapted to automated use
DNA from water										
87	NucleoSpin® eDNA Water	740402.10 / .50	Several liters of water depending on filtration system, < 40 mL unfiltered water	XS spin column		Depending on amount and quality of sample	100 µL		< 70 min (excluding water filtration)	For the isolation of eDNA from milliliter to liters of environmental water samples
88	NucleoMag® DNA/RNA Water	744220.1 / .4	10–1000 mL	Magnetic Beads	0.4 µg/µL beads	Depending on amount and quality of sample	50–250 µL	300 bp–approx. 50 kbp	40–120 min/96 preps (excl. lysis)	Flexible magnetic bead based isolation of DNA and RNA from water and air samples | Easily adapted to automated use
Direct PCR										
89	NucleoType Blood PCR	743201.25 / .100 / .500	Whole blood from human and animal samples / punches from blood storage cards	Transfer tools, PCR mix, Inhibitor Removal Pearls				Recommended for up to 1 kbp	< 1 min, 30-90 min PCR cycling (depending on cycler protocol)	Pretreatment of challenging blood samples with Inhibitor Removal Pearls | Transfer of blood aliquot with the Blood Transfer Tool
90	NucleoType Mouse PCR	743200.25 / .100 / .500	Mouse tail clipping (1 mm), mouse ear punch (Ø 1 mm), mouse blood (1 µL), mouse hairs (approx. 3–30)	Lysis Buffer, PCR mix, Liquid Proteinase K				Recommended for up to 1 kb	5 min/prep (DNA release) 30–90 min PCR cycling (depending on cycler protocol)	Kit for rapid mouse typing experiments with common samples such as tail clips, ear punch, hair, and blood | Efficient lysis buffer allows DNA preparation within 5 minutes | HotStart PCR Master Mix with agarose gel loading dye included
91	NucleoType Plant PCR	743202.25 / .100 / .500	Plant leaf (e.g., corn, tobacco, or fruit flesh)	Plant transfer tool, and PCR mix				Recommended for up to 1 kb	< 1 min, 30–90 min PCR cycling (depending on cycler protocol)	Direct PCR | Transfer of plant leaf aliquot with Plant Transfer Tool (PTT) directly into PCR Mix
92	NucleoType Seed PCR	743203.25 / .100 / .500	Hard plant material (e.g., soybeen, wheat, corn, rice, moss, fern leaf, or fir needle)	Lysis buffer P, PCR mix, and Liquid Proteinase K				Recommended for up to 2 kb	5 min/prep (DNA release, 30–90 min PCR cycling (depending on cycler protocol)	Simple sample preparation in less than 5 min | Optimized Lysis Buffer P | Proteinase K included

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com*; [3] Depending on instrument type / setup / configuration. For more detailed infomation regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at *www.mn-net.com*.; [4] Not available in the USA

RNA

RNA

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1]	Typical yield / recovery	Elution volume	Fragment size	Approximate processing time	Features
■ RNA										
RNA from cells and tissue										
93	NucleoSpin® RNA	740955.10 / .50 / .250	< 5 x 10^6 cultured cells, < 10^9 bacterial cells, < 10^8 yeast cells, < 30 mg human / animal tissue	Mini spin column	200 µg	14 µg (10^6 HeLa cells), 70 µg (10^9 bacterial cells)	30–120 µL	> 200 nt	35 min/6 preps	rDNase and NucleoSpin® Filters included
94	NucleoSpin® RNA Plus	740984.10 / .50 / .250	10^7 cultured cells, < 10^9 bacterial cells, < 10^8 yeast cells, < 30 mg human / animal tissue	Mini spin column	200 µg	40–60 µg (5 x 10^6 HeLa cells), 80–100 µg (20 mg mouse liver), 40–70 µg (20 mg mouse kidney), 30–60 µg (5 mg mouse spleen)	30–120 µL	> 200 nt	20 min/6 preps	Filtration and DNA removal in one step with the NucleoSpin® gDNA Removal Column | No ß-mercaptoethanol / TCEP necessary
95	NucleoSpin® RNA XS	740902.10 / .50 / .250	1–10^5 cells, < 5 mg human / animal tissue	XS spin column	110 µg	0.1–1.5 ng (10^2 HeLa cells), 1–1.5 µg (10^5 HeLa cells)	5–30 µL	> 200 nt	35 min/6 preps	For smallest samples | rDNase and NucleoSpin® Filters included | No ß-mercapthoethanol
96	NucleoSpin® RNA Plus XS	740990.10 / .50 / .250	1–10^5 cells, < 5 mg human / animal tissue	XS spin column	110 µg	0.5–2 µg (10^5 HeLa cells), 0.05–0.2 ng (10 HeLa cells), 2.5–8 ng (0.5 µg mouse liver), 0.1–0.5 ng (0.5 µg mouse brain)	5–30 µL	> 100 nt	18 min/6 preps	For extra small samples down to single cell analysis | gDNA removal column – no DNA digestion needed | No ß-mercapthoethanol or TCEP | XS columns allow elution in 5 µL for highest RNA concentration
97	NucleoSpin® RNA Midi	740962.20	< 5 x 10^7 cultured cells, < 10^{10} bacterial cells, < 3 x 10^8 yeast cells, < 200 mg human / animal tissue	Midi spin column	700 µg	620 µg (4 x 10^7 HeLa cells)	500–1000 µL	> 200 nt	80 min/4 preps	Large scale RNA preparation | rDNase and NucleoSpin® Filters included
98	NucleoSpin® 8 RNA, NucleoSpin® 8 RNA Core Kit[2], NucleoSpin® 96 RNA, NucleoSpin® 96 RNA Core Kit[2]	740698 / .5, 740465.4, 740709.2 / .4 / .24, 740466.4	< 2 x 10^6 cells, < 20 mg human / animal tissue	8-well strip, 96-well plate	100 µg	20 µg (2 x 10^6 HeLa cells, 20 mg mouse liver)	50–130 µL	> 200 nt	45 min/6 strips, 70 min/plate	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible | rDNase included
99	NucleoMag® RNA	744350.1 / .4	< 2 x 10^6 cells, < 20 mg human / animal tissue	Magnetic beads	0.4 µg/µL beads	< 30 µg	50–200 µL	> 200 nt	40–120 min/96 preps[3] (excl. lysis)	rDNase included | Easily adapted to automated use
100	NucleoZOL	740404.200	Per mL NucleoZOL: < 2–10^6 cultured bacteria / yeast cells, < 100 mg human / animal / plant tissue, < 0.4 mL (viral) fluids	Reagent		Total RNA: 6–8 µg/mg (liver), 3–4 µg/mg (kidney, spleen), 0.5–1.5 µg/mg (muscle, brain), 4–10 µg/10^6 (cultured cells) Large RNA: 5–7 µg/mg (liver), 3–4 µg/mg (kidney, spleen), 0.5–1.5 µg/mg (muscle, brain), 3–8 µg/10^6 (cultured cells)	Flexible	> 10 nt (total RNA), > 10–200 nt (small RNA), > 200 nt (large RNA)	< 1 h	No chloroform, no phase separation, easy procedure | High RNA yield and purity from any sample material | Small and large RNA in one or in separated fractions | Combination with NucleoSpin® RNA Set (mini spin columns) possible
101	NucleoSpin® RNA Set for NucleoZOL	740406.10 / .50	< 500 µL NucleoZOL sample	Mini spin column	200 µg	85–95 % (depending on sample quality)	60 µL	> 10 nt (total RNA), > 10–200 nt (small RNA), > 200 nt (large RNA)	< 1 h	Total RNA (incl. miRNA) with a simple bind-wash-elute procedure | Efficient lysis, superior yields | Save time and benefit from the easy and proven handling
MicroRNA										
102	NucleoSpin® miRNA	740971.10 / .50 / .250	< 10^7 cells, < 30 mg human / animal tissue, < 50 mg plant tissue, < 150 µL reaction mixture	Mini spin column	200 µg	100 µg total RNA (10^7 HeLa cells: 10 µg small RNA, 90 µg large RNA)	30–100 µL	≥ 18 nt	45 min/6 preps (small and large RNA), 35 min/6 preps (small RNA only)	Optional fractionation of small and large RNA | No organic solvents | rDNase and NucleoSpin® Filters included
103	NucleoSpin® miRNA Plasma	740981.10 / .50 / .250	< 300 µL plasma / serum (< 900 µL with multiple loading steps)	Mini spin column	200 µg	Depending on sample amount and quality	20–50 µL	≥ 18 nt	40 min/10 preps, 70 min/10 preps (incl. DNA digestion)	Efficient purification of RNA | Optional co-isolation of cfDNA
104	Exosome Precipitation Solution (Serum / Plasma)[4]	740398.2 / .12 / .60	0.1–1 mL serum / plasma	Buffer set					45 min/6 preps	RNA purification from exosomes | Simple and efficient precipitation of exosomes | No ultracentrifugation | Flexible scale | Ideal for subsequent nucleic acid purification with NucleoSpin® miRNA Plasma
105	Exosome Precipitation Solution (Urine)[4]	740399.12 / .50 / .250	1–10 mL urine	Buffer set					45 min/6 preps	RNA purification from exosomes | Simple and efficient precipitation of exosomes | No ultracentrifugation | Flexible scale | Ideal for subsequent nucleic acid purification with NucleoSpin® miRNA Plasma
RNA, DNA, and protein isolation										
106	NucleoSpin® TriPrep	740966.10 / .50 / .250	< 5 x 10^6 cells, < 30 mg human / animal tissue, < 100 mg plant tissue	Mini spin column	200 µg	< 70 µg RNA, < 6 µg DNA, < 1200 µg protein	40–120 µL (RNA), 100 µL (DNA), 10–100 µL (protein)	> 200 nt (RNA), < 30 kbp (DNA), 15–300 kDa (protein)	30 min/6 preps (RNA), 45 min/6 preps (RNA and DNA), +35 min/6 preps (protein)	RNA, DNA, and proteins - three molecules in separate fractions | One procedure
107	NucleoSpin® RNA/Protein	740933.10 / .50 / .250	< 5 x 10^6 cells, < 30 mg human / animal tissue, < 100 mg plant tissue	Mini spin column	200 µg	< 70 µg RNA, < 1200 µg protein	40–120 µL (RNA), 10–100 µL (protein)	> 200 nt (RNA), 15–300 kDa (protein)	30 min/6 preps (RNA), +35 min/6 preps (protein)	RNA and proteins - two molecules in separate fractions | One procedure

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com*; [3] Depending on instrument type / setup / configuration. For more detailed infomation regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at *www.mn-net.com*.; [4] Not available in the USA

RNA

RNA

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1)]	Typical yield / recovery	Elution volume	Fragment size	Approximate processing time	Features
RNA, DNA, and protein isolation										
108	NucleoSpin® RNA/DNA Buffer Set	740944	See NucleoSpin® RNA, NucleoSpin® RNA XS, NucleoSpin® miRNA, NucleoSpin® RNA Blood, NucleoSpin® RNA Plant, NucleoSpin® RNA/ Protein	Buffer set		RNA yield and quality identical to NucleoSpin® RNA kits	100 µL (DNA)	< 30 kbp (DNA)	5 min/6 preps (DNA), for RNA, see NucleoSpin® RNA kits	RNA and DNA – two molecules in separate fractions | One procedure
RNA from blood										
109	NucleoSpin® Dx RNA Blood (CE-IVD)	740201.50	1200 µL stabilized blood (S-Monovette RNA Exact)	Mini spin column	200 µg		40 – 60 µL	> 200 nt	45 min/6 min	CE-IVD certified workflow for RNA purification form Sarstedt S-Monovette RNA Exact
110	NucleoSpin® RNA Blood	740200.10 / .50	< 400 µL whole blood (fresh or frozen)	Mini spin column	200 µg	1–8 µg (400 µL whole blood)	40–120 µL	> 200 nt	55 min/6 preps	No selective erythrocyte lysis – direct lysis of whole blood | rDNase included
111	NucleoSpin® RNA Blood Midi	740210.20	400–1300 µL whole blood (fresh or frozen)	Midi spin column	700 µg	4–26 µg (1.3 mL whole blood)	200–400 µL	> 200 nt	75 min/6 preps	No selective erythrocyte lysis – direct lysis of whole blood | rDNase included
112	NucleoSpin® 8 RNA Blood, NucleoSpin® 96 RNA Blood	740220 / .5, 740225.2 / .4	< 400 µL whole blood (fresh or frozen)	8-well strip, 96-well plate	100 µg	1–8 µg (400 µL whole blood)	50–130 µL	> 200 nt	60 min/6 strips, 100 min/plate	No selective erythrocyte lysis – direct lysis of whole blood | rDNase included | Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible
Total RNA from FFPE samples										
113	NucleoSpin® totalRNA FFPE XS	740969.10 / .50 / .250	< 10 sections (10 µm) with < 5 mg tissue	XS spin column	100 µg	Depending on sample amount and quality	5–30 µL		70 min/6 preps (90 min incl. optional rDNase digest)	Special Paraffin Dissolver (patented technology) – no xylene necessary – high decrosslinking efficiency
114	NucleoSpin® totalRNA FFPE	740982.10 / .50 / .250	< 10 sections (10 µm) with < 50 mg tissue	Mini spin column	200 µg	Depending on sample amount and quality	30–50 µL		70 min/6 preps (90 min incl. optional rDNase digest)	Special Paraffin Dissolver (patented technology) – no xylene necessary – high decrosslinking efficiency
RNA from plant and fungi										
115	NucleoSpin® RNA Plant and Fungi	740120.10 / .50 / .250	< 500 mg plant / fungal material	Mini spin column	200 µg	20–70 µg	50 µL	> 200 nt	25 min/6 preps	Universal kit and tailored protocols for challenging plant and fungal samples | Convenient handling and efficient isolation of high integrity RNA | NucleoSpin® RNA Plant and Fungi Filters for lysate clearing included
116	NucleoSpin® RNA Plant	740949.10 / .50 / .250	< 100 mg plant material	Mini spin column	200 µg	3–70 µg	40 – 60 µL	> 200 nt	30 min/6 preps	Convenient handling and efficient isolation of high integrity RNA | DNase included
RNA from soil and stool										
117	NucleoBond® RNA Soil	740140.20	< 2 g soil	Midi gravity flow column	600 µg	1–10 µg	100 µL	> 100 nt	60 min/6 preps	Anion exchange technology to optimize RNA yield and purity – suitable for metagenomic studies | Combination of mechanical homogenization and chemical lysis for large sample amounts
118	DNA Set for NucleoBond® RNA Soil	740141.20	NucleoBond® RNA Soil kit required	Buffer set		5–50 µg	100 µL		15 min/12 preps	Parallel preparation of RNA and DNA in one hour
119	NucleoBond® RNA Soil Mini	740142.10 / .50	0.25–0.5 g soil	Mini gravity flow column	30 µg	0.25–2.5 µg	50–100 µL	> 100 nt	60 min/12 preps	RNA purification from soil samples for qRT-PCR analysis | Parallel preparation of RNA and DNA in one hour
120	DNA Set for NucleoBond® RNA Soil Mini	740143.10 / .50	NucleoBond® RNA Soil Mini kit required	Buffer set		1.25–12.5 µg	50–100 µL		15 min/12 preps	Parallel preparation of RNA and DNA in one hour
121	NucleoSpin® RNA Stool	740130.10 / .50	180–220 mg fresh or frozen human stool (for animal stool lower amounts may be required for optimal results)	Mini spin column	200 µg	10–30 µg (varies by sample and protocol used)	100 µL	≥ 18 nt	70 min/10 preps	Total RNA isolation (incl. miRNA) from human and animal stool samples | No Proteinase K treatment required | NucleoSpin® PCR Inhibitor Removal Columns included
RNA stabilization										
122	NucleoProtect® RNA	740400.50 / .250 / .500	Variable	Stabilization solution			10 x volume NucleoProtect® per sample volume			For cells, tissue, bacteria, yeast, insects, plants, buffy coat and leukocytes | Long storage times

[1)] Theoretical value

RNA

Viral RNA and DNA

Viral RNA and DNA

No.	Product	REF	Typical amount of starting material	Format	Binding capacity[1]	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
■ Viral RNA and DNA										
Viral RNA / DNA from blood, biological fluids and clinical samples										
123	NucleoSpin® Virus	740983.10 / .50 / .250	< 200 µL serum / plasma / cell-free biological fluid, < 400 µL (with two loading steps)	Mini spin column	25 µg	Depending on sample amount and quality	30 µL	100 bp–approx. 50 kbp	50 min/6 preps	For RNA and DNA viruses from plasma / serum or cell-free body fluids | Carrier RNA and Liquid Proteinase K included
124	NucleoSpin® Dx Virus (CE-IVD)[4]	740895.50	150 µL serum / plasma	Mini spin column	40 µg	Depending on sample amount and quality	50 µL	100 bp–approx. 50 kbp	30 min/6 preps	CE-IVD marked | For RNA and DNA viruses from plasma and serum | Carrier RNA and Proteinase K included
125	NucleoSpin® RNA Virus F	740958	< 1 mL serum / plasma / cell-free biological fluid	Funnel column	30 µg	Depending on sample amount and quality	50–100 µL	100 bp–approx. 50 kbp	45 min/6 preps	NucleoSpin® Funnel Columns: large buffer volumes, small elution volumes
126	NucleoSpin® 8 Virus, NucleoSpin® 8 Virus Core Kit[2], NucleoSpin® 96 Virus, NucleoSpin® 96 Virus Core Kit[2]	740643 / .5, 740451.4, 740691.2 / .4, 740452.4	< 150 µL serum / plasma / cell-free biological fluid	8-well strip, 96-well plate	40 µg	Depending on sample amount and quality	70–100 µL	100 bp–approx. 50 kbp	60 min/6 strips or plate	Flexible format | Flexible processing (vacuum / centrifugation / positive pressure) | Automation possible | Proteinase K included
127	NucleoMag® Virus	744800.1 / .4	< 200 µL serum / plasma / cell-free biological fluid	Magnetic beads	0.2 µg/µL beads	Depending on sample amount and quality	50–100 µL	300 bp–approx. 50 kbp	40–120 min/96 preps[3]	Proteinase K included | Easily adapted to automated use
128	NucleoSpin® Blood	740951.10 / .50 / .250	5–200 µL blood / serum / plasma, < 5 x 10^6 human / animal cells	Mini spin column	60 µg	4–6 µg (200 µL blood)	60–200 µL	200 bp–approx. 50 kbp	30 min/prep	All purpose effectiveness compatible with all blood stabilization substances (e.g., citrate, EDTA, heparin, CPDA) I Suitable for pathogen detection by isolation of viral DNA or bacterial DNA from blood samples
Viral RNA / DNA and bacterial DNA from clinical samples										
129	NucleoMag® Pathogen	744210.1 / .4	Fully scalable, typically < 200 µL whole blood / serum / plasma / swab wash solution / feces, < 25 mg tissue	Magnetic beads	0.4 µg/µL beads	Depending on sample amount and quality	50–100 µL	300 bp–approx. 50 kbp	40–120 min/96 preps[3]	One kit for all common clinical sample types | High sensitivity | Reliable nucleic acid isolation – suitable even for low viral titers | Easily adapted to automated use
130	NucleoMag® Dx Pathogen	744215.4	≤ 200 µL swab wash solution / saliva	Magnetic beads	0.4 µg/µL beads	Depending on sample amount and quality	50–100 µL	300 bp–approx. 50 kbp	40–120 min/96 preps, depends on instruments / automation used	CE-IVD certified for isolation of viral RNA from oral / nasal swabs and saliva (SARS-CoV-2) | Easily adapted to automated use
Viral RNA / DNA and bacterial DNA from veterinary samples										
131	NucleoSpin® VET	740842.10 / .50 / .250	< 200 µL serum, plasma, cell-free biological fluids, milk, 100 µL blood, 5–10 mg tissue, one dry or wet swab, or approx. 100 mg feces	Mini spin column	25 µg	≥ 80 %	< 100 µL	100 bp–approx. 50 kbp	20–40 min	For the isolation and purification of animal pathogen nucleic acids from veterinary materials | Support protocols available
132	NucleoMag® VET	744200.1 / .4	< 200 µL whole blood / serum / plasma / swab wash solution / feces, < 10–30 mg tissue (e.g., ear notches)	Magnetic beads	0.4 µg/µL beads	Depending on sample amount and quality	50–100 µL	300 bp–approx. 50 kbp	40–120 min/96 preps[3]	Allround kit for veterinary diagnostics | One tube procedure for minimal risk of cross-contamination | Easily adapted to automated use
133	NucleoProtect® VET Reagent	740750.50 / .500	Animal whole blood or swab samples	Stabilization and inactivation solution		Depending on sample amount and quality		2.5 x NucleoProtect® volume per sample volume		Inactivation of viral pathogens in animal whole blood swab samples and preservation of nucleic acids | Not intended for human use
134	NucleoProtect® VET Blood Tube	740755	1.6 mL animal whole blood	Stabilization and inactivation solution (prefilled)		Depending on sample amount and quality				Blood collection tube pre-filled with 4.0 mL NucleoProtect® VET reagent | Compatible with ruminants, swine, poultry, equine blood samples
135	NucleoProtect® VET Swab Tube	740760	Animal swab samples such as oral, throat, nasal or pharyngeal swabs	Stabilization and inactivation solution (prefilled)		Depending on sample amount and quality				Srew cap swab collection tube pre-filled with 1.5 mL Nucleo-Protect® VET reagent | Compatible with different swab types

[1] Theoretical value; [2] Kit mainly for use on automation platforms, for additional accessories and detailed information see *www.mn-net.com*; [3] Depending on instrument type / setup / configuration. For more detailed infomation regarding the processing time and equipment (e.g., automation platform, purification manifolds), please have a look at *www.mn-net.com*.; [4] Not available in the USA

Accessories

Accessories

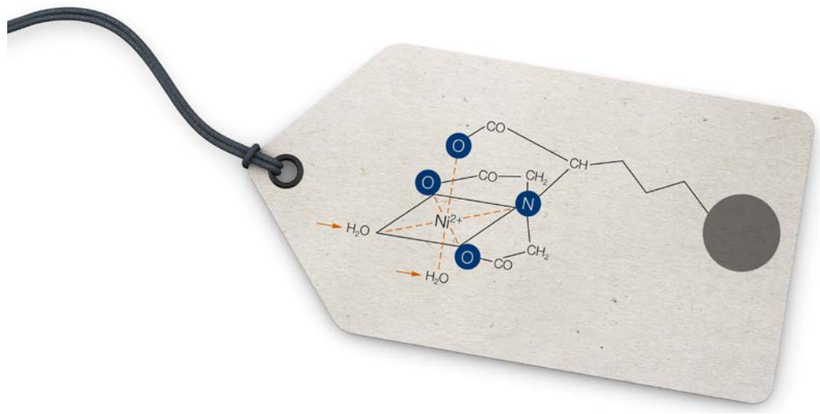
No.	Product	REF	Format	Handling	Brand	Features
	Accessories					
	NucleoVac Manifold					
136	NucleoVac 96 Vacuum Manifold	740681	Accessories	Vacuum	NucleoSpin® 8/96	Consists of Manifold base, Lid, Spacer set, two waste containers
137	NucleoVac 96 Regulator	740641	Accessories	Vacuum	NucleoSpin® 8/96	Additional equipment for controlling of vacuum
138	NucleoVac 24 Vacuum Manifold	740299	Accessories	Vacuum	NucleoSpin® NucleoSnap®	Parallel processing of 1–24 samples
139	NucleoVac Valves	740298	Accessories	Vacuum	NucleoSpin® NucleoSnap®	Regulation of individual flow rates
	Magnetic Bead Separator					
140	NucleoMag® SEP Mini	744901	Accessories	Magnetic Beads	NucleoMag®	For use with 12 x 1.5 mL or 2 mL reaction tubes
141	NucleoMag® SEP Maxi	744902	Accessories	Magnetic Beads	NucleoMag®	For use with 4 x 50 mL Falcon Tubes
142	NucleoMag® SEP	744900	Accessories	Magnetic Beads	NucleoMag®	For use with 96-well plates
	NucleoBond® Rack					
143	NucleoBond® Rack Small	740562	Rack	Gravity Flow	NucleoBond®	Rack for use with NucleoBond® AX 20 Columns
144	NucleoBond® Smart Rack	740413	Rack	Gravity Flow	NucleoBond®	Rack for use with NucleoBond® Xtra Midi / Maxi, Xtra BAC, AX 20, AX 100, AX 500, AX 2000, and AX 10000 Columns
145	NucleoBond® Xtra Combi Rack	740415	Rack	Gravity Flow	NucleoBond®	Rack for use with NucleoBond® Xtra Midi / Maxi, Xtra BAC, AX 100, AX 500, AX 2000 and AX 10000 Columns
146	NucleoBond® Rack Large	740563	Rack	Gravity Flow	NucleoBond®	Rack for use with NucleoBond® AX 500, AX 2000, AX 10000, BAC 100, and Xtra Midi Columns
147	NucleoBond® PC 10000 Rack	740599	Rack	Gravity Flow	NucleoBond®	Rack for use with NucleoBond® PC 10000 (EF)
	Plastics					
148	Collection Tubes	740600	Plastics	Centrifugation		Collection Tubes 2 mL without lid
149	MN Square-well Block	740476	Plastics	Centrifugation, Vacuum		96-well blcok with base with 2.1 mL wells
150	Square-well Block	740481	Plastics	Vacuum, magnetic separation		96-well block for use with NucleoMag® SEP
151	Elution Plates, U-Bottom	740672	Plastics	Vacuum, Magnetic separation		96-well microplates with 300 µL
	Additionals					
152	MN Sterilizer	740401	Auxiliary Tools	Syringe filters		Sterile filtration and removal of particles from aqueous solutions
153	BIO-LAB-TOP	740800	Auxiliary Tools	Surface protection		Protection of laboratory surfaces from spills

Protein purification

Protein purification

No.	Product	REF	Format	Binding capacity[1)]	Matrix	Ligand	Features
■ Protein purification							
Purification of His-tag proteins							
154	Protino® Ni-NTA Agarose	745400.25 / .100 / .500	Aqueous suspension	50 mg/mL	6 % beaded agarose (crosslinked)	NTA	50 % (v/v) aqueous suspension precharged with Ni^{2+} | Suitable for batch binding, gravity flow columns, and FPLC™ applications
155	Protino® Ni-NTA Columns 1 mL	745410.5	1 mL FPLC™ column	50 mg	6 % beaded agarose (crosslinked)	NTA	Ready to use prepacked FPLC™ columns | Agarose precharged with Ni^{2+} | Male and female outlet for ÄKTA™ platform | Adaptors for other systems available
156	Protino® Ni-NTA Columns 5 mL	745415.1 / .5	5 mL FPLC™ column	250 mg	6 % beaded agarose (crosslinked)	NTA	Ready to use prepacked FPLC™ columns | Agarose precharged with Ni^{2+} | Male and female outlet for ÄKTA™ platform | Adaptors for other systems available
157	Protino® 96 Ni-NTA	745425.1 / .4	96-well plate	2 mg/well	6 % beaded agarose (crosslinked)	NTA	Unique Protein Purification Plate | Leak-free incubation | Agarose precharged with Ni^{2+} | Suitable for centrifugation and vacuum | Automation possible
158	Protino® Ni-TED Resin	745200.5 / .30 / .120 / .600	Bulk resin	10 mg/g resin	Macroporous silica	TED	Dry matrix precharged with Ni^{2+} | Suitable for batch binding, gravity flow columns, and FPLC™ applications | Unique silica concept
159	Protino® Ni-TED 150 Packed Columns	745100.10 / .50	Mini gravity flow column	400 µg	Macroporous silica	TED	Ready to use gravity flow columns | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
160	Protino® Ni-TED 1000 Packed Columns	745110.5 / .50	Midi gravity flow column	2.5 mg	Macroporous silica	TED	Ready to use gravity flow columns | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
161	Protino® Ni-TED 2000 Packed Columns	745120.5 / .25	Maxi gravity flow column	5 mg	Macroporous silica	TED	Ready to use gravity flow columns | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
162	Protino® Ni-IDA Resin	745210.5 / .30 / .120 / .600	Bulk resin	20 mg/g resin	Macroporous silica	IDA	Dry matrix precharged with Ni^{2+} | Suitable for batch binding, gravity flow columns, and FPLC™ applications | Unique silica concept
163	Protino® Ni-IDA 150 Packed Columns	745150.10 / .50	Mini gravity flow column	800 µg	Macroporous silica	IDA	Ready to use gravity flow columns | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
164	Protino® Ni-IDA 1000 Packed Columns	745160.5 / .50	Midi gravity flow column	5 mg	Macroporous silica	IDA	Ready to use gravity flow columns | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
165	Protino® Ni-IDA 2000 Packed Columns	745170.5 / .25	Maxi gravity flow column	10 mg	Macroporous silica	IDA	Ready to use gravity flow columns | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
166	Protino® 96 Ni-IDA	745300.1 / .4	96-well plate	1 mg/well	Macroporous silica	IDA	Ready to use gravity flow 96-well plates | Matrix precharged with Ni^{2+} | Buffers included | Unique silica concept
Purification of GST-tag proteins							
167	Protino® Glutathione Agarose 4B	745500.10 / .100	Aqueous suspension	8 mg/mL	4 % beaded agarose	Glutathione	75 % (v/v) aqueous suspension | Suitable for batch binding, gravity flow columns, and FPLC™ applications
168	Protino® GST/4B Columns 1 mL	745510.5	1 mL FPLC™ column	10 mg	4 % beaded agarose	Glutathione	Ready to use prepacked FPLC™ columns | Male and female outlet for ÄKTA™ platform | Adaptors for other systems available
169	Protino® GST/4B Columns 5 mL	745515.1 / .5	5 mL FPLC™ column	50 mg	4 % beaded agarose	Glutathione	Ready to use prepacked FPLC™ columns | Male and female outlet for ÄKTA™ platform | Adaptors for other systems available
Porablot – Blotting Membranes							
170	Porablot PVDF	741260	Blotting	50–100 µg/cm² (pore size: 0.2 µm)	Polyvinylidendifluorid (PVDF)		PVDF membrane for high quality transfer membranes
170	Porablot Nitrocellulose	74180	Blotting	100 µg/cm²	100 % nitrocellulose		Nitrocellulose membrane for high quality transfer membranes
171	Porablot Nitrocellulose (+ supporting tissue)	741290	Blotting	100 µg/cm²	100 % nitrocellulose with inert supporting tissue		Nitrocellulose membrane for high quality transfer membranes

[1)] Protino® Ni-IDA / TED / NTA: binding capacity refers to 6xHis-GFPuv; Protino® Glutathione Agarose 4B: binding capacity will vary for each GST-tagged protein.



Selection Guide

Technologies

	Technology	Separation principle	Material	Format
NucleoBond®	Anion exchange chromatography	Solid phase extraction	Modified, macroporous silica particles	Gravity flow columns (from small to giga format) / 96-well plates
NucleoFast®	Ultrafiltration	Ultrafiltration	Ultrafiltration membrane	96-well plates
NucleoMag®	Magnetic bead technology	Chaotropic salt binding / Nucleic acid precipitation	Superparamagnetic beads (non silica)	Flexible (1–384)
NucleoSEQ®	Gel filtration	Size exclusion	Size exclusion matrix	Mini spin columns filled with dry matrix
NucleoSnap®	Silica membrane technology	Nucleic acid precipitation and filtration or chaotropic salt binding	Silica membrane	Snap off column
NucleoSpin®	Silica membrane technology	Chaotropic salt binding	Silica membrane	Spin columns (from extra small to extra large scale) / 8-well strips / 96-well plates
NucleoType	Sample preparation and PCR	DNA release and direct PCR	HotStart PCR Master Mix (enhancer, loading dye, and stabilizer included)	Buffer and PCR mix
Protino® Ni-IDA / TED	Affinity chromatography	Interaction between His-tag of the recombinant protein and immobilized Ni^{2+} ions, elution with imidazole	Macroporous silica with immobilized Ni^{2+}	Dry material, gravity flow columns (Midi, Midi, Maxi) / 96-well plates
Protino® Ni-NTA Agarose	Affinity chromatography	Interaction between His-tag of the recombinant protein and immobilized Ni^{2+} ions, elution with imidazole	6 % beaded agarose (cross-linked), precharged with Ni^{2+} | 50 % aqueous suspension containing 30 % ethanol	Bulk material / columns for FPLC™ / 96-well plates
Protino® Glutathione Agarose 4B	Affinity chromatography	Interaction between the GST-tag of the recombinant protein and immobilized glutathione	4 % beaded agarose with immobilized glutathione | 75 % aqueous suspension containing 20 % ethanol	Bulk resin / columns for FPLC™

If further assistance is requested, please contact our Technical Support and Customer Service:

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