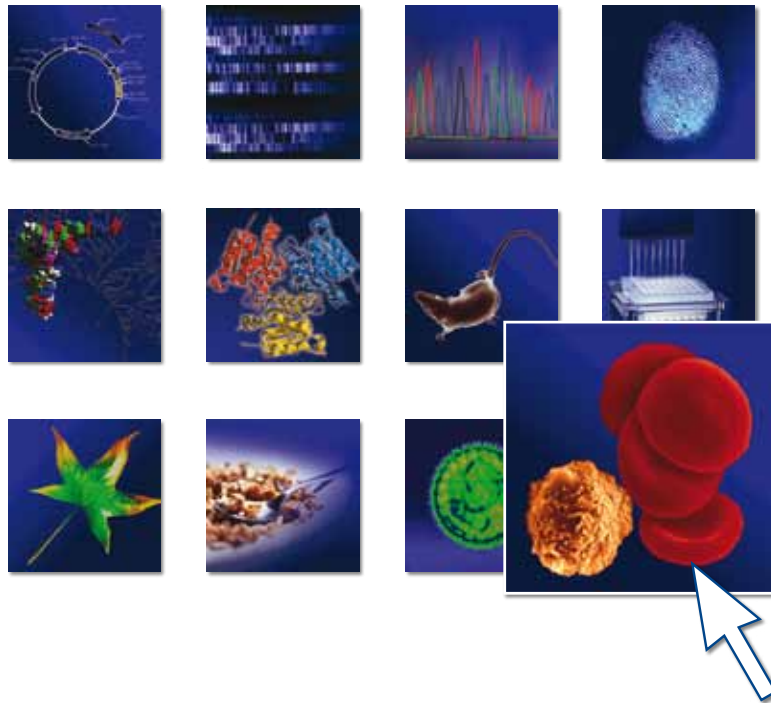


Selection Guide



for DNA, RNA, and
protein purification products



Selection guide for DNA, RNA, and protein purification products

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

Contents	Page
Product overview by application	2–3
Product specification table Plasmid DNA · DNA Clean-up · RNA	4, 5, 7
Genomic DNA · Viral RNA and DNA · Protein Purification	8, 9, 11
Technologies – DNA, RNA, and protein purification	12
Company profile	6
Contact information	10

Product overview by application

Plasmid DNA

<i>Application</i>	<i>Grade of purified plasmid DNA</i>
Cloning Sequencing Transfection / -formation Gene therapy Gene regulation studies	Transfection-grade plasmid DNA (No. 1–2)
	Transfection-grade, endotoxin-free plasmid DNA (No. 3)
	Sequencing-grade plasmid DNA (No. 5–8)

DNA Clean-up

<i>Application</i>	<i>Starting material</i>
Cloning Sequencing Nucleic acid amplification Gene regulation studies Forensics	PCR reaction mixtures (No. 9–13)
	Gel slices (No. 14–15)
	Pre-purified genomic DNA (No. 16–17)
	Sequencing reactions (No. 18)

RNA

<i>Application</i>	<i>Target molecule / starting material</i>
Gene regulation studies Gene expression profiling Gene silencing Molecular phenotyping Drug development / screening Transfection / -formation	RNA from cells and tissue (No. 19–23)
	MicroRNA (No. 24–25)
	RNA, DNA, and protein (No. 26–28)
	RNA from blood (No. 29–31)
	RNA and DNA from FFPE samples (No. 32–33)
	RNA from plant (No. 34)
	RNA clean-up (No. 35–36)
	Poly(A) mRNA from total RNA (No. 37)

Product overview by application:

As seen on pages 2 and 3, the product groups are shown based on a list of commonly performed applications. After identifying the application and starting material / target molecule of your personal interest, follow the corresponding numbers to select the kits that relate to your lab focus.

Product specification table:

The main table registers all relevant specifications and features of the noted kits. The number of the product line is repeated at the beginning and the end of the rows to ensure clear assignment.

Technologies:

In addition to the specified MN product information, general descriptions of the different MN technologies for DNA, RNA, and protein purification are shown at the back of the selection guide.

Genomic DNA

<i>Application</i>	<i>Starting material</i>
Genotyping Functional genomics Metagenomics Animal breeding Plant breeding Forensics Veterinary testing Infection diagnostics Environmental testing Food testing	Blood and biological fluids (No. 38–45)
	Plasma (No. 46)
	Tissue and cells (No. 47–50)
	FFPE samples (No. 51)
	Forensic samples (No. 52–54)
	Plant and fungi (No. 55–59)
	Soil, sludge, and sediment (No. 60)
	Food and feed (No. 61–62)

Viral RNA and DNA

<i>Application</i>	<i>Starting material</i>
Molecular diagnostics Infection diagnostics Viral research / diagnostics Veterinary testing	Cell-free body fluids (No. 63–67)
	Blood and biological fluids (No. 68)

Protein Purification

<i>Application</i>	<i>Affinity tag</i>
Recombinant protein purification Protein engineering Protein structure analysis Protein function analysis Drug development	His-tag proteins (No. 69–80)
	GST-tag proteins (No. 81–83)

No.	Product	REF	Typical downstream application	Min / Max amount of typical starting material
Plasmid DNA www.mn-net.com/plasmid				
Transfection-grade plasmid DNA				
1	NucleoBond® Xtra Midi, Xtra Midi Plus, NucleoBond® Xtra Maxi, Xtra Maxi Plus	740410.10/.50/.100, 740412.10/.50, 740414.10/.50/.100, 740416.10/.50	Transfection, cloning, sequencing	< 200 mL (high copy), < 400 mL (low copy) <i>E. coli</i> culture (Midi), < 600 mL (high copy), < 1200 mL (low copy) <i>E. coli</i> culture (Maxi)
2	NucleoBond® Xtra BAC	740436.10/.25	Transfection, cloning, sequencing	250–750 mL <i>E. coli</i> culture (BAC)
Transfection-grade, endotoxin-free plasmid DNA				
3	NucleoBond® Xtra Midi EF, Xtra Midi Plus EF, NucleoBond® Xtra Maxi EF, Xtra Maxi Plus EF	740420.10/.50, 740422.10/.50, 740424.10/.50, 740426.10/.50	Transfection of endotoxin-sensitive cells	< 200 mL (high copy), < 400 mL (low copy) <i>E. coli</i> culture (Midi), < 600 mL (high copy), < 1200 mL (low copy) <i>E. coli</i> culture (Maxi)
Plasmid DNA concentration and desalting				
4	NucleoBond® Finalizer, Finalizer Plus, Finalizer Large, Finalizer Large Plus	740519.20, 740520.20, 740418.20, 740419.20		5 mL anion-exchange chromatography eluate, 15 mL anion-exchange chromatography eluate
Molecular biology-/sequencing-grade plasmid DNA				
5	NucleoSpin® Plasmid, NucleoSpin® Plasmid (NoLid)	740588.10/.50/.250, 740499.50/.250	Transformation, cloning, sequencing, PCR, restriction digestion	1–10 mL <i>E. coli</i> culture
6	NucleoSpin® Plasmid QuickPure	740615.10/.50/.250	Transformation, cloning, sequencing, PCR, restriction digestion	1–3 mL <i>E. coli</i> culture
7	NucleoSpin® 8/96 Plasmid, NucleoSpin® 8/96 Plasmid Core Kit*	740621/.5, 740625.1/.4/.24, 740461.4, 740616.4	Transformation, cloning, sequencing, PCR, restriction digestion	1–5 mL <i>E. coli</i> culture
8	NucleoSpin® 96 Flash	740618.2/.4/.24	Transformation, cloning, sequencing, PCR, restriction digestion	1.1–1.3 mL (high copy), 1.1–3.9 mL (BACs) <i>E. coli</i> culture
DNA Clean-up www.mn-net.com/cleanup				
PCR clean-up				
9	NucleoSpin® Gel and PCR Clean-up	740609.10/.50/.250	Cloning, sequencing, PCR, restriction digestion	< 400 µL PCR reaction mixture
10	NucleoTraP®CR	740587/.10	Cloning, sequencing, PCR, restriction digestion	< 400 µL PCR reaction mixture
11	NucleoSpin® 8/96 PCR Clean-up, NucleoSpin® 8/96 PCR Clean-up Core Kit*	740668/.5, 740658.1/.2/.4/.24, 740463.4, 740464.4	Cloning, sequencing, PCR, restriction digestion	< 100 µL PCR reaction mixture
12	NucleoFast® 96 PCR Clean-up Kit, NucleoFast® 96 PCR Plates	743500.4, 743100.10/.50	Cloning, sequencing, PCR, restriction digestion	20–300 µL PCR reaction mixture
13	NucleoMag® 96 PCR	744100.1/.4/.24	Cloning, sequencing, PCR, restriction digestion	< 50 µL PCR reaction mixture
Gel extraction				
14	NucleoSpin® Gel and PCR Clean-up	740609.10/.50/.250	Cloning, sequencing, PCR, restriction digestion	< 400 mg agarose gel
15	NucleoTrap®	740584/.10	Cloning, sequencing, PCR, restriction digestion	< 200 mg agarose gel
Genomic DNA clean-up				
16	NucleoSpin® gDNA Clean-up	740230.10/.50/.250	Cloning, sequencing, qPCR, restriction digestion	< 150 µL solution containing < 25 µg DNA
17	NucleoSpin® gDNA Clean-up XS	740904.10/.50/.250	Cloning, sequencing, qPCR, restriction digestion	< 400 µL solution containing < 2 µg DNA
Dye-terminator removal				
18	NucleoSEQ®	740523.10/.50/.250	Sequencing	20 µL sequencing reaction mixture
RNA www.mn-net.com/RNA				
RNA from cells and tissue				
19	NucleoSpin® RNA II	740955.10/.50/.250	qRT-PCR, NGS**, blotting, array technology	< 5 x 10 ⁶ cells, < 10 ³ bacterial cells, < 30 mg human / animal tissue
20	NucleoSpin® RNA XS	740902.10/.50/.250	qRT-PCR, NGS**, blotting, array technology	1–10 ⁵ cells, < 5 mg human / animal tissue
21	NucleoSpin® RNA L	740962.20	qRT-PCR, NGS**, blotting, array technology	< 5 x 10 ⁷ cells, < 10 ¹⁰ bacterial cells, < 200 mg human / animal tissue
22	NucleoSpin® 8/96 RNA, NucleoSpin® 8/96 RNA Core Kit*	740698/.5, 740709.2/.4/.24, 740465.4, 740466.4	qRT-PCR, NGS**, blotting, array technology	< 10 ⁷ cells, < 30 mg human / animal tissue
23	NucleoMag® 96 RNA	744350.1/.4	qRT-PCR, NGS**, blotting, array technology	< 2 x 10 ⁶ cells, < 20 mg human / animal tissue
MicroRNA				
24	NucleoSpin® miRNA	740971.10/.50/.250	qRT-PCR, NGS**, blotting, array technology	< 10 ⁷ cells, < 30 mg human / animal tissue, < 50 mg plant tissue, < 150 µL reaction mixture
25	NucleoSpin® miRNA Plasma	740981.10/.50/.250	qRT-PCR, NGS**, blotting, array technology	< 300 µL plasma, serum (< 900 µL with multiple loading steps)
RNA, DNA, and protein				
26	NucleoSpin® TriPrep***	740966.10/.50/.250	qRT-PCR, blotting, array technology, SDS-PAGE / Western blotting	< 5 x 10 ⁶ cells, < 30 mg human / animal tissue, < 100 mg plant tissue
27	NucleoSpin® RNA/Protein	740933.10/.50/.250	qRT-PCR, blotting, array technology, SDS-PAGE / Western blotting	< 5 x 10 ⁶ cells, < 30 mg human / animal tissue, < 100 mg plant tissue
28	NucleoSpin® RNA/DNA Buffer Set***	740944		See NucleoSpin® RNA II, NucleoSpin® RNA XS, NucleoSpin® miRNA, NucleoSpin® RNA Plant, NucleoSpin® RNA/Protein
RNA from blood				
29	NucleoSpin® RNA Blood	740200.10/.50	qRT-PCR, NGS**, blotting, array technology	< 200 µL blood (< 400 µL with two loading steps)
30	NucleoSpin® RNA Blood Midi	740210.20	qRT-PCR, NGS**, blotting, array technology	400–1300 µL blood
31	NucleoSpin® 8/96 RNA Blood	740220/.5, 740225.2/.4	qRT-PCR, NGS**, blotting, array technology	< 400 µL blood
RNA and DNA from FFPE samples				
32	NucleoSpin® FFPE RNA	740969.10/.50/.250	qRT-PCR	≤ 7 sections (10 µm) of 250 mm ² , < 15 mg paraffin
33	NucleoSpin® FFPE RNA/DNA***	740978.10/.50/.250	qRT-PCR, qPCR	≤ 7 sections (10 µm) of 250 mm ² , < 15 mg paraffin
RNA from plant				
34	NucleoSpin® RNA Plant	740949.10/.50/.250	qRT-PCR, NGS**, blotting, array technology	< 100 mg (wet weight), < 20 mg (dry weight) plant tissue
RNA clean-up				
35	NucleoSpin® RNA Clean-up	740948.10/.50/.250	Enzymatic labeling reactions, qRT-PCR	< 200 µL phenol / chloroform extract or reaction mixture
36	NucleoSpin® RNA Clean-up XS	740903.10/.50/.250	Enzymatic labeling reactions, qRT-PCR	< 300 µL RNA solution containing < 90 µg RNA
Poly(A) mRNA from total RNA				
37	NucleoTrap® mRNA Mini, NucleoTrap® mRNA Midi	740655, 740656	qRT-PCR, NGS**, array technology	< 250 µg total RNA (Mini), < 1000 µg total RNA (Midi)

* Kit with basic content focused on automation platforms, for detailed information see www.mn-net.com/HTApplications; ** Next generation sequencing; *** Distribution and use in the USA is prohibited for patent reasons



Binding capacity	Typical yield [µg]/recovery [%]	Ratio A_{260}/A_{280}	Elution volume	Fragment size	Approximate preparation time	Technology
www.mn-net.com/plasmid						
400 µg (Midi), 1500 µg (Maxi) 150 µg	250 µg, 1000 µg 10–100 µg	1.80–1.95		< 300 kbp	70 min/prep, 30 min/prep (Midi), 75 min/prep, 35 min/prep (Maxi) 75 min/prep	Anion-exchange chromatography Anion-exchange chrom.
400 µg (Midi), 1500 µg (Maxi)	250 µg, 1000 µg	1.80–1.95		< 300 kbp	85 min/prep, 45 min/prep (Midi), 90 min/prep, 50 min/prep (Maxi)	Anion-exchange chromatography
500 µg, 2000 µg	60–90 %	1.80–1.95	200–800 µL, 400–1000 µL	2–50 kbp	5 min/prep	Filtration
60 µg 15 µg 20 µg	25 µg (5 mL <i>E. coli</i> culture, high copy), 40 µg (10 mL <i>E. coli</i> culture, high copy) 15 µg (3 mL <i>E. coli</i> culture, high copy) 4–6 µg (1 mL <i>E. coli</i> culture, high copy)	1.80–1.85 1.80–1.85 1.70–1.85	50 µL 50 µL 75–150 µL	< 15 kbp < 15 kbp < 15 kbp	25 min/18 preps 11 min/18 preps 45 min/6 strips or plate	Silica-membrane technology Silica-membrane technology Silica-membrane technology
	8 µg (1.3 mL <i>E. coli</i> culture, high copy), 1 µg (1.3 mL <i>E. coli</i> culture, BAC)			< 250 kbp	90 min/2 plates	Alkaline lysis, filtration, and precipitation
www.mn-net.com/cleanup						
25 µg 0.6 µg/µL suspension 15 µg	70–95 % 70–80 % 75–95 %	1.8–1.9 1.7–1.9 1.7–1.8	15–30 µL 20–50 µL 75–150 µL	50 bp–approx. 20 kbp 100 bp–approx. 50 kbp 50 bp–approx. 10 kbp	10 min/6 preps 45 min/6 preps 30 min/6 strips, 45 min/plate	Silica-membrane technology Silica-matrix technology Silica-membrane technology
	40–95 %	1.7–1.8	25–100 µL	> 150 bp	20 min/plate	Ultrafiltration
0.3 µg/µL beads	80–95 %	1.7–1.9	25–100 µL	150 bp–approx. 10 kbp	30–45 min/96 preps	Magnetic-bead technology
25 µg 0.6 µg/µL suspension	70–95 % 50–90 %	1.8–1.9 1.7–1.9	15–30 µL 20–50 µL	50 bp–approx. 20 kbp 20 bp–approx. 50 kbp	20 min/6 preps 60 min/6 preps	Silica-membrane technology Silica-matrix technology
50 µg 3 µg	80–90 % 60–70 %	1.8–1.9 1.8–1.9	50–100 µL 6–10 µL	100 bp–approx. 50 kbp 100 bp–approx. 50 kbp	15 min/10 preps 20 min/6 preps	Silica-membrane technology Silica-membrane technology
			20 µL		5 min/prep (excl. hydration)	Gel-filtration
www.mn-net.com/RNA						
200 µg 110 µg	14 µg (10 ⁶ HeLa cells), 0.1–1.5 ng (10 ² HeLa cells), 1–1.5 µg (10 ⁵ HeLa cells)	1.9–2.1 1.9–2.1	40–120 µL 5–30 µL	> 200 nt > 200 nt	35 min/6 preps 35 min/6 preps	Silica-membrane technology Silica-membrane technology
700 µg 100 µg	620 µg (4 x 10 ⁷ HeLa cells) 20 µg (2 x 10 ⁶ HeLa cells), 30 µg (30 mg mouse liver)	1.9–2.1 1.9–2.1	500–1000 µL 50–130 µL	> 200 nt > 200 nt	80 min/8 preps 45 min/6 strips, 70 min/plate	Silica-membrane technology Silica-membrane technology
0.3 µg/µL beads	20 µg (5 mg mouse liver)	1.9–2.1	50–200 µL	> 200 nt	120 min/96 preps	Magnetic-bead technology
200 µg 200 µg	10 µg small RNA, 95 µg large RNA (10 ⁷ HeLa cells) 0.1–100 ng (900 µL plasma)	1.9–2.1	30–100 µL 20–50 µL	< 200 nt (small RNA), > 200 nt (large RNA) < 1000 nt	45 min/6 preps (small and large RNA), 35 min/6 preps (small RNA only) 32 min/6 preps (w/o DNA digestion) 55 min/6 preps (with DNA digestion)	Silica-membrane technology Silica-membrane technology
200 µg (RNA), 10 µg (DNA)	6 µg RNA, 0.6 µg DNA, 60 µg protein (1 mg mouse liver)	1.9–2.1 (RNA), 1.7–1.9 (DNA)	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)	Silica-membrane technology
200 µg (RNA)	6 µg RNA, 60 µg protein (1 mg mouse liver) 5 µg DNA (10 ⁶ HeLa cells), RNA: see RNA kits	1.9–2.1 (RNA) 1.7–2.0 (DNA)	40–100 µL (RNA), 10–100 µL (protein) 100 µL (DNA)	> 200 nt (RNA), 15–300 kDa (protein) < 30 kbp (DNA)	30 min/6 preps (RNA), 35 min/6 preps (protein)	Silica-membrane technology
200 µg 700 µg 100 µg	3 µg (400 µL blood) 10 µg (1.3 mL blood) 2 µg (400 µL blood)	1.9–2.1 1.9–2.1 1.9–2.1	40–120 µL 200–400 µL 50–130 µL	> 200 nt > 200 nt > 200 nt	45 min/6 preps (excl. lysis) 85 min/6 preps (excl. lysis) 100 min/6 strips or plate	Silica-membrane technology Silica-membrane technology Silica-membrane technology
110 µg 110 µg (RNA), 10 µg (DNA)	Depending on sample amount and quality Depending on sample amount and quality	1.9–2.1 1.9–2.1 (RNA)	5–30 µL 5–30 µL (RNA), 10–30 µL (DNA)	> 200 nt > 200 nt (RNA), > 50 bp (DNA)	70 min/6 preps 90 min/6 preps	Silica-membrane technology Silica-membrane technology
200 µg	3–70 µg (100 mg plant tissue)	1.9–2.1	40–60 µL	> 200 nt	30 min/6 preps	Silica-membrane technology
200 µg 110 µg	85–95 % 85–95 %	1.9–2.1 1.9–2.1	40–120 µL 5–30 µL	> 200 nt > 200 nt	20 min/6 preps 20 min/6 preps	Silica-membrane technology Silica-membrane technology
5 µg poly(A) mRNA/ 20 µL suspension	10 µg mRNA (250 µg total RNA; Mini), 40 µg mRNA (1000 µg total RNA; Midi)	1.9–2.1	10–20 µL	50 nt–20 knt	30 min/6 preps	Affinity chromatography

asons.





MACHERY-NAGEL – The Company

MN history

Since its foundation in 1911, the roots of MACHERY-NAGEL have been in the field of Filtration (cellulose and glass fiber 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 Bioanalysis.

MN worldwide

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.

MN business strategy

MACHERY-NAGEL is focused on proprietary technologies, innovation in product development, and outstanding product quality. These values increase the efficiency of daily laboratory work, allowing fast, high-value performance, (e.g., for life science applications), and making MN well known as a reliable partner. This strategy has ensured significant growth and market share as an important company in the field of separation technologies.

MACHERY-NAGEL – Bioanalysis

MN Bioanalysis today

Since 1993 the Company has been successfully developing, producing, and world-wide marketing a comprehensive range of ready-to-use kits and consumables for purification of nucleic acids (DNA and RNA) and proteins. MACHERY-NAGEL has become a worldwide brand of high-value products of sample preparation. Our products cover a broad range of applications, providing solutions for customers with several needs. The Company provides innovative bioseparation technologies and outstanding products for academic, industrial, and clinical research in the area of life science research, genomics, nucleic acid based molecular diagnostics, genetic identity (e.g., with a view to forensics, GMO detection/quantification as well as animal species differentiation), gene expression profiling, gene therapy, and proteomics.

MN Bioanalysis products

These innovative products meet customer needs of time-saving, easy performance, reliable results containing excellent yield and purity, as well as the highest flexibility with regard to sample amount, throughput, and customized applications.



Bioanalysis production

Format	Features	No.
Plasmid DNA		
Transfection-grade plasmid DNA		
Midi gravity-flow columns, Maxi gravity-flow columns	Ultra-fast transfection-grade Midi / Maxi plasmid preps • NucleoBond® Xtra Column Filters included for lysate clarification • NucleoBond® Xtra Plus kits contain NucleoBond® Finalizers to speed up DNA precipitation • Sophisticated silica material leads to high yield and fast flow rates	1
Maxi gravity-flow columns	Fast isolation of transfection-grade large construct plasmid DNA with high yields • NucleoBond® Xtra Column Filter included for lysate clarification avoiding BAC shearing	2
Transfection-grade, endotoxin-free plasmid DNA		
Midi gravity-flow columns, Maxi gravity-flow columns	Ultra-fast, endotoxin-free plasmid preps with high yields • Endotoxin level of < 0.05 EU/µg DNA • Suitable for transfection of highly sensitive cells (patented endotoxin removal) • NucleoBond® Xtra Column Filters included for lysate clarification • NucleoBond® Xtra Plus kits contain NucleoBond® Finalizers to speed up DNA precipitation	3
Plasmid DNA concentration and desalting		
Syringe filters	Desalting tool to speed up the time-consuming DNA precipitation after anion-exchange plasmid purification • Time saving of up to 1 h • Highly concentrated plasmid DNA depending on elution volume • No loss of DNA pellets or incomplete solubilization of hardly visible pellets • Finalizer Plus versions include all required syringes	4
Molecular biology-/sequencing-grade plasmid DNA		
Mini spin columns	High-capacity plasmid Mini prep • Up to 40 µg high-purity plasmid DNA • Suitable for high- and low-copy plasmids < 15 kbp • Protocols available for Gram-positive bacteria and plasmid DNA clean-up	5
Mini spin columns	High-speed plasmid Mini prep (one combined washing and drying step) • < 11 min hands-on-time • Up to 15 µg of highly pure plasmid DNA	6
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput plasmid Mini preps • Processing under vacuum or centrifugation • Manual or automated use • Innovative MN Wash Plate minimizes risk of cross-contamination (not included in Core Kit version)	7
96-well plates	Suitable for high-throughput Mini preps of large constructs (cosmids, BACs) • Low cost system • Manual or automated use	8
DNA Clean-up		
PCR clean-up		
Mini spin columns	PCR clean-up and gel extraction – the 2 in 1 kit • High recovery for a broad range of fragment sizes • Elution volume of 15 µL leads to highly concentrated DNA	9
Aqueous suspension	PCR clean-up • Isolation of 100 bp–50 kbp fragments • Efficient removal of primers and primer-dimers • No shearing of large fragments	10
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput PCR clean-up • Processing under vacuum or centrifugation • Manual or automated use • Innovative MN Wash Plate minimizes risk of cross-contamination (not included in the Core Kit version) • High recovery	11
96-well plates	Cost-efficient 96-well PCR clean-up kit • Ultrafiltration technology • Processing under vacuum or centrifugation • Manual or automated use • No cross-contamination • Fast procedure	12
Superparamagnetic beads	Magnetic-bead based PCR clean-up • High recovery • Small elution volume (25 µL) • Recovery does not depend on elution volume • Easily adapted to automated use	13
Gel extraction		
Mini spin columns	PCR clean-up and gel extraction – the 2 in 1 kit • High recovery for any fragment size • Elution volume of 15 µL leads to highly concentrated DNA	14
Aqueous suspension	Gel extraction of 20 bp–50 kbp fragments • High binding capacity even for very small fragments > 20 bp • No shearing of large fragments	15
Genomic DNA clean-up		
Mini spin columns	Efficient post clean-up of genomic DNA for successful downstream applications • Quick clean-up of large-sized DNA from any enzymatic reaction or impure preparation	16
Mini spin columns (XS design)	Efficient post clean-up of small amounts of genomic DNA (e.g., forensic samples)	17
Dye-terminator removal		
Mini spin columns	Efficient removal of dye terminators including BigDye® terminators • Fast procedure • Dry matrix allows long-term storage at room temperature	18
RNA		
RNA from cells and tissue		
Mini spin columns	Complete Mini spin kit including rDNase for on-column DNA digestion and NucleoSpin® Filters (shredders) for efficient homogenization and reduction of lysate viscosity	19
Mini spin columns (XS design)	RNA isolation from smallest amounts of sample material (e.g., biopsy material, cryosections, laser captured cells) • Highly concentrated RNA (5 µL elution volume) • rDNase included for on-column DNA digestion • NucleoSpin® Filters (shredders) included for efficient homogenization and reduction of lysate viscosity	20
Midi spin columns	Large-scale RNA isolation • rDNase included for on-column DNA digestion • NucleoSpin® Filters L (shredders) included for efficient homogenization	21
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput isolation of RNA • Processing under vacuum or centrifugation • Manual or automated use • rDNase included for efficient on-column DNA digestion • Innovative MN Wash Plate minimizes risk of cross-contamination (not included in the Core Kit version)	22
Superparamagnetic beads	Magnetic-bead based isolation of RNA from tissue and cell samples • rDNase included • One-tube procedure (no cross-contamination) • Easily adapted to automated use	23
MicroRNA		
Mini spin columns	Separate isolation of small and large RNA • RNA purification fractionated by size • Additional isolation of total protein fraction ready to use for SDS-PAGE and Western blot analysis • Excellent RNA recovery and purity based on chaotropic salt isolation • Without phenol / chloroform • NucleoSpin® Filters (shredders) and rDNase included	24
Mini spin columns	Effective isolation of small RNA and DNA from plasma and serum • Efficient purification of small RNA < 200 nt • Optional on-column DNA digestion for increased sensitivity in downstream applications	25
RNA, DNA, and protein		
Mini spin columns	Parallel isolation of RNA, DNA, and protein from undivided samples • High quality RNA and DNA • rDNase for on-column DNA digestion and NucleoSpin® Filters (shredders) for sample homogenization included • High yield of denatured protein independent of protein size, localization, modification, etc.	26
Mini spin columns	Parallel isolation of RNA and protein from undivided samples • Reliable interpretation of RNA and protein levels • rDNase for on-column digestion and NucleoSpin® Filters for sample homogenization included • High yield of denatured protein independent of size, localization, modification, etc. • Suitable for siRNA experiments	27
Buffer set for use with Mini spin columns	Special wash and elution buffer for parallel isolation of high quality RNA and DNA from undivided samples • To be used in combination with NucleoSpin® RNA II, NucleoSpin® RNA XS, NucleoSpin® miRNA, NucleoSpin® RNA Plant, NucleoSpin® RNA/Protein	28
RNA from blood		
Mini spin columns	Efficient direct lysis of whole blood (e.g., stabilized with EDTA, citrate, or heparin) • rDNase included for on-column DNA digestion	29
Midi spin columns	Efficient direct lysis of < 1300 µL whole blood (e.g., stabilized with EDTA, citrate, or heparin) • rDNase included for on-column DNA digestion	30
8-well strips, 96-well plates	Medium and high-throughput isolation of RNA from whole blood • Processing under vacuum or centrifugation • Manual or automated use • rDNase included	31
RNA and DNA from FFPE samples		
Mini spin columns (XS design)	RNA from formalin-fixed, paraffin-embedded (FFPE) samples • RNA is decrosslinked and highly concentrated (5 µL elution volume) • Paraffin Dissolver for easy paraffin removal	32
Mini spin columns (XS design)	Parallel isolation of RNA and DNA from formalin-fixed, paraffin-embedded (FFPE) samples without sample splitting • High decrosslinking efficiency • Highly concentrated RNA (5 µL elution volume) and DNA (10 µL elution volume) • Paraffin Dissolver for easy paraffin removal	33
RNA from plant		
Mini spin columns	Two alternative lysis buffers for optimal lysis of various plant species and segments • rDNase and NucleoSpin® Filters (shredders) included	34
RNA clean-up		
Mini spin columns	Simple and convenient RNA clean-up of pre-purified RNA (phenol / chloroform, enzymatic reactions) • Complete removal of RT-PCR inhibitors • Time-saving procedure	35
Mini spin columns (XS design)	Highly efficient clean-up and concentration of RNA samples • Elution in only 5 µL results in up to 55-fold concentrated RNA • Complete removal of RT-PCR inhibitors	36
Poly(A) mRNA from total RNA		
Suspension of oligo(dT) latex beads	Purification of poly(A) mRNA from total RNA • High binding capacity of oligo(dT) latex beads • High quality poly(A) mRNA without degradation or DNA contamination • Fast mRNA enrichment	37

No.	Product	REF	Typical downstream application	Min/Max amount of typical starting material	
Genomic DNA				www.mn-net.com/gDNA	
Genomic DNA from blood and biological fluids				www.mn-net.com/DNAblood	
38	NucleoSpin® Blood	740951.10/.50/.250	qPCR, NGS**, blotting, enzymatic reactions	5–200 µL blood / serum / plasma, < 5 x 10 ⁶ human / animal cells	
39	NucleoSpin® Dx Blood***	740899.50/.250	qPCR, NGS**, blotting, enzymatic reactions	200 µL human blood	
40	NucleoSpin® Blood QuickPure	740569.10/.50/.250	qPCR, NGS**, blotting, enzymatic reactions	5–200 µL blood / serum / plasma, < 5 x 10 ⁶ human / animal cells	
41	NucleoSpin® Blood L	740954.20	qPCR, NGS**, blotting, enzymatic reactions	0.2–2 mL blood / serum / plasma, < 2 x 10 ⁷ human / animal cells	
42	NucleoSpin® Blood XL	740950.10/.50	qPCR, NGS**, blotting, enzymatic reactions	2–10 mL blood / serum / plasma, < 10 ⁸ human / animal cells	
43	NucleoSpin® 8/96 Blood, NucleoSpin® 8/96 Blood Core Kit*	740664/.5, 740665.1/.4/.24, 740455.4, 740456.4	qPCR, NGS**, blotting, enzymatic reactions	< 200 µL blood / serum / plasma, < 2 x 10 ⁶ human / animal cells	
44	NucleoSpin® 8/96 Blood QuickPure	740666/.5, 740667.2/.4/.24	qPCR, NGS**, blotting, enzymatic reactions	< 200 µL blood / serum / plasma, < 10 ⁷ lymphocytes	
45	NucleoMag® Blood 200 µL, NucleoMag® Blood 3 mL	744501.1/.4, 744502.1	qPCR, NGS**, blotting, enzymatic reactions	< 200 µL blood (fresh or frozen, EDTA or citrate treated), < 3 mL blood (fresh or frozen, EDTA or citrate treated)	
Genomic DNA from plasma				www.mn-net.com/DNAblood	
46	NucleoSpin® Plasma XS	740900.10/.50/.250	qPCR, NGS**, blotting, enzymatic reactions	< 240 µL plasma / serum	
Genomic DNA from tissue and cells				www.mn-net.com/DNAtissue	
47	NucleoSpin® Tissue	740952.10/.50/.250	qPCR, NGS**, blotting, enzymatic reactions	< 25 mg human / animal tissue, 10 ² –10 ⁷ human / animal cells	
48	NucleoSpin® Tissue XS	740901.10/.50/.250	qPCR, NGS**, blotting, enzymatic reactions	0.025–10 mg human / animal tissue, 10–10 ⁴ human / animal cells	
49	NucleoSpin® 8/96 Tissue, NucleoSpin® 8/96 Tissue Core Kit*	740740/.5, 740741.2/.4/.24, 740453.4, 740454.4	qPCR, NGS**, blotting, enzymatic reactions	< 20 mg human / animal tissue, < 10 ⁶ human / animal cells	
50	NucleoMag® 96 Tissue	744300.1/.4/.24	qPCR, NGS**, blotting, enzymatic reactions	< 20 mg human / animal tissue, < 10 ⁷ human / animal cells	
Genomic DNA from FFPE samples				www.mn-net.com/DNAFFPE	
51	NucleoSpin® FFPE DNA	740980.10/.50/.250	qPCR	≤ 7 sections (10 µm) of 250 mm ² , < 15 mg paraffin	
Genomic DNA from forensic samples				www.mn-net.com/DNAforensic	
52	NucleoSpin® DNA Trace	740942.4/.25	qPCR, enzymatic reactions	Forensic samples, buccal swabs, dried blood spots	
53	NucleoSpin® 8/96 Trace	740722.1/.5, 740726.2/.4	qPCR, enzymatic reactions	Forensic samples, buccal swabs, dried blood spots	
54	NucleoMag® 96 Trace	744600.1/.4/.24	qPCR, enzymatic reactions	Forensic samples, buccal swabs, dried blood spots	
Genomic DNA from plant and fungi				www.mn-net.com/DNAplant	
55	NucleoSpin® Plant II	740770.10/.50/.250	qPCR, NGS**, blotting, enzymatic reactions	< 100 mg (wet weight), < 20 mg (dry weight) plant tissue	
56	NucleoSpin® Plant II Midi	740771.20	qPCR, NGS**, blotting, enzymatic reactions	< 400 mg (wet weight), < 80 mg (dry weight) plant tissue	
57	NucleoSpin® Plant II Maxi	740772.10	qPCR, NGS**, blotting, enzymatic reactions	< 1500 mg (wet weight), < 300 mg (dry weight) plant tissue	
58	NucleoSpin® 8/96 Plant II, NucleoSpin® 8/96 Plant II Core Kit*	740669/.5, 740663.2/.4/.24, 740467.4, 740468.4	qPCR, NGS**, blotting, enzymatic reactions	20–100 mg (wet weight) plant tissue	
59	NucleoMag® 96 Plant	744400.1/.4/.24	qPCR, NGS**, blotting, enzymatic reactions	20–50 mg (wet weight) plant tissue	
Genomic DNA from soil				www.mn-net.com/DNAsoil	
60	NucleoSpin® Soil	740780.10/.50/.250	qPCR, NGS**, blotting, array technology	< 500 mg soil / sludge / sediment	
Genomic DNA from food and feed				www.mn-net.com/DNAfood	
61	NucleoSpin® Food	740945.10/.50/.250	qPCR, blotting, enzymatic reactions	5–200 mg food / feed	
62	NucleoSpin® 8/96 Food	740975/.5, 740976.2/.4/.24	qPCR, blotting, enzymatic reactions	< 200 mg food / feed	
Viral RNA and DNA				www.mn-net.com/virus	
63	NucleoSpin® Virus	740983.10/.50/.250	qRT-PCR, qPCR, enzymatic reactions	< 200 µL cell-free biological fluids (e.g., serum, plasma)	
64	NucleoSpin® RNA Virus F	740958	qRT-PCR, enzymatic reactions	< 1 mL cell-free biological fluids (e.g., serum, plasma)	
65	NucleoSpin® Dx Virus***	740895.50/.250	qRT-PCR, qPCR, enzymatic reactions	150 µL serum / plasma	
66	NucleoSpin® 8/96 Virus, NucleoSpin® 8/96 Virus Core Kit*	740643/.5, 740691.2/.4, 740451.4, 740452.4	qRT-PCR, qPCR, enzymatic reactions	< 150 µL cell-free biological fluids (e.g., serum, plasma)	
67	NucleoMag® 96 Virus	744800.1/.4	qRT-PCR, qPCR, enzymatic reactions	< 200 µL cell-free biological fluids (e.g., serum, plasma)	
68	NucleoSpin® Blood	740951.10/.50/.250	qPCR, blotting, enzymatic reactions	5–200 µL blood / serum / plasma, < 5 x 10 ⁶ human / animal cells	
No.	Product	REF	Binding capacity****	Technology	Format
Protein Purification					
www.mn-net.com/protein					
His-tag proteins					
69	Protino® Ni-NTA Agarose	745400.25/.100/.500	50 mg/mL	IMAC	Bulk resin
70	Protino® Ni-NTA Columns 1 mL	745410.5	50 mg	IMAC	Ready-to-use columns for FPLC™ applications
71	Protino® Ni-NTA Columns 5 mL	745415.1/.5	250 mg	IMAC	Ready-to-use columns for FPLC™ applications
72	Protino® Ni-TED Resin	745200.5/.30/.120/.600	10 mg/g	IMAC	Bulk resin
73	Protino® Ni-TED 150 Packed Columns	745100.10/.50	400 µg	IMAC	Mini gravity-flow columns
74	Protino® Ni-TED 1000 Packed Columns	745110.5/.50	2.5 mg	IMAC	Midi gravity-flow columns
75	Protino® Ni-TED 2000 Packed Columns	745120.5/.25	5 mg	IMAC	Maxi gravity-flow columns
76	Protino® Ni-IDA Resin	745210.5/.30/.120/.600	20 mg/g	IMAC	Bulk resin
77	Protino® Ni-IDA 150 Packed Columns	745150.10/.50	800 µg	IMAC	Mini gravity-flow columns
78	Protino® Ni-IDA 1000 Packed Columns	745160.5/.50	5 mg	IMAC	Midi gravity-flow columns
79	Protino® Ni-IDA 2000 Packed Columns	745170.5/.25	10 mg	IMAC	Maxi gravity-flow columns
80	Protino® 96 Ni-IDA	745300.1/.4	1 mg/well	IMAC	96-well gravity-flow plates
GST-tag proteins					
81	Protino® Glutathione Agarose 4B	745500.10/.100	8 mg/mL	Affinity chromatography	Bulk resin
82	Protino® GST/4B Columns 1 mL	745510.5	10 mg	Affinity chromatography	Ready-to-use columns for FPLC™ applications
83	Protino® GST/4B Columns 5 mL	745515.1/.5	50 mg	Affinity chromatography	Ready-to-use columns for FPLC™ applications

* Kit with basic content focused on automation platforms, for detailed information see www.mn-net.com/HTApplications; ** Next generation sequencing; *** CE-IVD marked kit: not available in all countries, please

Binding capacity	Typical yield [μg]/recovery [%]	Ratio A_{260}/A_{280}	Elution volume	Fragment size	Approximate preparation time	Technology
www.mn-net.com/gDNA						
60 μg	4–6 μg (200 μL blood)	1.6–1.9	60–200 μL	200 bp–approx. 50 kbp	30 min/plate	Silica-membrane technology www.mn-net.com/DNAblood
60 μg	3–5 μg (200 μL blood)	1.7–1.9	50–200 μL	200 bp–approx. 50 kbp	30 min/plate	Silica-membrane technology
50 μg	4–6 μg (200 μL blood)	1.6–1.9	30–50 μL	200 bp–approx. 50 kbp	25 min/plate	Silica-membrane technology
250 μg	40–60 μg (2 mL blood)	1.6–1.9	120–200 μL	200 bp–approx. 50 kbp	60 min/plate	Silica-membrane technology
700 μg	200–300 μg (10 mL blood)	1.6–1.9	600–2000 μL	200 bp–approx. 50 kbp	60 min/plate	Silica-membrane technology
20 μg	4–6 μg (200 μL blood)	1.8–1.9	50–200 μL	300 bp–approx. 50 kbp	35 min/6 strips, 70 min/plate	Silica-membrane technology
60 μg	4–6 μg (200 μL blood)	1.6–1.9	75–100 μL	300 bp–approx. 50 kbp	60 min/12 strips, 60 min/2 plates	Silica-membrane technology
0.4 $\mu\text{g}/\mu\text{L}$ beads	2–8 μg (200 μL blood) 100–130 μg (3 mL blood)	1.6–1.9	50–100 μL , 1000 μL	300 bp–approx. 50 kbp	45 min/96 preps, 60 min/24 preps	Magnetic-bead technology www.mn-net.com/DNAblood
50 μg	25 pg–25 ng (240 μL plasma)		5–30 μL	> 50 bp	20 min/6 preps	Silica-membrane technology www.mn-net.com/DNAissue
60 μg	20–35 μg (25 mg mouse liver)	1.7–1.9	60–100 μL	200 bp–approx. 50 kbp	20 min/plate (excl. lysis)	Silica-membrane technology
50 μg	0.1–0.5 ng (10^2 HeLa cells) 10–50 ng (10^4 HeLa cells)	1.7–1.9	5–30 μL	200 bp–approx. 50 kbp	20 min/plate (excl. lysis)	Silica-membrane technology
40 μg	15–25 μg (20 mg human / animal tissue)	1.8–1.9	100–200 μL	300 bp–approx. 50 kbp	20 min/6 strips (excl. lysis), 60 min/plate (excl. lysis)	Silica-membrane technology
0.4 $\mu\text{g}/\mu\text{L}$ beads	10–20 μg (20 mg human / animal tissue)	1.6–1.9	50–200 μL	300 bp–approx. 50 kbp	120 min/96 preps (excl. lysis)	Magnetic-bead technology www.mn-net.com/DNAFFPE
110 μg	Depending on sample amount and quality		5–30 μL	50 bp–approx. 50 kbp	70 min/6 preps (excl. lysis)	Silica-membrane technology www.mn-net.com/DNAforensic
20 μg	Depending on sample amount and quality	1.7–1.9	100 μL	200 bp–approx. 50 kbp	60 min/plate	Silica-membrane technology
20 μg	Depending on sample amount and quality	1.8–1.9	50–100 μL	200 bp–approx. 50 kbp	30 min/6 strips, 70 min/plate	Silica-membrane technology
0.4 $\mu\text{g}/\mu\text{L}$ beads	Depending on sample amount and quality	1.6–1.9	50–200 μL	200 bp–approx. 50 kbp	120 min/96 preps	Magnetic-bead technology www.mn-net.com/DNAplant
50 μg	1–30 μg (100 mg plant tissue, wet weight)	1.8–1.9	50–100 μL	50 bp–approx. 50 kbp	30 min/plate	Silica-membrane technology
200 μg	10–100 μg (400 mg plant tissue, wet weight)	1.8–1.9	200–400 μL	50 bp–approx. 50 kbp	90 min/plate	Silica-membrane technology
500 μg	50–300 μg (1500 mg plant tissue, wet weight)	1.8–1.9	1000–2000 μL	50 bp–approx. 50 kbp	90 min/plate	Silica-membrane technology
30 μg	1–30 μg (100 mg plant tissue, wet weight)	1.8–1.9	100–200 μL	50 bp–approx. 50 kbp	60 min/6 strips or plate (excl. lysis)	Silica-membrane technology
0.4 $\mu\text{g}/\mu\text{L}$ beads	10–20 μg (50 mg plant tissue, wet weight)	1.6–1.9	50–200 μL	300 bp–approx. 50 kbp	120 min/96 preps	Magnetic-bead technology www.mn-net.com/DNAsoil
50 μg	2–10 μg (500 mg soil)	1.6–1.9	30–100 μL	50 bp–approx. 50 kbp	90 min/10 preps	Silica-membrane technology www.mn-net.com/DNAfood
30 μg	0.1–10 μg (200 mg food)	1.6–1.9	100 μL	300 bp–approx. 50 kbp	30 min/6 preps	Silica-membrane technology
30 μg	0.1–10 μg (200 mg food)	1.6–1.9	100–200 μL	300 bp–approx. 50 kbp	60 min/6 strips (excl. lysis), 120 min/plate (excl. lysis)	Silica-membrane technology www.mn-net.com/virus
40 μg	Depending on sample amount and quality		10–30 μL	100 bp–approx. 50 kbp	45 min/6 preps	Silica-membrane technology
30 μg	Depending on sample amount and quality		50–100 μL	100 bp–approx. 50 kbp	45 min/6 preps	Silica-membrane technology
40 μg	Depending on sample amount and quality		50 μL	100 bp–approx. 50 kbp	30 min/6 preps	Silica-membrane technology
40 μg	Depending on sample amount and quality		70–100 μL	100 bp–approx. 50 kbp	60 min/6 strips or plate	Silica-membrane technology
0.4 $\mu\text{g}/\mu\text{L}$ beads	Depending on sample amount and quality		50–100 μL	100 bp–approx. 50 kbp	120 min/96 preps	Magnetic-bead technology
60 μg	4–6 μg total DNA (200 μL blood)	1.6–1.9	60–200 μL	200 bp–approx. 50 kbp	30 min/plate	Silica-membrane technology
Matrix	Ligand	Features	www.mn-net.com/protein			
6% beaded agarose (cross-linked)	NTA	50% (v/v) aqueous suspension precharged with Ni^{2+} • Suitable for batch-binding, gravity-flow columns, and FPLC™ applications				
6% beaded agarose (cross-linked)	NTA	Ready-to-use prepacked FPLC™ columns • Agarose precharged with Ni^{2+} • Male and female outlet for ÄKTA™ platform • Adaptors for other systems available				
6% beaded agarose (cross-linked)	NTA	Ready-to-use prepacked FPLC™ columns • Agarose precharged with Ni^{2+} • Male and female outlet for ÄKTA™ platform • Adaptors for other systems available				
Macroporous silica	TED	Dry matrix precharged with Ni^{2+} • Suitable for batch-binding, gravity-flow columns, and FPLC™ applications • Unique silica concept				
Macroporous silica	TED	Ready-to-use gravity-flow columns • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
Macroporous silica	TED	Ready-to-use gravity-flow columns • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
Macroporous silica	TED	Ready-to-use gravity-flow columns • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
Macroporous silica	IDA	Dry matrix precharged with Ni^{2+} • Suitable for batch-binding, gravity-flow columns, and FPLC™ applications • Unique silica concept				
Macroporous silica	IDA	Ready-to-use gravity-flow columns • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
Macroporous silica	IDA	Ready-to-use gravity-flow columns • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
Macroporous silica	IDA	Ready-to-use gravity-flow columns • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
Macroporous silica	IDA	Ready-to-use gravity-flow 96-well plates • Matrix precharged with Ni^{2+} • Buffers included • Unique silica concept				
4% beaded agarose	Glutathione	75% (v/v) aqueous suspension • Suitable for batch-binding, gravity-flow columns, and FPLC™ applications				
4% beaded agarose	Glutathione	Ready-to-use prepacked FPLC™ columns • Male and female outlet for ÄKTA™ platform • Adaptors for other systems available				
4% beaded agarose	Glutathione	Ready-to-use prepacked FPLC™ columns • Male and female outlet for ÄKTA™ platform • Adaptors for other systems available				

For more information, please contact us at info@mn-net.com. **** Protino® Ni-IDA/TED/NTA: binding capacity refers to 6xHis-GFPuv; Protino® Glutathione Agarose 4B: binding capacity will vary for each GST-tagged protein.



Service Bioanalysis

Technical Support and Customer Service	phone	+49 24 21 969-270
	e-mail	tech-bio@mn-net.com
Product Management	phone	+49 24 21 969-275
		+49 24 21 969-271
	e-mail	pm-bio@mn-net.com
Product Management High Throughput	phone	+49 24 21 969-271
	e-mail	pm-htp@mn-net.com
Sales and Marketing	phone	+49 24 21 969-272
		+49 24 21 969-273
		+49 24 21 969-277
	e-mail	sales@mn-net.com
Business Development	phone	+49 24 21 969-272
	e-mail	bdm-bio@mn-net.com

MACHEREY-NAGEL subsidiaries

	MACHEREY-NAGEL GmbH & Co. KG Germany and international	phone	+49 24 21 969-0
		toll-free	0800 26 16 000 (Germany only)
		fax	+49 24 21 969-199 or -198
		e-mail	info@mn-net.com
	MACHEREY-NAGEL EURL France	phone	+33 388 68 22 68
		fax	+33 388 51 76 88
		e-mail	sales-fr@mn-net.com
	MACHEREY-NAGEL AG Switzerland	phone	+41 62 388 55 00
		fax	+41 62 388 55 05
		e-mail	sales-ch@mn-net.com
	MACHEREY-NAGEL Inc. USA	phone	+1 484 821 0984
		toll-free	+1 888 321 6224
		fax	+1 484 821 1272
		e-mail	sales-us@mn-net.com

A globally operating network of distributors in more than 150 countries ensures worldwide availability of MN products and services. See www.mn-net.com/distributors.



Format	Features	No.
Genomic DNA		
Genomic DNA from blood and biological fluids		
Mini spin columns	Rapid purification of high-quality DNA from whole blood (human or animal, fresh or frozen, treated with citrate, EDTA, heparin, or CPDA), body fluids, buffy coats, cultured cells • Suitable for detection of viral and bacterial DNA • Complete removal of PCR inhibitors	38
Mini spin columns	Rapid purification of high-quality DNA from blood • CE-IVD marked • Fits into <i>in vitro</i> diagnostic workflows • Suitable for EDTA, citrate, and heparin treated blood samples	39
Mini spin columns	High-speed purification (combined washing and drying step) of highly concentrated DNA from blood • Suitable for difficult / old samples • Complete removal of PCR inhibitors	40
Midi spin columns	Rapid processing of larger blood volumes < 2 mL • Whole blood treated with citrate, EDTA, heparin, or CPDA • Optimized elution volume, high concentration	41
Maxi spin columns	Rapid processing of large blood volumes < 10 mL • Whole blood treated with citrate, EDTA, heparin, or CPDA • Optimized elution volume, high concentration	42
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput purification of gDNA from blood • Optimized for manual or automated use under vacuum • Improved flow-rate reduces clogging of wells • Complete processing at room temperature • Innovative MN Wash Plate minimizes risk of cross-contamination (not included in Core Kit version)	43
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput purification of gDNA from blood • Manual or centrifugation • Minimized hands-on-time (reduced washing and drying steps)	44
Superparamagnetic beads	Magnetic-bead based isolation of gDNA from whole blood • One-tube procedure (no cross-contamination) • Small elution volumes (50 µL/1000 µL) • Easily adapted to automated use • Consistent high yields	45
Genomic DNA from plasma		
Mini spin columns (XS design)	For rapid purification of circulating DNA from plasma and serum • High recovery of fragmented DNA (> 50 bp) • Highly concentrated DNA (5 µL elution volume)	46
Genomic DNA from tissue and cells		
Mini spin columns	Allround kit with highest sensitivity and flexibility • DNA purification from clinical and forensic samples, tissues, cells, yeast, bacteria, or viruses	47
Mini spin columns (XS design)	Highly sensitive purification of genomic, bacterial, and viral DNA from smallest samples • Concentrated DNA (5 µL elution volume)	48
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput purification of gDNA from tissue, cultured cells, or bacteria • Processing under vacuum or centrifugation • Manual or automated use • MN Wash Plate minimizes risk of cross-contamination (not included in Core Kit version)	49
Superparamagnetic beads	Magnetic-bead based isolation of gDNA from human / animal tissue, cultured cells, or bacteria • One-tube procedure (no cross-contamination) • Easily adapted to automated use	50
Genomic DNA from FFPE samples		
Mini spin columns (XS design)	Improved DNA quality (decrosslinking buffer) from formalin-fixed, paraffin-embedded samples • No xylene needed (Paraffin Dissolver) • Highly concentrated DNA (5 µL)	51
Genomic DNA from forensic samples		
Funnel columns	Isolation of DNA traces from forensic samples • NucleoSpin® Funnel Column allows application of large buffer volumes • Buffer set for isolation of gDNA from bones available	52
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput purification of DNA from forensic samples (e.g., blood spots, buccal swabs, cigarette filters) • Processing under vacuum or centrifugation • Manual or automated use • Innovative MN Wash Plate minimizes risk of cross-contamination	53
Superparamagnetic beads	Magnetic-bead based isolation of gDNA from forensic samples • One-tube procedure (no cross-contamination) • Small elution volume (50 µL) • Easily adapted to automated use	54
Genomic DNA from plant and fungi		
Mini spin columns	Two alternative lysis buffers (based on CTAB or SDS) for optimal processing of various samples • NucleoSpin® Filters and RNase A included	55
Midi spin columns	Medium scale purification of plant DNA • Two alternative lysis buffers for optimal processing of various samples • NucleoSpin® Filters L and RNase A included	56
Maxi spin columns	Large scale purification of plant DNA • Two alternative lysis buffers for optimal processing of various samples • NucleoSpin® Filters XL and RNase A included	57
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput purification of gDNA from plant samples • Processing under vacuum (centrifuge required for clearing the lysate) or centrifugation • Manual or automated use • RNase A included • Innovative MN Wash Plate minimizes risk of cross-contamination (not included in Core Kit version)	58
Superparamagnetic beads	Magnetic-bead based isolation of gDNA from plant tissue • One-tube procedure (no cross-contamination) • Small elution volume (50 µL) • Easily adapted to automated use	59
Genomic DNA from soil		
Mini spin columns	Isolation of total DNA from diverse soil types • Two alternative lysis buffers and a special additive for optimal processing of various soil samples • NucleoSpin® Bead Tubes with ceramic beads (cell disruption) and NucleoSpin® Inhibitor Removal Columns (PCR inhibitor removal) included	60
Genomic DNA from food and feed		
Mini spin columns	DNA isolation from heterogeneous food samples • High quality DNA from complex matrices (soy, meat, processed food, e.g., chocolate, cereals, animal feed) • Complete removal of PCR inhibitors	61
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput purification of gDNA from food and feed • Processing under vacuum or centrifugation • Manual or automated use • Complete removal of PCR inhibitors	62
Viral RNA and DNA		
Mini spin columns (XS design)	Isolation of viral RNA/DNA from cell-free biological fluids • Carrier RNA and Proteinase K included • Highly concentrated RNA/DNA (10 µL elution volume)	63
Funnel columns	Large scale isolation of viral RNA/DNA • For parallel isolation of RNA and DNA use of Proteinase K is required (not included in the kit) • NucleoSpin® Funnel Column allows isolation of < 1 mL cell-free biological fluid in a small elution volume (50 µL)	64
Mini spin columns	Isolation of viral RNA/DNA from cell-free biological fluids • CE-IVD marked • Fits into <i>in vitro</i> diagnostic workflows • Carrier RNA and Proteinase K included	65
8-well strips, 96-well plates	8-well strips and 96-well plates for medium- and high-throughput isolation of viral RNA/DNA from cell-free biological fluids • Proteinase K included • Processing under vacuum or centrifugation • Manual or automated use • Innovative MN Wash Plate minimizes risk of cross-contamination (not included in Core Kit version)	66
Superparamagnetic beads	Magnetic-bead based isolation of viral RNA/DNA from cell-free biological fluids • Proteinase K included • One-tube procedure (no cross-contamination) • Small elution volume (50 µL) • Easily adapted to automated use	67
Mini spin columns	Rapid purification of high-quality DNA from whole blood (human or animal, fresh or frozen, treated with citrate, EDTA, heparin, or CPDA), body fluids, buffy coats, cultured cells • Suitable for detection of viral and bacterial DNA • Complete removal of PCR inhibitors	68

Additional information

Constantly updated and additional product information such as application data, literature, and product news is provided at the MN website:

www.mn-net.com/Bioanalysis.

The MN website also includes the MN Bioanalysis KitFinder. This tool is used to choose the most suitable product either by application or by simply entering the reference number of an alternatively used product:

www.mn-net.com/BioKitFinder.

MN quality assurance

Sophisticated German manufacturing and strict quality control ensure consistent high product standards:

- Certification according to EN ISO 9001:2008
- CE-certification of selected products in accordance with EU Directive 98/79/EC
- Comprehensive supplier control and extensive tests of basic materials
- Computer-aided process control at different production stages



NucleoBond®		NucleoSpin®	
Technology	Anion-exchange chromatography	Silica-membrane technology	
Separation principle	Ionic interaction of negatively charged DNA and positively charged silica resin	Chaotropic salt binding	
Material	Modified, macroporous silica particles	Silica membrane	
Format	Gravity-flow columns (e.g., Midi, Maxi)	<ul style="list-style-type: none"> • Spin columns: low-throughput systems, from extra small to extra large scale • 8-well strips, 96-well plates: medium- and high-throughput systems, for vacuum manifolds, centrifuges, and robotic systems 	
Result	Ultra-pure, transfection-grade DNA/RNA	Ready-to-use, sequencing and PCR-grade DNA/RNA	
NucleoTrap®		NucleoTrap® mRNA	NucleoFast®
Technology	Silica-matrix technology	Affinity chromatography	Ultrafiltration
Separation principle	Chaotropic salt binding	Hybridization	Filtration
Material	Silica particles	Oligo(dT) latex beads	Ultrafiltration membrane
Format	Aqueous suspension	Aqueous suspension	96-well plates, high-throughput systems, for vacuum manifolds, centrifuges, and robotic systems
Result	Ready-to-use, sequencing and PCR-grade DNA	Ready-to-use, sequencing and PCR-grade poly(A) mRNA	Ready-to-use, sequencing and PCR-grade DNA
NucleoSEQ®		NucleoMag®	
Technology	Gel-filtration	Magnetic-bead technology	
Separation principle	Size exclusion	Chaotropic salt binding	
Material	Size exclusion matrix	Superparamagnetic beads (non-silica)	
Format	Spin columns filled with dry matrix	Flexible, easily adapted to automated use	
Result	Removal of sequencing dye terminators	Highly-pure ready-to-use DNA/RNA	
Protino® Ni-IDA/TED		Protino® Ni-NTA Agarose	Protino® Glutathione Agarose 4B
Technology	Purification of polyhistidine (His)-tagged proteins	Purification of polyhistidine (His)-tagged proteins	Purification of Glutathione-S-transferase (GST)-tagged proteins
Separation principle	Affinity chromatography (IMAC, immobilized metal ion affinity chromatography)	Affinity chromatography (IMAC, immobilized metal ion affinity chromatography)	Affinity chromatography
Material / backbone	Interaction between the His-tag of the recombinant protein and immobilized Ni ²⁺ ions, elution with imidazole	Interaction between the His-tag of the recombinant protein and immobilized Ni ²⁺ ions, elution with imidazole	Interaction between the GST-tag of the recombinant protein and immobilized glutathione, elution with free glutathione
Format	Macroporous silica with immobilized Ni ²⁺	6 % beaded agarose (cross-linked) precharged with Ni ²⁺	4 % beaded agarose with immobilized glutathione
Format	Dry material <ul style="list-style-type: none"> • Dry bulk matrix for gravity-flow chromatography, batch binding, FPLC™ • Gravity-flow columns • 96-well plates 	50 % aqueous suspension containing 30 % ethanol <ul style="list-style-type: none"> • Bulk resin for gravity-flow chromatography, batch binding, FPLC™ • Ready-to-use columns for FPLC™ 	75 % aqueous suspension containing 20 % ethanol <ul style="list-style-type: none"> • Bulk resin for gravity-flow chromatography, batch binding, FPLC™ • Ready-to-use columns for FPLC™

Trademarks: NucleoBond®, NucleoFast®, NucleoMag®, NucleoSEQ®, NucleoSpin®, NucleoTrap®, and Protino® are registered trademarks of MACHERY-NAGEL; BigDye® is a registered trademark of Applied Biosystems; AKTA™ and FPLC™ are trademarks of GE Healthcare companies.

Your local distributor

www.mn-net.com

MACHERY-NAGEL



MACHERY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

Germany and international:
Tel.: +49 24 21 969-0
Fax: +49 24 21 969-199
E-mail: info@mn-net.com

Switzerland:
MACHERY-NAGEL AG
Tel.: +41 62 388 55 00
Fax: +41 62 388 55 05
E-mail: sales-ch@mn-net.com

France:
MACHERY-NAGEL EUROL
Tel.: +33 388 68 22 68
Fax: +33 388 51 76 88
E-mail: sales-fr@mn-net.com

USA:
MACHERY-NAGEL Inc.
Tel.: +1 484 821 0984
Fax: +1 484 821 1272
E-mail: sales-us@mn-net.com

