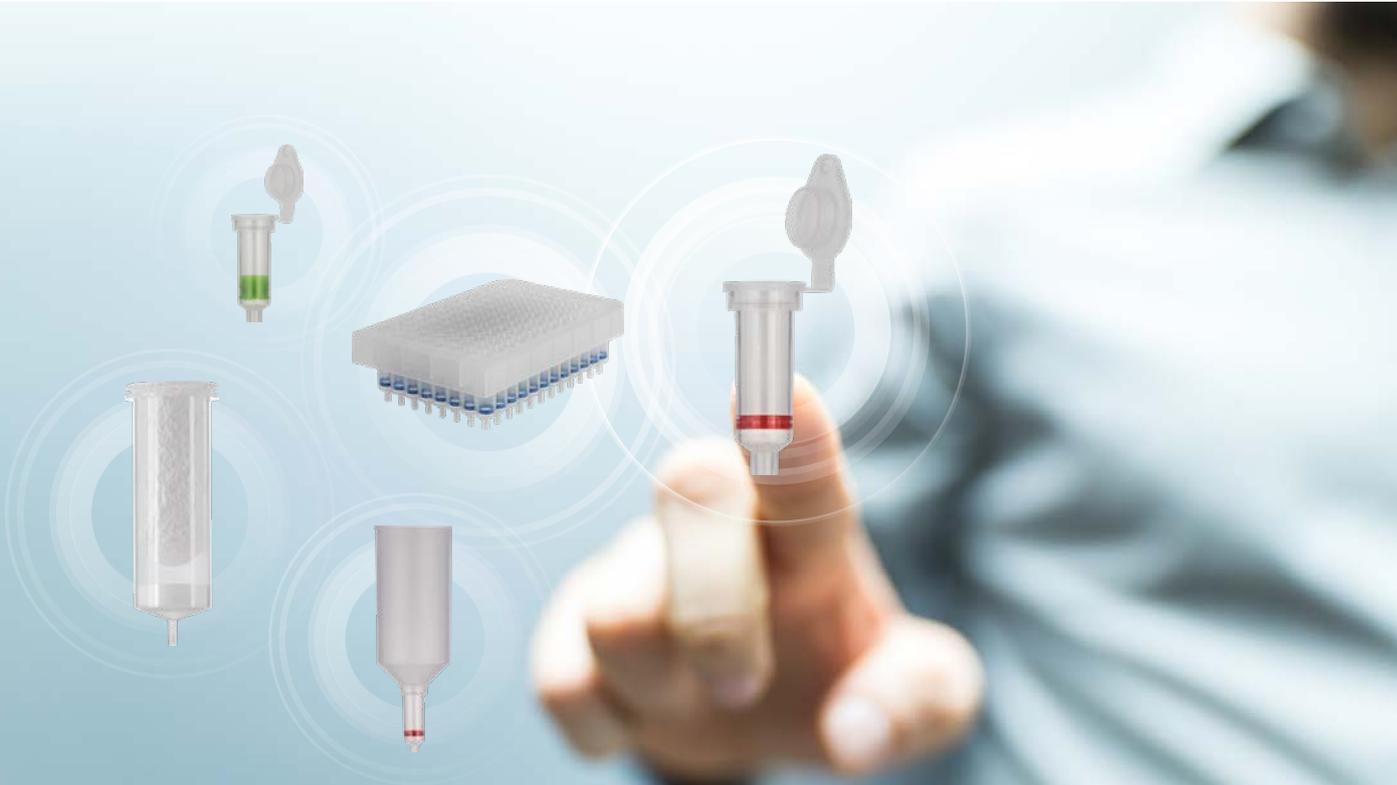


# MACHEREY-NAGEL

## Selection Guide

Bioanalysis



for DNA, RNA, and protein purification products

- Compact overview of MN Bioanalysis products
- All essential information at a glance
- Find the optimal product for your application

**MACHEREY-NAGEL**

[www.mn-net.com](http://www.mn-net.com)



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### 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, 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 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

As seen at the summary on page 3, the products of this selection guide are listed in groups according to the 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.



### Summary

Product group	No.	Page
<b>■ Plasmid DNA</b>		
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RNA from plant and fungi	55	10
RNA from soil and stool	56-60	10
<b>■ DNA</b>		
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No.	Product	REF	Starting material ( <i>E. coli</i> culture)	Format	Binding capacity <sup>1)</sup>	Typical yield /recovery	Elution volume	Vector size	Approximate processing time	Features
<b>■ Plasmid DNA</b>										
<b>Molecular biology-grade plasmid DNA</b>										
1	NucleoSpin® Plasmid, NucleoSpin® Plasmid (NoLid)	740588.10/.50/.250, 740499.50/.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 <sup>2)</sup> , NucleoSpin® 96 Plasmid, NucleoSpin® 96 Plasmid Core Kit <sup>2)</sup>	740621/.5, 740461.4, 740625.1/.4/.24, 740616.4	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
<b>Transfection-grade plasmid DNA</b>										
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 <sup>2)</sup>	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		< 300 kbp	70 min/prep, 30 min/prep	Lysate clarification and binding in one step   NucleoBond® Xtra Midi Plus: NucleoBond® Finalizer for rapid plasmid precipitation
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		< 300 kbp	75 min/prep, 35 min/prep	Lysate clarification and binding in one step   NucleoBond® Xtra Maxi Plus: NucleoBond® Finalizer for rapid plasmid precipitation
10	NucleoBond® Xtra BAC	740436.10/.25	250–750 mL (low copy)	Maxi gravity flow column	150 µg	10–150 µg		< 300 kbp	75 min/4 preps	Lysate clarification and binding in one step
<b>Endotoxin-free plasmid DNA</b>										
11	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		< 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
12	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		< 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
13	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)		< 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
<b>Plasmid DNA concentration and desalting</b>										
14	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
15	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
16	NucleoBond® Finalizer, NucleoBond® Finalizer Plus	740519.20, 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
17	NucleoBond® Finalizer Large, NucleoBond® Finalizer Large Plus	740418.20, 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

<sup>1)</sup> Theoretical value; <sup>2)</sup> Kit mainly for use on automation platforms, for additional accessories and detailed information see [www.mn-net.com](http://www.mn-net.com)



No.	Product	REF	Typical amount of starting material	Format	Binding capacity <sup>1)</sup>	Typical recovery	Elution volume	Fragment size	Approximate processing time	Features
<b>Clean up</b>										
<b>PCR clean up</b>										
18	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
19	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   Now in Midi prep scale
20	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   Now in Maxi prep scale
21	NucleoSpin® 8 PCR Clean up, NucleoSpin® 8 PCR Clean up Core Kit <sup>2)</sup> , NucleoSpin® 96 PCR Clean up, NucleoSpin® 96 PCR Clean up Core Kit <sup>2)</sup>	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
22	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
23	NucleoMag® PCR	744100.1 / .4 / .24	< 50 µL PCR reaction mixture	Magnetic beads	0.3 µg/µL beads	80–95 %	25–100 µL	150 bp–approx. 10 kbp	40–120 min/96 preps <sup>3)</sup>	Easily adapted to automated use
<b>Gel extraction</b>										
24	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 <sup>4)</sup>	2 in 1 kit – PCR clean up and gel extraction
25	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   Now in Midi prep scale
26	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   Now in Maxi prep scale
<b>NGS clean up and size selection</b>										
27	NucleoMag® NGS Clean up and Size Select <sup>5)</sup>	744970.5 / .50 / .500	17.5 pg–5 µg nucleic acids in NGS <sup>6)</sup> reaction mixture	Magnetic beads		≥ 80 %	10–100 µL	Tunable (150–800 bp)	40–120 min/96 preps <sup>3)</sup>	Convenient magnetic bead technology   Easy to adjust for specific applications or sequencers   Optimal scalability for manual and automated processing
<b>Genomic DNA clean up</b>										
28	NucleoSpin® gDNA Clean up XS	740904.10 / .50 / .250	< 400 µL solution containing < 2 µg DNA	Mini spin column (XS design)	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)
29	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
<b>RNA clean up</b>										
30	NucleoSpin® RNA Clean up XS	740903.10 / .50 / .250	< 300 µL RNA solution containing < 90 µg RNA	Mini spin column (XS design)	110 µg	85–95 %	5–30 µL	> 200 nt	20 min/6 preps	Easy clean up and concentration of prepurified RNA
31	NucleoSpin® RNA Clean up	740948.10 / .50 / .250	< 200 µL phenol / chloroform extract or reaction mixture	Mini spin column	200 µg	85–95 %	40–120 µL	> 200 nt	20 min/6 preps	Easy clean up of prepurified RNA
32	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
<b>Dye terminator removal</b>										
33	NucleoSEQ®	740523.10 / .50 / .250	20 µL sequencing reaction mixture	Mini spin column			20 µL		5 min/prep (excl. hydration)	Efficient dye terminator removal

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

No.	Product	REF	Typical amount of starting material	Format	Binding capacity <sup>1)</sup>	Typical yield /recovery	Elution volume	Fragment size	Approximate processing time	Features
<b>RNA</b>										
<b>RNA from cells and tissue</b>										
34	NucleoSpin® RNA Plus XS	740990.10/.50/.250	1–10 <sup>5</sup> cells, < 5 mg human / animal tissue	Mini spin column (XS design)	110 µg	0.5–2 µg (10 <sup>5</sup> 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 β-mercaptoethanol or TCEP   XS columns allow elution in 5 µL for highest RNA concentration
35	NucleoSpin® RNA Plus	740984.10/.50/.250	10 <sup>7</sup> cultured cells, < 10 <sup>9</sup> bacterial cells, < 10 <sup>8</sup> yeast cells, < 30 mg human / animal tissue	Mini spin column	200 µg	40–60 µg (5 x 10 <sup>6</sup> 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 β-mercaptoethanol / TCEP necessary
36	NucleoSpin® RNA XS	740902.10/.50/.250	1–10 <sup>5</sup> cells, < 5 mg human / animal tissue	Mini spin column (XS design)	110 µg	0.1–1.5 ng (10 <sup>2</sup> HeLa cells), 1–1.5 µg (10 <sup>5</sup> HeLa cells)	5–30 µL	> 200 nt	35 min/6 preps	For smallest samples   rDNase and NucleoSpin® Filters included   No β-mercaptoethanol
37	NucleoSpin® RNA	740955.10/.50/.250	< 5 x 10 <sup>6</sup> cultured cells, < 10 <sup>9</sup> bacterial cells, < 10 <sup>8</sup> yeast cells, < 30 mg human / animal tissue	Mini spin column	200 µg	14 µg (10 <sup>6</sup> HeLa cells), 70 µg (10 <sup>9</sup> bacterial cells)	30–120 µL	> 200 nt	35 min/6 preps	rDNase and NucleoSpin® Filters included
38	NucleoSpin® RNA Midi	740962.20	< 5 x 10 <sup>7</sup> cultured cells, < 10 <sup>10</sup> bacterial cells, < 3 x 10 <sup>8</sup> yeast cells, < 200 mg human / animal tissue	Midi spin column	700 µg	620 µg (4 x 10 <sup>7</sup> HeLa cells)	500–1000 µL	> 200 nt	80 min/4 preps	Large scale RNA preparation   rDNase and NucleoSpin® Filters included
39	NucleoSpin® 8 RNA, NucleoSpin® 8 RNA Core Kit <sup>2)</sup> , NucleoSpin® 96 RNA, NucleoSpin® 96 RNA Core Kit <sup>2)</sup>	740698/.5, 740465.4, 740709.2/.4/.24, 740466.4	< 2 x 10 <sup>6</sup> cells, < 20 mg human / animal tissue	8-well strip, 96-well plate	100 µg	20 µg (2 x 10 <sup>6</sup> 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
40	NucleoMag® RNA	744350.1/.4	< 2 x 10 <sup>6</sup> 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 <sup>3)</sup> (excl. lysis)	rDNase included   Easily adapted to automated use
41	NucleoZOL	740404.200	Per mL NucleoZol: < 2–10 <sup>6</sup> 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 <sup>6</sup> (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 <sup>6</sup> (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
42	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
<b>MicroRNA</b>										
43	NucleoSpin® miRNA	740971.10/.50/.250	< 10 <sup>7</sup> cells, < 30 mg human / animal tissue, < 50 mg plant tissue, < 150 µL reaction mixture	Mini spin column	200 µg	100 µg total RNA (10 <sup>7</sup> 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
44	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
45	Exosome Precipitation Solution (Serum / Plasma) <sup>4)</sup>	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
46	Exosome Precipitation Solution (Urine) <sup>4)</sup>	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
<b>RNA, DNA, and protein isolation</b>										
47	NucleoSpin® TriPrep	740966.10/.50/.250	< 5 x 10 <sup>6</sup> 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
48	NucleoSpin® RNA/Protein	740933.10/.50/.250	< 5 x 10 <sup>6</sup> 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

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

No.	Product	REF	Typical amount of starting material	Format	Binding capacity <sup>1)</sup>	Typical yield /recovery	Elution volume	Fragment size	Approximate processing time	Features
<b>RNA, DNA, and protein isolation</b>										
49	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
<b>RNA from blood</b>										
50	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
51	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
52	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
<b>Total RNA from FFPE samples</b>										
53	NucleoSpin® totalRNA FFPE XS	740969.10/.50/.250	< 10 sections (10 µm) with < 5 mg tissue	Mini spin column (XS design)	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
54	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
<b>RNA from plant and fungi</b>										
55	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
<b>RNA from soil and stool</b>										
56	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
57	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
58	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
59	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
60	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

<sup>1)</sup> Theoretical value



No.	Product	REF	Typical amount of starting material	Format	Binding capacity <sup>1)</sup>	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
<b>■ DNA</b>										
<b>DNA from blood and biological fluids</b>										
61	NucleoSpin® Blood	740951.10/.50/.250	5–200 µL blood / serum / plasma, < 5 x 10 <sup>6</sup> 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)
62	NucleoSpin® Dx Blood (CE-IVD) <sup>3)</sup>	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)
63	NucleoSpin® Blood QuickPure	740569.10/.50/.250	5–200 µL blood / serum / plasma, < 5 x 10 <sup>6</sup> 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)
64	NucleoSpin® Blood L	740954.20/.100	0.2–2 mL blood / serum / plasma, < 2 x 10 <sup>7</sup> 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)
65	NucleoSpin® Blood L Vacuum	740954.24	1–2 mL whole blood	Midi spin column	250 µg	50–80 µg (2 mL blood)	2 x 300 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
66	NucleoSpin® Blood XL	740950.10/.50	2–10 mL blood / serum / plasma, < 10 <sup>9</sup> 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)
67	NucleoSpin® 8 Blood, NucleoSpin® 8 Blood Core Kit <sup>2)</sup> , NucleoSpin® 96 Blood, NucleoSpin® 96 Blood Core Kit <sup>2)</sup>	740664/.5, 740455.4, 740665.1/.4/.24, 740456.4	< 200 µL blood / serum / plasma, < 2 x 10 <sup>6</sup> 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)
68	NucleoSpin® 8 Blood QuickPure, NucleoSpin® 96 Blood QuickPure	740666/.5, 740667.2/.4/.24	< 200 µL blood / serum / plasma, < 5 x 10 <sup>6</sup> 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)
69	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 <sup>4)</sup> , 60 min/24 preps <sup>4)</sup>	Easily adapted to automated use   Compatible with blood stabilization substances (e.g., citrate, EDTA)
<b>cfDNA from plasma</b>										
70	NucleoSpin® cfDNA XS	740900.10/.50/.250	< 240 µL plasma / serum, < 720 µL plasma / serum (multiple loading steps)	Mini spin column (XS design)		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
71	NucleoSpin® cfDNA Midi, NucleoSpin® cfDNA Midi Core Kit <sup>2)</sup>	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
72	NucleoSpin® 96 cfDNA, NucleoSpin® 96 cfDNA Core Kit <sup>2)</sup>	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)
73	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
74	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) <sup>4)</sup>	Consistent cfDNA recovery from 1–10 mL plasma samples   Efficient purification of fragmented DNA as small as 50 bp   Automation possible
<b>DNA from tissue and cells</b>										
75	NucleoSpin® DNA RapidLyse	740100.10/.50/.250	< 40 mg fresh weight, < 10 <sup>6</sup> 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
76	NucleoSpin® 96 DNA RapidLyse	740110.1/.4	< 30 mg fresh weight, < 10 <sup>6</sup> 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) <sup>4)</sup>	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
77	NucleoSpin® Tissue XS	740901.10/.50/.250	0.025–10 mg human / animal tissue, 10–10 <sup>4</sup> human / animal cells, Guthrie cards (5–30 mm <sup>2</sup> )	Mini spin column (XS design)	50 µg	0.1–0.5 ng (10 <sup>2</sup> HeLa cells), 10–50 ng (10 <sup>4</sup> 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
78	NucleoSpin® Tissue	740952.10/.50/.250	< 25 mg human / animal tissue, 10 <sup>2</sup> –10 <sup>7</sup> 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

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

No.	Product	REF	Typical amount of starting material	Format	Binding capacity <sup>1)</sup>	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
<b>DNA from tissue and cells</b>										
79	NucleoSpin® 8 Tissue, NucleoSpin® 8 Tissue Core Kit <sup>2)</sup> , NucleoSpin® 96 Tissue, NucleoSpin® 96 Tissue Core Kit <sup>2)</sup>	740740/.5, 740453.4, 740741.2/.4/.24, 740454.4	< 20 mg human / animal tissue, < 10 <sup>6</sup> 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
80	NucleoMag® Tissue	744300.1/.4/.24	< 20 mg human / animal tissue, < 10 <sup>6</sup> 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) <sup>3)</sup>	Efficient lysis and small elution volumes for highest concentrated DNA   Easily adapted to automated use
81	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   NucleoSpin® Bead Tubes for efficient lysis included   Fast and convenient procedure without RNA contamination
82	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   NucleoSpin® Bead Tubes for efficient lysis of an exoskeleton included   Fast and convenient procedure
<b>DNA from FFPE samples</b>										
83	NucleoSpin® DNA FFPE XS	740980.10/.50/.250	≤ 7 sections (10 µm) of 250 mm <sup>2</sup> total area, < 15 mg paraffin	Mini spin column (XS design)	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
84	NucleoSpin® 8 DNA FFPE, NucleoSpin® 96 DNA FFPE	740242/.5, 740240.1/.4	≤ 10 mg tissue / 7 sections (10 µm) of 250 mm <sup>2</sup> 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)
85	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) <sup>3)</sup>	Odorless paraffin removal by patented Paraffin Dissolver   No use of xylene needed   Efficient removal of crosslinks   Manual or automated processing (vacuum / centrifugation / positive pressure)
<b>DNA from forensic samples</b>										
86	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)
87	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/6 preps (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
88	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
89	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) <sup>3)</sup>	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
<b>DNA from plant and fungi</b>										
90	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/6 preps	Two optional lysis buffers (based on CTAB or SDS) for optimal lysis
91	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/6 preps	For processing of large plant samples   NucleoSpin® Midi Filters and RNase A included
92	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/6 preps	For processing of larger plant samples   NucleoSpin® Maxi Filters and RNase A included
93	NucleoSpin® 8 Plant II, NucleoSpin® 8 Plant II Core Kit <sup>2)</sup> , NucleoSpin® 96 Plant II, NucleoSpin® 96 Plant II Core Kit <sup>2)</sup>	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
94	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) <sup>3)</sup>	Easily adapted to automated use
95	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) <sup>3)</sup>	Easily adapted to automated use   Tailored preparation of DNA from plant samples in a 384-well format

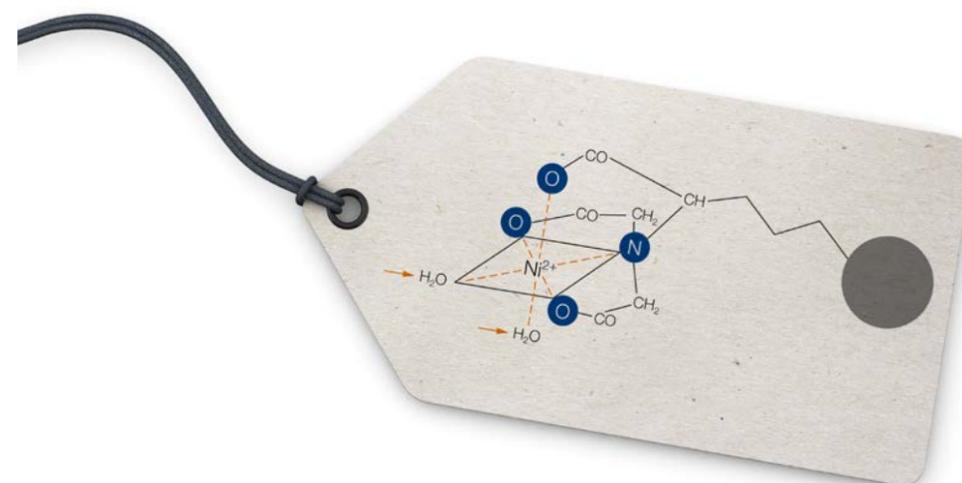
<sup>1)</sup> Theoretical value; <sup>2)</sup> Kit mainly for use on automation platforms, for additional accessories and detailed information see [www.mn-net.com](http://www.mn-net.com); <sup>3)</sup> Depending on instrument type / setup / configuration. For more detailed information regarding the processing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

No.	Product	REF	Typical amount of starting material	Format	Binding capacity <sup>1)</sup>	Typical yield	Elution volume	Fragment size	Approximate processing time	Features
<b>DNA from microorganisms</b>										
96	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   NucleoSpin® Bead Tubes for efficient lysis included   Fast and easy procedure   Liquid Proteinase K included, no additional enzyme required
<b>DNA from soil and stool</b>										
97	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   NucleoSpin® Bead Tubes and NucleoSpin® Inhibitor Removal Column included
98	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	NucleoSpin® Bead Tubes and NucleoSpin® Inhibitor Removal Strips/Plate included
99	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   NucleoSpin® Bead Tubes for efficient lysis included   NucleoSpin® Inhibitor Removal Columns ensure highest purity of the isolated DNA
<b>DNA from food and feed</b>										
100	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
101	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
102	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) <sup>3)</sup>	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
<b>Direct PCR</b>										
103	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 cyclers protocol)	Pretreatment of challenging blood samples with Inhibitor Removal Pearls   Transfer of blood aliquot with the Blood Transfer Tool
104	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)	Buffer, PCR mix, and Liquid Proteinase K				Recommended for up to 1 kb	5 min/prep (DNA release) 30–90 min PCR cycling (depending on cyclers 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
<b>■ Viral RNA and DNA</b>										
<b>Viral RNA/DNA from blood and biological fluids</b>										
105	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
106	NucleoSpin® Dx Virus (CE-IVD) <sup>4)</sup>	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
107	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
108	NucleoSpin® 8 Virus, NucleoSpin® 8 Virus Core Kit <sup>2)</sup> , NucleoSpin® 96 Virus, NucleoSpin® 96 Virus Core Kit <sup>2)</sup>	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
109	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 <sup>3)</sup>	Proteinase K included   Easily adapted to automated use
110	NucleoSpin® Blood	740951.10/.50/.250	5–200 µL blood/serum/plasma, < 5 x 10 <sup>6</sup> 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)   Suitable for pathogen detection by isolation of viral DNA or bacterial DNA from blood samples
<b>Viral RNA/DNA and bacterial DNA from clinical samples</b>										
111	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 <sup>3)</sup>	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
<b>Viral RNA/DNA and bacterial DNA from veterinary samples</b>										
112	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 <sup>3)</sup>	Allround kit for veterinary diagnostics   One tube procedure for minimal risk of cross-contamination   Easily adapted to automated use

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

No.	Product	REF	Format	Binding capacity <sup>1)</sup>	Matrix	Ligand	Features
<b>■ Protein purification</b>							
<b>Purification of His-tag proteins</b>							
113	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 <sup>2+</sup>   Suitable for batch binding, gravity flow columns, and FPLC™ applications
114	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 <sup>2+</sup>   Male and female outlet for ÄKTA™ platform   Adaptors for other systems available
115	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 <sup>2+</sup>   Male and female outlet for ÄKTA™ platform   Adaptors for other systems available
116	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 <sup>2+</sup>   Suitable for centrifugation and vacuum   Automation possible
117	Protino® Ni-TED Resin	745200.5 / .30 / .120 / .600	Bulk resin	10 mg/g resin	Macroporous silica	TED	Dry matrix precharged with Ni <sup>2+</sup>   Suitable for batch binding, gravity flow columns, and FPLC™ applications   Unique silica concept
118	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 <sup>2+</sup>   Buffers included   Unique silica concept
119	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 <sup>2+</sup>   Buffers included   Unique silica concept
120	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 <sup>2+</sup>   Buffers included   Unique silica concept
121	Protino® Ni-IDA Resin	745210.5 / .30 / .120 / .600	Bulk resin	20 mg/g resin	Macroporous silica	IDA	Dry matrix precharged with Ni <sup>2+</sup>   Suitable for batch binding, gravity flow columns, and FPLC™ applications   Unique silica concept
122	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 <sup>2+</sup>   Buffers included   Unique silica concept
123	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 <sup>2+</sup>   Buffers included   Unique silica concept
124	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 <sup>2+</sup>   Buffers included   Unique silica concept
125	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 <sup>2+</sup>   Buffers included   Unique silica concept
<b>Purification of GST-tag proteins</b>							
126	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
127	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
128	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

<sup>1)</sup> 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 <sup>2+</sup> ions, elution with imidazole	Macroporous silica with immobilized Ni <sup>2+</sup>	Dry material, gravity flow columns (Midi, Maxi) / 96-well plates
Protino® Ni-NTA Agarose	Affinity chromatography	Interaction between His-tag of the recombinant protein and immobilized Ni <sup>2+</sup> ions, elution with imidazole	6 % beaded agarose (cross-linked), precharged with Ni <sup>2+</sup>   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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