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## DNA and RNA Purification



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### *Protein Purification*

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## Plasmid DNA

### Transfection-grade plasmid DNA

Format	Typical yield	Product	Page
<b>High-/low-copy plasmid DNA (anion-exchange chromatography)</b>			
<b>NucleoBond® Xtra</b>			
Midi / Maxi gravity-flow columns	250 µg 1 000 µg	NucleoBond® Xtra Midi / Midi Plus NucleoBond® Xtra Maxi / Maxi Plus	24
<b>NucleoBond® PC</b>			
Mini – Giga gravity-flow columns	20 – 10 000 µg	NucleoBond® PC 20 – PC 10 000	26
<b>Large constructs, e.g., BACs, PACs, P1s, cosmids (anion-exchange chromatography)</b>			
Maxi gravity-flow columns	100 µg	NucleoBond® BAC 100	28
<b>Plasmid DNA concentration and desalination</b>			
Desalting tool	500 µg / 2 000 µg	NucleoBond® Finalizer / Finalizer Large	29

### Transfection-grade, endotoxin-free plasmid DNA

Format	Typical yield	Product	Page
<b>Plasmid DNA for transfection of endotoxin-sensitive cells (anion-exchange chromatography)</b>			
<b>NucleoBond® Xtra EF</b>			
Midi / Maxi gravity-flow columns	250 µg 1 000 µg	NucleoBond® Xtra Midi EF / Midi Plus EF NucleoBond® Xtra Maxi EF / Maxi Plus EF	30
<b>NucleoBond® PC EF</b>			
Maxi – Giga gravity-flow columns, preparative scale columns	500 µg – 100 mg	NucleoBond® PC 500 EF – PC Prep 100	32

### Molecular biology-/sequencing-grade plasmid DNA

Format	Typical yield	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	<40 µg <15 µg	NucleoSpin® Plasmid / Plasmid (NoLid) NucleoSpin® Plasmid QuickPure	34 35
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	<20 µg <20 µg	NucleoSpin® 8 / 96 Plasmid NucleoSpin® 8 / 96 Plasmid Core Kit	36
96-well filter plates (filtration and precipitation)	8 µg	NucleoSpin® 96 Flash	38



## DNA Clean-up

### PCR clean-up

Format	Sample	Product	Page
<b>Single prep</b>			
Mini spin columns (silica-membrane technology)	<400 µL PCR reaction mixture	NucleoSpin® Extract II	43
Silica matrix (silica-matrix technology)	20 – 400 µL PCR reaction mixture	NucleoTraP®CR	44
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	<100 µL PCR reaction mixture	NucleoSpin® 8/96 Extract II NucleoSpin® 8/96 Extract II Core Kit	45
96-well plates (ultrafiltration technology)	20 – 300 µL PCR reaction mixture	NucleoFast® 96 PCR	47
96-well systems (magnetic-bead technology)	<50 µL PCR reaction mixture	NucleoMag® 96 PCR	48

### Gel extraction

Format	Sample	Product	Page
<b>Single prep</b>			
Mini spin columns (silica-membrane technology)	<400 mg agarose gel	NucleoSpin® Extract II	43
Silica matrix (silica-matrix technology)	20 – 600 mg agarose gel	NucleoTrap®	49

### Dye-terminator removal

Format	Sample	Product	Page
<b>Single prep</b>			
Mini spin columns (gel filtration)	20 µL sequencing reaction mixture	NucleoSEQ®	50

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## RNA

### Total RNA from cells and tissue

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	<30 mg tissue, <5 x 10 <sup>6</sup> cultured cells	NucleoSpin® RNA II	58
Mini spin columns – XS design	<5 mg tissue, 1 – 10 <sup>5</sup> cultured cells	NucleoSpin® RNA XS	59
Midi spin columns	<200 mg tissue, <5 x 10 <sup>7</sup> cultured cells	NucleoSpin® RNA L	60
Gravity-flow columns (anion-exchange chromatography)	<100 mg tissue, <2 x 10 <sup>7</sup> cultured cells	NucleoBond® RNA/DNA	61
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	<30 mg tissue, <10 <sup>7</sup> cultured cells	NucleoSpin® 8/96 RNA NucleoSpin® 8/96 RNA Core Kit	62
96-well systems (magnetic-bead technology)	<20 mg tissue, <2 x 10 <sup>6</sup> cultured cells	NucleoMag® 96 RNA <b>NEW!</b>	64

### Total RNA, microRNA, and protein isolation

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	<30 mg human/animal tissue, <50 mg plant tissue, <10 <sup>7</sup> cultured cells, <150 µL reaction mixture	NucleoSpin® miRNA <b>NEW!</b>	65

### Total RNA, DNA, and protein isolation

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
<b>Total RNA, DNA, and protein isolation</b>			
Mini spin columns	<30 mg tissue, <100 mg plant tissue, <5 x 10 <sup>6</sup> cultured cells	NucleoSpin® TriPrep <b>NEW!</b>	66
<b>Total RNA and protein isolation</b>			
Mini spin columns	<30 mg tissue, <100 mg plant tissue, <5 x 10 <sup>6</sup> cultured cells	NucleoSpin® RNA/Protein	67
<b>Total RNA and DNA isolation</b>			
Buffer set	<30 mg tissue, <100 mg plant tissue, <5 x 10 <sup>6</sup> cultured cells	NucleoSpin® RNA/DNA Buffer Set	68
<b>Protein quantification</b>			
Buffer and reagent set		Protein Quantification Assay <b>NEW!</b>	69

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## Total RNA from plant

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	< 100 mg plant tissue	NucleoSpin® RNA Plant	70

## Total RNA and DNA from FFPE samples

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
<b>Total RNA from FFPE samples</b>			
Mini spin columns – XS design	≤7 sections (10 μm) of 250 mm <sup>2</sup> total area (<15 mg paraffin)	NucleoSpin® FFPE RNA	<b>NEW!</b> 71
<b>Total RNA and DNA from FFPE samples</b>			
Mini spin columns – XS design	≤7 sections (10 μm) of 250 mm <sup>2</sup> total area (<15 mg paraffin)	NucleoSpin® FFPE RNA/DNA	<b>NEW!</b> 72

## RNA clean-up

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	≤200 μL phenol / chloroform extract or reaction mixture	NucleoSpin® RNA Clean-up	73
Mini spin columns – XS design	≤300 μL phenol / chloroform extract or reaction mixture	NucleoSpin® RNA Clean-up XS	74

## Poly(A) mRNA isolation from total RNA

Format	Sample	Product	Page
<b>Single prep (affinity chromatography)</b>			
Latex beads	250 – 1 000 μg total RNA	NucleoTrap® mRNA	75

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## Genomic DNA



### Circulating DNA from plasma

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns – XS design	240 µL plasma	NucleoSpin® Plasma XS	82



### Genomic DNA from blood and biological fluids

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	5 – 200 µL whole blood	NucleoSpin® Blood	83
		NucleoSpin® Blood QuickPure	84
Midi spin columns	200 µL – 2 mL whole blood	NucleoSpin® Blood L	86
Maxi spin columns	2 – 10 mL whole blood	NucleoSpin® Blood XL	86
Gravity-flow columns (anion-exchange chromatography)	1 – 20 mL whole blood	NucleoBond® CB	87
<b>Single prep CE-IVD marked (silica-membrane technology)</b>			
Mini spin columns	200 µL whole blood	NucleoSpin® Dx Blood	<b>NEW!</b> 85
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	200 µL whole blood	NucleoSpin® 8/96 Blood	88
		NucleoSpin® 8/96 Blood Core Kit	90
		NucleoSpin® 8/96 Blood QuickPure	90
96-well systems (magnetic-bead technology)	200 µL whole blood	NucleoMag® Blood 200 µL	91
	3 mL whole blood	NucleoMag® Blood 3 mL	<b>NEW!</b>



### Genomic DNA from tissue and cells

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	25 mg tissue, <10 <sup>7</sup> cells	NucleoSpin® Tissue	92
Mini spin columns – XS design	0.025 – 10 mg tissue, 10 – 10 <sup>4</sup> cells	NucleoSpin® Tissue XS	93
Gravity-flow columns (anion-exchange chromatography)	20 – 400 mg tissue	NucleoBond® AXG	94
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	20 mg tissue, <10 <sup>6</sup> cells	NucleoSpin® 8/96 Tissue	95
		NucleoSpin® 96 Tissue Core Kit	95
96-well systems (magnetic-bead technology)	<20 mg tissue, <10 <sup>7</sup> cells	NucleoMag® 96 Tissue	97



## Genomic DNA from FFPE samples

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns – XS design	≤7 sections (10 μm) of 250 mm <sup>2</sup> total area (<15 mg paraffin)	NucleoSpin® FFPE DNA	<b>NEW!</b> 98



## Genomic DNA from forensic samples

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Funnel columns	Forensic samples, buccal swabs	NucleoSpin® DNA Trace	99
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	Forensic samples, buccal swabs	NucleoSpin® 8/96 Trace	100
96-well systems (magnetic-bead technology)	Forensic samples, buccal swabs	NucleoMag® 96 Trace	102



## Genomic DNA from plant and fungi

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	< 100 mg plant tissue	NucleoSpin® Plant II	103
Midi spin columns	< 400 mg plant tissue	NucleoSpin® Plant II Midi	104
Maxi spin columns	< 1 500 mg plant tissue	NucleoSpin® Plant II Maxi	104
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	< 100 mg plant tissue	NucleoSpin® 8/96 Plant II NucleoSpin® 8/96 Plant II Core Kit	105
96-well systems (magnetic-bead technology)	5 – 20 mg plant tissue	NucleoMag® 96 Plant	107



## Genomic DNA from soil

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	< 500 μg soil, sludge, or sediment	NucleoSpin® Soil	<b>NEW!</b> 108

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## Genomic DNA (cont.)



### Genomic DNA from food and feed

Format	Sample	Product	Page
<b>Single prep</b>			
Mini spin columns (silica-membrane technology)	<200 mg food	NucleoSpin® Food	109
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	<200 mg food	NucleoSpin® 8/96 Food	110



## Viral RNA and DNA

### Viral RNA and DNA from serum and plasma

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	≤ 150 µL serum	NucleoSpin® RNA Virus	116
Funnel columns	≤ 1 mL serum	NucleoSpin® RNA Virus F	117
<b>Manual and automated high throughput (HTP)</b>			
8-well strips, 96-well plates (silica-membrane technology)	≤ 150 µL serum	NucleoSpin® 8/96 Virus NucleoSpin® 8/96 Virus Core Kit	118
96-well systems (magnetic-bead technology)	≤ 200 µL serum	NucleoMag® 96 Virus <b>NEW!</b>	120

### Viral DNA from blood and biological fluids

Format	Sample	Product	Page
<b>Single prep (silica-membrane technology)</b>			
Mini spin columns	≤ 200 µL serum	NucleoSpin® Blood	121

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## Protein Purification

### Purification of His-tag proteins

Format	Binding capacity	Product	Page
<b>Bulk material</b>			
Resin	10 mg/g	Protino® Ni-TED Resin	126
	20 mg/g	Protino® Ni-IDA Resin	128
	≤50 mg/mL	Protino® Ni-NTA Agarose <b>NEW!</b>	130
<b>Single prep</b>			
Gravity-flow columns	0.4/2.5/5 mg	Protino® Ni-TED Packed Columns	126
	0.8/5/10 mg	Protino® Ni-IDA Packed Columns	128
FPLC™ columns	≤50/250 mg	Protino® Ni-NTA Columns <b>NEW!</b>	130
<b>Manual high throughput (HTP)</b>			
96-well gravity-flow plates	1 mg	Protino® 96 Ni-IDA	128

### Purification of GST-tag proteins

Format	Binding capacity	Product	Page
<b>Bulk material</b>			
Resin	>8 mg/mL	Protino® Glutathione Agarose 4B	132
<b>Single prep</b>			
FPLC™ columns	10/50 mg	Protino® GST/4B Columns <b>NEW!</b>	132