

Total RNA from Cells and Tissue

single prep	mini spin columns
manual HTP	mini spin columns – XS design
automated HTP	midi spin columns
	gravity flow columns

NucleoSpin® RNA II

rDNase and NucleoSpin® Filters included

Features

Mini spin kit for the isolation of RNA of highest integrity

- Efficient removal of contaminating DNA – rDNase included for on-column DNA digestion
- Efficient sample homogenization and reduction of viscosity – NucleoSpin® Filters (shredders) included
- Up to 70 µg ready-to-use RNA
- Parallel purification of genomic DNA possible by using the NucleoSpin® RNA/DNA Buffer Set (page 68)



Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<5 x 10 ⁶ cultured cells, <10 ⁹ bacterial cells, <10 ⁸ yeast cells, <30 mg tissue
Fragment size	>200 b
Typical yield	14 µg from 10 ⁶ HeLa cells, 70 µg from 10 ⁹ bacterial cells
A ₂₆₀ /A ₂₈₀	1.9 – 2.1
Typical RIN (RNA integrity number)	>9
Elution volume	40 – 120 µL
Preparation time	30 min / 6 preps
Binding capacity	200 µg
Procedure chart see page 54	

Applications*

- Total RNA isolation from cultured cells, tissue (standard protocol)
- Support protocol for total RNA from < 10⁹ bacterial cells (Gram-negative, Gram-positive) or < 10⁸ yeast cells
- Support protocol for total RNA from ≤ 100 µL biological fluids
- Support protocol for RNA clean-up from reaction mixtures
- Support protocol for total RNA from samples stored in RNA_{later}®
- Typical downstream applications: real-time RT-PCR, Northern blotting, primer extension, array technology, RNase protection assays

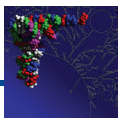
* Kits to be used for research purposes only (see page 160)

For detailed product information and application data see www.mn-net.com/RNA

Ordering information

Product	Preps	Specification	REF
NucleoSpin® RNA II	10	NucleoSpin® RNA II Columns with Collection Tubes, Collection Tubes (2 mL), Collection Tubes (1.5 mL), NucleoSpin® Filters, buffers, RNase-free rDNase	740955.10
	50	as above	740955.50
	250	as above	740955.250

For separate kit components see “Accessories” page 137



Total RNA from Cells and Tissue

single prep	mini spin columns
manual HTP	mini spin columns – XS design
automated HTP	midi spin columns
	gravity flow columns

NucleoSpin® RNA XS

5 µL elution volume → highly concentrated RNA

Features

Purification of highly concentrated RNA from smallest samples

- Isolation of RNA from small sample quantities like biopsy material or single cells
- Excellent RNA recovery and integrity
- Concentrated RNA for sensitive downstream applications by elution in as little as 5 µL
- rDNase included for on-column DNA removal
- Efficient homogenization and reduction of viscosity – NucleoSpin® Filters (shredders) included
- High quality RNA, ready to use for RT-PCR and other applications



Product at a glance

Technology	Silica-membrane technology	
Format	Mini spin columns – XS design	
Sample material	Small amounts of tissue <5 mg, <100 000 cultured cells	
Fragment size	>200 b	
Typical yield	10 ² HeLa cells: 0.1 – 1.5 ng	10 ³ HeLa cells: 10 – 15 ng
	10 ⁴ HeLa cells: 100 – 150 ng	10 ⁵ HeLa cells: 1 000 – 1 500 ng
A ₂₆₀ /A ₂₈₀	1.9 – 2.1	
Typical RIN (RNA integrity number)	>9 (depending on sample quality)	
Elution volume	5 – 30 µL	
Preparation time	40 min / 12 preps	
Binding capacity	110 µg	
Procedure chart	see page 54	

Applications*

- Total RNA isolation from cultured cells
- Total RNA isolation from tissue
- Total RNA isolation from cryosections
- Total RNA isolation from laser captured cells
- Total RNA isolation from small amounts of plant material
- Total RNA isolation from samples stored in RNA/late[®]
- Typical downstream applications: real-time RT-PCR, Northern blotting, primer extension, array technology, RNase protection assays

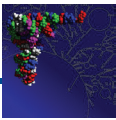
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For detailed product information and application data see www.mn-net.com/RNA

Ordering information

Product	Preps	Specification	REF
NucleoSpin® RNA XS	10	NucleoSpin® RNA XS Columns with Collection Tubes, Collection Tubes (2 mL), Collection Tubes (1.5 mL), NucleoSpin® Filters, buffers, RNase-free rDNase, Carrier RNA, Reducing Agent TCEP	740902.10
	50	as above	740902.50
	250	as above	740902.250

For separate kit components see “Accessories” page 137



Total RNA from Cells and Tissue

single prep	mini spin columns
manual HTP	mini spin columns – XS design
automated HTP	midi spin columns
	gravity flow columns

NucleoSpin® RNA L

rDNase and NucleoSpin® Filters included

Features

Midi spin kit for the isolation of RNA of highest integrity

- Efficient removal of genomic DNA – rDNase included for on-column digestion
- Efficient sample homogenization and reduction of viscosity – NucleoSpin® Filters L (shredders) included
- Up to 600 µg ready-to-use RNA



Product at a glance

Technology	Silica-membrane technology
Format	Midi spin columns
Sample material	<5 x 10 ⁷ cultured cells, <10 ¹⁰ bacterial cells, <3 x 10 ⁸ yeast cells, <200 mg tissue
Fragment size	>200 b
Typical yield	180 µg from 10 ⁷ HeLa cells, 620 µg from 4 x 10 ⁷ HeLa cells
A ₂₆₀ /A ₂₈₀	1.9 – 2.1
Typical RIN (RNA integrity number)	>9
Elution volume	500 µL
Preparation time	80 min / 4 preps
Binding capacity	700 µg
Procedure chart	see page 54

Applications*

- Total RNA isolation from cultured cells, tissue (standard protocol)
- Support protocol for total RNA from <10¹⁰ bacterial cells (Gram-negative, Gram-positive) or <3 x 10⁸ yeast cells
- Support protocol for RNA clean-up from reaction mixtures
- Support protocol for total RNA from samples stored in RNA/ater®
- Typical downstream applications: real-time RT-PCR, Northern blotting, primer extension, array technology, RNase protection assays

* Kits to be used for research purposes only (see page 160)

For detailed product information and application data see www.mn-net.com/RNA

Ordering information

Product	Preps	Specification	REF
NucleoSpin® RNA L	20	NucleoSpin® RNA L Columns with Collection Tubes, Collection Tubes (15 mL), NucleoSpin® Filters L, buffers, RNase-free rDNase	740962.20

For separate kit components see "Accessories" page 137

**single prep**

- manual HTP
- automated HTP

- mini spin columns
- mini spin columns – XS design
- midi spin columns
- gravity flow columns**



NucleoBond® RNA/DNA

Features

Anion-exchange chromatography – extra high purity for up to 400 µg total RNA

- Ultra-pure RNA from different samples
- Separate isolation of different RNA species (tRNA, rRNA, mRNA) possible
- Separate elution of genomic DNA possible

Product at a glance

	NucleoBond® RNA/DNA 80	NucleoBond® RNA/DNA 400
Technology	Anion-exchange chromatography	
Format	Midi gravity-flow columns	Maxi gravity-flow columns
Sample material	5 x 10 ⁶ cultured eukaryotic cells 20 mg tissue 5 x 10 ⁷ bacteria/yeast cells	2 x 10 ⁷ eukaryotic cells 100 mg tissue 2 x 10 ⁹ bacteria/yeast cells
Fragment size	50 b – 300 kb	50 b – 300 kb
Typical RNA yield	70 µg from 5 x 10 ⁶ cultured cells 30 µg from 20 mg tissue 50 µg from 5 x 10 ⁷ bacteria	300 µg from 2 x 10 ⁷ cultured cells 150 µg from 100 mg tissue 200 µg from 2 x 10 ⁹ bacteria
A ₂₆₀ /A ₂₈₀	1.80 – 1.95	1.80 – 1.95
Preparation time	1.5 – 2.5 h	1.5 – 2.5 h
Binding capacity	80 µg	400 µg



Applications*

- Total RNA from cultured cells, tissue, bacteria

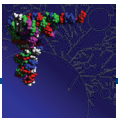
* Kits to be used for research purposes only (see page 160)

For detailed product information and application data see www.mn-net.com/RNA

Ordering information

Product	Preps	Specification	REF
NucleoBond® RNA/DNA 80	25	NucleoBond® AXR 80 Columns, buffers	740650
NucleoBond® RNA/DNA 400	10	NucleoBond® AXR 400 Columns, buffers	740651

For separate kit components see “Accessories” page 137



Total RNA from Cells and Tissue

single prep	
manual HTP	
automated HTP	8-well strips
	96-well plates
	96-well systems

NucleoSpin® 8/96 RNA · NucleoSpin® 8/96 RNA Core Kit

Features

Isolation of total RNA in flexible 8-well strip format and for high throughput in approved 96-well format

- Time-saving parallel isolation of total RNA
- rDNase included for efficient removal of genomic DNA
- Processing under vacuum or by centrifugation
- Suitable for manual and automated processing
- Innovative MN Wash Plate minimizes risk of cross-contamination
- RNA ready to use for any kind of enzymatic reaction
- NucleoSpin® 8/96 RNA Core Kits:
Kits with basic content focussed on automation platforms.
Additional accessories can be combined as needed.



Product at a glance

	NucleoSpin® 8 RNA NucleoSpin® 8 RNA Core Kit	NucleoSpin® 96 RNA NucleoSpin® 96 RNA Core Kit
Technology	Silica-membrane technology	
Format	8-well strips	96-well plates
Processing	Manual or automated, vacuum or centrifugation	
Sample material	10^7 cultured cells (centrifugation), 30 mg tissue (centrifugation), saliva (collected with Oragene®)	
Fragment size	>200 b	>200 b
Typical yield	100 µg	100 µg
A_{260}/A_{280}	1.90 – 2.10	1.90 – 2.10
Typical RIN (RNA integrity number)	>9 (cells) ≥7 (tissue)	>9 (cells) ≥7 (tissue)
RNA ratio	28S/18S ~ 2.1	28S/18S ~ 2.1
Typical concentration	50 – 200 ng/µL	50 – 200 ng/µL
Elution volume	50 – 130 µL	50 – 130 µL
Preparation time	45 min / 6 strips	70 min / plate
Binding capacity	100 µg	100 µg
Procedure chart see page 54		

Applications*

- Manual or automated isolation of total RNA from cultured cells and tissue
- Total RNA from saliva samples collected with Oragene®• RNA (Genotek)

* Kits to be used for research purposes only (see page 160)

① For detailed product information and application data see www.mn-net.com/RNA



Total RNA from Cells and Tissue

single prep				
manual HTP				
automated HTP	<table border="1"> <tr> <td>8-well strips</td> </tr> <tr> <td>96-well plates</td> </tr> <tr> <td>96-well systems</td> </tr> </table>	8-well strips	96-well plates	96-well systems
8-well strips				
96-well plates				
96-well systems				

Ordering information

Product	Preps	Specification	REF
NucleoSpin® 8 RNA	12 x 8	NucleoSpin® RNA Binding Strips, MN Wash Plates, MN Square-well Block, Racks of Tube Strips, Elution Plate U-bottom, Self-adhering Foil, buffers, RNase-free rDNase	740698
	60 x 8	as above	740698.5
NucleoSpin® 8 RNA Core Kit	48 x 8	NucleoSpin® RNA Binding Strips, buffers, RNase-free rDNase	740465.4
NucleoSpin® 96 RNA	2 x 96	NucleoSpin® RNA Binding Plates, MN Wash Plates, MN Square-well Blocks, Round-well Block Low, Elution Plates U-bottom, Self-adhering Foil, buffers, RNase-free rDNase	740709.2
	4 x 96	as above	740709.4
	24 x 96	as above	740709.24
NucleoSpin® 96 RNA Core Kit	4 x 96	NucleoSpin® RNA Binding Plates, buffers, RNase-free rDNase	740466.4
Product accessories	Pack of	Specification	REF
NucleoVac 96 Vacuum Manifold	1		740681
NucleoVac Vacuum Regulator	1	for controlling of vacuum	740641
Starter Set A	1	for use of NucleoSpin® 8-well strips on the NucleoVac 96 Vacuum Manifold	740682
Starter Set C	1	for use of NucleoSpin® 8-well strips under centrifugation	740684
NucleoSpin® RNA Filter Plate	4	96-well plates for filtration of cell and tissue homogenates, for use under vacuum or centrifugation	740711
NucleoSpin® RNA Filter Strips	12	8-well strips for filtration of cell and tissue homogenates, for use under vacuum or centrifugation	740699.12F
	60	as above	740699.60F

For separate kit components see "Accessories" page 137



single prep	
manual HTP	
automated HTP	8-well strips
	96-well plates
	96-well systems



NucleoMag® 96 RNA

Features

Magnetic-bead based isolation of RNA from tissue and cell samples

- One-tube procedure minimizes risk of cross-contamination
- Small elution volumes $\geq 50 \mu\text{L}$
- Suitable for manual and automated processing
- Recombinant DNase included
- Reducing agent TCEP included (no β -mercaptoethanol necessary)

Product at a glance

Technology	Magnetic-bead technology
Format	Highly reactive superparamagnetic beads
Processing	Manual or automated
Sample material	$< 20 \text{ mg tissue, } < 2 \times 10^6 \text{ cells}$
Typical yield	$< 30 \mu\text{g}$
Elution volume	$\geq 50 \mu\text{L}$
Preparation time	$< 120 \text{ min / 96 preps}$
Binding capacity	Approx. $0.3 \mu\text{g} / \mu\text{L beads}$
Procedure chart	see page 55

Applications*

- Rapid manual and automated small-scale preparation of highly pure total RNA from tissue or cell samples

* Kits to be used for research purposes only (see page 160)

For detailed product information and application data see www.mn-net.com/RNA

Ordering information

Product	Preps	Specification	REF
NucleoMag® 96 RNA	1 x 96	NucleoMag® B-Beads, buffers, TCEP, RNase-free rDNase	744350.1
	4 x 96	as above	744350.4
Material to be supplied by the user			
Lysis tubes, e.g., Rack of Tube Strips	4 sets	incl. Cap Strips	740477
	24 sets		740477.24
Separation plate, e.g., Square-well Block	4		740481
	24		740481.24
Elution plate, e.g., Elution Plate U-bottom	24		740486.24
	1 set	Square-well Blocks, Deep-well Tip Combs and Elution Plates for 4 x 96 preparations	744951
For use with KingFisher® 96 platform			
KingFisher® 96 Accessory Kit B	1		
Product accessories			
	Pack of	Specification	REF
NucleoMag® SEP	1	magnetic separator	744900

For separate kit components see "Accessories" page 137