

RNA Purification Products from MACHEREY-NAGEL



Total RNA Mini spin kit for FFPE samples
Improved RNA quality – enhanced RT-PCR

NucleoSpin[®] FFPE RNA



Very easy paraffin removal

Convenient handling

Fast procedure

... get RNA easily out of your FFPE samples

NucleoSpin[®] FFPE RNA

No restriction for total RNA isolation – even from FFPE samples

► Enhance your RT-PCR performance

Improved template quality – get less fragmented, well decrosslinked, DNA-free RNA.
Decrosslinking buffer and rDNase provided with the kit.
Improved sensitivity – highly concentrated RNA by elution in only 5 – 30 µl.
Use of the XS (mini elution volume) column design.

► Make your paraffin removal convenient

Simply melt paraffin with the Paraffin Dissolver (patent pending) provided with the kit.
Without toxic organic solvent – without time-consuming mixing steps –
without long incubation time.

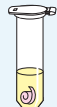
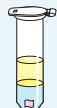
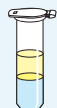
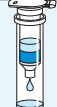
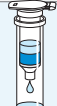
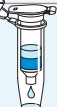
► Save your time

Minimum number of working steps.
Fast procedure preserves RNA quality.

Suitable for a large variety of starting materials, like clinical samples

E.g., colon carcinoma (hematoxylin stained/unstained), colon mucosa, adenocarcinoma of colon transversum, liver (rat/human), liver carcinoma (hematoxylin stained), lymph node, spleen (rat/human); pancreas (rat/human; diabetic/non-diabetic), placenta

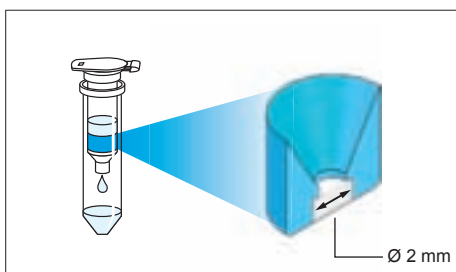
Procedure

- | | | |
|---|---|---|
| <p>1. Paraffin Removal
Convenient paraffin removal by melting the sample in Paraffin Dissolver</p> |  | <p>Add Paraffin Dissolver to the sample
70°C; 3 min</p> |
| <p>2. Sample Lysis
Enzymatic digestion and lysis of the sample in lower aqueous phase</p> |  | <p>Add lysis buffer / Proteinase K
Immediate formation of two phases
60°C; 15 min – 3 h</p> |
| <p>3. Decrosslinking of RNA
Efficient removal of formaldehyde cross-links</p> |  | <p>Add Decrosslinking Buffer
90°C; 15 min</p> |
| <p>4. Binding of RNA
Load lysate in one step</p> |  | <p>Transfer lysate (lower phase) onto NucleoSpin[®] FFPE Column
Wash</p> |
| <p>5. On-column DNA digest
Digestion at RT with premium quality rDNase</p> |  | <p>rDNase Digestion of residual DNA
RT; 15 min
Wash</p> |
| <p>6. Total RNA elution
Elution of concentrated RNA, ready-to-use for downstream applications</p> |  | <p>Elute RNA in only 5 – 30 µl H₂O</p> |

Product at-a-glance

Technology	Silica-membrane technology
Format	Mini spin columns – XS design*
Sample material	Up to 7 sections of 250 mm ² , or up to 15 mg
RNA yield	Depending on amount and quality of the sample
Typical Ratio A ₂₆₀ /A ₂₈₀	1.9 – 2.1
Typical RIN	2 – 6 [†]
Typical RNA size	100 – 5,000 nt [†]
Elution volume	5 – 30 µl
Preparation time	70 min

[†] strongly depending on sample quality

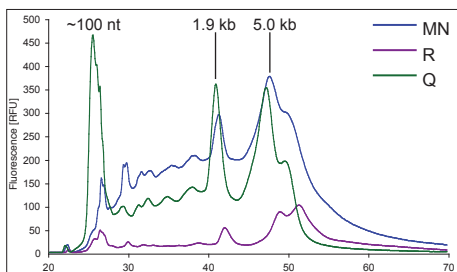


*XS-column design – increased sensitivity

NucleoSpin® FFPE RNA columns are designed for increased sensitivity. A silica membrane of small diameter is embedded in a funnel-shaped ring (see column cross-section), allowing an elution volume of only 5 – 30 µl. Thus, also limited amounts of RNA can be eluted in higher concentrations – for higher sensitivity in downstream applications.

Application data

Faster RNA isolation and superior RT-PCR performance from FFPE tissue



Improved structural integrity of RNA – even from FFPE tissue

RNA was isolated from 7.5 µm sections of rat liver tissue with NucleoSpin® FFPE RNA (MN) and with kits from competitors Q and R.

NucleoSpin® FFPE RNA shows a higher percentage of large RNA and less fragmentation.

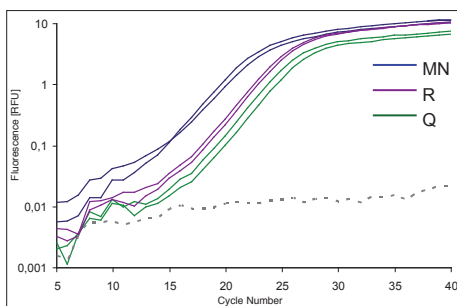
RNA analyzed on Agilent 2100 Bioanalyzer / RNA 6000 Nano Kit

	MN	Q	R
Working steps:	36	43	54
Centrifugation steps:	9	9	15
Preparation time:	70 min	75 min	251
Ct-values**:	21.5	26.0	24.0

Less working steps – faster procedure – best performance

Comparison of the NucleoSpin® FFPE RNA procedure (MN) with competitor methods (Q, R).

NucleoSpin® FFPE RNA requires less working steps and less time. It results in high quality RNA with best Ct-values**.



Superior RT-PCR performance of RNA from FFPE material

RNA was isolated from 7.5 µm sections of rat liver tissue with NucleoSpin® FFPE RNA (MN) and with kits from competitors Q and R.

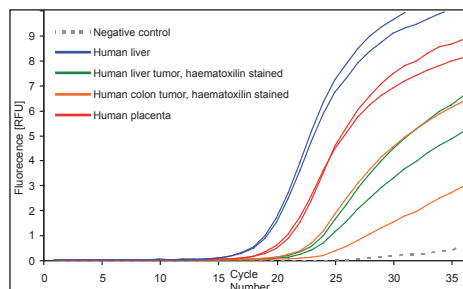
Total RNA, isolated with NucleoSpin® FFPE RNA is well decrosslinked, virtually DNA-free, and highly concentrated – resulting in superior RT-PCR performance.

Ct-values (Ø) are: MN 21.5 R: 24; Q: 26

**Analysis of RNA with LightCycler® qRT-PCR. 2 µl eluate were applied, respectively. Target length: 243 bases

Application data (cont.)

Sensitive RT-PCR from a broad range and limited amount of tissue samples



Sensitive RT-PCR – even from trace amounts of clinical samples

Archived human samples often vary in source and treatment of tissue, and are of limited amount. RNA was isolated from different clinical samples with NucleoSpin® FFPE RNA. Human FFPE sample materials: liver, liver tumor hematoxylin stained, colon tumor hematoxylin stained, placenta. Sample size: 10 µm sections, 2 x 2 cm (from glass slides).

NucleoSpin® FFPE RNA allows sensitive RT-PCR from limited amounts of samples.

Analysis of RNA with LightCycler® RT-PCR, β-actin specific primer, 73 nt amplification target.

**Superior RT-PCR performance – even from FFPE material.
Suitable for a large variety of sample materials.**

Ordering information

Product	Preps	Cat. No.
Mini spin columns – XS design NucleoSpin® FFPE RNA Mini spin kit for the isolation of total RNA from formalin fixed, paraffin embedded samples. Including Paraffin Dissolver, decrosslinking buffer, and rDNase.	10/50/250	740969.10/.50/.250
Buffers and reagents Paraffin Dissolver Solvent for easy paraffin removal.		740968.25

Related product

Mini spin columns – XS design NucleoSpin® FFPE RNA/DNA* Mini spin kit for parallel isolation of total RNA and genomic DNA from unsplit formalin fixed, paraffin embedded samples. Including Paraffin Dissolver, decrosslinking buffer, and rDNase.	10/50/250	740978.10/.50/.250
Mini spin columns – XS design NucleoSpin® RNA XS Mini spin kit for the isolation of highly concentrated total RNA from extremely small amount of starting material. Elution down to 5 µl.	10/50/250	740902.10/.50/.250
Mini spin columns NucleoSpin® RNA II Mini spin kit for the isolation of total RNA. Including rDNase and shredders	10/50/250	740955.10/.50/.250
Buffer set NucleoSpin® RNA/DNA Buffer set* Buffer set for the simultaneous isolation of RNA and DNA from unsplit samples. To be used in combination with NucleoSpin® RNA II, NucleoSpin® RNA Plant, NucleoSpin® RNA/Protein kits.	100	740944

Visit www.mn-net.com/bioanalysis for detailed information

Your local distributor:

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