

NucleoSpin® FFPE RNA

NucleoSpin® FFPE RNA from Macherey Nagel (MN) is designed for extracting RNA from formalin-fixed or paraffin-embedded samples. This innovated product significantly reduces the problems in traditional extraction methods and further provides benefits for your downstream applications.

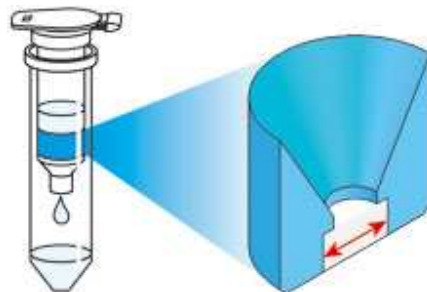
Paraffin Dissolver Buffer and Decrosslinking Buffer

Traditional extraction methods using carcinogenic xylol requires high temperature and long time that will degrade the RNA and then lead to low yield and fragmentation. Also, crosslinking of RNA usually happens in formalin-fixed samples. Separation of cross-linked RNA is required for downstream applications.

Patenting-pending Paraffin Dissolver Buffer from MN is well designed to remove the paraffin with a very short period of time (3 minutes). This time saving process greatly reduces fragmentation of RNA. Also, Decrosslinking Buffer is used to decrosslink the RNA.

Enhanced sensitivity by XS-column design

Unlike the traditional spin columns from other brands, the silica membrane is embedded in funnel-shaped ring. No residue buffer will be left on the ring and very small amount of elution buffer (down to 5 uL) is allowed for high concentration of eluted RNA which greatly enhances the sensitivity in, for example, qRT-PCR.



Less working step, fast procedure

The NucleoSpin FFPE RNA procedure (MN) is compared with competitor methods (Q, R). NucleoSpinFFPE RNA requires less working steps and less time. It results in high quality RNA with best Ct-values

Brand name	MN	Q	R
Working Steps	36	43	54
Centrifugation steps	9	9	15
Time of prep [min]	70	75	251
Ct-Values	21.5	26.0	24.0

Complete package

All the necessary components including the rDNase for on-column DNA digestion are consisted in the kit. All you need is simply following the provided protocol with your own samples. No extra buying is required.

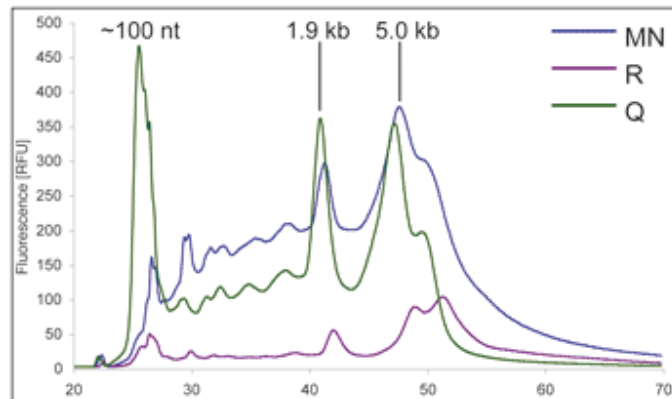
Application data

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



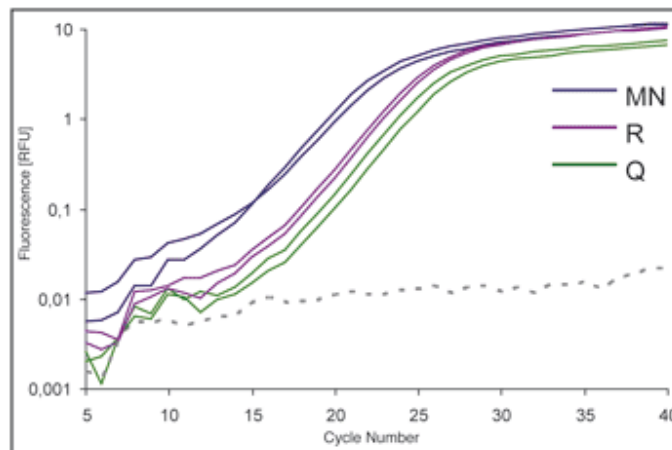
Superior RT-PCR performance of RNA from FFPE material

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



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

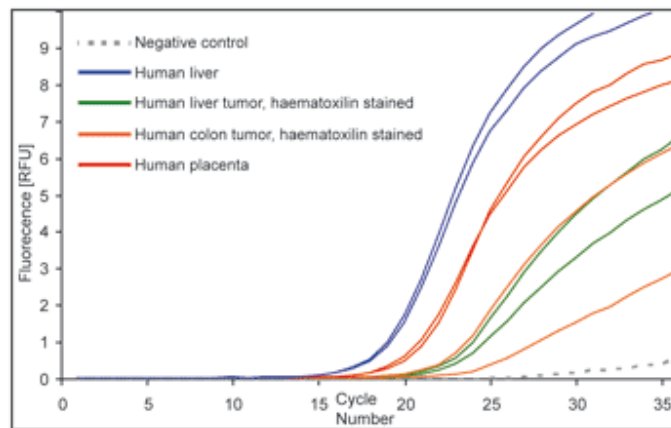
Archived human samples often vary in source and treatment of tissue, and are of limited amount. RNA was isolated from different clinical samples with NucleoSpin FFPE RNA.

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.



More to know

[1\) Specifications, principle and procedures and application data](#)