

# NucleoSpin® RNA XS

Get highly concentrated RNA from smallest samples!

## NucleoSpin® RNA XS

Rapid purification of total RNA  
from **Xtra Small** samples

NucleoSpin® RNA XS is designed for total RNA isolation out of **Xtra Small** samples like microdissected tissue or small amounts of cells.

Based on the reliable silica membrane technology NucleoSpin® RNA XS is overcoming the limitations of conventional kits by an innovative new column design: A funnel-shaped thrust ring is holding a silica membrane of small diameter. This set-up allows accurate dispensing of small volumes onto the membrane and results in a reduced elution volume of only 5 – 20 µl. The high RNA yield achieved with NucleoSpin® RNA XS together with the small elution volume lead to highly concentrated RNA – free of impurities and suitable for sensitive downstream applications.

elution volume:  
**Xtra Small**  
- concentration:  
xtra high  
- downstream:  
**Xtra Sensitive**

✓ for smallest samples

✓ elution in only 5 – 20 µl

✓ DNase included

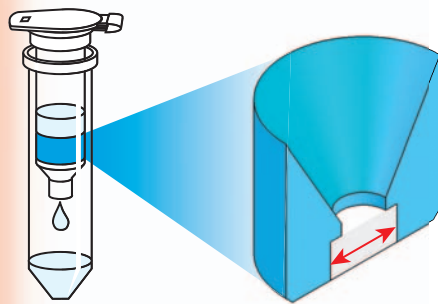
✓ high purity

...get RNA from a single cell  
or only 0.1 mg tissue

...highly concentrated RNA for  
sensitive downstream applications

...for optional timesaving  
on-column DNA removal

...ready-to-use for RT PCR



### New column design – increased sensitivity

The innovative new funnel-shaped thrust ring allows standard mini prep spin columns to hold a silica membrane of very small diameter.

The small surface of the NucleoSpin® RNA XS membrane allows efficient elution in only 5 – 20 µl resulting in highest RNA concentrations ready for all typical downstream applications.

➤ better results from small samples

### The ideal solution for the analysis of samples as small as:

tissue: 0.1 – 5 mg (e.g. laser microdissections, biopsy material, cryosections)

cells: 1 – 500,000 (e.g. cultured cells, stem cells)

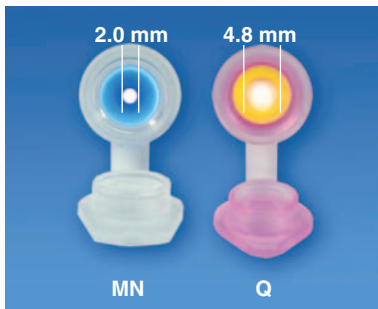
plant

material: 3 – 30 mg (e.g. stem, leaves, roots)

**MACHERY-NAGEL**

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





### Elution volume depends on membrane diameter

MACHEREY-NAGEL (MN):

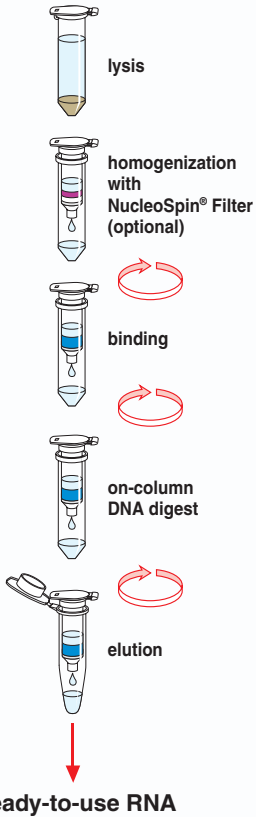
The **Xtra Small** diameter of the **NucleoSpin® RNA XS** membrane allows efficient elution in as little as 5 µl RNase-free water.

Competitor Q:

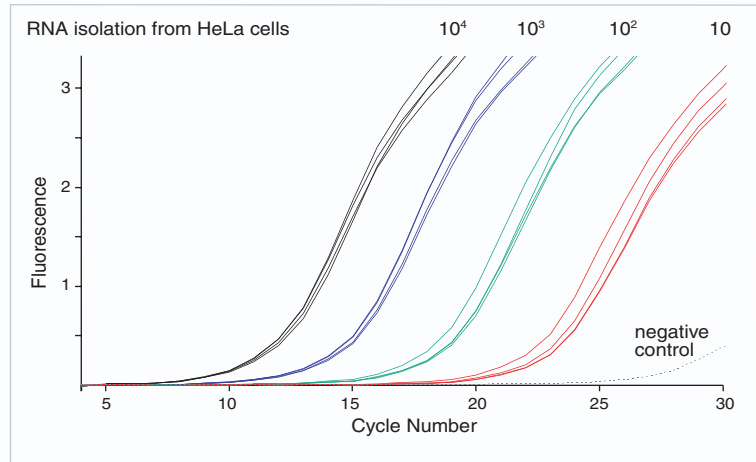
The kit designed for very small samples does not have optimized column features for the desired application. Therefore elution in higher volumes (10 – 14 µl) is necessary.

► **get the high RNA concentration you need ... with NucleoSpin® RNA XS**

### NucleoSpin® RNA XS Procedure



### Reliable sensitivity - constant high yields



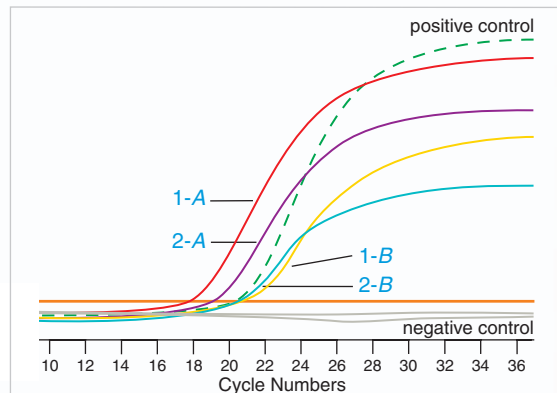
Total RNA was extracted from  $10^4$  (black),  $10^3$  (blue),  $10^2$  (green) and 10 (red) HeLa cells using **NucleoSpin® RNA XS**. Elution was performed in 10 µl, of which 2 µl were subjected to a one-tube, one-step qRT-PCR. **NucleoSpin® RNA XS** allows efficient isolation from sample amounts over several orders of magnitude, down to few cells.

**NucleoSpin RNA® XS combines reliable high sensitivity with reproducible high yields.**

### Wide variety of applications – reliable results

RNA was isolated from paranasal sinus carcinoma with **NucleoSpin® RNA XS**: Cryosections (1) and sections of tissue treated with RNA<sup>later</sup>® (2) served as sample material, sample size was 10 µm x 55 mm<sup>2</sup>. The RNA was reverse transcribed with two different commercial kits, one with random primers (A) and one with oligo-dT primers (B). Subsequent β-Actin qPCR was performed with a SYBR® Green qPCR Kit on an iCycler™ (Bio-Rad).

**NucleoSpin® RNA XS showed positive results on all systems with Ct values between 17.6 and 21.1.**



Data kindly provided by Dipl.-Biol. Monika Gramann, HNO Klinik, Kopf- und Halschirurgie, Universitätsklinikum Erlangen

### Ordering Information:

**NucleoSpin® RNA XS**  
(10/50/250 preps)

### Cat. No.

740 902.10 / .50 / .250

### Distributed by:

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