

# NucleoSpin® Plasma XS

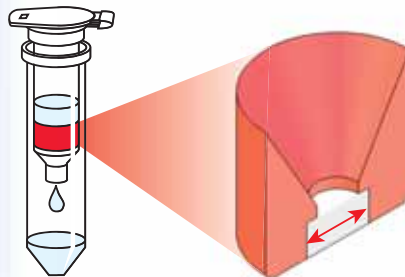
## Get highly concentrated DNA from plasma! NucleoSpin® Plasma XS Ideal solution for circulating DNA!

### Rapid purification of circulating DNA from plasma

Increased amounts of circulating DNA in plasma have been found in a variety of disorders including cancer, autoimmune diseases, infections, certain fetal diseases, trauma, stroke, and others. Circulating DNA is known to be highly fragmented and low in concentration which creates difficulties in its purification.

**NucleoSpin® Plasma XS** is designed for the isolation of fragmented DNA larger than 50 bp from human EDTA blood plasma. The kit is overcoming the limitations of conventional kits (large membrane diameter associated with large default elution volumes and a resulting DNA concentration which is too low to be directly used as PCR template).

**NucleoSpin® Plasma XS** allows elution in only 5 – 20 µl, resulting in highly concentrated DNA!



### Features

- ✓ silica membrane technology
- ✓ optimized column design
- ✓ elution in only 5 - 20 µl
- ✓ high DNA concentration
- ✓ high purity
- ✓ high recovery for fragments >50 bp
- ✓ for up to 240 µl plasma

### New column design – unique advantages

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

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

► *increased sensitivity, better results for circulating DNA*

*...known for high reliability*

*...reduced membrane area*

*...gives you highly concentrated DNA*

*...no need for subsequent speedvac concentration*

*...ready-to-use for real-time PCR*

*...ideally suited for fragmented circulating DNA*

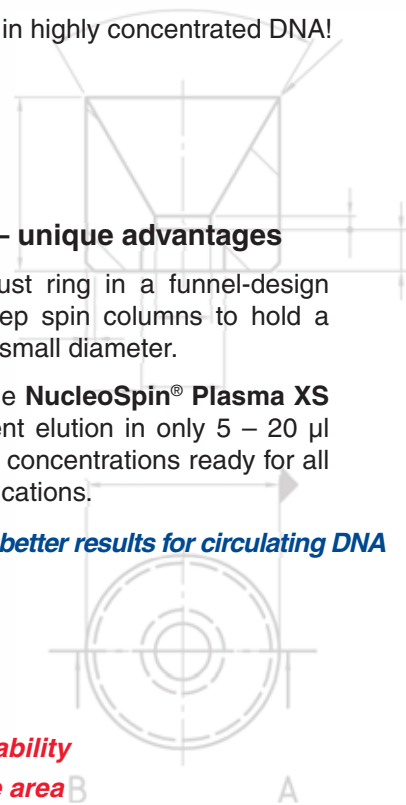
*... ideal solution for your routine analysis*

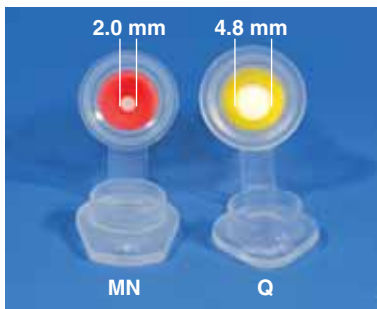
**MACHERY-NAGEL**

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



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





### Elution volume depends on membrane diameter!

MACHEREY-NAGEL (MN):

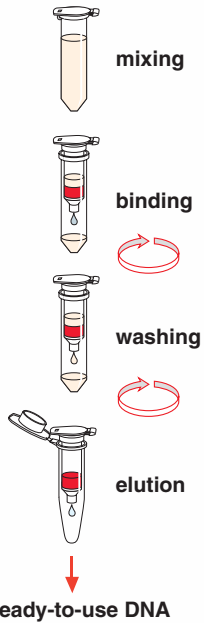
The **Xtra Small** diameter of the **NucleoSpin® Plasma XS** membrane allows efficient **elution in only 5 – 20 µl**.

Competitor Q (Q):

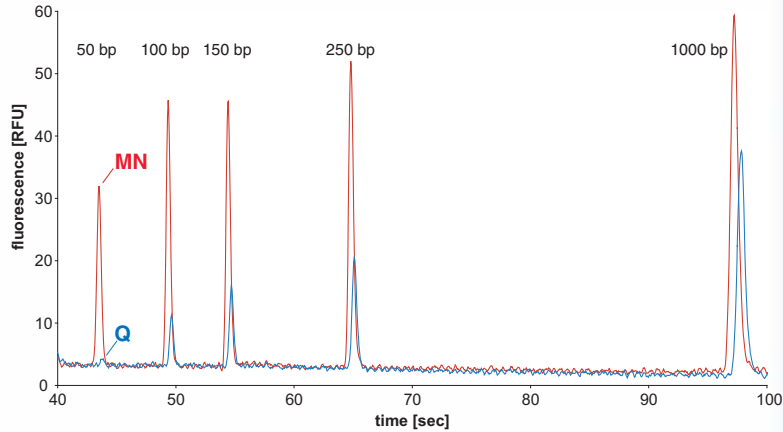
Even the kit especially designed for very small samples amounts does not have optimized column features for the desired application, thus **elution requires at least 20 – 30 µl**.

▶ **get the high DNA concentration you need ... with NucleoSpin® Plasma XS**

### NucleoSpin® Plasma XS procedure



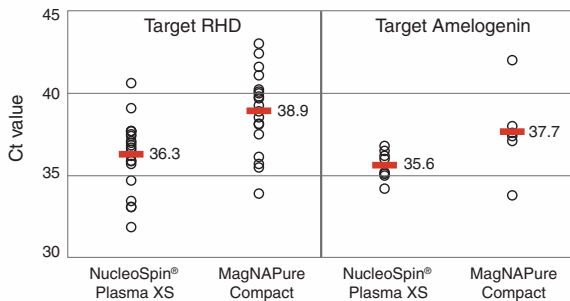
### Recovery of DNA spikes from plasma



DNA spikes of 50, 100, 150, 250, and 1000 bp were mixed with plasma samples. The DNA was subsequently purified with **NucleoSpin® Plasma XS** and a kit of competitor Q in parallel.

**Competitor Q (Q) completely failed to show recovery for fragments smaller than 100 bp and resulted in an overall weaker performance compared to NucleoSpin® Plasma XS (MN) which gave significantly higher recovery rates.**

### NucleoSpin® Plasma XS is ideally suited for the detection of fetal DNA in maternal plasma



Starting material: Human maternal plasma used for fetal DNA diagnostics

Duplex PCR amplification: RHD fragment (Rhesus-gene) and an Amelogenin fragment specific for the male Y-chromosome, amplicons 150 – 180 bp in size.

Comparison: Roche MagNA Pure Compact Nucleic Isolation Kit I - Large Volume, NucleoSpin® Plasma XS.

**Roche MagNA Pure Compact Nucleic Isolation Kit I - Large Volume**, input 1000 µl plasma, purification according to the user manual, 10% of the eluate used for PCR (i.e. DNA from approx. 100 µl plasma)

**NucleoSpin® Plasma XS**, input 240 µl plasma, purification according to the user manual, 40% of the eluate used for PCR (i.e. DNA from approx. 100 µl plasma)

**The significantly better performance of NucleoSpin® Plasma XS is demonstrated by an earlier PCR signal of 2.6 cycles (RHD gene) and 2.1 cycles (Amelogenin) respectively.**

### Customer testimonial

*We tested NucleoSpin® Plasma XS using human maternal plasma samples for subsequent fetal blood group genotyping (fetal RHD, RHE, and KEL typing).*

*NucleoSpin® Plasma XS gave a 2.5 – 3 cycles earlier signal compared to the competitor kit we used so far. I like the easy handling, the short purification procedure, and the good results!*

Data kindly provided by Dr. Doescher, DRK Blutspendedienst NSTOB, Oldenburg, Germany

### Ordering Information:

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

### Cat. No.

740 900.10 / .50 / .250

### Distributed by:

For more information regarding the use of MN products, please contact your local representative or visit MN directly: [www.mn-net.com](http://www.mn-net.com).

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