

# Genomic DNA Purification Products from MACHEREY-NAGEL



*Genomic DNA Mini Spin Kit for In-Vitro Diagnostics  
CE-marked for gDNA isolation from whole blood*

**NucleoSpin<sup>®</sup> Dx Blood**



**BIOKÉ**  
sharing knowledge

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**CE-marked in accordance with EU Directive 98/79/EC**

**For EDTA, citrate, and heparin blood samples**

**Very convenient handling**

**Highly reproducible gDNA isolation from whole blood...**

**... for most reliable results in PCR!**

## NucleoSpin® Dx Blood

gDNA from whole blood – for *in-vitro* diagnostic purposes

- ▶ **CE-marked in accordance with EU Directive 98/79/EC**  
Compliance with IVD directives in the EU
- ▶ **Fits into *in-vitro* diagnostic workflows**  
CE-marked gDNA extraction from whole blood  
Can be combined with any enzymatic amplification and detection of gDNA
- ▶ **Compatible with common blood collection tubes and anticoagulants**  
Suitable for EDTA, citrate, and heparin blood collecting systems  
For fresh and frozen blood samples
- ▶ **Highly reliable DNA isolation from whole blood**  
Reproducible results for reliable downstream applications
- ▶ **Convenient handling**  
Product storage: at room temperature  
Precise photometric measurement of DNA possible

### Procedure

NucleoSpin® Dx Blood is based on well-established NucleoSpin® silica-membrane technology and provides an easy way to isolate genomic DNA from 200 µl of whole blood.

The blood samples are lysed in presence of chaotropic salts and Proteinase K. Subsequently, genomic DNA is bound to the NucleoSpin® Dx Blood Column. The DNA on the membrane is washed and finally highly pure genomic DNA is eluted.

#### 1. Sample Lysis

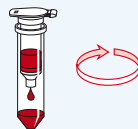
Efficient lysis of fresh or frozen blood (EDTA, citrate, or heparin treated)



Mix Proteinase K, blood sample and Lysis Buffer  
15 min incubation

#### 2. Binding of DNA

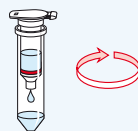
Lysate is loaded in one step



Transfer lysate onto NucleoSpin® Dx Blood Binding Column

#### 3. Washing

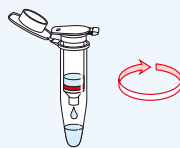
Removal of inhibitors and contaminants by two washing steps



Pipette 1st washing buffer (high salt concentration)  
Pipette 2nd washing buffer (low salt concentration)

#### 4. Elution of genomic DNA

Elution in azide free elution buffer, allowing direct photometric DNA quantification



Elute DNA in 50 – 200 µl Elution Buffer

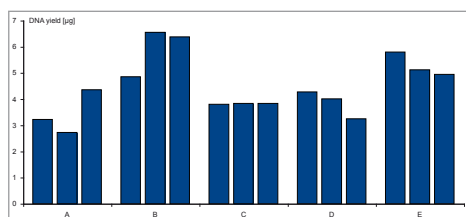
## Product at-a-glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	Whole blood, fresh or frozen EDTA, citrate, or heparin treated
Sample volume	200 µl
Typical DNA yield	3-5 µg (depending on individual blood sample)
Typical DNA quality	Ratio $A_{260}/A_{280}$ 1.7 – 1.9
Elution volume	50 – 200 µl
Typical DNA concentration	40 – 60 ng/µl
Processing	Centrifugation
Preparation Time	30 min



## Application data

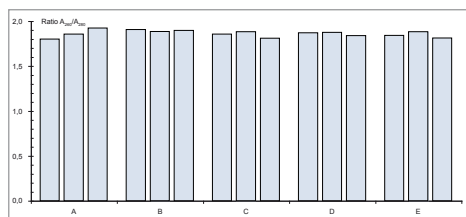
### CE-marked procedure – excellent DNA quality – reliable downstream applications



#### Excellent DNA recovery

DNA was isolated from triplicates of blood samples (200 µl, EDTA) from 5 individuals (A – E).

The DNA yield is 2.7 – 6.6 µg, depending on blood sample.

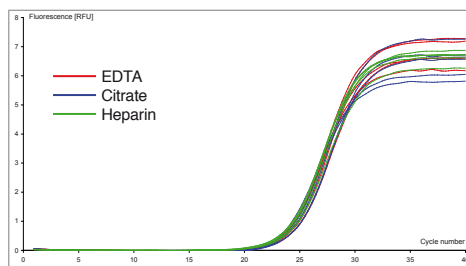


#### Consistent high purity

Ratio  $A_{260}/A_{280}$  was measured for 15 DNA samples (triplicates, from 5 individuals, A – E).

The ratio is consistently between 1.80 and 1.92 indicating excellent DNA quality.

Consistency in DNA quality for best performance in IVD workflows.



#### Reliable performance regardless the anticoagulant used

DNA was isolated from 15 individual blood samples, stabilized with different anticoagulants: EDTA, citrate, and heparin.

All samples are showing reliable good performance in q-PCR.

Lightcycler<sup>®</sup> (Roche) q-PCR,  $\beta$ -globin specific primer

### Compatible with common blood sampling devices, e.g.,

Blood collecting systems	Manufacturer
S-Monovette <sup>®</sup> Li-Heparin	Sarstedt
S-Monovette <sup>®</sup> EDTA	Sarstedt
S-Monovette <sup>®</sup> Citrat	Sarstedt
VACUETTE <sup>®</sup> EDTA	GREINER BIO-ONE
BD VACUTAINER <sup>®</sup> K2E	BD Diagnostics
K2 EDTA	APTACA

# NucleoSpin® Dx Blood

## Reliable DNA isolation for IVD workflows

NucleoSpin® Dx Blood is a generic system for the isolation and purification of genomic DNA from human whole blood samples for subsequent *in-vitro* diagnostic purposes. The kit can be used with fresh and frozen human whole blood treated with EDTA, citrate, and heparin, from common blood collection systems.

NucleoSpin® Dx Blood is designed to be used with any downstream application employing enzymatic amplification and detection of DNA (e.g., PCR) and thus fits perfectly into diagnostic workflows.



### Ordering information

Product	Preps	Cat. No.
<b>Mini spin columns</b> <b>NucleoSpin® Dx Blood*</b> CE-marked Mini spin kit for the isolation of genomic DNA from 200 µl human whole blood.	50/250	740899.50/.250
<b>Related products</b>		
<b>Mini spin columns – XS design</b> <b>NucleoSpin® Plasma XS</b> Mini spin kit for the rapid purification of circulating DNA from plasma or serum. High recovery, even of short DNA fragments (down to 50 bp). Concentrated DNA by elution in small volume (5 – 30 µl).	10/50/250	740900.10/.50/.250
<b>Midi spin columns</b> <b>NucleoSpin® Blood L</b> Midi spin kit for the isolation of DNA from up to 2 ml blood. Typical yield of 40 – 60 µg DNA, from fresh or frozen blood samples. Suitable for EDTA, citrate, or heparin treated samples.	20	740954.20
<b>Maxi spin columns</b> <b>NucleoSpin® Blood XL</b> Maxi spin kit for the isolation of DNA from up to 10 ml blood. Typical yield of 200 – 300 µg DNA, from fresh or frozen blood samples. Suitable for EDTA, citrate, or heparin treated samples.	10/50	740950.10/.50
<b>Silica membrane technology – high throughput solutions</b>		
<b>NucleoSpin® 8 Blood</b>	12 x 8/60 x 8	740664/.5
<b>NucleoSpin® 96 Blood</b>	1 x 96/4 x 96/24 x 96	740665.1/.4/.24
<b>NucleoSpin® 96 Blood Core kit</b> 8-well strips/96-well plates for high throughput isolation of DNA from blood and buffy coats. For automated or manual DNA preparation. Scripts for common robotic platforms available.	4 x 96	740456.4
<b>Magnetic bead technology – high throughput solutions</b>		
<b>NucleoMag® 96 Blood</b> For manual or automated isolation of DNA from whole blood. Scripts for common robotic platforms available.	1 x 96/4 x 96/24 x 96	744500.1/.4/.24

Visit [www.mn-net.com/bioanalysis](http://www.mn-net.com/bioanalysis) for detailed information

Your local distributor:

\*IVD-CE-marked kit: Not available in all countries, please inquire.

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