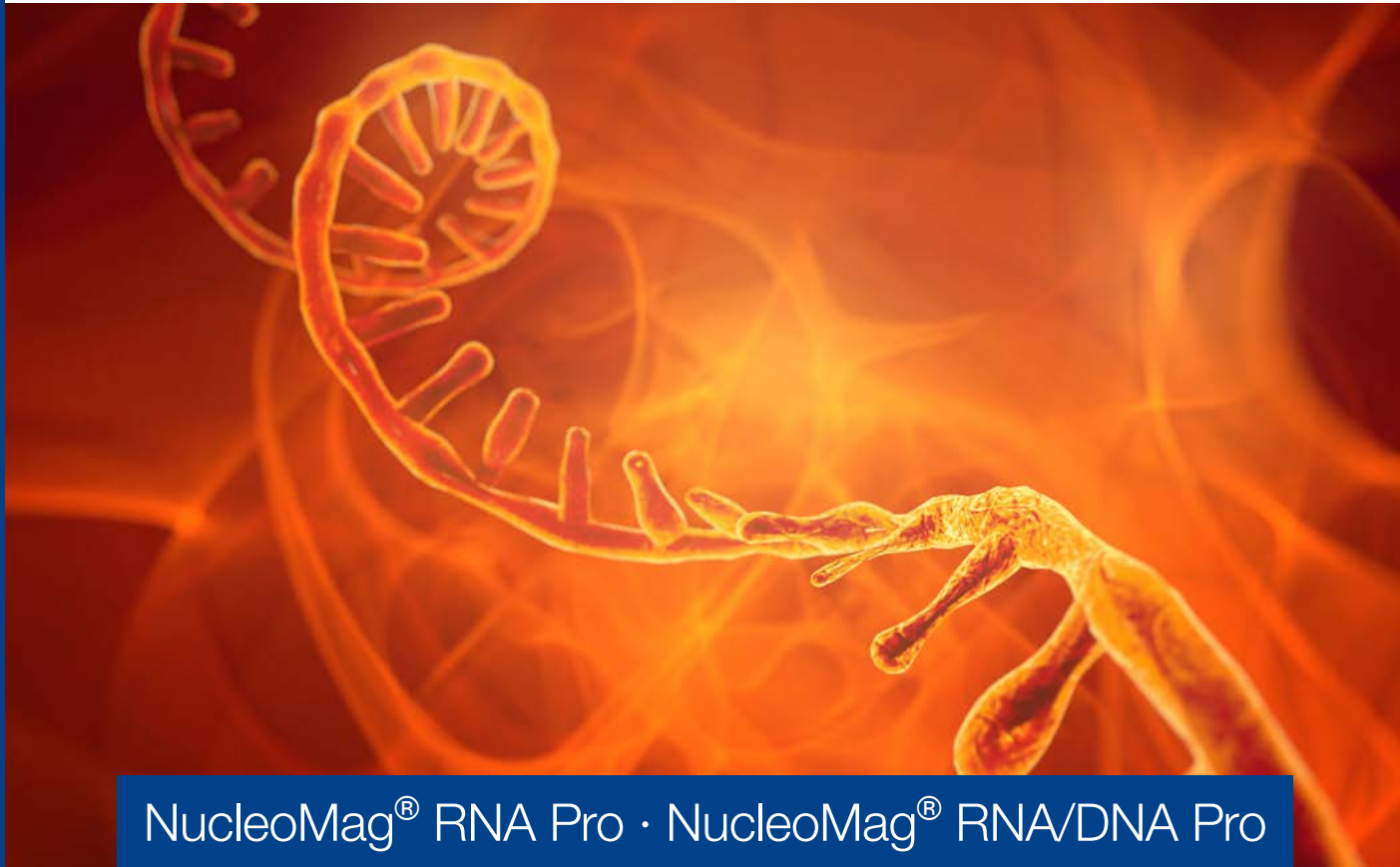


MACHEREY-NAGEL

# Automatable RNA and DNA purification

Bioanalysis



NucleoMag<sup>®</sup> RNA Pro · NucleoMag<sup>®</sup> RNA/DNA Pro

Better results, better science!

- RNA/DNA extraction option with one kit
- Broader applications: Compatible with cells, tissues, and plants
- Effortless integration into automated systems

**MACHEREY-NAGEL**

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



# Automatable RNA and DNA purification

## NucleoMag® RNA Pro and NucleoMag® RNA/DNA Pro

Take your purification workflow to the next level

Discover the next generation of nucleic acid purification with NucleoMag® RNA Pro and NucleoMag® RNA/DNA Pro. Designed for rapid and efficient small-scale preparation, these kits deliver highly pure RNA or RNA/DNA from a wide range of sample types, including up to 20 mg of tissue, 40 mg of plant leaf material, or  $2 \times 10^6$  cells.

Optimized for both manual workflows and automation, NucleoMag® RNA Pro offers unparalleled flexibility. Streamline your lab with automation platforms such as liquid handling or magnetic rod systems, and extract your nucleic acids in as little as 90 minutes.

Isolate RNA  
and DNA in one  
workflow!

## Perfect match for our automation systems

### IsoPure Mini

- Compact footprint
- Automation benefits
- Android app compatible
- Process 16 samples in parallel





### MagnetaPure 32 Plus

- User-friendly with saved methods
- Automation benefits
- Open platform for flexibility
- Process 32 samples in parallel



## Products at a glance

	 NucleoMag® RNA Pro	 NucleoMag® RNA/DNA Pro
REF	744360.1 / 744360.4	744370.1
Technology	Magnetic bead technology	Magnetic bead technology
Target	RNA*	RNA and DNA
Sample material	Cells, tissue and plant leaf material	Cells, tissue and plant leaf material
Sample amount	Up to 20 mg of tissue Up to $2 \times 10^6$ cultured cells Up to 40 mg plant leaf material	Up to 20 mg of tissue Up to $2 \times 10^6$ cultured cells Up to 40 mg plant leaf material
Selling unit	1 × 96 preps, 4 × 96 preps	1 × 96 preps
Automatable	Yes	Yes
Use	For research use only	For research use only

\* RNA and DNA in combination with NucleoSpin® RNA/DNA Buffer Set (REF 740944)

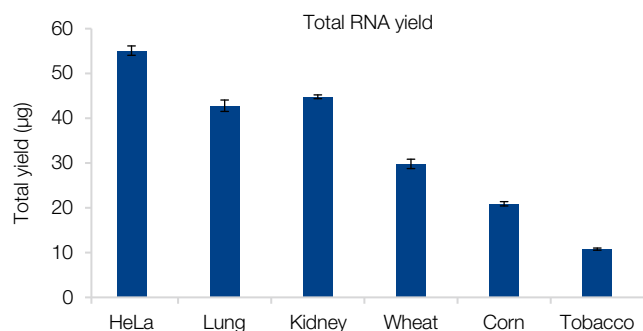
## Product features at a glance

- RNA & DNA isolation in separate fractions
- Suitable for diverse sample materials
- Seamless integration into your automation workflow
- Improved performance
- No downstream inhibition



# Automatable RNA and DNA purification

## Application data – Isolation of RNA from different sample types

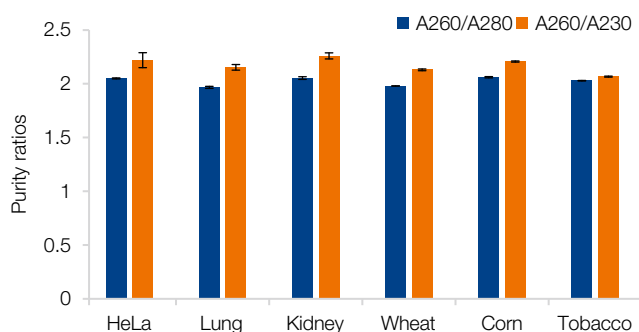


Automation-friendly magnetic bead technology

Nucleic acids from cells, tissues & plant material

### RNA isolation with NucleoMag® RNA Pro from diverse sample materials

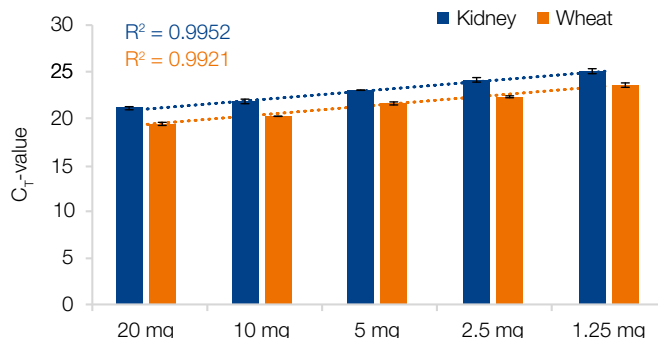
Extraction of RNA was conducted from  $2 \times 10^6$  HeLa cells, 20 mg tissue (lung, kidney) and 40 mg plant leaf material (wheat, corn, tobacco) using the NucleoMag® RNA Pro kit according to the user manual. The yield was determined photometrically. RNA was eluted in a final volume of 100 µL.



### Ideal purity ratios for your downstream application

Extraction of RNA was conducted from  $2 \times 10^6$  HeLa cells, 20 mg tissue (lung, kidney) and 40 mg plant leaf material (wheat, corn, tobacco) using the NucleoMag® RNA Pro kit according to the user manual. The purity ratios A260/A280 and A260/A230 were determined photometrically. RNA was eluted in a final volume of 100 µL.

The figure shows A260/A280 purity ratios across different sample materials highly consistent. Results show A260/A230 ratios  $\geq 2.0$  for all isolated RNA samples.



### Efficient qRT-PCR analysis even with low sample amounts

RNA from different sample amounts of tissue samples (kidney) and plant leaf material (wheat) was isolated using the NucleoMag® RNA Pro kit according to the user manual. qRT-PCR was conducted on a Bio-Rad CFX96™ Real-Time PCR Detection System with C1000™ Thermal Cycler. qRT-PCR data indicate a strong linear relationship between RNA input and C<sub>T</sub>-values, with R<sup>2</sup> values (0.9952 for kidney and 0.9921 for wheat), suggesting consistent amplification efficiency across the dilution series.

## NucleoMag® RNA/DNA Pro - Isolation of RNA and DNA in two fractions

RNA	HeLa			Kidney			Wheat		
A260/A280	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0
A260/A230	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Yield (µg)	32.5	41.0	34.1	31.7	37.1	29.6	20.9	23.0	18.0
RIN	9.3	9.4	9.5	8.5	8.7	8.1	8.6	8.5	8.5

DNA	HeLa			Kidney			Wheat		
A260/A280	1.9	1.9	1.8	1.7	1.7	1.7	1.6	1.7	1.7
Yield (µg)	6.8	6.4	5.2	27.1	16.1	16.7	19.4	10.0	19.7

### NucleoMag® RNA/DNA Pro – Isolation of RNA and DNA in one workflow!

Extraction of both RNA and DNA were conducted using the NucleoMag® RNA/DNA Pro kit according to the protocol of the user manual.  $2 \times 10^6$  HeLa cells, 20 mg kidney and 40 mg leaf material of wheat were used. RNA and DNA were analyzed photometrically regarding purity ratios A260/A280 and A260/A230 as well as yield in µg. RIN values of the isolated RNA were determined using Agilent's Bioanalyzer 2100.

# Automatable RNA and DNA purification

Application data – Comparison data versus competitor kit show high performance RNA and DNA isolation

DNA	MN NucleoMag® RNA/DNA Pro					Supplier Z				
Sample material	HeLa	Lung	Wheat	Corn	Kidney	HeLa	Lung	Wheat	Corn	Kidney
Yield (µg)	5.9	3.5	5.2	2.6	3.9	1.4	1.6	0.7	0.8	1.7
A260/A280	1.8	1.7	1.6	1.6	1.7	1.6	1.8	1.7	1.4	1.7

RNA	MN NucleoMag® RNA/DNA Pro					Supplier Z				
Sample material	HeLa	Lung	Wheat	Corn	Kidney	HeLa	Lung	Wheat	Corn	Kidney
Yield (µg)	23.7	3.4	1.7	1.7	2.5	20.4	1.2	0.2	0.5	0.7
A260/A280	2.1	1.8	1.8	1.8	1.8	2.1	1.9	1.3	1.4	1.6
A260/A230	2.1	1.8	1.7	1.7	1.8	1.7	2.7	3.1	1.1	2.1
RIN	9.4	7.0	6.8	–	–	9.5	4.7	3.8	–	–

## High performance RNA and DNA isolation with NucleoMag® RNA/DNA Pro

RNA and DNA were extracted from different sample types with NucleoMag® RNA/DNA Pro and with Supplier Z kit following each manufacturer's recommended protocols.  $1 \times 10^6$  HeLa cells, 1.7 mg tissue samples (lung and kidney) and 5 mg leaf material (wheat and corn) were used. MACHEREY-NAGEL's magnetic bead based kit showed higher yields and purities as well as higher RNA integrities (RIN). RIN values were analyzed for sample types including HeLa cells, lung and wheat.

RNA/DNA  
isolation with the  
highest quality!

## Ordering information

Product	Pack of	REF
NucleoMag® RNA Pro	96 preps / 384 preps	744360.1 / 744360.4
NucleoMag® RNA/DNA Pro	96 preps	744370.1
NucleoSpin® RNA/DNA Buffer Set	96 preps	740944
Lysis Buffer RL1	125 mL	740385.125
96 Deep-well plates for magnetic rod systems	25	744955
8-well Tip Combs for magnetic rod systems	50	744960
Elution Plate U-bottom (with Self adhering Foil)	24 sets	740486.24
MagnetaPure 32 Plus	1	747010
IsoPure Mini (16)	1	747000

## Questions?

Contact the experts from MACHEREY-NAGEL technical support!

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