

MACHEREY-NAGEL

Tailored solutions for RNA/DNA isolation from plants and fungi

Bioanalysis



Smart RNA/DNA isolation technologies

Pure results. Fast workflows. Trusted kits.

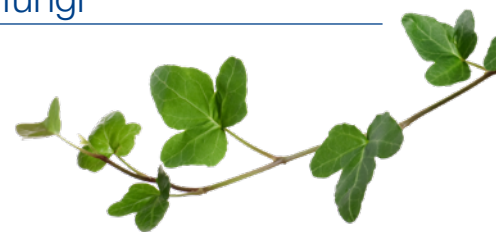
- Works seamlessly with diverse plant and fungal samples
- Designed for high-throughput labs and scalable workflows
- Consistent purity and integrity for downstream applications

MACHEREY-NAGEL

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Tailored solutions for RNA/DNA isolation from plants and fungi





NucleoSpin® Plant II

- Compatibility with diverse plant and fungal materials due to selectable lysis buffer chemistry including CTAB or SDS
- NucleoSpin® Plant Filters are included to eliminate the risk of column clogging

	 Mini NucleoSpin® Plant II	 Midi NucleoSpin® Plant II Midi	 Maxi NucleoSpin® Plant II Maxi	 96-well NucleoSpin® 96 Plant II NucleoSpin® 8 Plant II
Technology	Silica membrane technology	Silica membrane technology	Silica membrane technology	Silica membrane technology
Format	Mini Spin column	Midi Spin column	Maxi Spin column	8-well strip / 96-well plate
Sample amount	< 100 mg wet weight, < 20 mg dry weight	< 400 mg wet weight, < 80 mg dry weight	< 1500 mg wet weight, < 300 mg dry weight	20 – 100 mg wet weight
Fragment size	50 bp–approx. 50 kbp	50 bp–approx. 50 kbp	50 bp–approx. 50 kbp	50 bp–approx. 50 kbp
Typical yield	Up to 30 µg	Up to 100 µg	Up to 300 µg	Up to 30 µg
A260/A280	1.8 – 1.9	1.8 – 1.9	1.8 – 1.9	1.8 – 1.9
Elution volume	50 – 100 µL	200 – 400 µL	1000 – 2000 µL	100 – 200 µL
Preparation time	30 min/prep	90 min/prep	90 min/prep	60 min–6 strips / 60 min–plate
Theoretical binding capacity	50 µg	200 µg	500 µg	30 µg

NucleoSpin® RNA Plant and Fungi

- Universal kit for challenging plant and fungal samples
- Tailored protocols for diverse starting materials
- High-throughput processing options on multiple platforms

	 Mini NucleoSpin® RNA Plant and Fungi	 96-well NucleoSpin® 96 RNA Plant and Fungi
REF	740120.10 / .50 / .250	740128.1 / .4
Technology	Silica membrane technology	Silica membrane technology
Target	RNA	RNA
Sample material	Up to 500 mg of plant or fungal material	Up to 500 mg of plant or fungal material
Typical yield	20 – 70 µg	10 – 60 µg depending on sample material and quality
Elution volume	50 µL	100 µL (70 – 150 µL)
Preparation time	25 min/6 preps	50 min/plate (without lysis)
Automation	No	Yes
Use	For research use only	For research use only

Visit our product website:



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Tailored solutions for RNA/DNA isolation from plants and fungi

NucleoMag® options for DNA and RNA isolation

- Magnetic bead based isolation of DNA and RNA from plant tissue
- Optimized CTAB buffer chemistry for efficient DNA isolation
- Combine RL1 buffer with NucleoMag® RNA Pro for high quality RNA





	 NucleoMag® Plant	 NucleoMag® RNA Pro
Technology	Magnetic bead technology	Magnetic bead technology
Target	DNA	RNA
Processing	Manual or automated	Manual or automated
Fragment size	300 bp–approx. 50 kbp	> 200 nt
Sample material	Diverse plant species	Cells, tissue, plant leaf material, bacteria, yeast
Sample amount	20–50 mg wet weight	Up to 20 mg of tissue Up to 40 mg of plant leaf material Up to 2 × 10 ⁶ cultured cells
Typical yield	10–20 µg	Depending on sample material and quality
Elution volume	50–200 µL	50–200 µL
Preparation time	40–120 min/96 preps (excl. lysis)	90–120 min/96 preps
Automation	Yes	Yes
Use	For research use only	For research use only

High molecular weight DNA from plant samples

- High quality DNA with up to 200 kbp
- Excellent purity for all long-read sequencing technologies
- HMW DNA for modern metagenomics



	 NucleoBond® HMW DNA	 NucleoMag® HMW DNA
Technology	Anion exchange chromatography	Magnetic bead technology
Format	Midi gravity flow columns	Magnetic beads
Fragment size	2 kbp to 150 kbp for enzymatic lysis, up to 50 kbp for mechanical lysis	From 50 kbp up to 100 kbp or 200 kbp depending on sample, quality, sample lysis and processing
Sample material	Up to 300 mg solid tissue Up to 10 ⁷ cultured cells Up to 1.5 g plant material Between 30 mg to 300 mg of yeast or bacteria depending on the sample and lysis method Up to 2 mL liquid sample (e. g., blood, body fluids or enzymatic reactions)	Up to 20 mg human / animal tissue Up to 10 ⁶ cultured cells Up to 50 mg plant material Up to 25 mg gram-negative and 35 mg gram-positive bacteria Up to 50 mg yeast, depending on the species
Typical yield	Depends on the sample amount, type and quality	Depends on the sample amount, type and quality
Elution volume	50 µL to 250 µL	100 µL to 200 µL
Processing time	2 h/12 preps (including 30 min lysis)	1 h/24 or 1.5 h/48 samples for manual processing, 1 h for automated preparation using a magnetic rod instrument

Tailored solutions for RNA/DNA isolation from plants and fungi

Product overview of RNA/DNA isolation kits

Product	Description	REF
Kits for plant and fungi samples		
■ NucleoMag® Plant	Automatable magnetic bead based isolation of DNA from plant tissue. Lysis optimized with CTAB buffer chemistry.	744400.1 / .4
■ NucleoMag® 384 Plant	Optimized for high throughput processing in a 384-well format	744402.1 / .4
■ NucleoSpin® Plant II	Rapid isolation of DNA from a variety of plant samples. Select CTAB or SDS based lysis buffer chemistry.	740770.10 / .50 / .250
■ NucleoSpin® 96 Plant II	Optimized for high throughput processing in a 96-well format with manual or automated processing.	740663.1 / .4
■ NucleoBond® HMW DNA	High molecular weight DNA purification using anion exchange (≤ 200 kb).	740160.20
■ NucleoMag® HMW DNA	Automatable magnetic bead based high molecular weight DNA purification from a wide variety of sample materials (up to 200 kb).	744160.1 / .4
■ NucleoMag® RNA Pro	Automatable magnetic bead based RNA purification from cells, tissues, bacteria, yeast, and plant samples (with RL1 lysis buffer, REF 740385.125)	744360.1 / .4
■ NucleoMag® RNA/DNA Pro	Designed for automated isolation of RNA and DNA from cells, tissues, and plant samples	744370.1
■ NucleoSpin® RNA Plant and Fungi	Universal RNA extraction kit for challenging plant and fungi. Filter columns for lysate clarification included	740120.10 / .50 / .250
■ NucleoSpin® 96 RNA Plant and Fungi	Optimized for high throughput processing in a 96-well format	740128.1 / .4
■ NucleoSpin® Plant Pathogen	Designed for the isolation of viral nucleic acid (RNA, DNA) from diverse plant material	740170.10 / .50
■ NucleoType® Plant PCR	For rapid plant genotyping. Plant transfer tool and NucleoType® HotStart PCR Master Mix included	743202.100 / .500
■ NucleoType® Seed PCR	Seed genotyping with optimized lysis buffer chemistry. Proteinase K and NucleoType® HotStart PCR Master Mix included	743203.100 / .500
Kits for plant related samples		
■ NucleoMag® DNA Microbiome	Automatable magnetic bead based isolation of DNA from soil, stool, or biofilm samples with inhibitor removal technology	744330.1 / .4
■ NucleoSpin® Soil	DNA isolation from a variety of soil types with adaptable lysis buffer chemistry and inhibitor removal columns	740780.10 / .50 / .250
■ NucleoSpin® 96 Soil	Optimized for high throughput processing in a 96-well format	740787.1 / .4
■ NucleoBond® RNA Soil	RNA purification from up to 2 g of soil. MN Bead Tubes Type A included	740140.20

Questions?

Contact the experts from MACHEREY-NAGEL technical support!

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