

MACHEREY-NAGEL

High throughput isolation of DNA from plant samples

Bioanalysis



NucleoMag[®] 384 Plant

- Optimized for high throughput processing in a 384-well format
- Efficient purification of DNA from up to 30 mg sample material
- Suitable for a wide variety of plant species

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NucleoMag® 384 Plant

Speed up your plant DNA extraction workflow

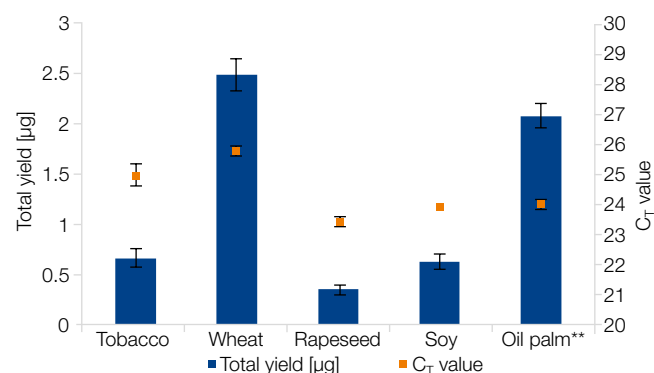
The NucleoMag® 384 Plant kit enables efficient and rapid isolation of genomic DNA from a wide range of plant species and plant organs as an integral step in plant research or plant breeding laboratories. The kit composition was optimized for reliable high throughput processing of sample material up to 30 mg and is suitable for 384 well formats. The NucleoMag® 384 Plant kit was designed to deal with typical issues during plant sample processing, such as the release of polyphenolic compounds or complex polysaccharides. Plant tissue is extracted with CTAB Lysis Buffer MC1 and binding of DNA to the NucleoMag® V-Beads is facilitated with Binding Buffer MC2. After magnetic separation and removal of supernatant, the paramagnetic beads are washed with Wash Buffers MC3, MC4, and 80 % ethanol to remove contaminants and salt. There is no need for a drying step as ethanol from previous wash steps is removed by Wash Buffer MC5. Finally, DNA is eluted with low salt Elution Buffer MC6 and is ready to use for downstream applications such as NGS, qPCR, blotting, or enzymatic reactions.

Product at a glance

Technology	Magnetic bead technology
Format	Suitable for 96–384 well plates
Sample material	Up to 30 mg plant tissue (wet weight)
Plant species already successfully tested	<i>Zea mays</i> (maize), <i>Brassica napus</i> (rapeseed), <i>Glycine max</i> (soy), <i>Triticum aestivum</i> (wheat), <i>Nicotiana tabacum</i> (tobacco), <i>Elaeis guineensis</i> (oil palm*)
Typical A ₂₆₀ /A ₂₈₀	1.6–1.9
Elution volume	50–100 µL
Preparation time	Approx. 60 min/384 preps using e.g., TECAN Freedom EVO MCA 384
Binding capacity	≥ 0.4 µg/µL beads

* Support protocol available. Please inquire tech-bio@mn-net.com

Application data



Reliable detection of genomic DNA from various different plant species

DNA was isolated from 30 mg fresh leaves or seeds from different plant species using the NucleoMag® 384 Plant kit. The total yield was determined by UV spectrometry (dark blue bars). A subsequent qPCR analysis (orange squares) was performed with a Taqman® Probe for a 103 bp actin amplicon using the SensiFast™ Probe Lo-ROX kit from Bioline on an Applied Biosystems® 7500 Real-Time PCR System. High throughput processing with the NucleoMag® 384 Plant kit of all tested sample material, results in pure and sufficient DNA yields, ready for direct subsequent biomolecular analysis.

** Genomic DNA extraction of oil palm leaves was achieved by addition of Binding Buffer CB according to the support protocol NucleoMag® 384 Plant – Oil palm leaves.

Ordering information

Product	Specifications	Preps	REF
NucleoMag® 384 Plant	NucleoMag® V-Beads, buffers, RNase A	1 x 384 / 4 x 384	744402.1 / 4

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NucleoMag® 384 Plant procedure

