

MACHEREY-NAGEL

High molecular weight DNA for long-read sequencing

Bioanalysis



Reliable purification of HMW DNA

Elevate your genomic analysis!

- High quality DNA with up to 200 kbp
- Simple handling for a variety of samples
- Excellent purity for downstream sequencing

MACHEREY-NAGEL

www.mn-net.com



High molecular weight DNA for long-read sequencing

HMW DNA for modern metagenomics

Long-read sequencing of high molecular weight (HMW) DNA allows for insights into challenging, metagenomic systems, which are otherwise difficult to analyze with short-read sequencing methods alone. The efficacy of third-generation sequencing systems depends on the structural integrity of the DNA. To that end, our HMW DNA kits aim to preserve HMW DNA during lysis, while also securing sample purity and overall yield.

Ideal for Oxford Nanopore and PacBio sequencing!

Excellent purity and yield!

Products at a glance



NucleoBond® HMW DNA Kit



NucleoMag® HMW DNA Kit

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	2h/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

Visit the web pages!

[NucleoBond® HMW DNA Kit](#)



[NucleoMag® HMW DNA Kit](#)



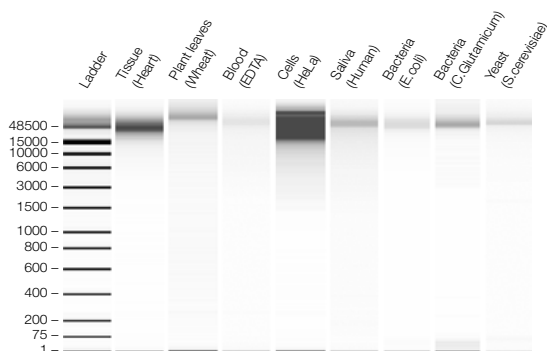
“For long read sequencing pipelines, the purity of genomic DNA is key to success. For Pacific Biosciences and Oxford Nanopore Technology, the commercially available NucleoBond® HMW DNA Kit from MACHEREY-NAGEL was very well suited to get this pure and long gDNAs which resulted in high gigabase yields when sequencing shotgun genomic libraries on the GridION, Nanopore or the PacBio Sequel Systems.”

(Dr. B. Hüttel, Max-Planck-Genome-centre Cologne)

Magnetic bead technology

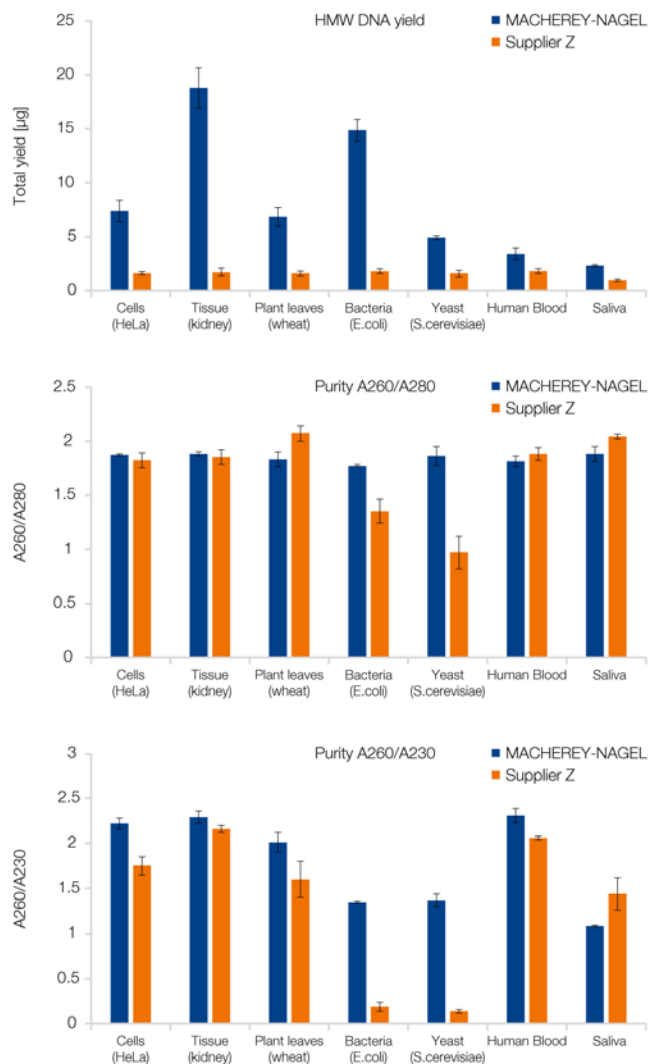
NucleoMag[®] HMW DNA Kit – Application data

The NucleoMag[®] HMW DNA kit can be implemented on either liquid handling or magnetic rod automation platforms. Additionally, it is compatible with a variety of biological sample types. Both those properties make the NucleoMag[®] HMW DNA kit a flexible and convenient kit for purifying high molecular weight DNA.



High molecular weight DNA from diverse sample materials

Genomic DNA from different samples such as heart tissue, plant leaves, blood, cells, saliva, bacteria and yeast was isolated using the NucleoMag[®] HMW DNA Kit from MACHEREY-NAGEL. Isolated DNA shows fragment lengths above 50 kb. Samples were analyzed on Agilent's Bioanalyzer 2100.



High yields and purities

HMW DNA was extracted from different sample types with the NucleoMag[®] HMW DNA and with Supplier Z's kit. MACHEREY-NAGEL's magnetic bead-based kit showed higher yields as well as purities for the tested sample types. Isolated DNA was analyzed by NanoDrop[™] 2000.

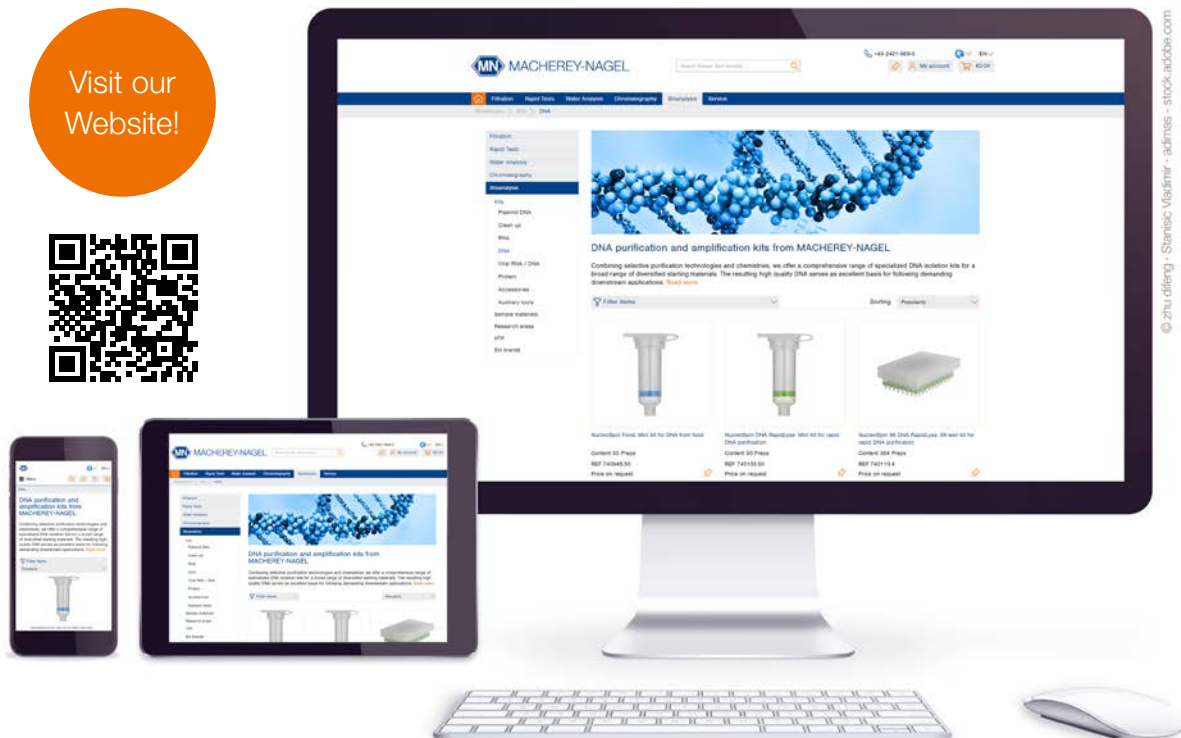
Interested in automation? Check out our webpage!

Discover our vast portfolio of automatable technologies and the different platforms they are compatible with! Like our very own magnetic rod system, the NucleoMag[®] X32, which you can use in conjunction with the NucleoMag[®] HMW DNA kit!



High molecular weight DNA for long-read sequencing

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Management System
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