

MACHEREY-NAGEL

# Powering the future with high-quality plasmid DNA



Plasmid DNA from research to cure

Products for your specific needs!

- Transfection grade to vaccine-grade quality
- Mini to preparative scale
- Automatable solutions for high throughputs

**MACHEREY-NAGEL**

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

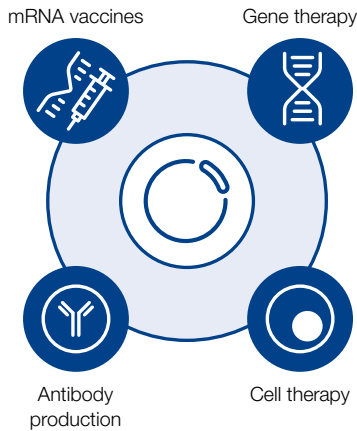


High-performance plasmid DNA solutions

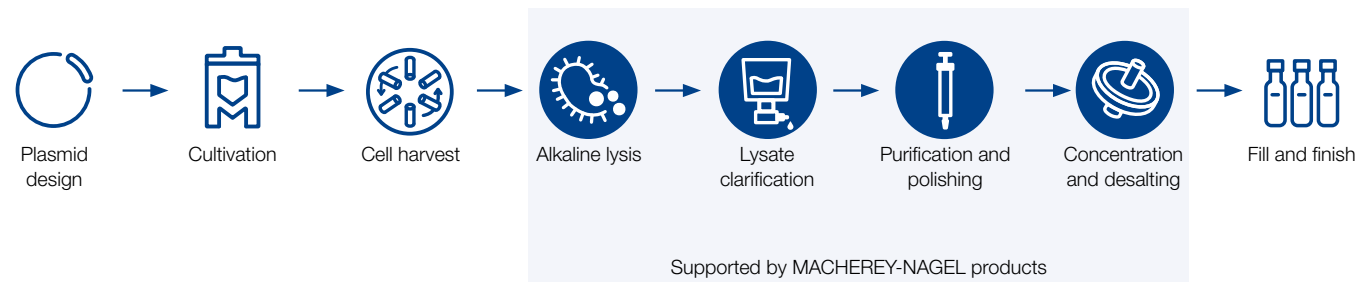
Take your purification workflow to the next level with trusted tools tailored for biopharma applications.

In response to rapid advancements in cell and gene therapy as well as vaccine production, the need for top-notch plasmid DNA has increased significantly. Cutting-edge applications like mRNA-based vaccines and gene therapies depend on superior plasmid DNA as a fundamental starting material. One of the most critical and challenging aspects is the removal of endotoxins – components of the bacterial cell wall that can compromise product safety and efficacy.

Here's where MACHEREY-NAGEL comes into play. Our innovative solutions for cell lysis, clarification and plasmid purification are designed to deliver consistently high yields with minimal endotoxin contamination. With our specialized kits, columns, and buffers, you can achieve the purity and performance your application demands.



Plasmid purification workflow



Find the perfect match for your plasmid purification workflow

- Tailored technologies to fit your process
- Flexible purchasing options
- Powerful buffers for efficient endotoxin removal

**NucleoBond® Xtra EF**

- Endotoxin-free
- Anion-exchange

**NucleoBond® PC EF**

- Endotoxin-free
- Anion-exchange

**NucleoBond® RS**

- Vaccine-grade
- Anion-exchange

**NucleoMag® Plasmid**

- Transfection-grade
- Magnetic bead-based

**NucleoSpin® Plasmid Transfection-grade**

- Transfection-grade
- Silica-membrane

**Individual buffers and desalting options**

- Buffer for endotoxin removal
- Desalting options

The right fit for your plasmid purification workflow

Product and ordering information

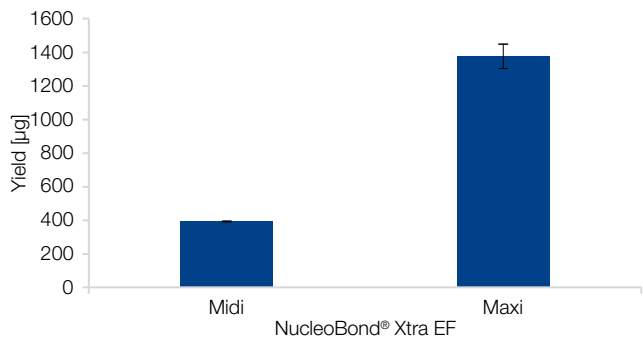
Product	Theoretical binding capacity	ODV recommended	Endotoxin concentration	Time/prep	REF
NucleoMag® Plasmid	–	24	≤ 50 EU/μg	50 min/32 Preps	744750.1 / .4
NucleoSpin® Plasmid Transfection-grade	35 μg	15	≤ 50 EU/μg	20 min/6 Preps	740490.10 / .50 / .250
NucleoSpin® 96 Plasmid Transfection-grade	20 μg	15	≤ 50 EU/μg	45 min/Plate	740491.1 / .4 / .24
NucleoSnap® Plasmid Midi	1500 μg	250	≤ 50 EU/μg	35 min/6 Preps	740494.10 / .50
NucleoBond® Xtra Midi EF	1000 μg	400	≤ 0.05 EU/μg	85 min/Prep	740420.10 / .50
NucleoBond® Xtra Midi Plus EF	1000 μg	400	≤ 0.05 EU/μg	45 min/Prep	740422.10 / .50
NucleoBond® Xtra Maxi EF	3000 μg	1200	≤ 0.05 EU/μg	90 min/Prep	740424.10 / .50
NucleoBond® Xtra Maxi Plus EF	3000 μg	1200	≤ 0.05 EU/μg	50 min/Prep	740426.10/.50
NucleoBond® PC 500 EF	500 μg	600	≤ 0.1 EU/μg	100 min/2 Preps	740550
NucleoBond® PC 2000 EF	2000 μg	2250	≤ 0.1 EU/μg	150 min/2 Preps	740549
NucleoBond® PC 10000 EF	10000 μg	6000	≤ 0.1 EU/μg	180 min/2 Preps	740548
NucleoBond® 96 Xtra EF	50 μg	15	≤ 0.1 EU/μg	120 min/Plate	740430.1 / .4
NucleoBond® RS 10	Up to 10 mg	3000	≤ 0.01 EU/μg	115 min/Prep	743502
NucleoBond® RS 50	Up to 50 mg	15000	≤ 0.01 EU/μg	240 min/Prep	743503
NucleoBond® RS 100	Up to 100 mg	30000	≤ 0.01 EU/μg	415 min/Prep	743504
NucleoBond® RS 200	Up to 200 mg	54000	≤ 0.01 EU/μg	710 min/Prep	743505

Related products

Product	REF
NucleoBond® RS Starter Set	743510
NucleoBond® RS FPLC Adapter Set	743511
NucleoBond® Finalizer	740519.20
NucleoBond® Finalizer Large	740418.20
NucleoBond® Bottle Top Filters Type 2	740553.5
NucleoMag® Clearing Beads	744751.1
Liquid RNase A	740397

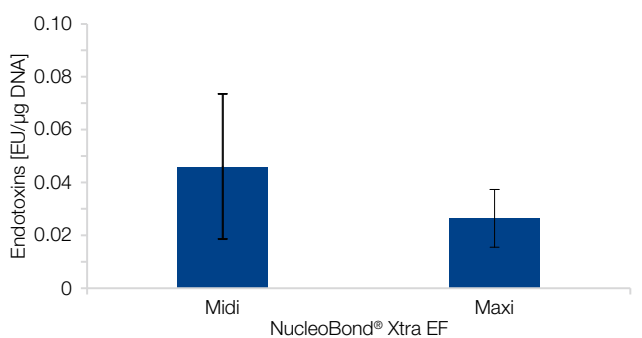
Application data – NucleoBond® Xtra Midi/Maxi EF

- Best endotoxin levels in class
- Outstanding yields
- Convenient and fast processing



NucleoBond® Xtra purification workflow enables high yield.

Plasmid DNA was purified from *E. coli* with two different sizes of the NucleoBond® Xtra EF kits. The figure shows the total plasmid yields (pcDNA3.1) grown in LB medium extracted with the NucleoBond® Xtra EF kits.



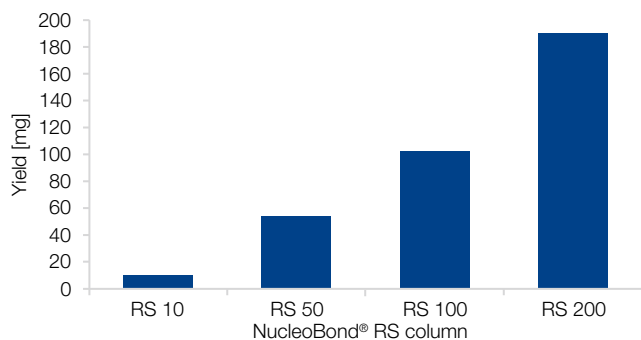
NucleoBond® Xtra purification workflow enables low endotoxin levels.

Endotoxin concentration was determined after plasmid DNA isolation from *E. coli* with the NucleoBond® Xtra EF kits. The endotoxin levels were determined using the *Limulus* amoebocyte lysate (LAL) test.

# Powering the future with high-quality plasmid DNA

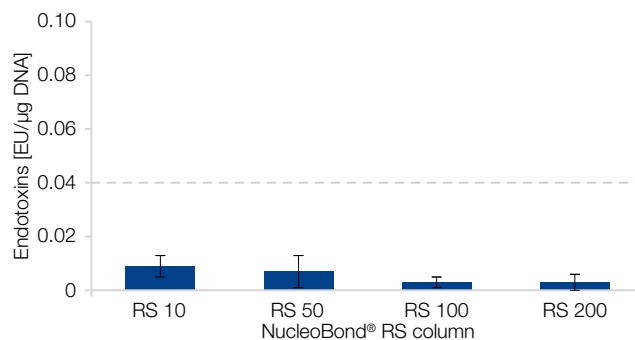
## Application data – NucleoBond® RS

- Vaccine-grade plasmid DNA
- Closed columns for pump/FPLC processing
- Flexible component configuration



NucleoBond® RS purification workflow enables straightforward scalability of your plasmid purification.







Plasmid DNA was purified from *E. coli* with the four different sizes of the NucleoBond® RS columns. The figure shows the maximum of plasmid DNA achieved per column size.



NucleoBond® RS purification workflow enables very low endotoxin levels.

Plasmid DNA was purified from *E. coli* with the four different sizes of the NucleoBond® RS columns. The endotoxin concentration was determined using the recombinant Factor C (rFC) test. After plasmid isolation, endotoxin levels are below the FDA limit for vaccines (< 0.04 EU/µg DNA).

## Product at a glance

	 NucleoBond® Xtra Midi EF	 NucleoBond® Xtra Maxi EF	 NucleoBond® RS 10	 NucleoBond® RS 50	 NucleoBond® RS 100	 NucleoBond® RS 200
Endotoxins (EU/µg DNA)	0.046 ± 0.027	0.027 ± 0.011	0.009 ± 0.004	0.007 ± 0.006	0.003 ± 0.002	0.003 ± 0.003
A <sub>260</sub> /A <sub>280</sub>	1.89 ± 0.1	1.92 ± 0.07	1.99 ± 0.04	1.97 ± 0.02	1.97 ± 0.04	1.98 ± 0.01
Supercoiled form (ccc) in %	≥ 90 %	≥ 90 %	≥ 90 %	≥ 90 %	≥ 90 %	≥ 90 %

## Ordering information

To ensure maximum flexibility for our customers, we offer all components needed for plasmid purification with our endotoxin-free kits as standalone products.

Scan for more  
Biopharma  
products!



### Questions?

Contact the experts from  
MACHEREY-NAGEL technical  
support!

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www.mn-net.com

**MACHEREY-NAGEL**



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EN ISO 13485:2016  
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