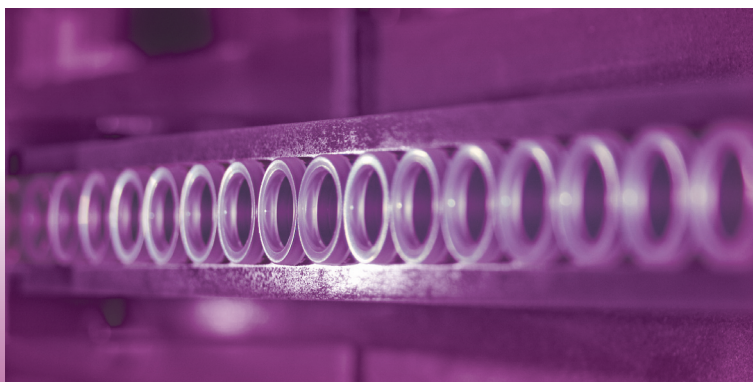


DNA Clean-up

DNA clean-up is one of the most frequent processes in molecular biology. Not only do MACHEREY-NAGEL's clean-up kits focus on fast, easy-to-handle, and quantitative high-recovery DNA purification, they also ensure high-quality downstream applications.

<i>PCR clean-up</i>	43
<i>Gel extraction</i>	43, 49
<i>Dye-terminator removal</i>	50



www.mn-net.com/cleanup



DNA Clean-up · Summary of Products

PCR clean-up

Format	Sample	Product	Page
Single prep			
Mini spin columns (silica-membrane technology)	<400 µL PCR reaction mixture	NucleoSpin® Extract II	43
Silica matrix (silica-matrix technology)	20 – 400 µL PCR reaction mixture	NucleoTraP®CR	44
Manual and automated high throughput (HTP)			
8-well strips, 96-well plates (silica-membrane technology)	<100 µL PCR reaction mixture	NucleoSpin® 8/96 Extract II NucleoSpin® 8/96 Extract II Core Kit	45
96-well plates (ultrafiltration technology)	20 – 300 µL PCR reaction mixture	NucleoFast® 96 PCR	47
96-well systems (magnetic-bead technology)	<50 µL PCR reaction mixture	NucleoMag® 96 PCR	48

Gel extraction

Format	Sample	Product	Page
Single prep			
Mini spin columns (silica-membrane technology)	<400 mg agarose gel	NucleoSpin® Extract II	43
Silica matrix (silica-matrix technology)	20 – 600 mg agarose gel	NucleoTrap®	49

Dye-terminator removal

Format	Sample	Product	Page
Single prep			
Mini spin columns (gel filtration)	20 µL sequencing reaction mixture	NucleoSEQ®	50


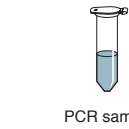
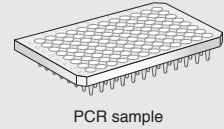
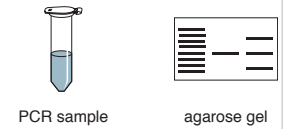

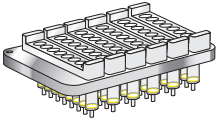
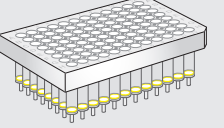


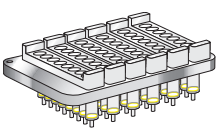
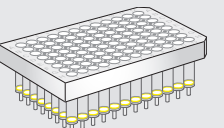


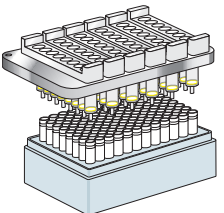
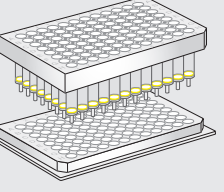



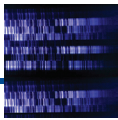
DNA Clean-up · Summary of Procedures

*PCR clean-up/
Gel extraction*

PCR clean-up

*PCR clean-up/
Gel extraction*

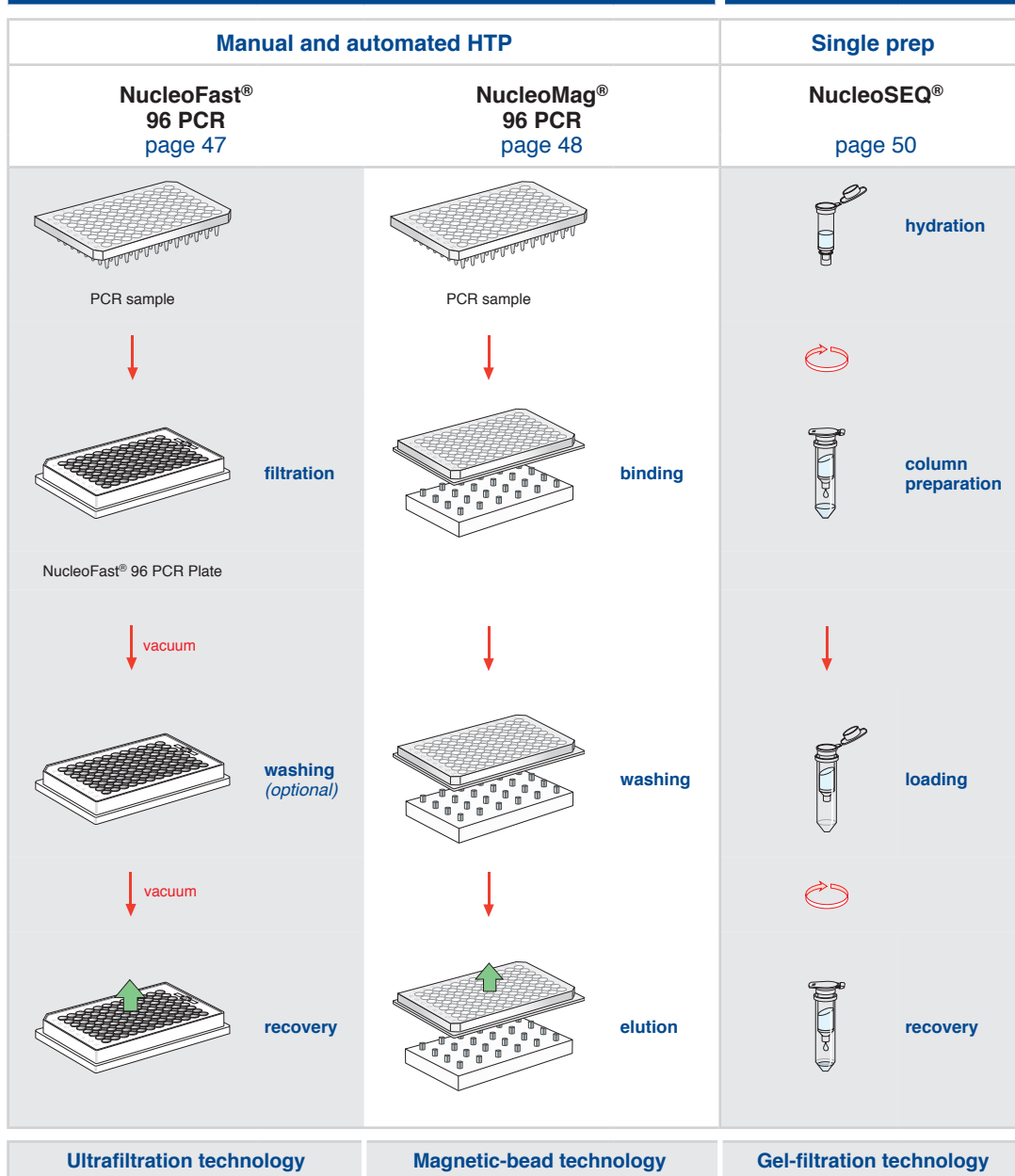
Single prep	Manual and automated HTP		Single prep
<p>NucleoSpin® Extract II page 43</p>	<p>NucleoSpin® 8 Extract II page 45</p>	<p>NucleoSpin® 96 Extract II page 45</p>	<p>NucleoTraP®CR/ NucleoTrap® page 44 / 49</p>
 <p>PCR sample agarose gel</p>	 <p>PCR sample</p>	 <p>PCR sample</p>	 <p>PCR sample agarose gel NucleoTraP®CR NucleoTrap®</p>
 <p>binding</p>	 <p>binding</p> <p>NucleoSpin® Extract II Binding Strips</p>	 <p>binding</p> <p>NucleoSpin® Extract II Binding Plate</p>	 <p>batch binding</p>
 <p>washing</p>	 <p>washing</p>	 <p>washing</p>	 <p>washing</p>
 <p>elution</p>	 <p>elution</p>	 <p>elution</p>	 <p>elution</p>
	Silica-membrane technology		Silica-matrix technology

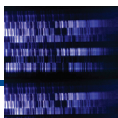


DNA Clean-up · Summary of Procedures

PCR clean-up

Dye-terminator removal





single prep

manual HTP

automated HTP

mini spin columns

silica matrix



NucleoSpin® Extract II

15 µL elution volume → highly concentrated DNA

Features

PCR clean-up and gel extraction – the two-in-one kit with optimized recovery and elution volume

- High recovery even for small fragments ≥ 50 bp with efficient removal of primers
- Minimized elution volume: 15 µL → highly concentrated DNA
- 10 min / 6 preps → time-saving procedure
- One buffer for PCR clean-up and gel extraction
- Suitable for all gel buffer systems (e.g., TAE, TBE)



Product at a glance

Technology	Silica-membrane technology
Format	Mini spin columns
Sample material	<400 µL PCR reaction mixture <400 mg TAE / TBE agarose gel
Fragment size	50 bp – 15 kbp
Typical recovery	70 – 95%
A ₂₆₀ /A ₂₈₀	1.8 – 1.9
Elution volume	15 – 50 µL
Preparation time	10 min / 6 preps
Binding capacity	25 µg
Procedure chart see page 41	

Applications

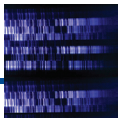
- Purification of PCR products
- Extraction of DNA from agarose gels
- Support protocol for concentration and desalination of reaction mixtures
- Support protocol for clean-up of single stranded DNA (Binding Buffer NTC required, not included in the kit, see “Ordering information”)
- Support protocol for clean-up of SDS-containing samples (Binding Buffer NTB required, not included in the kit, see “Ordering information”)
- Typical downstream applications: cloning, sequencing, PCR, restriction analysis

For detailed product information and application data see www.mn-net.com/cleanup

Ordering information

Product	Preps	Specification	REF
NucleoSpin® Extract II	10	NucleoSpin® Extract II Columns, Collection Tubes (2 mL), buffers	740609.10
	50	as above	740609.50
	250	as above	740609.250
Product accessories	Pack of	Specification	REF
Buffer NTB	150 mL	for clean-up of SDS-containing samples	740595.150
Buffer NTC	100 mL	for clean-up of single stranded DNA	740654.100

For separate kit components see “Accessories” page 137



single prep
manual HTP
automated HTP

mini spin columns
silica matrix



NucleoTraP®CR

Features

The silica-matrix based kit for PCR clean-up without columns

- Batch binding procedure
- Quantitative removal of primer and primer-dimer molecules
- High recovery for DNA fragments ≥ 120 bp

Product at a glance

Technology	Silica-matrix technology
Format	Silica bead suspension
Sample material	20 – 400 μ L PCR reaction mixture
Fragment size	100 bp – 50 kbp
Typical recovery	70 – 80 %
A ₂₆₀ /A ₂₈₀	1.7 – 1.9
Elution volume	20 – 50 μ L
Preparation time	45 min / 6 preps
Binding capacity	6 μ g / 10 μ L suspension

Procedure chart see page 41

Applications

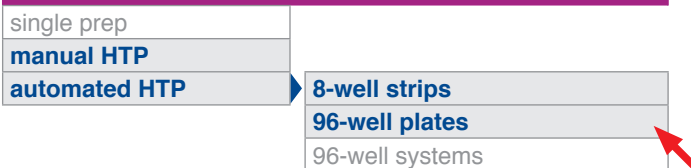
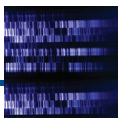
- Purification of PCR products
- Support protocol for concentration and desalination of reaction mixtures
- Typical downstream applications: cloning, sequencing, PCR, restriction analysis

ⓘ For detailed product information and application data see www.mn-net.com/cleanup

Ordering information

Product	Preps	Specification	REF
NucleoTraP®CR	10	NucleoTraP®CR Suspension, buffers	740587.10
	100	as above	740587.100

For separate kit components see “Accessories” page 137



NucleoSpin® 8/96 Extract II · NucleoSpin® 8/96 Extract II Core Kit

Features

Clean-up of PCR products in flexible 8-well strip format and for high throughput in convenient 96-well plate format

- Time-saving parallel clean-up of PCR products
- Complete removal of primers and primer-dimers
- Optimal recovery
- Suitable for processing under vacuum and centrifugation
- Innovative MN Wash Plate minimizes risk of cross-contamination
- Suitable for manual or automated use
- NucleoSpin® 8/96 Extract II Core Kits:
Kits with basic content focussed on automation platforms.
Additional accessories can be combined as needed.



Product at a glance

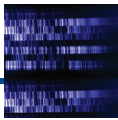
	NucleoSpin® 8 Extract II NucleoSpin® 8 Extract II Core Kit	NucleoSpin® 96 Extract II NucleoSpin® 96 Extract II Core Kit
Technology	Silica-membrane technology	
Format	8-well strips	96-well plates
Processing	Manual or automated, vacuum or centrifugation	
Sample material	<100 µL PCR reaction mixture	
Fragment size	65 bp – 10 kbp	65 bp – 10 kbp
Typical recovery	75 – 95 %	75 – 95 %
A ₂₆₀ /A ₂₈₀	1.70 – 1.80	1.70 – 1.80
Elution volume	75 – 150 µL	75 – 150 µL
Preparation time	30 min / 6 strips	45 min / plate
Binding capacity	15 µg	15 µg
Procedure chart	see page 41	

Applications

- Manual or automated purification of PCR products

For detailed product information and application data see www.mn-net.com/cleanup

Ordering information see next page



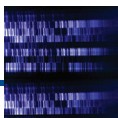
PCR Clean-up

single prep				
manual HTP				
automated HTP	<table border="1"> <tr> <td>8-well strips</td> </tr> <tr> <td>96-well plates</td> </tr> <tr> <td>96-well systems</td> </tr> </table>	8-well strips	96-well plates	96-well systems
8-well strips				
96-well plates				
96-well systems				

Ordering information

Product	Preps	Specification	REF
NucleoSpin® 8 Extract II	12 x 8	NucleoSpin® Extract II Binding Strips, MN Wash Plate, Rack of Tube Strips, buffers	740668
	60 x 8	as above	740668.5
NucleoSpin® 8 Extract II Core Kit	48 x 8	NucleoSpin® Extract II Binding Strips, buffers	740463.4
NucleoSpin® 96 Extract II	1 x 96	NucleoSpin® Extract II Binding Plate, MN Wash Plate, Elution Plate U-bottom, Self-adhering Foil, buffers	740658.1
	2 x 96	as above	740658.2
	4 x 96	as above	740658.4
	24 x 96	as above	740658.24
NucleoSpin® 96 Extract II Core Kit	4 x 96	NucleoSpin® Extract II Binding Plates, buffers	740464.4
Product accessories	Pack of	Specification	REF
NucleoVac 96 Vacuum Manifold	1		740681
NucleoVac Vacuum Regulator	1	for controlling of vacuum	740641
Starter Set A	1	for use of NucleoSpin® 8-well strips on the NucleoVac 96 Vacuum Manifold	740682
Starter Set C	1	for use of NucleoSpin® 8-well strips under centrifugation	740684

For separate kit components see "Accessories" page 137



NucleoFast® 96 PCR

Features

Cost-efficient 96-well ultrafiltration kit for PCR clean-up

- Ready-to-use DNA for sequencing and microarray spotting
- Sturdy membrane allows easy recovery of DNA
- No well-to-well cross-contamination
- Fast procedure
- Available as complete kits and as plates only
- Detergent-free membrane
- Manual or automated use



Product at a glance

Technology	Ultrafiltration technology
Format	96-well plates
Processing	Manual or automated, vacuum or centrifugation
Sample material	20 – 300 µL
Fragment size	≥ 150 bp
Typical recovery	40 – 95 %
A ₂₆₀ /A ₂₈₀	1.70 – 1.80
Recovery volume	25 – 100 µL
Preparation time	20 min / plate (for typical PCR reactions of 25 µL)
Procedure chart	see page 42

Applications

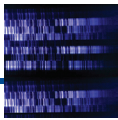
- Purification of PCR products ≥ 150 bp

For detailed product information and application data see www.mn-net.com/cleanup

Ordering information

Product	Preps	Specification	REF
NucleoFast® 96 PCR Clean-up Kit	4 x 96	NucleoFast® 96 PCR Plates, Elution Plates U-bottom, Self-adhering Foil, buffers	743500.4
NucleoFast® 96 PCR Plates	10 x 96 50 x 96	NucleoFast® 96 PCR Plates as above	743100.10 743100.50
Product accessories	Pack of	Specification	REF
NucleoFast® Lids	50	lids for NucleoFast® 96 PCR Plates	743101.50
NucleoVac 96 Vacuum Manifold	1		740681
NucleoVac Vacuum Regulator	1	for controlling of vacuum, recommended for use with NucleoVac 96 Vacuum Manifold	740641

For separate kit components see “Accessories” page 137



single prep	
manual HTP	
automated HTP	8-well strips
	96-well plates
	96-well systems



NucleoMag® 96 PCR

Features

Magnetic-bead based PCR clean-up

- Closed system: reduced risk of cross-contamination
- Small elution volumes $\geq 25 \mu\text{L}$
- Recovery does not depend on elution volume
- Easily adapted to automated use

Product at a glance

Technology	Magnetic-bead technology
Format	Highly reactive superparamagnetic beads
Processing	Manual or automated
Sample material	$< 50 \mu\text{L}$ PCR reaction mixture
Fragment size	150 bp – 10 kbp
Typical recovery	80 – 95 %
A_{260}/A_{280}	1.70 – 1.90
Elution volume	$\geq 25 \mu\text{L}$
Preparation time	30 – 45 min / 96 preps
Binding capacity	Approx. $0.3 \mu\text{g} / \mu\text{L}$ beads
Procedure chart	see page 42

Applications

- Manual or automated PCR clean-up
- Typical downstream application: sequencing

For detailed product information and application data see www.mn-net.com/cleanup

Ordering information

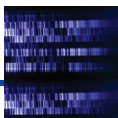
Product	Preps	Specification	REF
NucleoMag® 96 PCR	1 x 96	NucleoMag® P-Beads, Elution Plate	744100.1
	4 x 96	U-bottom, Self-adhering PE Foil, buffers	744100.4
	24 x 96	as above	744100.24

Material to be supplied by the user

Separation plate, e.g., Square-well Block	4	740481
	24	740481.24

Product accessories	Pack of	Specification	REF
NucleoMag® SEP	1	magnetic separator	744900

For separate kit components see "Accessories" page 137



NucleoTrap®

Features

The silica-matrix based kit for gel extraction without columns

- Batch binding procedure
- High binding capacity even for very small fragments ≥ 20 bp
- Large DNA fragments are neither sheared nor degraded

Product at a glance

Technology	Silica-matrix technology
Format	Silica bead suspension
Sample material	20 – 600 mg agarose gel
Fragment size	20 bp – 50 kbp
Typical recovery	50 – 90%
A ₂₆₀ /A ₂₈₀	1.7 – 1.9
Elution volume	20 – 50 μ L
Preparation time	60 min / 6 preps
Binding capacity	6 μ g / 10 μ L suspension

Procedure chart see page 41

Applications

- Extraction of DNA from agarose gels
- Support protocol for concentration and desalination of reaction mixtures
- Typical downstream applications: cloning, sequencing, PCR, restriction analysis

For detailed product information and application data see www.mn-net.com/cleanup

Ordering information

Product	Preps	Specification	REF
NucleoTrap®	10	NucleoTrap® Suspension, buffers	740584.10
	100	as above	740584
NucleoTrap® Suspension	100	NucleoTrap® Suspension for 100 preps	740589

For separate kit components see “Accessories” page 137

NucleoSEQ®

Features

Pre-filled single spin columns for dye-terminator removal

- Efficient removal of dye terminators (e.g., BigDye™ terminators) without ethanol precipitation
- Convenient spin column format
- Long-term storage at room temperature



Product at a glance

Technology	Gel-filtration technology
Format	Mini spin columns
Sample material	20 µL sequencing reaction mixture
Preparation time	5 min / prep (without hydration of matrix)
Procedure chart	see page 42

Applications

- Dye-terminator removal

For detailed product information and application data see www.mn-net.com/cleanup

Ordering information

Product	Preps	Specification	REF
NucleoSEQ®	10	pre-filled NucleoSEQ® Columns, Collection Tubes (2 mL)	740523.10
	50	as above	740523.50
	250	as above	740523.250
Product accessories	Pack of	Specification	REF
Receiver Columns 20 µm	10	empty spin columns with 20 µm filter frit and Collection Tubes (2 mL), to be used for general filtration purposes as well as for retaining chromatographic resins	740522.10
	50	as above	740522.50
	250	as above	740522.250

For separate kit components see “Accessories” page 137