

MACHEREY-NAGEL

# Sustainable alternative for Gel and PCR Clean-ups

Bioanalysis



## NucleoVerde® Gel and PCR Clean-up

Reduce your environmental impact!



- 2-in-1 solution for Gel and PCR Clean-up
- Less plastic, less cardboard, less waste
- Eco-friendly from packaging to chemistry

**MACHEREY-NAGEL**

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



# Sustainable alternative for Gel and PCR Clean-ups

## NucleoVerde® Gel and PCR Clean-up

A cleaner future for science: Supporting sustainable practices in molecular biology

Laboratory research continues to generate large amounts of waste, particularly plastics, chemicals, and packaging. Most of this waste is difficult to recycle due to contamination. As sustainability becomes increasingly important, life science companies face the challenge of reducing environmental impact while maintaining the high standards researchers rely on. The NucleoVerde® Gel and PCR Clean-up kit was developed as a more environmentally responsible alternative to the trusted NucleoSpin® Gel and PCR Clean-up kit. While sustainability was the main goal, performance was never compromised. NucleoVerde® uses the same silica membrane technology as the NucleoSpin® Gel and PCR Clean-up kit and has undergone extensive validation to ensure equivalent results for gel extraction and PCR clean-up.





## Take responsibility for a greener future

- NucleoVerde® Gel and PCR Clean-up product features at a glance
- Patent pending buffer chemistry - No hazard labeling under REACH
  - Up to 41 % less plastic material
  - Collection tubes made from at least 70 % post-consumer recycled plastic
  - Same performance compared to the trusted NucleoSpin® Gel and PCR Clean-up kit
  - Save up to 37 % cardboard
  - Bags from 80 % biobased material
  - Labels from at least 95 % post-industrial recycled material (PIR)



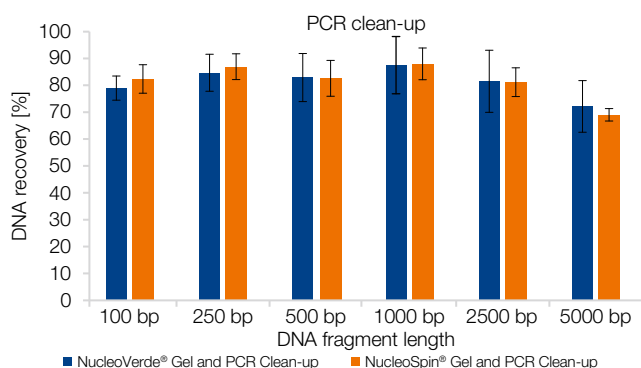
## Product at a glance

	 NucleoVerde® Gel & PCR Clean-up	 NucleoSpin® Gel & PCR Clean-up
REF	740880.50 / 740880.250	740609.10 / .50 / .250
Technology	Silica membrane technology	Silica membrane technology
Target	Clean-up	Clean-up
Sample material	Agarose gel, PCR reaction mixture	Agarose gel, PCR reaction mixture
Sample amount	Up to 200 µL PCR reaction mixture Up to 200 mg agarose gel	Up to 200 µL PCR reaction mixture Up to 200 mg agarose gel
Typical downstream application	Cloning, PCR, Restriction analysis, Sequencing	Cloning, PCR, Restriction analysis, Sequencing
Selling unit	50 preps, 250 preps	10 preps, 50 preps, 250 preps
Elution volume	15 – 50 µL	15 – 30 µL
Typical recovery	70 – 95 %	70 – 95 %
Fragment size	50 bp – ~20 kbp	50 bp – ~20 kbp
Use	For research use only	For research use only



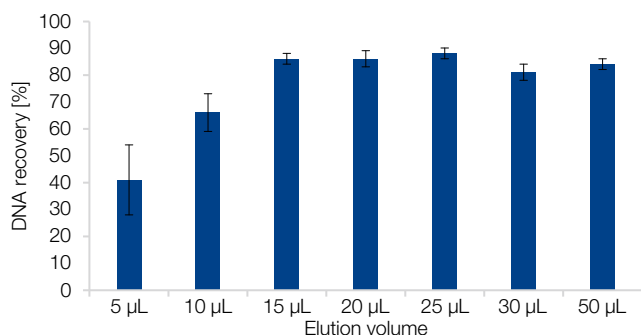
# Sustainable alternative for Gel and PCR Clean-ups

## Application data



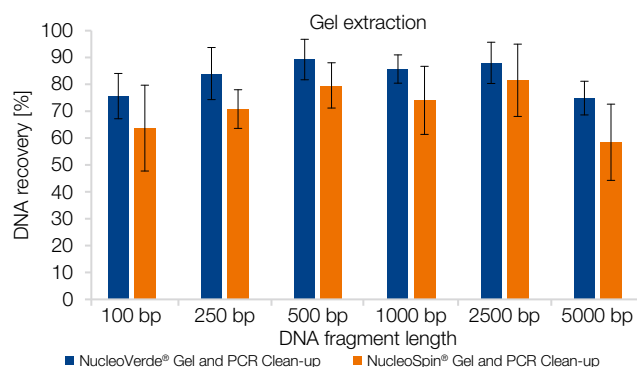
### Fragment length dependent DNA recovery from PCR clean-up

Six distinct DNA fragments (125 ng fragment) in the range 100 bp – 5000 bp were purified from 100 µL NucleoType HotStart PCR using the NucleoVerde® Gel and PCR Clean-up kit or the NucleoSpin® Gel and PCR Clean-up kit with 30 µL elution volume. Eluates were separated via TAE gel electrophoresis and the band intensity was compared to the original input. DNA recovery was calculated utilizing ImageJ.



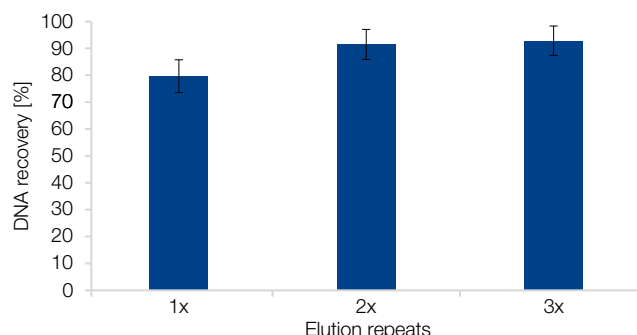
### Elution volume dependent DNA recovery and concentration

A quantity of 1.4 µg of a DNA ladder with a size range from 250 bp to 10,000 bp was purified from 100 mg of 2 % agarose gel, and subsequently eluted with increasing volumes. DNA quantities were analyzed via UV-spectrometry. The NucleoVerde® Gel and PCR Clean-up kit has been demonstrated to facilitate efficient elution in as little as 15 µL of water.



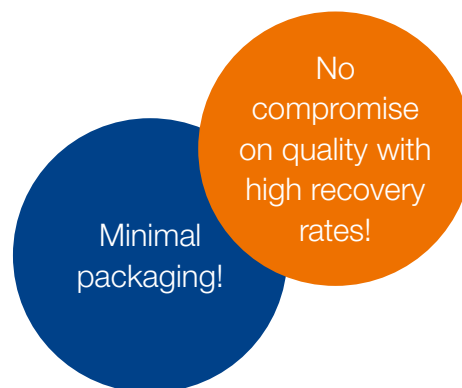
### Fragment length dependent DNA recovery from gel extraction

Six distinct DNA fragments (125 ng per fragment) in the range 100 bp – 5000 bp were purified from 150 mg of a 2 % agarose gel using the NucleoVerde® Gel and PCR Clean-up kit or the NucleoSpin® Gel and PCR Clean-up kit with 30 µL of elution volume. Eluates were separated via TAE gel electrophoresis and the band intensity was compared to the original input. DNA recovery was calculated utilizing ImageJ.



### Multiple elution steps increase recovery

1 µg of a DNA ladder with a size range from 250 bp to 10,000 bp was purified from 150 mg of 2 % agarose gel. The DNA was then eluted on three occasions with 20 µL of water, showing that a second elution step can result in a notable enhancement of the DNA recovery. DNA quantities were measured fluorometrically.



# Sustainable alternative for Gel and PCR Clean-ups

## Taking responsibility has never been easier!

- Less waste – save up to 41 % plastic and up to 37 % cardboard compared with standard kit.
- Up to 36 % weight reduction. A step toward a greener future.

By choosing NucleoVerde®, laboratories can maintain scientific excellence while reducing their environmental impact!



## Ordering information

Product	Pack of	REF
NucleoVerde® Gel and PCR Clean-up	50 / 250	740880.50 / .250
NucleoSpin® Gel and PCR Clean-up	10 / 50 / 250	740609.10 / .50 / .250
Buffer NTV	125 mL	740881.125
Buffer NTI	200 mL	740305.120
Buffer NTB	150 mL	740595.150
Buffer NTC	100 mL	740654.100
Buffer NT3 (Concentrate for 125 mL)	25 mL	740598
Collection Tubes (2 mL)	1000	740600

## Questions?

Contact the experts from MACHERY-NAGEL technical support!

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# MACHERY-NAGEL



Management  
System  
EN ISO 13485:2016  
ISO 9001:2015

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