



Protocol DNA Purification

Bacteria

with 4ward-NA® puriSorb®

-4ward-NA® puriColumns -

Cat.No. 4w03.010

Cat.No. 4w03.050

Cat. No. 4w03.250

Version 1.3

For research use only

Principle

4ward-NA® DNA purification kits (Bacteria) are designed for extraction and purification of DNA from a wide range of bacteria species. **4ward-NA® puriSorb®** technology allows the purification in one single step after lysis. Impurities are bound and the purified DNA is recovered in the eluate. The excellent purity of the DNA allows immediate use in all common downstream applications (e.g. PCR).

Kit contents

The kit contains all necessary reagents for lysis and DNA purification.

Component	Art. No. 4w03.010	Art. No. 4w03.050	Art. No. 4w03.250
Activation Solution (ActivS)	4.5 mL	20.5 mL	100 mL
Buffer 4wC (B)	1.1 mL	5.2 mL	26 mL
SDS Solution	1.1 mL	5.2 mL	26 mL
RNase A	0.25 mL	1.15 mL	5.75 mL
Proteinase K	0.15 mL	0.6 mL	2.9 mL
EDTA	0.1 mL	0.15 mL	0.6 mL
DTT (1,4-Dithio-DL-threitol)	0.1 mL	0.15 mL	0.75 mL
Lysozyme (25 mg/mL)*	5.0 mg*	15 mg*	75 mg*
4ward-NA® puriColumns	10	50	250
Waste Tubes	10	50	250
DNA Tubes	10	50	250

*add H₂O

Storage Conditions

During shipment all kit components are stable at room temperature. After arrival, store chemicals at **+2 °C to +8 °C**. All other components can be stored at room temperature. Please see expiration date of the kit.

Safety Information

Proteinase K	Danger	H334 P304+P341, P342+P311
DTT	Warning	H315, H319 P280, P305+P351+P338, P321, P362, P332+P313, P337+P313
SDS	Danger	H315, H318 P305+P351+P338

Hazard Statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P341	IN INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P321	Specific treatment (see on this label).
P362	Take off contaminated clothing and wash before reuse.
P332+P313	If skin irritation occurs: Get medical advice/ attention.
P337+P313	If eye irritation persists: Get medical advice/ attention.

When working with chemicals, always wear a suitable lab coat, disposable gloves and protective goggles. For more information, please contact us for the appropriate material safety data sheets (MSDS).

Before starting

Activation of puriSorb® in 4ward-NA® puriColumn

A1	Add 350 µL Activation Solution onto each well of a 4ward-NA® puriColumn . Incubate for at least 5 min at room temperature. Centrifuge at <u>max.</u> 350 × g for 1 min to remove excess Activation Solution. Discard Waste Tube.
A2	The activated 4ward-NA® puriColumn is ready for purification.

- **Preheat an incubator to 56 °C.**
- **Dissolve Lysozyme**
Add **0.2 mL** (4w03.010), **0.6 mL** (4w03.050) or **3 mL** (4w03.250) of sterile water to the lyophilized lysozyme (final concentration is **25 mg/mL**).

Protocol

Lysis of bacteria for DNA purification

1. Transfer **0.5 mL of bacterial culture** (up to **1.5 OD600**) into a 1.5 mL or 2.0 mL reaction tube.
Centrifuge (**6,000 × g, 1 min**), discard the supernatant.
2. Add **90 µL Buffer 4wC (B)**, **10 µL Lysozyme** and **20 µL RNase A** to the cell pellet. Resuspend cells and incubate (**56 °C, 20 min**).
3. Add **90 µL SDS Solution**, **10 µL Proteinase K**, **2.5 µL DTT** and **2 µL EDTA** to each sample.
Incubate (**56 °C, 60 min**).

Purification of DNA using 4ward-NA® puriSorb® (ONE-STEP)

P1	Transfer between 60 µL and 120 µL of the lysate to an activated 4ward-NA® puriColumn . Incubate for at least 3 min and centrifuge at <u>max.</u> 700 × g for 1 min .
	The eluate contains the ready-to-use purified DNA.

Troubleshooting, FAQ and Special Applications

Please contact us for further information about our innovative DNA Purification System using the **4ward-NA® puriSorb®** technology.

Contact Information

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Ordering Information and Prices

For ordering information and prices please contact: sales@4ward-na.com.

