



**Protocol DNA Purification**  
**Plasmid from Bacteria**  
**with 4ward-NA® puriSorb®**

**- 4ward-NA® puriColumns -**

**Cat. No. 4w05.010**

**Cat. No. 4w05.050**

**Cat. No. 4w05.250**

**Version 1.3**

**For research use only**

## **Principle**

**4ward-NA® DNA purification kits (Plasmid from Bacteria)** are designed for extraction and purification of Plasmid DNA from bacteria (high yield/ low yield). **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.

<b>Component</b>	<b>Art. No. 4w05.010</b>	<b>Art. No. 4w05.050</b>	<b>Art. No. 4w05.250</b>
Activation Solution (ActivS)	4.5 mL	20.5 mL	100 mL
Buffer 4wE (P)	1.5 mL	7.5 mL	38 mL
Protease	0.1 mL	0.3 mL	1.5 mL
RNase A	0.2 mL	1.0 mL	4.4 mL
Lysozyme (25 mg/mL)*	3.0 mg*	5.0 mg*	23.0 mg*
4ward-NA® puriColumns	10	50	250
Waste Tubes	10	50	250
DNA Tubes	10	50	250

\*add H<sub>2</sub>O

## **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**

Protease	Danger	H315, H318, H334, H335 P261, P280, P342+P311, P305+P351+P338
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**Hazard Statements**

H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

**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.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

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® puriColumns**

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

- **Preheat a thermomixer to 96 °C.**
- **Dissolve Lysozyme**  
Add **0.12 mL** (4w03.010), **0.2 mL** (4w03.050) or **0.92 mL** (4w03.250) of sterile water to the lyophilized lysozyme (final concentration is **25 mg/mL**).

## **Protocol**

### **Lysis of Bacteria (Plasmid) for DNA purification**

1. Transfer **up to 1 mL of bacterial culture** to a 1.5 mL or 2.0 mL reaction tube.  
Centrifuge (**6,000 × g, 1 min**) and remove carefully the supernatant.
2. Add **130 µL Buffer 4wE (P)**, **5 µL Protease** and **3 µL Lysozyme** to the cell pellet.  
Resuspend cells and incubate for **5 min at room temperature**.
3. Transfer the reaction tube to a preheated thermomixer (**96 °C**) and incubate for **10 min**.  
Let the lysate cool down to room temperature.
4. Add **15 µL RNase A** to each lysate. Mix gently. Incubate for **3 min** at room temperature

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

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

**Troubleshooting, FAQ and Special Applications**

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

**Contact Information**

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**Ordering Information and Prices**

For ordering information and prices please contact: [sales@4ward-na.com](mailto:sales@4ward-na.com).

