

- Switch to Buffer D and flow 10 CV of Buffer D through the column at half max allowed flow rate.
- Store the column in 20% ethanol for future use or equilibrate with the required buffer for further purification workflows.
- If used for endotoxin removal, check endotoxin level after equilibrating with endotoxin free water or PBS.
- These solutions can also be used on HPLC-SEC columns as long as they are listed to be compatible with 100% aqueous solutions. Flow rates may need to be adjusted based on the HPLC column backpressure.

### *For More Information*



visit <https://products.advanta.com/Cleanera-Endotoxin-Removal> or go directly to the web-page by scanning the QR-code with your favorite bar-code scanner app on your smart phone.



#### **Advanta Corporation**

2140 Bering Drive | San Jose, CA 95131

Tel: 650.325.1980 | Fax: 650.325.1904

Email: [support@advanta.com](mailto:support@advanta.com)

[www.advanta.com](http://www.advanta.com)

## *Cleanera Endotoxin Removal Buffer Kit*

**Buffer system for cleaning various protein purification, size exclusion and HPLC columns**

### *For Catalog Number*

**K-02102-C50**

Cleanera Endotoxin  
Removal Buffer Kit, 4 x 50 mL



## Cleanera Endotoxin Removal Buffer Kit

---

### Description

Column fouling due to endotoxin and other impurities leads to a loss of efficiency and high column backpressure. Ultimately, this leads to non-optimal purified products for use in cell-based or *in-vivo* assays. Cleanera Endotoxin Removal Buffer Kit comprises a set of four buffers specially formulated to clean a column in a stepwise manner. The set of four buffers is intended to be used in the sequence A-B-C-D to regenerate standard 1- and 5-mL affinity purification columns, such as Protein A, Protein G, Ni-NTA and size exclusion (SEC). This buffer system is compatible with cleaning in place (CIP) processes used on automated purification systems as well as manual purification columns. In addition to endotoxin removal, these buffers may be used as general cleaning solutions to remove tightly bound hydrophobic proteins and aggregates. The Cleanera column cleaning method yields faster flow rates with reduced column backpressure.

### Warnings and Precautions

- Cleanera Endotoxin Removal Buffer Kit is for research use only.
- Always wear gloves when handling reagents.
- Refer to SDS documents for additional safety information.
- The product is guaranteed to be free from defects in materials and workmanship under normal storage conditions, and to function as intended when the enclosed protocol is followed by properly trained personnel.

### Package Contents

- R-03169-C50, Buffer A (50 ml)
- R-03171-C50, Buffer C (50 mL)
- R-03170-C50, Buffer B (50 mL)
- R-03172-C50, Buffer D (50 mL)

### Protocol

1. The column cleaning procedure can be started with the column in any buffer system such as PBS, acetate, water, or right after CIP with sodium hydroxide.
2. Identify the maximum allowed column pressure and flow rate and run the buffers at half of maximum recommended flow rate. This would typically mean cleaning the column at a flow rate of around 0.3–0.4 mL/min for a 1 mL column.
3. Flow 5–10 column volumes (CV) of Buffer A through the column at the chosen flow rate.
4. Switch to Buffer B, and flow 10 CV of Buffer B through the column at the chosen flow rate.
5. Switch to Buffer C, and flow 10 CV of Buffer C through the column at chosen flow rate. Depending upon the amount of fouling, an additional volume may be passed through the column, or 10 CV can be flowed through at very low flow rates of 0.1 mL/min.

