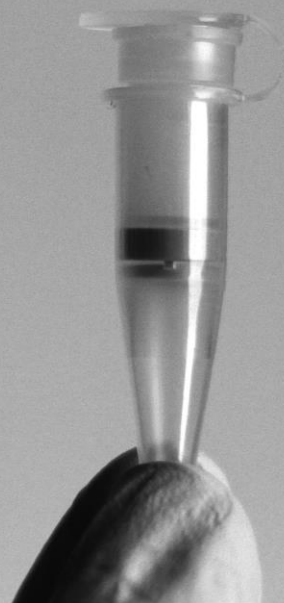




LudgerClean™  
Post-Exoglycosidase  
Clean-up Spin Columns

Product # LC-EXO-A6



**Ludger Document # LC-EXO-A6-Guide v1.0**

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## Ludger Post-Exoglycosidase Clean-up Spin Columns

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<b>Applications</b>	<b>Post-exoglycosidase Clean-up</b> For removal of exoglycosidase enzymes and other protein material following glycan enzymatic digestion/ sequencing. This will prevent contamination of HPLC columns during subsequent chromatographic analysis. The spin columns can also be used to remove exoglycosidases or other proteins before mass spectrometry analysis of glycans.
<b>Description</b>	The LC-EXO-A6 spin columns contain a specialized modified polyethersulfone membrane with a molecular weight cut-off of approximately 30 kDa. This product is compatible with any centrifuge equipped with a rotor suitable for Eppendorf tubes. Glycans pass through the membrane whilst proteins are retained on the membrane allowing separation of these two components.
<b>Number of Samples</b>	Each pack contains 6 spin columns
<b>Amount of Sample</b>	Up to 500 $\mu$ L per column
<b>Centrifugal Force</b>	Up to 14,000 x g
<b>Suitable Samples</b>	Unlabelled and fluorophore labelled (e.g. 2-AB, 2-AA or procainamide labelled) glycans released from glycoproteins or other sources and treated with exoglycosidase enzymes.
<b>Storage</b>	Store at room temperature. Protect from sources of heat, light, and moisture. When stored correctly, the products should be stable for 36 months from date of purchase.
<b>Shipping</b>	The product should be shipped at ambient temperature.

**For research use only. Not for human or drug use**

## Kit Contents

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The kit contains the following materials:

Cat. #	Item	Quantity
LC-EXO-A6	LudgerClean Post-Exoglycosidase Clean-up Spin Columns With Sample Collection Vials	6

## Additional Reagents and Equipment Required

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- Pure water: resistivity above 18 MΩ-cm, particle free (>0.22 μm), TOC <10 ppb
- Centrifuge equipped with a rotor suitable for Eppendorf tubes, operating speed up to 14,000 x g

## Safety and Handling

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- Ensure that any glass, plasticware or solvents used with this item are free of environmental carbohydrates. Use powder-free gloves for all sample handling procedures and avoid contamination with environmental carbohydrate.
- Once used, the plate should be discarded according to local safety rules.

## Clean-up Procedure

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### Time Line for Procedure

Procedure	Time
Sample loading	5 minutes
Elution of glycans	10 minutes
Drying glycans	as required
Total time	15 minutes plus drying time

## Method

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### Apply the samples onto the spin column

- Make sure that the post-exoglycosidase clean-up spin column is securely assembled inside of the sample collection vial provided.
- **Pipette the glycan sample onto the spin column membrane. Wash out each sample vial with 100 µL of water and add this to the spin column membrane.** Close the vial and centrifuge for 3 minutes at 10,000 x g or until the liquid has all gone through the membrane.

*The maximum centrifugal force used should not exceed 14,000 x g.*

### Wash the membrane of the spin column

- **Pipette 100 µL of water directly onto the spin column membrane to wash through any remaining sample.** Close the vial and centrifuge for 3 minutes at 10,000 x g or until the liquid has all gone through the membrane.

### Dry the glycans if necessary

- At this stage glycan samples may be at sufficient concentration for their intended use. Alternatively you additionally concentrate the glycans in a vacuum centrifuge. We do not recommend applying heat at this stage. Long drying times under elevated temperature may lead to glycan desialylation.

## Warranties and Liabilities

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Ludger warrants that the above product conforms to the attached analytical documents. Should the product fail for reasons other than through misuse Ludger will, at its option, replace free of charge or refund the purchase price. This warranty is exclusive and Ludger makes no other warrants, expressed or implied, including any implied conditions or warranties of merchantability or fitness for any particular purpose.

Ludger shall not be liable for any incidental, consequential or contingent damages.

This product is intended for *in vitro* research only.

## Document Revision Number

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## Appendix 1: Troubleshooting Guide

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### 1. **Liquid does not flow.**

- Insufficient centrifugation time: We recommend using extended centrifugation time for samples where high protein concentration/ high sample density is expected. Do not use higher than recommended centrifugation speed as this may disrupt the membrane structural integrity.
- Too much protein material: High concentration of protein or other high molecular weight material present in the sample can disrupt the liquid flow through the membrane. If liquid does not continue to pass despite extended centrifugation time, we recommend splitting the sample into two or more replicates. Maximum amount of protein per column should not exceed 20 µg.

## Appendix 2: Material Safety Data Sheet

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<b>Manufacturer</b>	Ludger Ltd Culham Science Centre, Oxford OX14 3EB, UK Tel: +44 870 085 7011, Fax: +44 870 163 4620 Email: info@ludger.com, Website: www.ludger.com
<b>Identification of the substance</b>	LudgerClean Post-Exoglycosidase Clean-up Spin Columns
<b>Composition</b>	Polypropylene spin columns containing modified polyethersulfone membrane.
<b>Hazard identification</b>	Non hazardous.
<b>Fire fighting measures</b>	Non hazardous. Water spray or appropriate foam according to surrounding fire conditions.
<b>Accidental release measures</b>	Not applicable.
<b>Handling and storage</b>	Store at room temperature. Handle in accordance with Good Laboratory Practice.
<b>Exposure Controls /</b>	Wear appropriate protective clothing (safety spectacles, gloves, laboratory coat) in accordance with Good Laboratory Practice.
<b>Physical and chemical properties</b>	Constructed of solid plastic and polymeric materials.
<b>Stability and reactivity</b>	Not combustible.
<b>Toxicological information</b>	Toxicological, carcinogenic and mutagenic properties have not been investigated.
<b>Ecological information</b>	Data not available.
<b>Disposal considerations</b>	No special requirements. Dispose of according to local requirements.
<b>Transport information</b>	Contact Ludger Ltd for transportation information.
<b>Regulatory information</b>	Data not available.
<b>Other information</b>	<b>The advice offered is derived from the currently available information on the hazardous materials in this product or component. Consideration has been made regarding the quantities offered in the pre-dispensed container. The advice offered is, therefore, not all inclusive nor should it be taken as descriptive of the compound generally.</b>