

Pierce[®] Detergent Removal Spin Plates

88304

2278.0

Number	Description
88304	<p>Pierce Detergent Removal Spin Plates, 2 plates, each well in the 96-well plate can process 25-100µL and contains ~550µL resin slurry in 0.15M NaCl, 0.05% sodium azide</p> <p>Note: Each package also contains two wash plates and two collection plates.</p> <p>Storage: Upon receipt store at 4°C. Product is shipped at ambient temperature.</p>

Introduction

The Thermo Scientific Pierce Detergent Removal Spin Plate enables multiple-sample processing using a high-performance resin that offers effective detergent removal and excellent protein/peptide recovery. Sample from 25 to 100µL can be processed with > 95% detergent retention. One plate containing 96 samples can be processed in 15 minutes for downstream analysis such as ELISA, isoelectric focusing, NMR and mass spectrometry. Protein and peptide mass spectrometry results are dramatically improved after removing detergents such as SDS, sodium deoxycholate, CHAPS, Triton X-100, Triton X-114, NP-40, Brij-35, octyl glucoside, octyl thioglucoside and lauryl maltoside. The plates are supplied ready to use with no resin hydrating or dispensing required.

Additional Materials Required

- Centrifuge with rotor and carriers capable of handling stacked plates (4.4cm height) and a minimum speed of $1000 \times g$
- Multi-channel pipettor and tips
- Wash/equilibration buffer: Recommended buffers include AMBIC, PBS, MES, MOPS, carbonate-bicarbonate or Tris at pH 4-10. **Do not use buffers containing organic solvents.**

Detergent Removal Procedure

1. Equilibrate the Pierce Detergent Removal Spin plates to room temperature.
2. Carefully remove the sealing material from the bottom of the detergent plate. Place the detergent removal plate on top of a wash plate.
3. Remove the sealing material from the top of the detergent removal plate.
4. Place the assembly into a centrifuge with 96-well plate-carrier rotor and centrifuge at $1000 \times g$ for 2 minutes to remove the storage buffer. Discard the flow-through and replace the detergent removal plate on top of the wash plate.
5. Add 300µL of wash/equilibration buffer to each well and centrifuge at $1000 \times g$ for 2 minutes. Discard the flow-through. Repeat this step two additional times.
6. Stack the detergent removal plate on top of a sample collection plate (blue), aligning the alphanumeric indices on the plate.
7. Slowly apply sample (25-100µL) to the center of the resin bed. To expel the entire sample from the pipette tip, carefully touch the tip to the resin. Incubate the plate for 2 minutes at room temperature.

Note: To process > 96 samples, evenly divide samples between two plates. To process ≤ 96 samples, balance the centrifuge by using an unprocessed plate with the top and bottom seal in place.
8. Centrifuge the plate assembly at $1000 \times g$ for 2 minutes to collect the detergent-free sample. Discard the detergent removal plate or reserve it for future balancing purposes.

Troubleshooting

Problem	Possible Cause	Solution
Sample or buffer does not flow through the plate	Centrifugation problem	Ensure that centrifuge is properly working
	Bottom seal was not removed	Remove the bottom seal before use
Incomplete detergent removal	Improper sample loading	Apply sample directly to the center of the resin bed, avoiding contact with sides of the plate wells; carefully touch the pipette tip to the resin to expel the entire sample
	Buffer contains organic solvents	Remove the organic solvent by dialysis
	Detergent concentration is too high	Dilute sample before processing

Detergent Removal Efficiency and Protein Recovery

Typical results are indicated in the table below. Results can vary depending on the type of detergent, the concentration of both the sample and detergent, and the type of protein/peptide being used.

Detergent	Detergent Concentration (%)	Detergent Removal (%)	Protein Recovery (%)
SDS	5	99	89
Triton® X-100	4	99	100
NP-40	1	95	100
CHAPS	5	99	100
Sodium deoxycholate	5	99	100
Octyl glucoside	5	99	90
Octyl thioglucoside	5	99	95
Lauryl maltoside	1	98	99
Triton X-114	2	95	100
Brij® -35	1	99	97
Tween® -20	0.25	99	87

Related Thermo Scientific Products

87777	Pierce Detergent Removal Spin Columns, 0.5mL, 25 columns, for 25-100µL samples
87774	Zeba™ Spin Desalting Plates, 96-well, 40K MWCO, 2 plates
89807	Zeba Spin Desalting Plate, 96-well, 7K MWCO, 2 plates
22660	Pierce 660 nm Protein Assay Reagent
22663	Ionic Detergent Compatibility Reagent, 5 × 1g

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Current product instructions are available at www.thermoscientific.com/pierce. For a faxed copy, call 800-874-3723 or contact your local distributor.

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