

Pierce™ Dye and Biotin Removal Plate

96-well plates for processing 40–100 µL sample volumes

Catalog Numbers A44304 and A44305

Doc. Part No. 2162738 Pub. No. MAN0018805 Rev. A.0

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Product description

The Thermo Scientific™ Pierce™ Dye and Biotin Removal Plate contains a ready-to-use resin that is uniquely designed for rapid removal of non-conjugated fluorescent dyes, biotin, reducing agents, and crosslinkers with exceptional protein recovery. One plate can process 96 samples in five minutes, enabling high-throughput sample purification for downstream analysis.

Removal of free dye after a labeling reaction is essential for the accurate determination of dye-to-protein ratios. The Pierce™ Dye and Biotin Removal Plate can be used to remove most fluorescent dyes. For optimal protein recovery and dye removal, ensure that the appropriate amount of sample and buffer conditions are used.

This product is recommended for the removal of unreacted biotin, fluorescent dyes, crosslinkers, and reducing agents from proteins >7 kDa.

Contents and storage

| Product | Cat. No. | Amount ^[1] | Storage |
|--|----------|-----------------------|---------|
| Pierce™ Dye and Biotin Removal Plate, 96-well ^[2] | A44304 | 2 filter plates | 4°C |
| | A44305 | 4 filter plates | |

^[1] Two wash plates and two collection plates are included in each package.

^[2] Each well contains approximately 420 µL of settled resin in a 0.1 N NaCl/0.05% sodium azide solution.

Required materials not supplied

Unless otherwise indicated, all materials are available through thermofisher.com. MLS: Fisher Scientific (fisherscientific.com) or other major laboratory supplier.

| Item | Source |
|--|--------|
| Equipment | |
| Variable-speed centrifuge with rotor and adaptor capable of handling stacked plates (4.4 cm height) at 1,000 × g | MLS |
| Multichannel pipette | MLS |

| Item | Source |
|---|--|
| Consumables | |
| Pipette tips (as recommended by pipette manufacturer) | thermofisher.com/pipettetips |

Procedural guidelines

- Do not reuse the purification resin.
- Limit DMF and other organic solvents to ≤10%.
- Do not use this product for desalting or buffer exchange.

Prepare the plate

1. Equilibrate the filter plate to room temperature.
2. Use the tab to remove the seal from the bottom of the plate, then place the filter plate on top of the wash plate.
3. Remove the seal from the top of the filter plate.
4. Place the plate assembly into a 96-well plate-carrier rotor, then centrifuge at 1,000 × g for 2 minutes to remove the storage buffer. Discard the flow-through.
5. (Optional) Add 300–400 µL of equilibration buffer to each well of the filter plate, then centrifuge at 1,000 × g for 2 minutes. Discard the flow-through.

Rinse the wash plate three times with deionized water, allow the plate to dry, then store for future use.

Process the samples

1. Place the prepared filter plate on top of a blue collection plate, aligning the alphanumeric grids of the plates.
2. Apply 40–100 µL of sample to the center of the settled resin. Touch the pipette tip to the resin to expel the entire sample.
3. Centrifuge the plate assembly at 1,000 × g for 2 minutes. The sample is in the blue collection plate.

Troubleshooting

| Observation | Possible cause | Recommended action |
|--|---|---|
| Sample or buffer does not flow through the resin | A problem occurred during centrifugation. | Ensure that the centrifuge is in proper working condition. |
| | | Ensure that the bottom plug of the column is removed and the top cap is loosened. |
| Insufficient removal of free dye | Low resin-to-free dye ratio. | Repeat the procedure using a higher resin-to-free dye ratio. |
| Sample contains contaminants | The sample was not loaded on the column properly. | Add the sample directly to the center of the settled resin, then carefully touch the pipette tip to the resin to expel the entire sample. |
| | A problem occurred during centrifugation. | Avoid contact with the sides of the column. Do not exceed the recommended centrifugation speed or time. |

Related products

| Product | Cat. No. |
|--|----------|
| Pierce™ Biotin Quantitation Kit | 28005 |
| Pierce™ Fluorescence Biotin Quantitation Kit | 46610 |
| Pierce™ Rapid Gold BCA Protein Assay Kit | A53225 |
| Slide-A-Lyzer™ G2 Dialysis Cassettes, 20K MWCO, 70 mL, 6 units | 87738 |
| EZ-Link™ Sulfo-NHS-SS-Biotin, No-Weigh™ Format | A39258 |
| EZ-Link™ Hydrazide-PEG4-Biotin | 21360 |
| Bond-Breaker™ TCEP Solution, Neutral pH | 77720 |
| Pierce™ TCEP-HCl, No-Weigh™ Format | A35349 |
| BS3 (bis(sulfosuccinimidyl)suberate), No-Weigh™ Format | A39266 |
| Alexa Fluor™ 660 NHS Ester (Succinimidyl Ester) | A20007 |
| DyLight™ 488 NHS Ester | 46402 |
| Pierce™ DTT (Dithiothreitol) | A39255 |
| DTNB (Ellman's Reagent) (5,5-dithio-bis-(2-nitrobenzoic acid) | 22582 |
| Pierce™ BCA Protein Assay Kit | 23225 |

Limited product warranty

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

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Revision history: Pub. No. MAN0018805

| Revision | Date | Description |
|----------|---------------|-------------------------------|
| A.0 | 6 August 2019 | New document for new product. |

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