Product Summary

Optima DTR™ 8-Well Strip

PRODUCT	CATALOG #	PURIFICATIONS
Optima DTR 8-Well Strip Kit, (12 strips)	8Well-1	96
Optima DTR 8-Well Strip Refill, (12 strips)	8Well-1R	96

Description

Optima DTR 8-Well Strips (12 strips) are gel filtration strips in a standard 8-well array. The strips provide optimal performance for removal of unincorporated BigDye® v1.1, v3.0, v3.1 and other dye terminators, dNTPs, salts, and other low molecular weight materials from sequencing reactions. These strips also remove DNA primers and fragments up to 20 bases, buffers, and nucleotides labeled with biotin, isotopes, and other assorted markers.

Each column of the 8-well strip is pre-packed with a 400 µL volume of Optima DTR resin, a fully hydrated matrix. To minimize the potential for interference with sequencing applications, no preservatives or buffers are used in the preparation of these strips. Each Optima DTR 8-Well Strip is sealed at the top to minimize drying.

COMPONENT	8WELL-1	8WELL-1R
Optima DTR 8-Well Strips (12 strips)	1 Plate (1 x 4050356)	1 Plate (1 x 4050356)
96-Well Waste Plates	2 Plates (1 x 4050096)	N/A
96-Well Receiver Plates	2 Plates (1 x 4050098)	N/A
Balancing Strip	1 strip (1 x 3020107)	N/A

Equipment and Materials Required

1. Variable speed centrifuge (benchtop or floor model)
2. Rotor and microplate carriers for above

Storage Condition

Store at +4ºC. Do not freeze.

Quality Control

Tested for sequence quality and sequencing accuracy on a capillary sequencer.

Recommended Protocol for 5 µL–10 µL Sequencing Reaction Volumes

1. Bring reaction volume to at least 5 µL with distilled water before adding to the Optima DTR 8-Well Strips.
2. Open and remove Optima DTR 8-Well Strips from foil package (retain packaging for storage).
3. Label packaging with the date opened using the label provided. Strips should be consumed within 2 weeks of opening.
4. Remove the desired number of Optima DTR 8-Well Strip(s) from the 96-well plate holder and place into the flat bottom 96-well flat bottom waste plate starting at Column 1.
5. Allow 30 minutes to equilibrate to room temperature (recommended).
6. Seal the open spaces on the Optima DTR 8-Well Strip holder with EdgeBio plate sealers (Cat# 48461). Return the unused Optima DTR 8-Well Strips in the 96-well plate holder to the foil package, seal and store at 4°C.
7. Peel back the clear plastic sealer/covering from the top of the Optima DTR 8-Well Strips.
8. Place the Optima DTR 8-Well Strip(s) in the flat bottom waste plate in a centrifuge and balance*. Spin at **850 x g for 3 minutes**. The flat bottom waste tray can be reused for additional samples.
9. Remove the Optima DTR 8-Well Strip(s) from the flat bottom waste plate and place into the corresponding column (column 1) of the 96-well V-bottom collection plate.
10. Load sequencing sample in center of wells and spin at **850 x g for 5 minutes**.
11. Pipet purified sample from V-bottom collection plate to a semi-skirted capillary plate (Cat# 13506) for sequencing.
12. The 96-well V-bottom collection plate can be used again to collect additional sequencing samples. However, do not reuse the columns of the plate that have already been used.

continued on reverse

Visit the EdgeBio YouTube channel for an **Optima DTR product tutorial**.

*Balancing the strips in centrifuge:

- It is important to balance the centrifuge to prevent damage to personnel and equipment. Please ensure that you check your centrifuge models weight imbalance tolerance.
- If using only one 8-Well Strip, then balance with the balancing strip provided.
- If using even numbers of 8-Well Strips, then split into two and run opposite each other.

Additional Notes

1. **Conversion of RCF to RPM Calculation**:

   An accurate determination of the centrifugation speed is very important. The relative centrifugal force (RCF) specified in the protocol is converted to revolutions per minute (RPM) using the following formula:

$$RPM = 1000\sqrt{\frac{RCF}{1.12r}}$$

   The radius, r, is equal to the distance in millimeters between the axis of rotation and the bottom of the gel bed when the plate is placed in the plate carrier in the centrifuge bucket.

   After measuring the radius for the specific centrifuge and accessories to be used, the proper RPM setting is calculated as follows:

   To achieve RCF = 850 *x g*:

$$RPM = 27{,}549\sqrt{\frac{1}{r}}$$

Visit the EdgeBio YouTube channel for an **RCF to RPM Conversion tutorial**.

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