PERFORMA® DTR Ultra 96-Well Plates

Product	Catalog #	Purifications
Performa DTR Ultra 96-Well Plates (10 Plates)	74251	960
Performa DTR Ultra 96-Well Plates (50 Plates)	86077	4800

Description

Performa DTR (**D**ye **T**erminator **R**emoval) Ultra 96-Well Plates are gel filtration plates that consists of 0.8-ml volume columns in a standardized array, packed with a gel matrix optimized to effectively remove dye terminators, dNTPs, salts and other low molecular weight materials from sequencing reactions. These columns also remove DNA primers and fragments up to 15 bases, buffers, and nucleotides labeled with biotin, isotopes and other assorted markers.

The columns are pre-packed with a fully hydrated matrix to afford optimal handling and performance characteristics. To minimize the potential for interference with sequencing applications, no preservatives, salts or buffers are used in the preparation of these columns. Both ends of the Performa DTR Ultra 96-Well Plate are sealed to prevent drying.

The sample can be spun directly into the ABI PRISM® MicroAmp® Optical 96 Well Reaction Plate or equivalent (96-Well Capillary Plates), thereby saving a transfer step.

Components	74251	86077
Performa DTR Ultra 96-Well Plate	10 plates (10 x PN 4050207)	50 plates (50 x PN 4050207)

Equipment and Materials Required

1. Variable speed centrifuge (benchtop or floor model)
2. Rotor and microplate carriers for above. The microplate carriers must be able to accommodate a deep-well plate.
3. 96-well receiver[1] and waste[2] plates
4. 96-Well Plate Lids (Edge BioSystems, Cat. No. 33100)

Storage Condition

Store at +4°C. Do not freeze.

Quality Control

Field-tested for sequence quality and sequencing accuracy on capillary sequencers.

Recommended Protocol for 5 µl–20 µl Sequencing Reaction Volumes

1. **Remove the top and bottom adhesive tapes from an Ultra 96-Well Plate. Cover with lid.**
   - Note: Remove the bottom adhesive tape first.
   - Ensure that the plate remains horizontal to avoid losing any gel.
2. **Stack the Ultra 96-Well Plate on top of a 96-well waste plate[2]. Place assembly on a cushioned centrifuge carrier designed to hold deep-well 96-well plates.**
3. **Centrifuge for 5 minutes at 850 *x g*[3]. Discard eluate.**
   - See "Additional Notes" for determination of RPM from RCF or visit our website at www.edgebio.com and click on Technical Support.
4. **Transfer the reaction samples in a volume of 5–20 µl to the center of each well in the Ultra 96-Well Plate. Pipet slowly. Do not touch the sides of the wells. Cover with lid.**
5. **Stack the Ultra 96-Well Plate on top of a receiver plate[1]. Place the assembly in the centrifuge carrier designed to hold deep-well 96-well plates.**
6. **Centrifuge for 5 minutes at 850 *x g*. Retain eluate.**
   - The eluate contains purified sample ready for loading on sequencers.
   - Note: Consult the instrument manufacturer's recommendation for sample handling.

Additional Notes

1. The following receiver plates are recommended: Edge BioSystems 96-Well Capillary Plate (Cat. No. 13506), ABI MicroAmp® Optical 96 Well Reaction Plate, Nunc Polypropylene V-bottom plate (part # 442587) and Costar Polystyrene V-bottom plate (part # 3897).

2. The following waste plate is recommended: Costar Flat Bottom plate (part # 9017).

    - The waste and receiver plates should be of the same height to allow the use of identical centrifuge setting for both steps 3 and 6.

3. 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:

$$RCF = 1.12\, r \left(\frac{RPM}{1000} \right)^2$$

    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:

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

    To achieve RCF = 850 *x g*:

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