

PERFORMA[®] DTR Gel Filtration Cartridges

Product	Catalog #	Purifications
Performa DTR Gel Filtration Cartridges (36 cartridges)	98780	36
Performa DTR Gel Filtration Cartridges (108 cartridges)	42453	108

Description

Performa DTR (**D**ye **T**erminator **R**emoval) Gel Filtration Cartridges are 0.8-ml spin columns packed with a gel matrix optimized to effectively remove dye terminators, dNTPs, 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 column is pre-packed with the matrix fully hydrated in water.

Components	98780	42453
Performa Gel Filtration Cartridges	36 carts. (PN 4050167)	108 carts. (3 x PN 4050167)
1.5-ml Microcentrifuge Tubes	36 tubes (PN 4050090)	108 tubes (PN 4050087)

Equipment and Materials Required

1. Variable speed centrifuge (benchtop or floor model) capable of 850 x g.
2. Carriers for microcentrifuge tubes.

Storage Condition

Store at +4°C. Do not freeze.

Quality Control

Tested for sequence quality, including signal strength, removal of fluorescent contaminants, and sequencing accuracy on a gel sequencer.

Recommended Protocol for use with BigDye[™] v3.1

1. **Centrifuge the Performa Gel Filtration Cartridge for 3 minutes at 850 x g.**
 - The time and speed of centrifugation are important.
 - The drier the packing (longer centrifugation times and/or higher g forces), the longer it takes to recover product and the lower the overall recovery.
 - Conversely, shorter spin times and lower speeds result in elution volumes higher than the input sample volume.
 - See "Notes" for determination of RPM from RCF or visit our website at www.edgebio.com and click on Technical Support.
2. **Transfer the cartridge to the provided 1.5-ml microcentrifuge tube and add the sample to the packed column. Be sure the fluid runs into the gel.**
 - If using a microcentrifuge or other centrifuge which uses a fixed angle rotor, place the sample in the center of the slanted gel bed surface to obtain optimal performance.
3. **Close the cap and centrifuge for 3 minutes at 850 x g. Retain eluate.**
 - Up to 4 µl may be lost during sample processing.
 - If the volume loss is greater than 4 µl, this is an indication of an overly dry gel. To optimize recovery of sample, repeat centrifugation.

Recommended Protocol for all other Dye Terminators

1. **Centrifuge the Performa Gel Filtration Cartridge for 2 minutes at 750 x g.**
2. **Transfer the cartridge to the provided 1.5-ml microcentrifuge tube and add the sample to the packed column. Be sure the fluid runs into the gel.**
3. **Close the cap and centrifuge for 2 minutes at 750 x g. Retain eluate.**

Notes

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:

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

The radius, r , is equal to the distance in millimeters between the axis of rotation and the bottom of the gel bed.

To achieve RCF = 750 x g:

$$RPM = 25,877 \sqrt{\frac{1}{r}}$$

To achieve RCF = 850 x g:

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