

Disposable Plastic Columns

29920 29922 29924

0026.3

Number	Description
29920	Disposable Polystyrene Columns , 100 columns, appropriate for 0.5-2.0mL gel beds
29922	Disposable Polypropylene Columns , 100 columns, appropriate for 1-5mL gel beds
29924	Disposable Polypropylene Columns , 100 columns, appropriate for 2-10mL gel beds

Additional Package Contents:

Porous Polyethylene Discs, 200 discs, 30 μ m pore size, for use above and below the packed gel bed

Top Caps, 100 push-on, water-tight polypropylene caps for the column top

Bottom Caps, 100 push-on, water-tight polypropylene caps for the column tip

Storage: Upon receipt store at room temperature. Product shipped at ambient temperature.

Introduction

The Thermo Scientific Disposable Plastic Columns are economical and convenient for packing gel supports for gravity-flow affinity and size exclusion chromatography procedures. The durable columns have leak-proof top and bottom caps that enable end-over-end mixing of reaction solutions and long-term storage of packed columns without risk of dehydration. The porous discs, when positioned above and below the packed gel bed (Figure 1 on last page), confer a unique stop-flow action to the column. Solutions applied to a column will automatically stop dripping from the column tip when the surface of solution drains down to the top disc, thereby keeping air bubbles from being drawn into the gel bed and preventing the gel from drying out if the column is left unattended for brief periods of time. Also, use of a top porous disc prevents suspension of the gel when pouring or pipetting solutions into the column and ensures that the quantity of solution applied to the column always equals the volume of eluate emerging from the tip.

Procedure for Packing Gel into a Column

1. Equilibrate column, degassed 50% gel slurry, and degassed buffer solution (or water) to room temperature.
2. Secure a bottom cap on the column tip and place the column in a 16 \times 125mm glass test tube (in a test tube rack) or clamp the column upright in a laboratory stand.
3. Add a sufficient volume of degassed buffer/water to the column to fill it up to the reservoir (wide-mouth) portion, then gently tap the end and side of the column to dislodge any air bubbles.
Note: Adding detergent such as Thermo Scientific Triton[®] X-100 Surfact-Amps Solution (Product No. 28314) to the buffer solution to a concentration of 0.03-0.05% will make it easier to remove air bubbles, especially from the conical tip of the column.
4. Float a porous disc on top of the liquid within the column.
5. Using the reverse end of a Pasteur pipette or reverse end of a serum separator (Product No. 69710), push the disc evenly to the bottom of the column.
6. Decant most of the liquid from the empty column, being sure to avoid getting air bubbles in the tip region of the column below the inserted disc. Place the column back in its stand with bottom cap still in place.
7. Add sufficient volume of degassed gel slurry to obtain the desired settled gel volume.
8. Allow gel to settle in the column for at least 30 minutes.

9. Position a second porous disc on top of the settled gel bed by floating it on the liquid within the column and pushing it down to just above the settled gel. Leave 1-2mm of space between the top of the gel bed and the top disc; do not compress the gel bed.
10. Wash the inside top part of the column with buffer/water to remove residual gel that may have remained along the sides during packing.
11. The packed column is now ready for storage or use.
 - Store the packed column upright at 4°C with the gel bed submerged under 1-2mL of buffer/water and a top column cap securely in place. Sodium azide added to the storage buffer/water to a concentration of 0.02% will help to prevent microbial growth in carbohydrate-containing gel supports.
 - Always remove the top cap before the bottom cap to avoid drawing air bubbles down into the gel bed.
 - Prevent air bubbles from forming in the gel bed by using only degassed buffer and sample solutions. Degassing involves subjecting a solution to vacuum to “boil” off excess dissolved air (see Additional Information section).

Additional Information

A. Please visit the web site for additional information about our products, including the following items:

- Tech Tip #29: Degas buffers for use in affinity and gel filtration columns
- Tech Tip #7: Remove air bubbles from columns to restore flow rate

B. Chemical Compatibility and Physical Properties of Plastic Columns

Polystyrene and Polypropylene Columns are compatible with dilute or weak acids, aliphatic alcohols and bases. Strong or concentrated acids can be used for brief periods. The columns are not compatible with aldehydes, esters, hydrocarbons, ketones or strong oxidizing agents. Polypropylene Columns (Product No. 29922, 29924) generally are more resistant to organic solvents, at least for brief periods of exposure, than Polystyrene Columns (Product No. 29920). Disposable Plastic Columns are intended for use between 4°C and 50°C, and they will deform above 90°C. The polyethylene porous discs used in the columns are more resistant to chemicals of all kinds than the column plastic.

Related Thermo Scientific Products

89896	Pierce Centrifuge Columns, 2mL
89897	Pierce Centrifuge Columns, 5mL
29923	Disposable Polypropylene Funnels
29925	Disposable Column Trial Pack , accessories plus two each of Product No. 29920, 29922, 29924 and one of Product No. 29923
69700	Spin Cup Columns
69705	Mini-Spin Columns Plus Accessories
89868	Economy Mini-Spin Columns
20055	Reusable Glass Columns
69710	Resin Separators

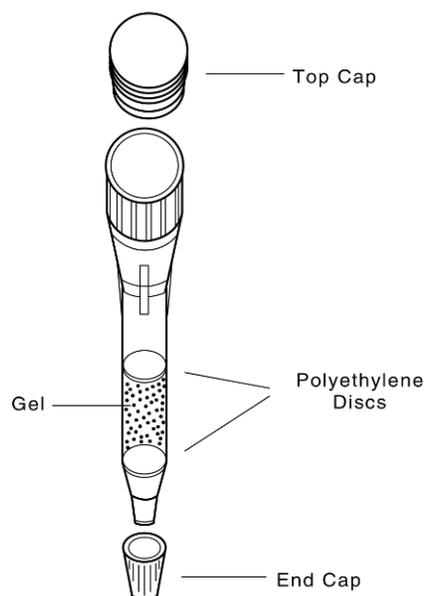


Figure 1. Assembly of Disposable Columns.

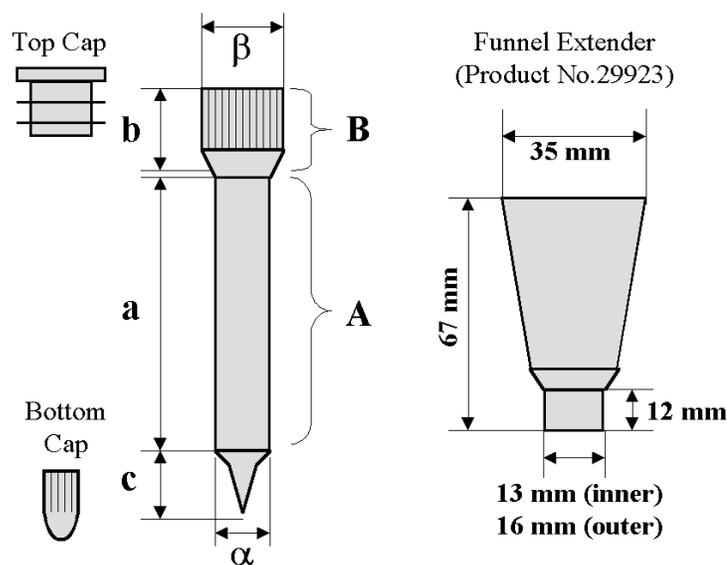


Figure 2. Column parameters described in Table 1.

Table 1. Dimensions (in millimeters) and Volumes (in milliliters) of Thermo Scientific Disposable Columns.

Column Product No.	Column Bed			Column Reservoir			Tip	Total Column			
	a Height	α Diameter Inner Outer		A Volume	b Height	β Diameter Inner Outer		B Volume	c Height	Height (w/o cap)	Height (with cap)
29920	60	7	9	2.3	20	16	19	4.0	17	102	107
29922	70	10	13	5.5	14	16	19	2.8	20	107	110
29924	70	15	18	12.3	14	16	19	2.8	20	107	110

Triton is a trademark of The Dow Chemical Company.

This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the original purchaser of the Product ("Buyer").

No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s).

There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.

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

© 2011 Thermo Fisher Scientific Inc. All rights reserved. Unless otherwise indicated, all trademarks are property of Thermo Fisher Scientific Inc. and its subsidiaries. Printed in the USA.