



Top-Off Resin for Q and S Bio-Scale Columns Instructions

**Catalog Numbers
751-0009, 751-0019**

For Technical Service
Call Your Local Bio-Rad Office or
in the U.S. Call **1-800-4BIORAD**
(1-800-424-6723)

BIO-RAD

Introduction

When the top of the column bed is strongly discolored or obviously plugged and the usual hygiene steps do not restore performance, then a few millimeters of the bed should be removed and replaced with fresh resin as instructed below:

Column Preparation

1. Wash column with 10 bed volumes of deionized water at a flow rate not exceeding 50% of the recommended maximum flow-rate (see Table 1).
2. Disassemble the column and remove the top frit as described in the Bio-Scale column instruction manual.
3. Add 2-4 mm of deionized water to the top of the resin bed.
4. Using a spatula or pipette slurry the contaminated resin.
5. Remove the slurry with a pipette.

Top-Off Resin Usage

1. Vortex the top-off tube until the slurry is homogeneous.
2. Pipette an appropriate amount of slurry on top of the column bed (see Table 1).
3. Allow the resin to settle (approximately 10-15 min).
4. Insert frit and assemble column as described in the Bio-Scale column instruction manual.
5. After assembly, backflush the column with deionized water at a low flow rate until the air is removed from the tubing.
6. Turn the column around and wash the column with 5 column volumes of deionized water at a flow rate not exceeding 50% of the maximum recommended flow rate (see Table 1).
7. Prior running a sample, it is recommended to run a blank gradient at the appropriate flow rate an ionic strength to ensure the column packing is homogeneous.
8. Column performance can be tested by using a Bio-Rad Protein Standard. Use the conditions stated in the Sample Chromatogram that was provided with the column.

Technical Assistance

For additional information and technical assistance, contact your local Bio-Rad representative (as listed on the back cover of our catalog). In the U.S.A., call Technical Service at 1-800-4BIORAD.

Table 1. Look-Up Tables and Conversions

Column Volume	Maximum Recommended Flow Rate(ml/min)	ml Resin/cm Column Length
2 ml	0.5 to 3.0	0.4
5 ml	0.5 to 5.0	0.8
10 ml	0.5 to 7.0	1.1
20 ml	0.5 to 10.0	1.8

- The slurry concentration is approximately 66% (resin/20% ethanol)
- There is approximately 1.2 ml of resin per tube
- To measure: 0.5 ml of resin, pipette 0.8 ml of slurry
1.0 ml of resin, pipette 1.6 ml of slurry

Ordering Information

Catalog Number	Product Description
751-0001	Bio-Scale Q2 Column
751-0003	Bio-Scale Q5 Column
751-0005	Bio-Scale Q10 Column
751-0007	Bio-Scale Q20 Column
751-0009	Top-Off Resin Kit Q , 1 ml, includes 1 ml of MP10 Q resin, 2 frits and 2 distribution screens for each column diameter
751-0011	Bio-Scale S2 Column
751-0013	Bio-Scale S5 Column
751-0015	Bio-Scale S10 Column

Ordering Information (*cont.*)

Catalog Number	Product Description
751-0017	Bio-Scale S20 Column
751-0019	Top-Off Resin Kit S , 1 ml, includes 1 ml of MP10 S resin, 2 frits and 2 distribution screens for each column diameter
751-0091	Bio-Scale 2 ml Replacement Part Kit , includes 5 frits, 5 distribution screens, 2 o-rings, 1 frit remover
751-0093	Bio-Scale 5 ml Replacement Part Kit , includes 5 frits, 5 distribution screens, 2 o-rings, 1 frit remover
751-0095	Bio-Scale 10 ml Replacement Part Kit , includes 5 frits, 5 distribution screens, 2 o-rings, 1 frit remover
751-0097	Bio-Scale 20 ml Replacement Part Kit , includes 5 frits, 5 distribution screens, 2 o-rings, 1 frit remover
751-0099	Bio-Scale Fittings Kit , includes 2 Super Flangeless Nuts (1/4 x 28 thread) and 6 Ferrules, 2 Flangeless M6 Nuts, 4 Ferrules and 2 Caps, 2 Fingertight II Fittings (10-32 threads)



**Bio-Rad
Laboratories**

Life Science Group

U.S. (800) 4BIORAD • **California** Ph. (510) 741-1000 • **New York** Ph. (516) 756-2575 • **Australia** Ph. 02-805-5000 • **Austria** Ph. (1) 877 89 01 • **Belgium** Ph. 09-385 55 11 • **Canada** Ph. (905) 712-2771 • **China** Ph. (01) 2046622 • **Denmark** Ph. 45-39 17 99 47 • **France** Ph. (1) 49 60 68 34 • **Germany** Ph. 089 31884-0 • **India** Ph. 91-11-461-0103 • **Italy** Ph. 02-21609 1 • **Japan** Ph. 03-3534-7665 • **Hong Kong** Ph. 7893300 • **The Netherlands** Ph. 0318-540666 • **New Zealand** Ph. 09-443 3099 • **Singapore** Ph. (65) 4432529 • **Spain** Ph. (91) 661 70 85 • **Sweden** Ph. 46 (0) 735 83 00 • **Switzerland** Ph. 01-809 55 55 • **United Kingdom** Ph. 0800 181134