


Packing Conditions for Self Pack™ POROS™ 20 MC Media

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 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Read me second

Before you read this document, please read the document titled *POROS™ Self Pack™ Packing Device for High Performance Perfusion Chromatography™ Columns* (shipped with the packing device). Then read these instructions, which are a supplement to the instructions provided with the packing device.

For the media you have purchased, this instruction sheet tells you:

- The specific slurry conditions and packing conditions to use on Perfusion Chromatography™ systems (the BioCad™ Workstation or BioCad™ Sprint™ System) or FPLC™ systems.
- The specific slurry conditions and all packing conditions, except flow rate, to use on other HPLC systems. (The POROS™ Self Pack™ Packing Device instruction sheet explains how to determine the packing flow rate.)
- Recommended maximum flow rate.
- Column permeability testing information.

Preparing the slurry

This section tells you what solvents to use and how to slurry the media.

Solvents

 **WARNING!** Always wear eye protection when working with solvents.

Use these solvents:

- Slurry solvent (to slurry the media): Deionized water
- Packing solvent: Deionized water

Slurrying the media

The bottle of dry POROS™ media contains enough media to give the correct slurry density to pack the number of columns shown in Table 1 on page 1.

Table 1 Number of columns/solvent requirements

Media Quantity	Number of Columns		Required Volume (ml)
	4.6 mmD/50 mmL	4.6 mmD/100 mmL	Slurry Solvent
(0.8 g)	2	1	12
(2.7 g)	6	3	36

To guarantee proper results, slurry the entire bottle even if you will not use all the slurry at once. Do not divide the powder into portions.


To slurry the media:

1. Pour the required volume (see Table 1 on page 1) of slurry solvent into the media bottle. Swirl the bottle gently until the material is well suspended.

When you tilt the bottle, no powder should remain on the bottom. The slurry should have a milky appearance and consistency.

2. Store unused media slurry in the refrigerator.

Note: Add to the media bottle 20 µl of a 1.0% sodium azide stock solution (a preservative) per 1 ml of unused slurry (final azide concentration is 0.02%).

 **DANGER! CHEMICAL HAZARD. 1% Sodium azide in water** is a poison. It may be fatal if inhaled, swallowed or absorbed through the skin. Exposure may cause nerve and heart damage. Contact with acids liberates toxic gases. DO NOT ADD acids to any liquid wastes containing sodium azide. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Read the MSDS, and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Packing conditions

See Table 2 on page 2 for packing conditions for your system.

Note: Set the system pressure limit before you pack your column. See Preparing Your LC System, in the *POROS™ Self Pack™ Packing Device Product Information Sheet* for information.

Table 2 Packing conditions

Column Size	Volume of media slurry to add to device (ml) ^[1]	Recommended initial packing flow rate (ml/min)	Volume of packing solvent to pass through column during packing (ml)
Perfusion Chromatography™ systems			
4.6 mmD/50 mmL	6	20	35
4.6 mmD/100 mmL	12	20	35
FPLC™ systems^[2]			
4.6 mmD/50 mmL	6	10	35
4.6 mmD/100 mmL	12	10	35
Other systems			
4.6 mmD/50 mmL	6	^[3]	35
4.6 mmD/100 mmL	12	^[3]	35

^[1] After you add this media slurry to the device, top off the device with slurry solvent as described in the section on filling the packing device in the *POROS™ Self Pack™ Packing Device Product Information Sheet*.

^[2] To keep within the pressure specifications of FPLC™ pumps, program your FPLC™ system to deliver the flow rate with pump A and B (set "Conc % B" to 50 and prime both pumps with packing solvent).

^[3] See Packing a Column Using Other Systems in the *POROS™ Self Pack™ Packing Device Product Information Sheet* to determine the packing flow rate.

Note: You may need to reduce the flow rate because of variations in frit permeability or system backpressure. See Packing a Column Using Other Systems in Packing the Column, in the *POROS™ Self Pack™ Packing Device Product Information Sheet* for more information.

Recommended maximum flow rate

The maximum recommended flow rate for the column during normal operation is 85% of the packing flow rate. This flow rate keeps the pressure within the operating limit you recorded in Packing the Column, in the *POROS™ Self Pack™ Packing Device instruction sheet*.

When you work with viscous solvents, lower the operating flow rate to account for the greater pressures generated by the greater viscosity.

Recording column permeability

Column pressure/flow characteristics are called column *permeability*. Test column permeability at the recommended maximum flow rate to establish a baseline.

To test column permeability:

1. Run the packing solvent through the column at the recommended maximum flow rate.
2. Record the generated pressure (permeability baseline).

Whenever you re-test column permeability, do so under solvent and flow rate conditions identical to those of this initial test.

Support

For service and technical support, go to thermofisher.com/poros or call toll-free in US: 1.800.831.6844.

For the latest service and support information at all locations, or to obtain Certificates of Analysis or Safety Data Sheets (SDSs; also known as MSDSs), go to thermofisher.com/support, or contact your local Thermo Fisher Scientific representative.

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Revision	Date	Description
B	18 January 2017	Baseline for this revision history.

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