


Packing Conditions for Self Pack™ POROS™ 20 AL 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.

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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:

- To react the support before packing the column.
- The specific slurry conditions and packing conditions to use on Perfusion Chromatography™ systems (the BioCad™ Workstation or BioCad™ Sprint™ System).
- The specific slurry conditions and all packing conditions, except flow rate, to use on other HPLC systems. (The *POROS™ Self Pack™ Packing Device Product Information Sheet* explains how to determine the packing flow rate.)
- Recommended maximum flow rate.
- To record column permeability.

Reacting the support and preparing the slurry

React the POROS™ media before packing it into a column. Reacting the support before packing allows you to:

- Optimize the coupling reaction with small aliquots of media
- Conserve ligand


The bottle of dry POROS™ media contains enough media to pack the following number of columns:

Table 1 Number of columns

Media Quantity	Number of Columns	
	4.6 mmD/50 mL	4.6 mmD/100 mL
[0.8 g]	2	1
[2.7 g]	6	3

Note: If you use media to optimize the coupling reaction, you will be able to pack fewer columns.


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

Reacting the support and preparing the slurry

 **WARNING!** POROS™ media is provided as a dry powder, which may form a light dust. Use one of the following when handling dry POROS™ media:

- NIOSH*/MSHA**-approved respirator with dust cartridge
- Fume hood

* National Institute for Occupational Safety and Health

** Mine Safety and Health Administration

1. If desired, use small aliquots of media to determine optimum conditions for reacting the support. For specific information and guidelines on reacting the support, please refer to the appropriate sections in the POROS™ AL, EP, OH, NH, and HY Bulk Media Operating Instructions included with the POROS™ media:
2. When you have determined optimum conditions for reacting the support, weigh out the quantity of media required to pack your columns:

Column size	Quantity required for packing
4.6 mmD/50 mL	0.4 g
4.6 mmD/100 mL	0.8 g

3. React the support. Refer to the sections listed above for specific information.
4. Wash the media with deionized water. Add deionized water to produce the needed volume of media slurry (see Table 2).
5. Store unused media at room temperature.

Packing conditions

If you are packing a column using a Perfusion Chromatography™ system or a conventional HPLC system, install a backpressure regulator on your column. See "Using the Backpressure Regulator" in the *POROS™ Self Pack™ Packing Device Product Information Sheet* for information.

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 the device off with slurry solvent as described in "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 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 Product Information Sheet*.

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

The information in this guide is subject to change without notice.

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

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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.

Limited product warranty

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