



SepTech Silica Reversed-Phase Media Data Sheet

General Description

SepTech media is a 10 µm silica C18 material for prep to process liquid chromatography. This guide is intended to help with column packing, performance and lifetime.

Introduction

The following are guidelines for packing SepTech material into the laboratory Load & Lock columns using the recommended packing station. The packing pressure used must NOT exceed the safe operating pressure of the packing station/column. The operational instructions supplied with the Load & Lock packing station and columns must be adhered to at all times

Personnel

These guidelines have been written for personnel having a good knowledge of the methodologies used for packing laboratory Dynamic Axial Compression (DAC).

Safety

Please read the MSDS provided with the SepTech material before opening the bottle. The person, or persons, using the SepTech material must comply with the Health and Safety Regulations in force in the Country and Establishment where the material is being used.

Preparation of the Packing Slurry and Column Packing

The recommended weight of dry SepTech material required to pack a 10 cm bed length of the three diameters of laboratory Load & Lock columns is given in Table 1. The recommended weights equate to a packed bed density of 0.61 g of dry material per mL of packed column bed.

1. SepTech is supplied as a dry powder ready for use.
2. Based on the required column volume, column id and length to be packed, calculate and weigh the appropriate amount of dry material.
3. Disperse the material in packing solvent, propan-2-ol, to give a final slurry concentration of approximately 0.5 g dry packing solvent.
4. To ensure the SepTech material is fully dispersed and free of lumps the packing slurry can be shaken, bottle rolled or

ultrasonicated for approximately five min. As with HPLC media, do not use a magnetic stirring bar as this will grind the particles and produce fines.

5. The packing slurry is now ready for use.
6. Take the homogenous, free flowing slurry and pour quickly into the assembled column in one continuous action.
7. Complete the assembly of the column and operate the packing station according to the instructions supplied. A piston packing pressure of approximately 650 psi (45 bar) is recommended. Make sure that the packing pump pressure has been calculated using the correct ratio for the column id/packing station being used to give a piston pressure of 650 psi.
8. Once column packing is complete, the flow of packing solvent has ceased and the pump has stopped, allow the column to stand/equilibrate for 10 min.
9. If required the column plunger can be locked in the compressed position so that the column can be operated in the Static Axial Compression (SAC) mode.
10. The packed column is now ready for use. It can be used while still assembled on the packing station or it can be undocked for use in a purification facility.
11. The typical column efficiency for the SepTech media in a bench top Load & Lock column is 25,000 plates/meter.

Table 1. Summary of the column packing/testing parameters for the three sizes of Load & Lock columns - based on a 10 cm packed bed length.

	Load & Lock columns		
	1 in (2.5 cm id)*	2 in (5.0 cm id)	3 in (7.5 cm id)
Column volume	57 mL	196 mL	442 mL
Weight of dry SepTech	35 g	120 g	270 g
Packing solvent	85 mL	300 mL	650 mL
Flow rate equivalent to 180 cm/h	17 mL/min	59 mL/min	133 mL/min

* actual id 2.7 cm.



Agilent Technologies

www.agilent.com/chem

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc., 2011

Printed in the UK

October 2011

Part Number 830-0122



Agilent Technologies