
Micro-Guard Cartridges

Instruction Manual

BIO-RAD

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Warranty

Cartridges received damaged in shipment or defective in workmanship will be replaced if returned within 20 days of the invoice date. No other warranty as to end use, life, or performance is made. Specifications are subject to change.

Section 1

Introduction

Guard columns have been an accepted part of HPLC technology for a number of years. They protect expensive microparticle analytical columns from degradation caused by particulate matter, irreversibly bound material, and aggressive reagents in the sample or the solvent.

The Micro-Guard HPLC guard cartridges are slurry-packed with material similar to that in the HPLC columns they protect. Micro-Guard cartridges are housed in the reusable standard cartridge holder (catalog number 121-0131) or the deashing holder (catalog number 125-0139). When resolution begins to degrade, simply replace the spent cartridge. Industrial guards are recommended for HPLC analysis in industrial settings. These guards are packed with a larger size packing material than analytical guards.

Section 2

Installation

Care should be taken to prevent air from passing into the cartridge by making sure that no air bubbles are in the tubing before the holder and cartridge are in place.

To fit a cartridge into the holder, unscrew one end of the holder and pull it away from the central tube. Loosen the other end a few turns, and then insert the cartridge into the holder. Firm pressure will pop the cartridge into the holder securely. Fit the free end of the holder onto the cartridge and screw it down. With the Deashing Holder, the center fitting should be placed between the two cartridges in the holder. The holder ends need only be screwed down finger-tight. Further tightening is unnecessary, and may damage the seal or holder. Never use tools to tighten this seal.

Section 3

Specifications

The cartridges are 4.6 mm ID x 3 cm long. Materials in contact with the mobile phase are stainless steel and Kel-F fluoropolymer. With standard test mixes, these cartridges have a typical lifetime of over 300 injections.

3.1 Pressure

System pressure should not exceed 4,000 psi. The pressure drop should be less than 750 psi for resin-based cartridges, and less than 400 psi for silica-based cartridges.

3.2 Temperature

The maximum temperature for Micro-Guard cartridges and the cartridge holders is 60°C.

Section 4

Cartridge Storage

To store a cartridge out of its holder between uses, protect its Kel-F frit assemblies from dirt and scratches. Store it in the shipping vial with a few drops of recommended storage solvent to prevent the cartridge from drying out.

Guard	Shipping/Storage Solvent
Carbo-P	H ₂ O
Carbo-C	H ₂ O
Cation H	0.01 M H ₂ SO ₄
Anion CO ₃	0.001 M NaHCO ₃
Cation N	0.001 M Na ₂ SO ₄

Section 5

Product Information

Catalog number	Product Description
Micro-Guard Cartridges Packed with Aminex® Resin	
125-0118	Deashing Cartridge (1 Cation H+ and 1 Anion CO ₃ -)
125-0119	Carbo-P Cartridge
125-0128	Carbo-C Cartridge
125-0129	Cation H Cartridge
125-0506	Anion CO ₃ - Cartridge
125-0508	Cation N Cartridge
Cartridge Holders	
125-0131	Standard Cartridge Holder (accommodates 1 cartridge)
125-0139	Deashing Holder (accommodates 2 cartridges)

Kel-F is a trademark of 3M Corporation.



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