

# For High Performance Liquid Chromatography

## COSMOSIL® GUARD CARTRIDGE

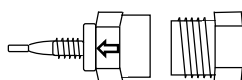
### 1. INTRODUCTION

The guard cartridge is a disposable unit packed with the same packing material as the COSMOSIL Packed Columns. To ensure maximum efficiency and long life for the analytical column, read this manual carefully.

### 2. CARTRIDGE HOLDER

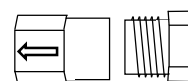
The COSMOSIL Guard Cartridge is slotted into the Guard Cartridge Holder (sold separately). Two types of Guard Cartridge Holder are available.

#### i) Direct Cartridge Holder



Connect to analytical column directly without Column Connecting Tube.

#### ii) Guard Cartridge Holder



Connect to analytical column with Column Connecting Tube (sold separately).

### 3. USAGE

#### (1) Assembly of the Guard Cartridge

Slot the Guard Cartridge into COSMOSIL Guard Cartridge Holder and close the Holder tight with wrenches. Arrows on the Guard Cartridge and the Holder must point the same direction!

#### (2) Connection of the Guard Cartridge Holder

Connect the inlet of the Guard Cartridge Holder according to the direction of mobile phase flow.

#### (3) Removal of air

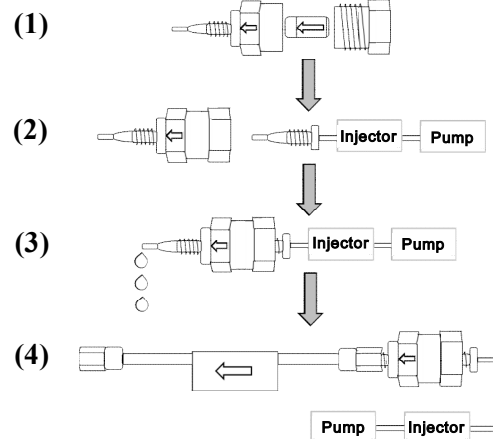
To remove air bubbles from the cartridge, pass a mobile phase which contains no salts (ex. 70% methanol, 60% acetonitrile) through the Guard Cartridge for 5 min or longer.

Recommended flow rate is 1.0 ml/min for a 4.6 mm I.D. cartridge, or 0.2 ml/min for a 2.0 mm I.D. cartridge.

#### (4) Connection of Guard Cartridge Holder and analytical column

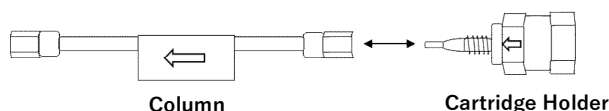
Connect as shown in the diagram below, and pump the mobile phase through.

#### Preparation procedure

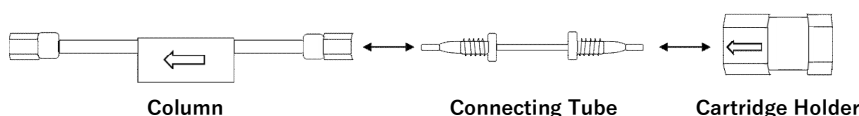


#### How to connect to the column

##### i) Direct Cartridge Holder



##### ii) Guard Cartridge Holder



#### 4. EXCHANGE OF GUARD CARTRIDGES

If any problems (increase of pressure, appearance of ghost peaks, increasing/unstable baseline, etc.) occur during the analysis, change the Guard Cartridge immediately. Continued use of a blocked Guard Cartridge will result performance decline of the analytical column. The Holder can be used repeatedly.

#### 5. STORAGE OF GUARD CARTRIDGE

After use, wash the column and the Guard Cartridge with a suitable solution which contains no salts or buffer (ex. 70% methanol, 60% acetonitrile), keep the Guard Cartridge in the Holder, and store it tightly plugged (for the Direct Cartridge Holder, keep it connected to the analytical column). Removing and reinserting the Guard Cartridge may reduce performance.

#### 6. CARE AND USE

- Avoid mechanical shocks to the analytical column and Guard Cartridge.
- Use only HPLC grade solvents

#### 7. RELATED PRODUCTS

Product Name	Product Number	PKG Size
COSMOSIL® Direct Cartridge Holder 4.6mmI.D.	19989-71	1 PKG
COSMOSIL® Guard Cartridge Holder 2.0mmI.D.	11884-71	1 PKG
COSMOSIL® Guard Cartridge Holder 4.6mmI.D.	38009-79	1 PKG
COSMOSIL® Column Connecting Tube (0.1mmI.D.)	12570-41	1 PKG
COSMOSIL® Column Connecting Tube (0.25mmI.D.)	37843-69	1 PKG