

MCI GEL packed columns and packing materials are polymer based and silica based packings for HPLC applications. MCI GEL packing are produced by Mitsubishi Chemical Corporation with advanced, state-of-the-art, chemical process manufacturing technology. The column performance of each MCI GEL column has been chromatographically tested and quality controlled.

MCI GEL columns are packed with MCI GEL packings materials which are spherical packings with a narrow particle size distribution. MCI GEL columns provide high performance, excellent lot to lot consistency, and long operating life.

The MCI GEL CK08EH packed column has been designed for the analysis of organic acids, carbohydrates and alcohol by ion exclusion chromatography mode. This column will provide excellent separation and short analysis time.

1. Column specifications

Packing materials	
Materials	: styrene-divinylbenzene copolymer
Type	: strongly acidic cation exchange resin
Particle size	: 9 μ m
Functional group	: sulfonic
Counter ion	: H ⁺
Column dimensions	: 8 mmI.D \times 300mm (stainless steel 316L)
Shipping solvent	: 1% H ₃ PO ₄
Maximum pressure	: 6 MPa (60 kg/cm ²)
Maximum flow rate	: 1.2 mL/min.
Maximum temperature	: 95 °C
pH range	: 1 ~ 7

2. Column performance

Theoretical plate number	: >8000 (for peak ethylene glycol, per column)
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Test conditions

Eluent	: 1% H ₃ PO ₄
Flow rate	: 0.6 mL/min.
Column temperature	: ambient
Detection	: RI
Sample	: ethylene glycol 1% 10 μ L injection

3. Important notice regarding operating instructions

- ① The recommended mobile phase is deionized water. The mobile phase must be filtered with a $0.45\ \mu\text{m}$ filter and degassed before use.
(用去离子水配置流动相, 不是用去离子水作流动相)
- ② Flow eluent only in the direction shown on the column.
- ③ Please observe the following: the column flow rate must be 0.1 mL/min. at start experimental work. After about 2 minutes the column flow rate is increased at a rate of 0.1 mL/min. every 2 minutes until at the planned operating flow rate. The recommended column flow rate is 0.6 mL/min.
- ④ Filter the sample solution through a $< 0.45\ \mu\text{m}$ filter before injection. Any suspended particles and undissolved solids trapped or adsorbed packing in the column will shorten the column life.
- ⑤ When disconnecting the column from the HPLC instrument... avoid leaving the solution in the column during storage... cap both column ends tightly to prevent drying of the packing material.
- ⑥ The recommended storage solution is 1% H_3PO_4 with a storage temperature range 15°C to 30°C . During storage, avoid exposure of the column to direct sunlight.

4. Column cleaning procedure

In a situation where column performance has changed, and of lower performance than the as received column, there may be a blockage of the filter, contamination of the resin, etc.

In the case of a slight blockage (and increased back pressure), we recommend backwash the column using eluent at a flow rate of 0.1 mL/min. for a minimum of one hour. If cleaning with the eluent does not return the column to satisfactory chromatography performance, we recommend backwash with 1N HNO_3 using the same procedure.

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