2 MCI GEL™ Ion exchange columns and materials

○Cation exchange resins MCI GEL™ CK series

○Anion exchange resins MCI GEL™ CA series

Mitsubishi Chemical Ion Exchange Resins

MCI GEL™ specializes in polymer based packing materials. Specifically, polystyrene polymer based ion exchange resins are derived from over 50 years of manufacturing experience of Diaion™ product line. MCI GEL™ ion exchange resins for HPLC have been developed with the same attention to performance and quality. For several decades, Mitsubishi Chemical has been providing MCI GEL™ ion exchange columns are offered in a variety of chemistries, particle sizes and counter ions to support a broad range of applications.

Features

1. Variety of products gel type, porous type, DVB%, particle size, particle size distribution analytical use, preparative use

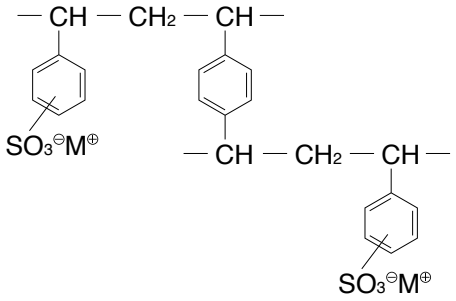
2. Persistence of high quality, excellent separation performance

3. Accumulation of abundant knowledge and experience of applications

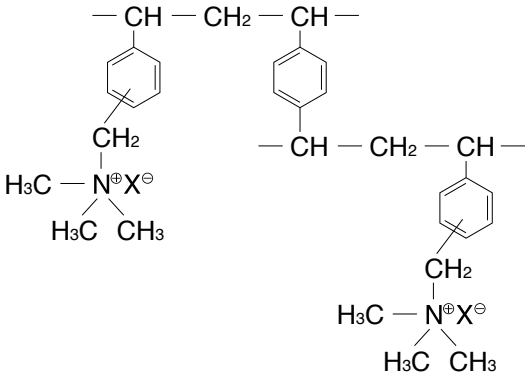
Ion exchange resins are generally used for analysis of amino acids, sugars, organic acids and amines, etc. MCI GEL™ custom pre-packed columns are specifically designed for each application using the most appropriate packing material among our product line and using the most suitable column dimensions.
Typical application for each column is shown in this catalog. These data will suggest an appropriate column.

●Chemical structure of ion exchange resin

〈Strongly acidic cation exchange resin〉



〈Strongly basic anion exchange resin〉



●MCI GEL™ columns for HPLC

	Description						Typical usage					
	Product name	Column dimensions I.D×L [mm]	Packing material: Cross linkage [%]	Packing material: Counter ion	Packing material: Particle size [μm]	USP	Amino acid	Mono saccharide	Oligo-saccharide	Carboxylic acid	Amine	Physiological fluid
MCI GEL™ Cation exchange columns	MCI GEL™ CK10U	6×120	10	Na^+	5		○				○	
	MCI GEL™ CK08S	8×500	8	Na^+	11	L58		○				
	MCI GEL™ CK08E	8.0×300 7.8×300	8	Na^+	9	L58		○				
	MCI GEL™ CK08EC	8.0×300 7.8×300	8	Ca^{2+}	9	L19		○				
	MCI GEL™ CK08EH	8.0×300 7.8×300	8	H^+	9	L17		○		○	○	
	MCI GEL™ CK06SC	8×500	6	Ca^+	11			○	○			
	MCI GEL™ CK04S	10×200	4	Na^+	11	L58			○			
	MCI GEL™ CK04SS	10×200	4	Ag^+	11				○			
	MCI GEL™ CK02A	20×250	2	Na^+	20	L58			○			
	MCI GEL™ CK02AS	20×250	2	Ag^+	20				○			
MCI GEL™ Anion exchange columns	MCI GEL™ CA08F	4.6×250	8	SO_4^{2-}	7			○		○		

●Packing materials

Packing materials are available. Please look at P.62 and P.63.

●Description of a gel type ion exchange column

MCI GEL™ CK08EC

- for HPLC use
- Cation=K, Anion=A
- DVB%
- Particle size (mode): A=20μm, S=11μm, E=9μm, F=7μm, U=5μm
- Counter ion: (no letter=Na^+, C=Ca^{2+}, S=Ag^+, H=H^+)

●Note ; Pre-column and guard column

1. Please consider using a guard column concerning purity of injection sample. Guard columns, are listed in the end of this catalog, should be selected in accordance with a main column.
2. As for analysis of amino acids by MCI GEL™ CK10U, MCI GEL™ AFR2-PC is recommended as a pre-column. The AFR2-PC column is very effective to stabilize base line because it can trap ammonium ion in eluent. A peak caused of the ammonium ion may disturb base line stability.