



# HICHROM

Chromatography Columns and Supplies

LC COLUMNS  
MCI Gel

Catalogue 9

## Hichrom Limited

1 The Markham Centre, Station Road  
Theale, Reading, Berks, RG7 4PE, UK

Tel: +44 (0)118 930 3660 Fax: +44 (0)118 932 3484

Email: [sales@hichrom.co.uk](mailto:sales@hichrom.co.uk) [www.hichrom.co.uk](http://www.hichrom.co.uk)

- Polymeric phases
- Reversed-phase, ion-exchange, SEC phases
- Columns and bulk resins
- High chemical stability

The MCI GEL® range of polymeric phases, manufactured by Mitsubishi Chemicals, includes reversed-phase, ion-exchange, ion chromatography, chiral and size exclusion materials. These products are available as packed columns and bulk materials. The features of these MCI GEL phases are summarised below. Please contact Hichrom for ordering information for the bulk resins and chiral columns.

## Columns for Low Molecular Weight Separations (eg. MW < 2000)

### Columns for ion-exchange (CK and CA Series) – for MW < 2000

Matrix: styrene-divinylbenzene copolymer

MCI GEL Phase	Cross Linkage %	Counter Ion	Particle Size (µm)	Applications	Column Dimensions <sup>1</sup> (mm)	Cat. No.	Price
CK10U	10	Na <sup>+</sup>	5	Amino acids, amines	120 x 6.0	001901	
CK08S	8	Na <sup>+</sup>	11	General sugar separations	500 x 8.0	000901	
CK08E	8	Na <sup>+</sup>	9	General sugar separations	300 x 8.0	001001	
CK08EC	8	Ca <sup>2+</sup>	9	General sugar separations, sugar alcohols	300 x 8.0	001002	
CK08ES	8	Ag <sup>+</sup>	9	-	300 x 8.0	001003	
CK08EH	8	H <sup>+</sup>	9	Carboxylic acids, sugar alcohols	300 x 8.0	001005	
CK04S	4	Na <sup>+</sup>	11	Oligosaccharides	200 x 10	000301	
CK04SS	4	Ag <sup>+</sup>	11	Oligosaccharides	200 x 10	000302	
CK02A	2	Na <sup>+</sup>	20	Oligosaccharides	250 x 20	000101	
CK02AS	2	Ag <sup>+</sup>	20	Oligosaccharides	250 x 20	000102	
CA08F	8	Cl <sup>-</sup>	7	Sugars, carboxylic acids, nucleotides	250 x 4.6	011101	
CDR10	porous	AcO <sup>-</sup>	7	Sugars, nucleotides from physiological fluids	250 x 4.6	011901	

<sup>1</sup> Guard columns available

### Columns for ion chromatography (SCK and SCA)

The MCI GEL ion chromatography columns are designed for non-suppressed ion chromatography applications.

Matrix: SCK01 – styrene-divinylbenzene copolymer, SCA04 – polyhydroxymethacrylate

MCI GEL Phase	Functional Group	Counter Ion	Particle Size (µm)	Applications	Column Dimensions <sup>1</sup> (mm)	Cat. No.	Price
SCK01	-SO <sub>3</sub> <sup>-</sup>	Na <sup>+</sup>	11	Mono- and divalent cations, transition metals, nucleosides	50 x 6.0	003401	
					150 x 4.6	003404	
SCA04	Quaternary ammonium	Cl <sup>-</sup>	5	Inorganic anions	150 x 4.6 <sup>2</sup>	013302	

<sup>1</sup> Guard columns available

<sup>2</sup> PEEK hardware

Column: MCI GEL SCK01 (50 x 6.0mm)  
 Eluent: 1.5mM tartaric acid, 0.8mM ethylenediamine  
 Flow rate: 1.0ml/min  
 Column temperature: 40°C  
 Detection: Conductivity

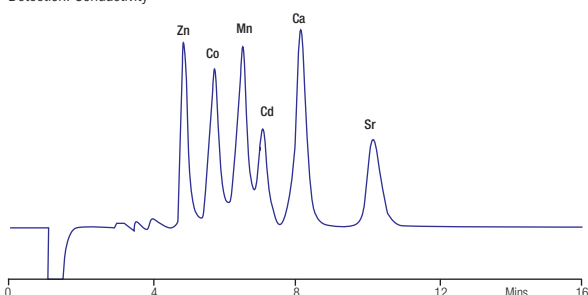


Figure 1. Transition metal analysis on MCI GEL SCK01

Column: MCI GEL SCA04 (50 x 6.0mm)  
 Eluent: 3mM potassium hydrogenphthalate  
 Flow rate: 1.2ml/min  
 Column temperature: 40°C  
 Detection: Conductivity

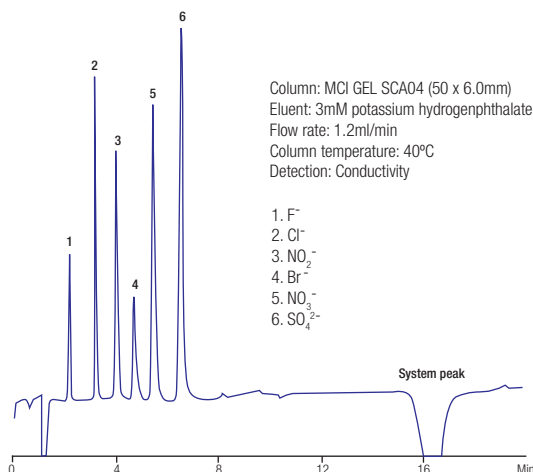


Figure 2. Anion analysis on MCI GEL SCA04

## Columns for Low Molecular Weight Separations (eg. MW < 2000) (continued)

### Columns for reversed-phase (CHP Series)

MCI GEL Phase	Matrix	Particle Size (µm)	Pore Size (Å)	pH Range	Column Dimensions (mm)	Cat. No.	Price
CHP10M	PS-DVB	4	proprietary	1 - 13	150 x 4.6	040101	
CHP5C	PS-DVB	10	250	1 - 13	250 x 4.6	020401	
CHP2MGM	Hydroxypolymethacrylate	4	proprietary	2 - 12	150 x 4.6	040201	
CHP2MG	Hydroxypolymethacrylate	10	250	2 - 12	250 x 4.6	020201	

### Columns for Biopolymer Separations (eg. MW > 2000)

#### Columns for gel filtration (CQP Series)

Matrix: polyhydroxymethacrylate

MCI GEL Phase	Particle Size (µm)	Pore Size (Å)	Exclusion Limit PEG	Applications	Column Dimensions <sup>1</sup> (mm)	Cat. No.	Price
CQP06	10	120	10 <sup>3</sup>	Proteins, peptides, enzymes and other biomolecules	600 x 7.5	021301	
CQP10	10	200	10 <sup>4</sup>		600 x 7.5	021401	
CQP30	10	600	10 <sup>6</sup>		600 x 7.5	021501	

<sup>1</sup> Guard columns available

#### Columns for ion-exchange (CQA and CQK Series) – for MW > 2000

Matrix: polyhydroxymethacrylate

MCI GEL Phase	Functional Group	Counter Ion	Particle Size (µm)	Pore Size (Å)	pH Range	Applications	Column Dimensions (mm)	Cat. No.	Price
CQA31S	Diethylaminoethyl	Cl <sup>-</sup>	10	600	2 - 12	Proteins and peptides	75 x 7.5	012601	
CQA35S	Quaternary ammonium	Cl <sup>-</sup>	10	600	2 - 12		75 x 7.5	013001	
CQK30S	Sulphopropyl	Na <sup>+</sup>	10	600	1 - 13		75 x 7.5	003601	
CQK31S	Carboxymethyl	Na <sup>+</sup>	10	600	4 - 13		75 x 7.5	003801	

#### Columns for hydrophobic interaction chromatography (CQH Series) – for MW > 2000

Matrix: polyhydroxymethacrylate

MCI GEL Phase	Functional Group	Particle Size (µm)	Pore Size (Å)	Applications	Column Dimensions (mm)	Cat. No.	Price
CQH3ES	Ether	10	600	Proteins and peptides	75 x 7.5	021701	
CQH3BS	Butyl	10	600		75 x 7.5	021601	
CQH3PS	Phenyl	10	600		75 x 7.5	021801	

### MCI GEL® Bulk Media

MCI GEL® bulk packing materials include ion-exchange resins, size exclusion materials and non-functionalised polymer for reversed-phase separations. The availability of resins with particle sizes from 4 to greater than 100µm makes MCI GEL materials suitable for analytical to preparative applications.

Please contact Hichrom for further details of these materials.