

## Allsep Anion

The Allsep Anion column range was developed by Alltech. Hichrom acquired this column range from Grace. Allsep Anion is a methacrylate-based phase with quaternary ammonium functional groups, optimised for use with both suppressed and non-suppressed conductivity detection. Columns are compatible with common IC mobile phases, such as carbonate, bicarbonate, p-hydroxybenzoic acid, phthalic acid, succinic acid, and sodium octane sulfonate.

Allsep Anion is recommended for applications involving inorganic anions, weak and strong acid ions, metal complexes and organic acids. It meets the requirements for the EPA method 300.0 Part A for determination of inorganic ions in water.

### Key Features

- 7 µm polymer-based anion exchange phase
- Suppressed or non-suppressed conductivity detection
- pH range 2–10
- Use with 0–100 % organic modifier
- USP L23

### Ordering Information

#### 7 µm

Length / mm	50	100	150		250
i.d. / mm	4.6	4.6	2.1	4.6	2.1
Stainless Steel	51214	51200	51210	51208	51212
PEEK (metal-free)	51213	51207	–	51209	–

Length / mm	Guard cartridges (3/pk) <sup>1</sup>	Guard cartridges (3/pk) <sup>1</sup>	Guard cartridge kits <sup>2</sup>	Guard cartridge kits <sup>2</sup>
i.d. / mm	For 2.1	For 3.0–4.6	For 2.1	For 3.0–4.6
Stainless Steel	38110/S	38108/S	38111/S	38109/S
PEEK (metal-free)	–	38108	–	38109

<sup>1</sup>All-Guard cartridge holder and coupler (80101/N and HI-081) for stainless steel hardware and 80101 for PEEK hardware required.

<sup>2</sup>Includes All-Guard cartridge holder and coupler (80101/N and HI-081) for stainless steel hardware, 80101 for PEEK hardware, and 3 guard cartridges.

## Hichrom Organic Acid

Hichrom Organic Acid columns are ion exclusion columns packed with sulphonated polystyrene-divinylbenzene. The OA-1000 and OA-2000 columns exhibit excellent selectivity for aliphatic and aromatic acids. As with most ion exclusion columns, a column heater is necessary for normal operating procedures.

The IOA-1000 and IOA-2000 columns are suitable for the separation of citric and other acids from glucose and fructose.

### Key Features

- Rapid analysis of organic acids and alcohols
- pH stable polymer resin
- Isocratic 100 % aqueous mobile phases only - no organic solvents
- USP L17

### Ordering Information

Part number	Phase	Particle size / µm	Column dimensions / mm	Applications
9046	OA-1000	9	300 x 6.5	Inorganic ions, such as fluoride, arsenate, sulphite, alcohols and most organic acids
9048	OA-2000	6.5	100 x 6.5	Organic acids with low pH values, low MW straight chain acids and aromatic acids
9646	IOA-1000	9	300 x 7.8	Acids of the tricarboxylic acid cycle (Krebs cycle)
9648	IOA-2000	8	150 x 6.5	Fast separation of acids and some alcohols

**28884** – Guard cartridges for Hichrom Organic Acid columns (2/pk).

**28883** – Guard cartridge kit for Hichrom Organic Acid columns, including guard cartridge holder and 2 guard cartridges.

## Hichrom Anion Exclusion

Hichrom Anion Exclusion columns are based on a highly sulphonated polystyrene-divinylbenzene cation-exchange resin. The phase has a particle size of 10 µm and is designed for the separation of organic acids and weakly ionised anions by an anion exclusion mechanism. Typical mobile phases contain dilute mineral acids. Acetonitrile (<10%) may be added as organic modifier to decrease the retention of hydrophobic compounds.

### Key Features

- Separates organic acids and weakly ionised anions
- Polymer-based for broad pH stability
- USP L22

### Ordering Information

10 µm

Length / mm	100	300
i.d. / mm	7.8	7.8
Anion Exclusion (stainless steel)	269068	269006

## Hichrom Anion/S

Hichrom Anion/S columns are based on 10 µm silica with quaternary ammonium ion-exchange groups. These columns are optimised for non-suppressed conductivity detection and are best suited for routine separations of chloride, bromide, nitrate, and sulphate.

### Key Features

- Silica-based for symmetrical peak shapes
- Separates inorganic and organic anions

### Ordering Information

10 µm

Length / mm	100	250
i.d. / mm	4.6	4.6
Stainless Steel	269013	269001
PEEK (metal-free)	269012	269011

## Hichrom Carbohydrate Cation

The Hichrom Carbohydrate Cation column consists of a highly efficient sulphonated polystyrene resin supplied in the calcium form. This column provides excellent separations using only water as the mobile phase.

### Key Features

- Sulphonated polystyrene resin (Ca<sup>2+</sup> form)
- 100% water used as mobile phase
- Column heating required
- USP L19

### Ordering Information

70057 – Hichrom Carbohydrate Cation, 10 µm, 300 x 6.5 mm

Length / mm	300
i.d. / mm	6.5
Hichrom Carbohydrate Cation	70057

### Hichrom Pre-saturation Columns

All silica HPLC packing materials will gradually dissolve in aqueous solution. This problem is exacerbated when the pH level of the solution is above 7. To avoid silica dissolution, mobile phases should ideally be buffered between pH 3.5–6.5. Where high levels of aqueous solvent or alkaline pH conditions are required, the pre-saturation column (packed with large 40 µm particle diameter silica) saturates the mobile phase with silica to minimise analytical column dissolution problems.

### Ordering Information

28610 – Hichrom pre-saturation column, 250 x 4.6 mm (1/pk)

28650 – Hichrom pre-saturation column, 250 x 4.6 mm (4/pk)