

Alltech® Allsep™ Anion Column

About the Packing

The Allsep™ Anion Exchange column is packed with a methacrylate-based anion exchanger with quaternary amine functional groups. The packing material is hydrophilic and stable within the pH range of 2 to 10. The particle size of the packing is 7µm.

About the Column

The Allsep™ anion column has been developed for the separation of inorganic anions by suppressor-based or single-column ion chromatography. **Figure 1** shows the separation of anions in the suppressor-based mode at room temperature. This column is also an excellent choice for single-column IC (SCIC). For SCIC applications, the column works well with p-hydroxybenzoic acid and phthalic acid mobile phases as shown in **Figures 2** and **3**. The Allsep columns are available in stainless steel or metal-free formats. For more information on the applications, please contact our Technical Support Group.

Care and Use

Our columns are carefully tested to meet specified performance criteria. A test chromatogram is enclosed with each column. Upon receipt of any column, the test chromatogram should be duplicated. If any problems occur at this time, please contact Grace or your Grace representative.

Ion-exchange columns, like all liquid chromatography columns, can be damaged after extended use. This problem is usually manifested as a loss in efficiency and column performance. A column can be damaged by using incompatible solvents, exceeding column pH limitations, changing solvent/mobile phase frequently, or not filtering samples and mobile phases.

NOTE: Do not use the Allsep™ column with sodium hydroxide mobile phase. The maximum operating pressure is 2000psig.

Best Insurance for a Long Column Life:

- Filter all the samples and mobile phases through 0.5µm (or smaller) filter prior to analysis.
- Use only IC grade water for preparation of mobile phases and standards.
- Use pure reagents for mobile phase preparation.
- Pretreat samples with Alltech® Maxi-Clean™ IC cartridges to remove interferences or column damaging contaminants.
- A guard column should be used in cases where the sample may contain materials that can "poison" the column.
- Store the column as recommended below.

In some cases, contamination on the column can be cleaned by a regeneration procedure, but in other cases the column must be replaced.

Regeneration Procedure for the Allsep™ Anion Column

1. Pass 100mL 50mM disodium EDTA adjusted to pH 10.0 with sodium hydroxide at 1mL/min.
2. Pass 100mL deionized water.
3. Pass 50mM sulfuric acid in 5% acetonitrile.
4. Pass 100mL deionized water.
5. Mobile phase.

Storage Solvent

Do not store columns in water alone for more than three days as this will promote microbial contamination. Store the column in the mobile phase. The column is shipped in bicarbonate/carbonate mobile phase.

Alltech® Allsep™ Anion Columns

| Description | Part No. |
|--------------------------------|----------|
| Metal-Free Allsep™ | |
| 50 x 4.6mm | 51213 |
| 100 x 4.6mm | 51207 |
| 150 x 4.6mm | 51209 |
| Stainless Steel Allsep™ | |
| 50 x 4.6mm | 51214 |
| 100 x 4.6mm | 51200 |
| 150 x 4.6mm | 51208 |

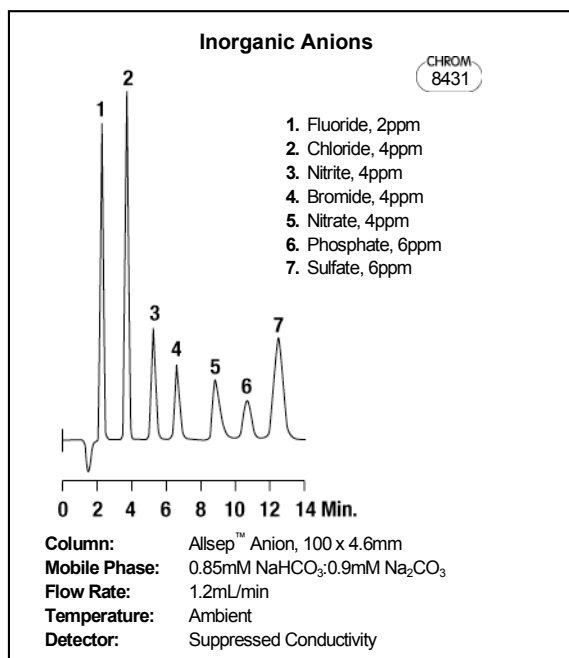


Figure 1

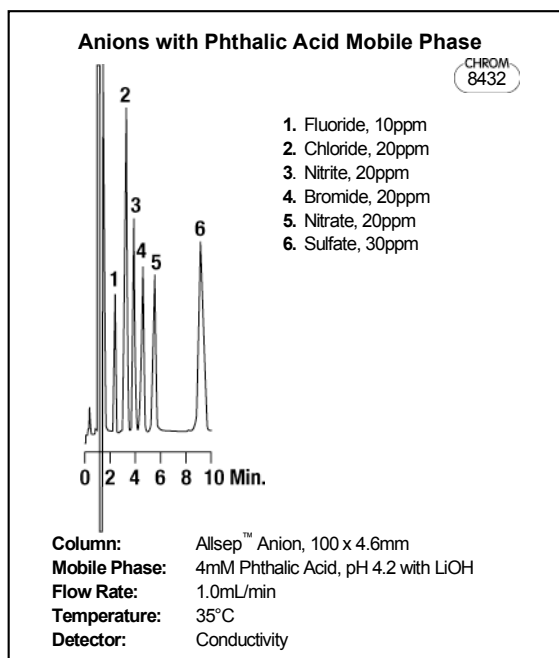


Figure 3

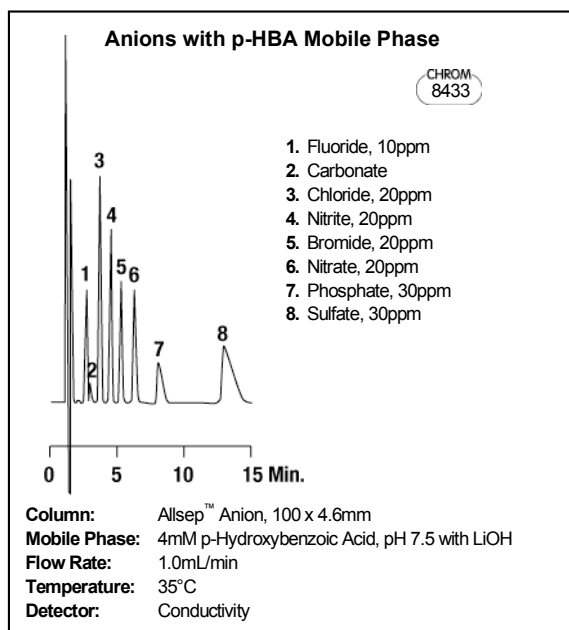


Figure 2

IMPORTANT Safety Considerations

Columns are intended for use by technically qualified personnel only. Columns operate at high pressures. To avoid leaks or pressure related failures, follow all manufacturer's directions and ensure all fittings and connections are tight and secure before operating the column. Refer to the QC chromatogram for maximum operating pressures and adjust operating conditions and limits accordingly. Users must be aware of the hazards associated with the mobile phase used and need to use appropriate personal protective equipment and engineering controls based on the MSDS for the mobile phase in use and the materials being analyzed.

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