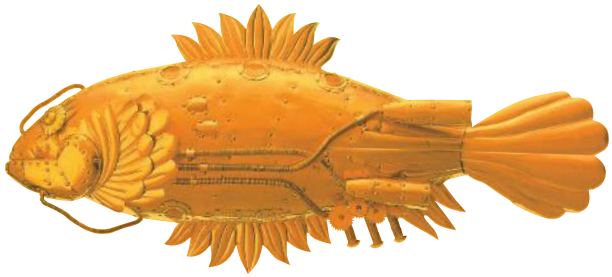
Shodex™



HPLC Columns

MANUAL

IC NI-424

SHOWA DENKO EUROPE

Columns manufactured by Showa Denko K.K Japan
Made in Japan

Shodex HPLC Columns
Europe, Middle East, Africa, Russia

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Operation Manual

Shodex™ IC NI-424

(Please read this manual carefully before using the column to ensure performance and life.)

1. Introduction

Shodex IC NI-424 column was developed for non-suppressor system in anion chromatography. Packing material is hydrophilic methacrylate gel chemically bonded with quaternary ammonium group. It can perform high-sensitivity measurement of most inorganic anions and organic acid ions.

2. Specifications

Size:	ID, 4.3mm; length, 100mm.
Column material:	316 stainless steel.
Theoretical plate number:	more than 5000 (SO_4^{2-}).
Maximum flow rate of eluent:	1.2 ml/min.
Maximum working pressure:	6.0 MPa.
pH range:	2~8.
Maximum organic solvent concentration in eluent:	10%.
Working temperature range:	Room temperature ~60 °C.

3. Adjustment of standard eluent

1) Measure 1.105 g of 4-hydroxybenzoic acid, 0.586 g of Bis-Tris*, 0.244 g of phenylboronic acid and 1.7 mg of CyDTA** into a 1 liter measuring flask. Make it up to a 1-liter solution using ion exchange water.

   *Bis (2-hydroxyethyl) iminotris-(hydroxymethyl) methane.

   **Trans -1, 2-aminocyclohexane -N, N, N', N' -4 acetic acid.

2) After dissolving the mixture in the water by applying ultrasonic vibration, pass the solution through a 0.45 µm membrane filter and use the filtered solution as eluent.

3) For measuring low concentration ion in particular, purification of 4-hydroxybenzoic acid is recommended as impurities contained in the reagent need to be removed. Vacant

peaks for trace amounts of the impurities in the reagent could interfere with the measurement.

4) When alkaline eluent (more than pH 7) is used, it is necessary to prevent absorption of carbon dioxide into the eluent and resulting change in the pH of the eluent. Attach a carbon dioxide trap to the mouth of the bottle containing the eluent to prevent carbon dioxide from being absorbed into the eluent. Use of acidic eluent is normally recommended as it is stable.