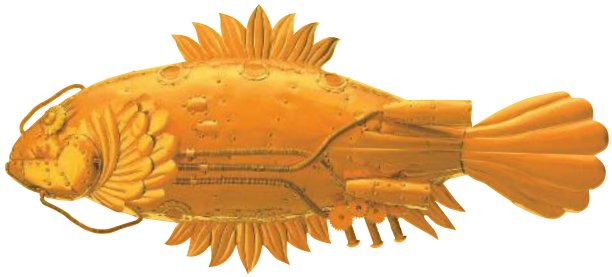
Shodex™



HPLC Columns

MANUAL

IC SI-50

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 SI-50

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

1. Introduction

The Shodex IC SI-50 4E column is developed for use in suppressor method anion chromatography.

The seven anions (fluoride, chloride, nitrite, bromide, nitrate, phosphate and sulfate) and organic acids (for example: acetate, formatecan, methacrylate and oxalate) be separated with high sensitivity.

2. Specifications

Table 1

Product name	Column size (ID x Length (mm))	Plate number (TP/per column)	Particle size	Application
IC SI-50 4E	4.0 x 250	>10,000	5µm	For analysis
IC SI-90G	4.6 x 10	-	9µm	As guard column

The packing material is an anion exchanger made from polyvinylalcohol gel chemically bonded with quaternary ammonium.

The liquid with which the columns are filled at delivery is a mixture of 3.2 mM Na_2CO_3 and 1.0 mM $NaHC_3$.

Table 2 – SI-50 4E

Column material:	PEEK
Recommended eluent:	3.2 mM Na_2CO_3 + 1.0 mM $NaHCO_3$
Maximum flow rate:	0.8 mL/min
Recommended flow rate:	0.7 mL/min
Maximum pressure:	15.0 MPa
Usable pH range:	pH 3~12
Recommended temperature range:	20~60 °C

3. Sample pretreatment

1) Inject the sample into the column only after it has been passed through a 0.45 µm membrane filter to remove particles.

2) Any sample containing protein should be injected into the column only after protein has been eliminated from the sample.

3) Inject the sample containing organic impurities into the column only after the sample has undergone solid extraction treatment (Sep-Pak PS-1).

4. Eluent

Normally aqueous solution of described in the Table 2 can be used as an eluent for Shodex IC Sl columns.

1) 3.2 mM Na_2CO_3 + 1.0 mM $NaHCO_3$

Measure 0.339g of Na_2CO_3 and 0.0840g of $NaHCO_3$ into a 1 liter measuring flask.

Make it up a 1 liter solution using distilled and deionized water.

5. Storage

The column should be throughly flushed with fresh eluent.

Column disconnected from the LC system should be tightly capped both ends to prevent internal drying, and stored in a room that has less temperature fluctuation.

6. Regenaration

Cause	Washing procedure
Polution by low valency hydrophilic ions	Washed by the following steps (flow rate 0.3mL/min): 1. 25 min: deionized water 2. 100 min: 10 times concentrated eluent 3. 25 min: deionized water 4. 100 min: eluent
Polution by high valency hydrophobic ions	Washed by the following steps (flow rate 0.3 mL/min): 1. 25 min: deionized water 2. 20 min: 5% acetonitrile 3. 100 min: 100% acetonitrile 4. 50 min: deionized water 5. 100 min: eluent