Shodex IC SI-50 Series

Sodium Carbonate Eluent Suppressor Method Anion Analysis Columns

Shodex

Features

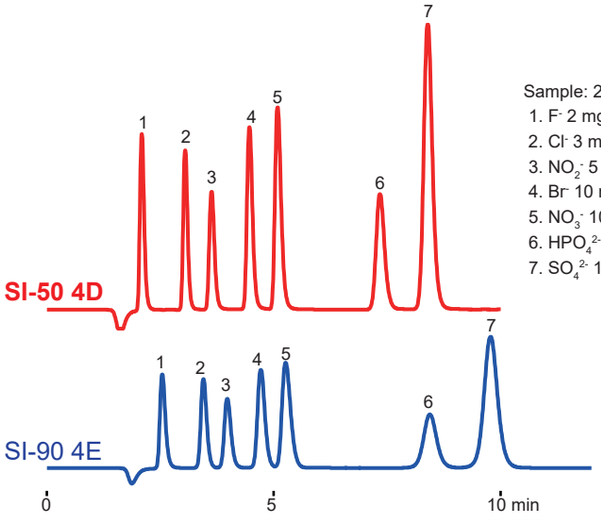
- Newly launched SI-50 4D provides rapid and high resolution analysis of seven general inorganic ions
- IC SI-50 4E well separates general inorganic anions from organic acids

Product Code	Product Name	Plate Number (TPN/column)	Column Size I.D. x L (mm)
F6995345	IC SI-50 4D NEW	≥10,000	4.0 x 150
F6995245	IC SI-50 4E	≥10,000	4.0 x 250
F6709625	IC SI-50G	(guard column)	4.6 x 10

Packing Material: Provinyl Alcohol Gel
Functional Group: Quaternary Ammonium
Particle Size: 5 µm
Shipping Solvent: 3.2 mM Na_2CO_3 + 1.0 mM $NaHCO_3$ aq.

Rapid Anion Analysis

～ Comparison of SI-50 4D and SI-90 4E ～



Sample: 20 µL
1. F^- 2 mg/L
2. Cl^- 3 mg/L
3. NO_2^- 5 mg/L
4. Br^- 10 mg/L
5. NO_3^- 10 mg/L
6. HPO_4^{2-} 15 mg/L
7. SO_4^{2-} 15 mg/L

- Separates 7 general anions within 10 minuets
- SI-50 4D（new product）showed improved theoretical plate number (TPN) compared to SI-90 4E (conventional product, particle size: 9 µm)

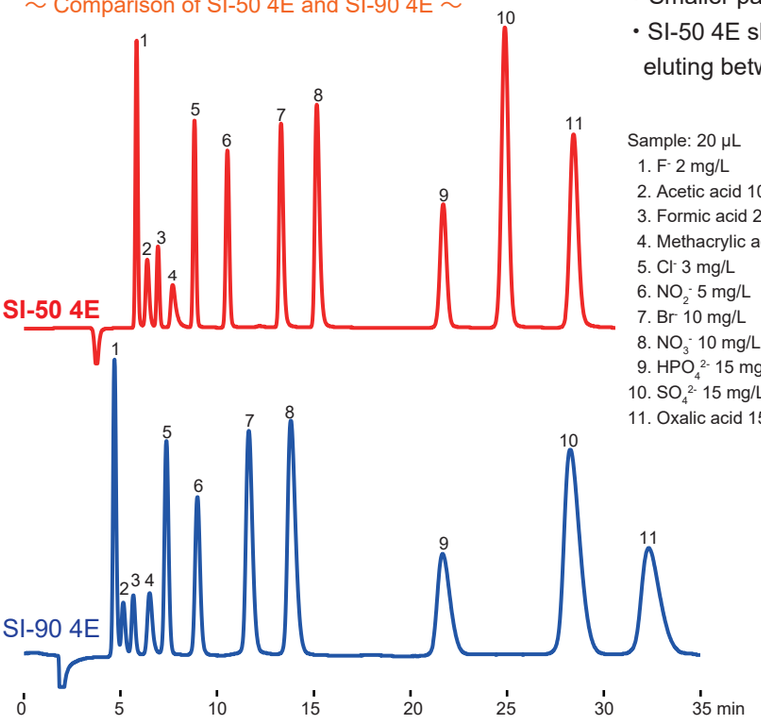
column	TPN (SO_4^{2-})	Resolution (Cl^-/NO_2^-)
SI-50 4D	9,900	3.20
SI-90 4E	5,200	2.17

Column : Shodex IC **SI-50 4D** (4.0 mm I.D. x 150 mm)
Eluent : 3.2 mM Na_2CO_3 + 1.0 mM $NaHCO_3$ aq.
Flow rate : 1.2 mL/min
Detector : Suppressed conductivity
Column temp.: 35 ºC

Column : Shodex IC **SI-90 4E** (4.0 mm I.D. x 250 mm)
Eluent : 1.8 mM Na_2CO_3 + 1.7 mM $NaHCO_3$ aq.
Flow rate : 1.5 mL/min
Detector : Suppressed conductivity
Column temp.: 30 ºC

Organic acids and Anion Analysis

～ Comparison of SI-50 4E and SI-90 4E ～



Sample: 20 µL
1. F^- 2 mg/L
2. Acetic acid 10 mg/L
3. Formic acid 2 mg/L
4. Methacrylic acid 10 mg/L
5. Cl^- 3 mg/L
6. NO_2^- 5 mg/L
7. Br^- 10 mg/L
8. NO_3^- 10 mg/L
9. HPO_4^{2-} 15 mg/L
10. SO_4^{2-} 15 mg/L
11. Oxalic acid 15 mg/L

- Smaller particle (5 µm) enabled the higher resolution
- SI-50 4E showed improved separations of organic acid ions eluting between fluoride and chloride ions compared to SI-90 4E

column	TPN (SO_4^{2-})	Resolution (F^-/Acetic acid)
SI-50 4E	24,500	2.16
SI-90 4E	5,900	1.56

Column : Shodex IC **SI-50 4E** (4.0 mm I.D. x 250 mm)
Eluent : 3.2 mM Na_2CO_3 + 1.0 mM $NaHCO_3$ aq.
Flow rate : 0.7 mL/min
Detector : Suppressed conductivity
Column temp.: 25 ºC

Column : Shodex IC **SI-90 4E** (4.0 mm I.D. x 250 mm)
Eluent : 12 mM $NaHCO_3$ aq.
Flow rate : 1.0 mL/min
Detector : Suppressed conductivity
Column temp.: 25 ºC

Manufactured by Resonac Corporation
To purchase, please contact a Shodex support office near you: https://www.shodex.com/location/

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Figures and descriptions are provided to help you select appropriate columns.
However, they do not guarantee nor warrant the suitability for your applications.

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