

IC Application Note No. S-255

Title: Sixteen anions separated on the Metrosep A Supp 7 – 250 applying gradient elution

Summary: Determination of fluoride, hypophosphite, chlorite, bromate, chloride, nitrite, bromide, chlorate, nitrate, phosphite, phosphate, sulfate, arsenate, iodide, chromate and perchlorate using anion chromatography with conductivity detection after gradient elution and chemical suppression.

Sample: Standard solution

Sample Preparation: None

Column: 6.1006.630 Metrosep A Supp 7 – 250

Eluent A: Ultrapure water

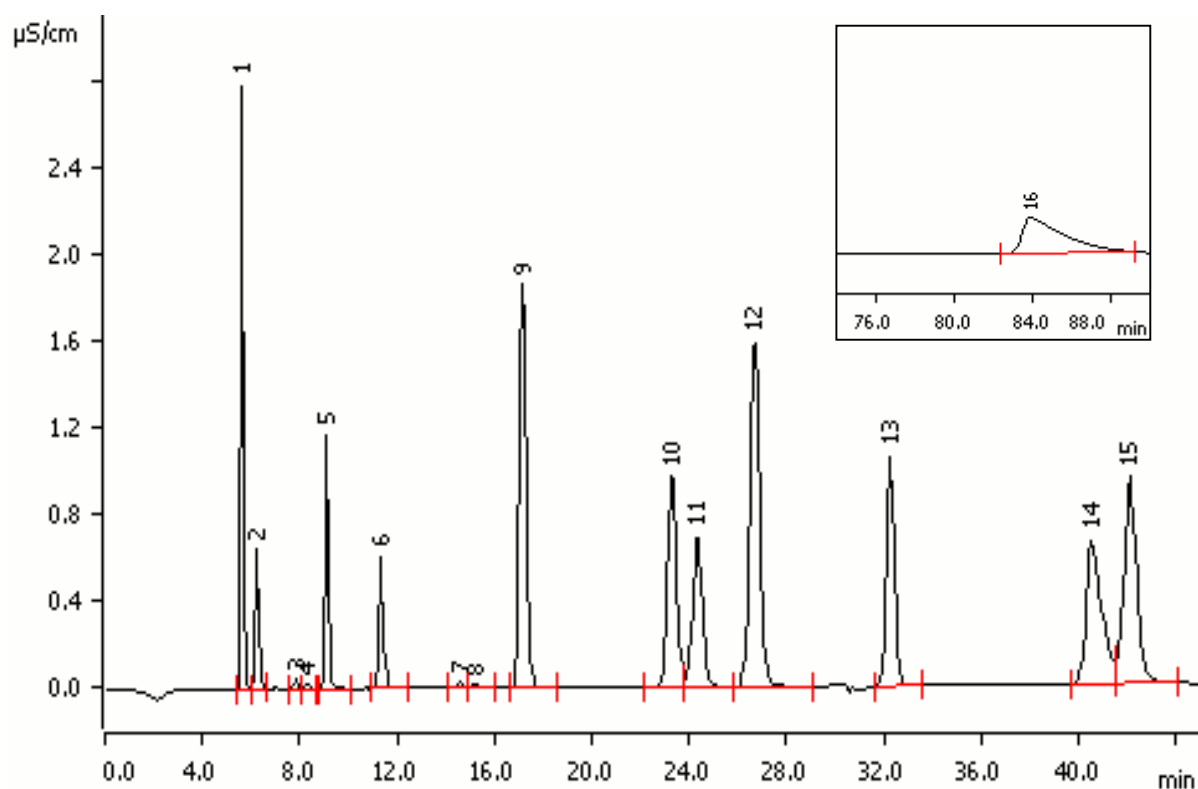
Eluent B: 7.2 mmol/L sodium carbonate

Suppressor: Sequential suppression: MSM (100 mmol/L H₂SO₄), MCS

Flow: 0.8 mL/min

Column temperature: 45°C

Injection Volume: 20 µL



Results:	Fluoride (1) mg/L	Hypophosphite (2) mg/L	Chlorite (3) mg/L	Bromate (4) mg/L	Chloride (5) mg/L	Nitrite(6) mg/L
	1.0	1.0	0.1	0.1	1.0	1.0

Results: continued	Bromide (7) mg/L	Chlorate (8) mg/L	Nitrate (9) mg/L	Phosphite (10) mg/L	Phosphate (11) mg/L	Sulfate (12) mg/L
	0.1	0.1	5.0	5.0	5.0	5.0

Results: continued	Arsenate (13) mg/L	Iodide (14) mg/L	Chromate (15) mg/L	Perchlorate (16) mg/L
	10.0	10.0	10.0	10.0

Gradient profile (step gradient):

Time [min]	Eluent A [%]	Eluent B [%]
0.0	50	50
25.0	25	75
40.0	0	100
90.0	50	50

