

Determination of Bromate in Mineral Water by Ion Chromatography



Application Industry

Food, Quality Supervising System

Key Words

Ion Chromatography, Bromate, Mineral Waters, Hydroxygen System Precision

Equipment and Instruments



CIC-D120 Ion Chromatograph, includes :

- High pressure pump
- Six-way valve
- Self regenerate supressor
- Conductance detector
- SH-AC-11 Column

- eluent unit

- eluent generater (selectable)

Analysis Condition

Chromatographic column : SH-AC-11 Column

Eluent 15.0 mmol NaOH

Flow rate 1.0 mL/min

Temperature 35°C

Injection volume 200μL

Reagent

UP water : 18.2MΩ·cm

Bromate standard sample 100ppm

Sodium hydroxide GR

Samples

5ppb bromate standard sample

Mineral waters

Pretreatment

The sample is filtered by 0.22μm of filter membrane , then injected into the Instrument .



Results and Discussions

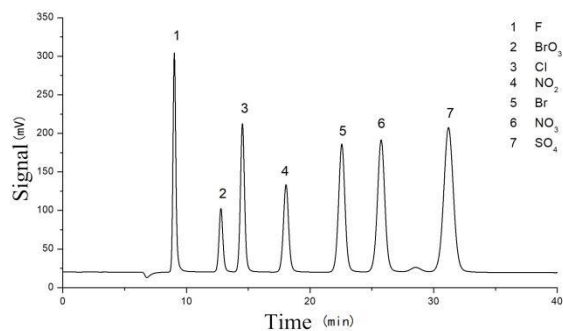


Fig. 1 SH-AC-11 column chromatogram

Stability of Instrument

	Retention Time	Calibration Factor	Peak Area	Peak Height
5ppb(20170302 14;06;50)	3.873	0.000508	9833	1385
5ppb(20170302 14;28;25)	3.874	0.000516	9699	1383
5ppb(20170302 14;50;21)	3.872	0.000502	9958	1402
5ppb(20170302 15;06;16)	3.868	0.000499	10022	1407
5ppb(20170302 15;25;29)	3.868	0.000496	10090	1418
5ppb(20170302 15;37;45)	3.869	0.000485	10300	1441
5ppb(20170302 16;30;19)	3.861	0.000517	9676	1374
Average	3.869	0.000503	9940	1401
Standard Deviation	0.004	1.12E-05	223	23
Relative Standard Deviation%	0.11	2.23	2.24	1.66

