

# The Measurement of Bromate in Mineral Water by Ion Chromatograph



**Application field :** Food, Quality Supervising System

**Key word :** Ion Chromatography Bromate 5  $\mu$  g/L Precision hydroxyl

## Introduction :

Bromate is a kind of strong carcinogenic substance, which is the byproduct of disinfect treatment using ozone. It is a necessary inspection item for mineral waters production.

This measurement is operated by CIC-D120 ion chromatograph,

## Samples :

5ppb bromate standard sample  
Mineral waters

## Instrument configuration scheme :



CIC-D120 ion chromatograph, include:  
high pressure pump  
Six port valve  
Self regenerate suppressor  
Conductance detector  
SH-AC-11 column  
- eluent unit  
- eluent generator (selectable)

## Chemicals :

UP water: 18.2M $\Omega$ ·cm  
Bromate standard sample 100ppm  
Sodium Hydroxide GR

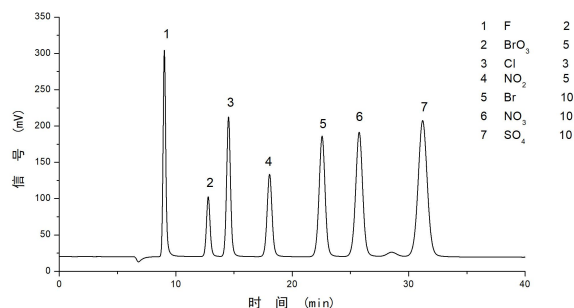
## Sample pretreatment

The sample is filtered by 0.22  $\mu$  m of filter membrane, then injected into the instrument .

## Instrument parameters :

Eluent 15.0 mmol NaOH  
Flow rate 1.0 mL/min  
Temperature 35 $^{\circ}$ C  
Injection volume 200  $\mu$  L

## Chromatogram :



SH-AC-11 type column spectrum



Address: No.151, Zhuzhou Road, Laoshan District, Qingdao, Shandong, China

Website: en.sheng-han.com

*Stability of apparatus*

Name	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 value	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



Address: No.151, Zhuzhou Road, Laoshan District, Qingdao, Shandong, China

Website: [en.sheng-han.com](http://en.sheng-han.com)