



# CERTIFIED REFERENCE MATERIAL BCR<sup>®</sup> – 612

## CERTIFICATE OF ANALYSIS

GROUNDWATER		
	Mass fraction	
	Certified value <sup>1)</sup> [µg/kg]	Uncertainty <sup>2)</sup> [µg/kg]
Bromide	252	10
1) This value is the unweighted mean of the means of 8 accepted sets of data, each set being obtained in a different laboratory with the same method of determination. The certified values are traceable to determinations by IC-based methods.		
2) Half-width of the 95 % confidence interval of the mean defined in 1).		

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is not critical. The sample can be considered as homogeneous.

### DESCRIPTION OF THE SAMPLE

The material consists of a groundwater sample at pH = 7.5 in a brown glass ampoule containing about 25 mL, each package containing four ampoules.

### INSTRUCTIONS FOR USE

The material is intended to be used for calibration purposes and for assessing method performance. When the reference material is used to assess the performance of a method, the user should refer to the recommendations of the certification report.

The sample must be used as it is from ampoule. It is recommended that the reference material be analysed immediately after opening of the ampoule.

### NOTE

This material has been certified by BCR (Community Bureau of Reference, the former reference materials programme of the European Commission). The certificate has been revised under the responsibility of IRMM.

Brussels, May 1997  
Revised: May 2007

Signed: \_\_\_\_\_

Prof. Dr. Hendrik Emons  
Unit for Reference Materials  
EC-JRC-IRMM  
Retieseweg 111  
2440 Geel, Belgium

<b>Additional Material Information</b>	
	Mass fraction
	Value <sup>1</sup> [µg/kg]
Total bromine	277
Iodide	26.3
Total iodine	26.2

1) The values of iodide and total iodine are based on the results from 3 laboratories, while the value of total bromine is based on the results from 4 laboratories.

### **ANALYTICAL METHOD USED FOR CERTIFICATION**

- Ion chromatography (conductivity or amperometry)
- Visible light or UV spectrophotometry
- High resolution inductively coupled plasma mass spectrometry
- Inductively coupled plasma mass spectrometry
- Instrumental neutron activation analysis

### **PARTICIPANTS**

- KIWA N.V., Nieuwegein (NL)
- Vandkvalitetsinstituttet, VKI, Hørsholm (DK)
- A/S AnalyCen, Fredericia (DK)
- CNRS, Service Central D'Analyse, Vernaison (FR)
- Energieonderzoek Centrum Nederland, Petten (NL)
- Finland Miljöcentral, Helsinki (FI)
- GSF-Forschungszentrum für Umwelt und Gesundheit, Oberschleissheim (DE)
- Istituto Superiore di Sanità, Roma (IT)
- Ministère de l'Intérieure, DGCRF, Talence (FR)
- NV-PWN Waterleidingbedrijf Noord-Holland, Haarlem (NL)
- Sociedad General de Aguas de Barcelona, Barcelona (ES)
- Stockholm Universitet, ITM, Solna (SE)
- Universiteit Gent, INW, Gent (BE)
- Water Research Centre, Medmenham (GB)

### **SAFETY INFORMATION**

The usual laboratory safety precautions apply.

### **STORAGE**

The ampoules may be stored at a temperature of + 18 °C in the dark.

However, the European Commission cannot be held responsible for changes that happen during storage of the material at the customer's premises, especially of opened samples.

### **LEGAL NOTICE**

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### **NOTE**

A technical report on the production of BCR-612 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.

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European Commission – Joint Research Centre  
Institute for Reference Materials and Measurements (IRMM)  
Retieseweg 111, B - 2440 Geel (Belgium)  
Telephone: +32-(0)14-571.722 - Telefax: +32-(0)14-590.406