



CERTIFIED REFERENCE MATERIAL BCR[®] – 579

CERTIFICATE OF ANALYSIS

COASTAL SEAWATER			
	Mass fraction		Number of accepted sets of results
	Certified value ²⁾ [ng/kg]	Uncertainty ³⁾ [ng/kg]	
Hg ¹⁾	1.9	0.5	6

1) Total mercury
2) The value is the unweighted mean of 6 values, each value being the mean of a set of results obtained by a different method and/or laboratory. The certified value is traceable to the SI.
3) Expanded uncertainty with a coverage factor $k = 2$ according to the Guide to the Expression of Uncertainty in Measurement (GUM), corresponding to a level of confidence of about 95 %.

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 30 mL.

DESCRIPTION OF THE SAMPLE

The material consists of acidified coastal seawater in a glass bottle containing approximately 1 L packed and sealed in two plastic bags.

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.

Certified: Brussels, November 1997

Revised: May 2007

Signed: _____

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

ANALYTICAL METHOD USED FOR CERTIFICATION

- Cold vapour atomic fluorescence spectrometry
- Cold vapour atomic absorption spectrometry

PARTICIPANTS

- Bundesanstalt für Seeschifffahrt und Hydrografie (BSH), Hamburg (DE)
- Energieonderzoek Centrum Nederland, Petten (NL)
- FORCE Institutet, Brøndby (DK)
- IVL Svenska Miljöinstitutet AB, Göteborg (SE)
- Labor für Spurenanalytik (LSA), Grafschaft - Gelsdorf (DE)
- Laboratory for Applied Marine Research, TNO-MEP, Den Helder (NL)
- Netherlands Organisation for Applied Scientific Research, TNO-MEP, Delft (NL)
- Presidio Multizonale di Prevenzione, Dipto. de Chimica Ambientale, Mestre (IT)
- Presidio Multizonale di Prevenzione, Laboratorio Chimico, La Spezia (IT)
- Universiteit Antwerpen, Dept. Analytische Scheikunde, Antwerpen (BE)

SAFETY INFORMATION

The usual laboratory safety precautions apply.

INSTRUCTIONS FOR USE

To prevent contamination, the bottle should be placed in a class 100 clean room (or at least in a class 100 laminar clean bench) environment prior to opening. Personnel should wear non-powdered polythene gloves and dust-free garments.

Before a bottle is opened, it should be shaken manually for one minute so that the material within is re-homogenised. In addition, the outside is to be washed with ultra pure water, to remove adhering salt crystals and particles. Subsamples should be taken by pouring instead of being pipetted. Due to the volatility of mercury, loss may occur during prolonged periods of opening. It is recommended to monitor the bottle weight in order to check for possible leaking. Detailed instruction for use are provided in the section 9 of the certification report.

The reference material is intended for the verification of the methods and not for calibration purposes. If the material is used for calibration purposes or to assess the performance of a procedure, the user should refer to the recommendations in the certification report.

STORAGE

Upon arrival, the bottles should be stored closed and kept in the dark at 20 °C or below.

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.

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NOTE

A technical report on the production of BCR-579 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.