



# CERTIFIED REFERENCE MATERIAL BCR<sup>®</sup> – 627

## CERTIFICATE OF ANALYSIS

TUNA FISH TISSUE			
	Mass fraction based on dry mass		Number of accepted sets of data p
	Certified value <sup>1)</sup>	Uncertainty <sup>2)</sup>	
Arsenobetaine	52 $\mu\text{mol/kg}$	3 $\mu\text{mol/kg}$	6
Dimethylarsinic acid	2.0 $\mu\text{mol/kg}$	0.3 $\mu\text{mol/kg}$	6
Total arsenic	4.8 $\text{mg/kg}$	0.3 $\text{mg/kg}$	9

1) The certified value is the unweighted mean of the means of p sets of results. These sets of results were provided by different laboratories and different methods. The certified value is traceable to the International System of Units (SI).

2) The uncertainty is taken as the half-width of the 95 % confidence interval of the mean value (1).

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 300 mg.

### 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, June 1997  
Latest revision: May 2007

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

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

## DESCRIPTION OF THE SAMPLE

The sample is a dried, homogenised and sterilised tuna fish muscle tissue in brown glass bottles each containing at least 10 g material.

## ANALYTICAL METHOD USED FOR CERTIFICATION

Several extraction (including ultrasonic, microwave assistance or trypsin digestion), clean-up (filtration, florisil, C18 columns), separation (HPLC, hydride generation with cold trapping or GC) and final determination procedures (ICP-MS, QFAAS and ICP-OES with UV irradiation) were applied. For total arsenic, dry ashing or acid digestion with strong oxidants (H<sub>2</sub>O<sub>2</sub>, HClO<sub>4</sub>) were applied.

## PARTICIPANTS

- European Commission, Joint Research Centre, Institute for Environment and Sustainability (IES), Ispra (IT)
- Centre National de la Recherche Scientifique, Service Central d'Analyse, Vernaison (FR)
- Ecole Européenne des Hautes Etudes des Industries Chimiques, Laboratoire de Chimie Minérale et Analytique, Strasbourg (FR)
- IFREMER, Nantes (FR)
- Institut Pasteur de Lille, Service Eaux-Environnement, Lille (FR)
- Istituto Superiore di Sanita, Roma (IT)
- Ministry of Health, National Food Agency, Søborg (DK)
- State Laboratory, Dublin (IE)
- Universidad de Barcelona, Departament de Química Analítica, Barcelona (ES)
- University of Plymouth, Department of Environmental Science, Plymouth (GB)
- University of Southampton, Department of Chemistry, Southampton (GB)

## SAFETY INFORMATION

The usual laboratory safety precautions apply.

## INSTRUCTIONS FOR USE

The material must be rehomogenised before opening by shaking manually for five minutes. The correction to dry mass should be made on a separate portion according to one of the two procedures described in section 5 of the certification report, and at each occasion the materials is analysed.

All glassware used should be thoroughly cleaned before use and checked by means of a blank determination.

When the reference material is used to assess the performance of a method, the user should refer to the recommendations of the certification report.

## STORAGE

Bottles must be stored closed in the dark at 4 °C.

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

Neither IRMM, its subsidiaries, its contractors nor any person acting on their behalf,

(a) make any warranty or representation, express or implied that the use of any information, material, apparatus, method or process disclosed in this document does not infringe any privately owned intellectual property rights; or

(b) assume any liability with respect to, or for damages resulting from, the use of any information, material, apparatus, method or process disclosed in this document save for loss or damage arising solely and directly from the negligence of IRMM or any of its subsidiaries.

## NOTE

A technical report on the production of BCR-627 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.