



CERTIFIED REFERENCE MATERIAL BCR[®] – 683

CERTIFICATE OF ANALYSIS

BEECH WOOD			
	Mass fraction based on dry mass		Number of accepted sets of data p
	Certified value ¹⁾ [mg/kg]	Uncertainty ²⁾ [mg/kg]	
Pentachlorophenol	3.6	0.5	6
Benz[a]anthracene	6.5	0.7	7
Benzo[a]pyrene	3.4	0.4	7
Benzo[e]pyrene	9.3	1.0	6
Benzo[b]fluoranthene	5.8	0.6	7
Benzo[k]fluoranthene	2.58	0.29	7

1) The certified value is the average of accepted data set averages. The values have been obtained after correction for water content and recovery. The certified values are traceable to the International System of Units (SI).

2) The certified uncertainty is the expanded uncertainty estimated in accordance with the Guide to the Expression of Uncertainty in Measurements (GUM) with a coverage factor $k = 2$, 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 0.8 g of wood.

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, March 2002

Revised: May 2007

Signed: _____

Prof. Dr. Hendrik Emons
Unit for Reference Materials
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Retieseweg 111
2440 Geel, Belgium

DESCRIPTION OF THE SAMPLE

The material is available in 250 mL brown glass bottles closed with a screw cap, containing approximately 60 g of a ground wood material with a particle top size of 1.0 mm.

ANALYTICAL METHOD USED FOR CERTIFICATION

Gas Chromatography (GC) or High Performance Liquid Chromatography (HPLC) with different detection methods: Mass Spectrometry (MS), Electron Capture Detector (ECD), Atomic Emission Detector (AED).

PARTICIPANTS

- BAM, Bundesanstalt für Materialforschung und –prüfung, Berlin (DE)
- Referentiematerialen Nederland B.V., Egelshoven, on behalf of Nederlands Meetinstituut, Van Swinden Laboratorium B.V., Delft (NL)
- BAM, Bundesanstalt für Materialforschung und –prüfung, Berlin (DE)
- BIU, Biochemisches Institut für Umweltcarcinogene, Großhansdorf (DE)
- CARSO, Centre d'analyse de traces, Lyon (FR)
- ICB, Institut für Chemo- und Biosensorik e.V., Münster (DE)
- Universitat de Barcelona, Departamento Química Analítica, Barcelona (ES)
- Universidade de Santiago de Compostela, Departamento de Química Analítica, Santiago de Compostela (ES)
- VITO, Vlaamse Instelling voor Technologisch Onderzoek, Mol (BE)
- VTT, Technical Research Centre of Finland, Department Chemical Technology, Espoo (FI)

SAFETY INFORMATION

Because of the toxicological and carcinogenic potential of some of the analytes, it is strongly recommended to handle the sample and the extracts with the same precautions as the hazardous substance itself. Although the analyte contents are very low, a risk for human health cannot be excluded in the case of direct contact with the sample. This also includes possible inhalation of fine wood particles with particle sizes < 250 µm which are only a small portion of the ground wood material but which can come into suspension when vigorously shaking the bottle.

INSTRUCTIONS FOR USE

This material is not intended for use as a calibrant. It is intended for the verification or validation of an analytical procedure for the determination of the analytes or a certain part of them.

The water content can be determined either by the Karl Fischer method, either by heating in an oven at a temperature of 102 °C or 105 °C until constant weight.

STORAGE

The material should be stored in the closed bottle at - 20 °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.

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NOTE

A technical report on the production of BCR[®]-683 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.