



CERTIFIED REFERENCE MATERIAL BCR[®] – 050

CERTIFICATE OF ANALYSIS

BENZO[e]PYRENE ¹⁾		
	Mass fraction	
	Certified value ²⁾ [g/g]	Uncertainty ³⁾ [g/g]
Benzo[e]pyrene	0.991	+ 0.009 - 0.010 ⁴⁾

1) According to IUPAC rules, CAS # 192-97-2.
2) Unweighted mean of accepted mean values. The value is traceable to the International System of Units (SI).
3) The certified uncertainty is the expanded uncertainty estimated in accordance with the Guide to the Expression of Uncertainty in Measurement (GUM) with a coverage factor $k = 2$, corresponding to a level of confidence of about 95 %.
4) Based on a standard uncertainty of 0.005 g/g.

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 2.5 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, May 1980

Revised: November 2007

Signed: _____

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

DESCRIPTION OF THE SAMPLE

The material is available in a brown glass bottle, containing 100 mg.

ANALYTICAL METHOD USED FOR CERTIFICATION

- Gas-Liquid Chromatography (GLC)
- High Performance Liquid Chromatography (HPLC)
- Gas Chromatography-Mass Spectrometry (GC-MS)
- Direct Inlet Mass Spectrometry
- Differential Scanning Calorimetry (DSC)

PARTICIPANTS

- Biochemisches Institut für Umweltkarzinogene, Ahrensburg (DE)
- BP Research Centre, Sunbury-on-Thames (GB)
- Bundesanstalt für Materialforschung und -prüfung, Berlin (DE)
- CNR, Istituto sull'Inquinamento Atmosferico, Roma (IT)
- European Commission, Joint Research Centre, Petten (NL)
- European Commission, Joint Research Centre, Cetus, Ispra (IT)
- Fondation Curie, Institut du Radium, Paris (FR)
- Fysisch-Chemisch Instituut TNO, Zeist (NL)
- Istituto Superiore di Sanità, Roma (IT)
- Laboratoire Central de la Préfecture de Police, Paris (FR)
- National Physical Laboratory, Teddington (GB)
- Organisch-Chemisch Instituut TNO, Utrecht (NL)

SAFETY INFORMATION

Cancer suspect agent. The material must be handled with great care, especially avoiding skin contamination, ingestion or inhalation. Discard solutions after use in accordance with appropriate safety regulations for carcinogenic or cancer suspect agents.

INSTRUCTIONS FOR USE

The material is mainly intended for calibration purposes. Solutions of the PAH reference material should be freshly prepared and should be protected from extended exposure to light and oxygen. Discard solutions after use.

STORAGE

The material should be shielded from sunlight and be stored at 4 °C in the darkness to prevent photo-oxidation reactions.

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-050 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.