



# CERTIFIED REFERENCE MATERIAL BCR<sup>®</sup> – 134

## CERTIFICATE OF ANALYSIS

BENZO[c]PHENANTHRENE <sup>1)</sup>		
	Mass fraction	
	Certified value <sup>2)</sup> [g/g]	Uncertainty <sup>3)</sup> [g/g]
Benzo[c]phenanthrene	0.9968	0.0014
<p>1) According to IUPAC rules; synonyms: 3,4-Benzophenanthrene, Tetrahelicene; CAS # 195-19-7. 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 <math>k = 2</math>, corresponding to a level of confidence of about 95 %.</p>		

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, December 1982  
Revised: November 2007

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

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## 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 (BAM), Berlin (DE)
- Centre d'Etudes et Recherches des Charbonnages de France, Verneuil (FR)
- CNR, Istituto sull'Inquinamento Atmosferico, Roma (IT)
- Energieonderzoek Centrum Nederland, Petten (NL)
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- Instituut voor Toegepaste Chemie, TNO, Zeist (NL)
- Istituto Superiore di Sanità, Roma (IT)
- Laboratoire Central de la Préfecture de Police, Paris (FR)
- National Physical Laboratory, Teddington (GB)

## 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.

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## NOTE

A technical report on the production of BCR-134 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.