



CERTIFIED REFERENCE MATERIAL BCR[®]-551

CERTIFICATE OF ANALYSIS

2,4-DINITROPHENYLHYDRAZONE DERIVATIVES IN ACETONITRILE			
Compound	Mass concentration		Number of accepted sets of results p
	Certified value ¹⁾ [mg/L]	Uncertainty ²⁾ [mg/L]	
2,4-dinitrophenylhydrazone of formaldehyde	2.94	0.05	16
2,4-dinitrophenylhydrazone of acetaldehyde	4.89	0.07	17
2,4-dinitrophenylhydrazone of acrolein	0.483	0.011	16
2,4-dinitrophenylhydrazone of acetone	4.96	0.07	17
<p>1) Unweighted mean of means of p accepted sets of results obtained by reversed-phase HPLC-UV. The values are traceable to determination by reversed-phase HPLC-UV.</p> <p>2) Half-width of 95 % confidence interval of that mean defined in (1).</p>			

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample is not critical as the sample can be regarded as homogeneous solution (see overleaf).

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.

Geel, December 2002
Revised: November 2005

Signed: _____

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

DESCRIPTION OF THE SAMPLE

The material consists of approximately 1 mL of solution under helium in sealed glass ampoules.

ANALYTICAL METHOD USED FOR CERTIFICATION

Reversed-phase HPLC with UV detection in the range of 340-380 nm.

PARTICIPANTS

- Arbetslivsinstitutet, Umeå (SE)
- BASF AG, Labor für Umweltanalytik, Ludwigshafen (DE)
- BP Research & Engineering Centre, Sunbury-On-Thames (GB)
- ERGO Forschungsgesellschaft GmbH, Hamburg (DE)
- Fondazione Clinica del Lavoro, Centro di Ricerche Ambientali, Padova (IT)
- Fondazione Clinica del Lavoro, Laboratorio Igiene Industriale, Pavia (IT)
- Health and Safety Laboratory, Sheffield (GB)
- Hogeschool Enschede, Enschede (NL)
- Institut für Wasser-, Boden- und Lufthygiene des Bundesgesundheitsamtes, Berlin (DE)
- Institut für Arbeits- und Sozialmedizin, Erlangen (DE)
- Institut National de Condiciones de Trabajo (INSHT), Barcelona (ES)
- Institut National de l'Environnement, Industriel et des Risques (INERIS), Département Mesures et Analyses, Verneuil-en-Halatte (FR)
- Institut Universitaire de Medicine et d'Hygiène du Travail, Lausanne (CH)
- Miljøkemi, Galten (DK)
- Ministère de l'Emploi et du Travail, Laboratoire de Toxicologie Industrielle, Bruxelles (BE)
- Niedersächsisches Landesamt für Ökologie, Hannover (DE)
- Tampereen Alueyöterveyslaitos, Tampere (FI)
- TNO Milieuwetenschappen, Delft (NL)

SAFETY INFORMATION

The usual laboratory safety precautions apply.

INSTRUCTIONS FOR USE

Before opening the ampoule containing the solution, it is allowed to reach room temperature. After reaching room temperature, the ampoule should be turned upside down several times prior to opening.

STORAGE

The material should be stored at - 20 °C. Care has been taken to ensure that the certified value represents the "true" value at the time of arrival at the customer as closely as possible. 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[®]-551 is supplied on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.