



# CERTIFIED REFERENCE MATERIAL BCR<sup>®</sup> – 115

## CERTIFICATE OF ANALYSIS

ANIMAL FEED			
Compound	Mass fraction (based on dry mass)		Number of accepted sets of results p
	Certified value <sup>1)</sup> [mg/kg]	Uncertainty <sup>2)</sup> [mg/kg]	
HCB	0.0194	0.0014	7
β-HCH	0.0234	0.0026	7
γ-HCH	0.0218	0.0020	6
Heptachlor	0.0190	0.0015	7
γ-Chlordane	0.048	0.006	5
α-Endosulfan	0.046	0.004	8
Dieldrin	0.0181	0.0023	8
Endrin	0.046	0.006	7
o,p'-DDT	0.046	0.005	6
p,p'-DDE	0.047	0.004	4

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 using GC-ECD under different conditions and with different sample preparation methods. The certified value is traceable to determination by GC-ECD.

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

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 1 g.

### 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, November 1995

Last revision: April 2007

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

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## DESCRIPTION OF THE SAMPLE

The sample consists of a homogenised animal feed obtained from commonly used ingredients (selected to mimic a mixture of pig and poultry diet) and enriched with organochlorine pesticides. It is provided in sealed hard glass ampoules containing approx. 25 g under dry N<sub>2</sub>. Additional information on the presence of  $\alpha$ -HCH, p,p'-DDT, p,p'-TDE,  $\beta$ -heptachlorepoxyde and aldrin is given in the report.

## ANALYTICAL METHOD USED FOR CERTIFICATION

Calibration was done with solutions of pesticides made from compounds of verified purity and stoichiometry. The samples were extracted with solvents or a mixture of solvents e.g. iso-octane, hexane, hexane/acetone, cyclohexane/acetone, petroleum ether/acetone, dichloromethane/petroleum ether. Clean-up was carried out by column chromatography on basic alumina, silica gel, biobeads, Florisil<sup>®</sup> or by high performance liquid chromatography. Capillary gas chromatography with electron capture detection was performed using different injection systems, different columns and different temperature programmes.

## PARTICIPANTS

- Centro Politécnico Superior de Ingenieros, Zaragoza (ES)
- Instituto Hidrografico, Lisboa (PT)
- Keuringsdienst van Waren, Inspectie Gezondheidsbescherming, Utrecht (NL)
- Laboratoire Central d'Hygiène Alimentaire - CNEVA, Paris (FR)
- Milchwirtschaftliche Untersuchungs- und Versuchsanstalt - MUVA, Kempten (DE)
- Nat. Inst. of Public Health and Environmental Protection - RIVM, Bilthoven (NL)
- Nestec Ltd., Research Laboratories, Nestlé, Lausanne (CH)
- RIKILT-DLO, Wageningen (NL)
- Statens Landbrukskemiska Laboratorium - SLL, Uppsala (SE)
- TNO-Voeding, Zeist (NL)

## SAFETY INFORMATION

The usual laboratory precautions apply.

## INSTRUCTIONS FOR USE

The material is intended to be used for the verification of an analytical procedure or the performance of a method. It is not intended to be used as a calibrant.

A cooled ampoule is to be equilibrated to room temperature before opening.

The correction to dry mass should be made on a separate portion that should be dried in an oven at 105 °C for 2 h. The moisture content is approximately 5 g/100 g.

## STORAGE

The ampoules should be stored unopened, preferably at 4 °C. Direct exposure to sunlight is to be avoided.

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

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## NOTE

A technical report on the production of BCR-115 is available on the internet (<http://www.irmm.jrc.be>). A paper copy can be obtained from IRMM on request.