JOINT RESEARCH CENTRE
Institute for Reference Materials and Measurements

CERTIFICATE OF ANALYSIS

ERM®- BF432c

SOYA		
	Mass Fraction	
	Certified value [2] [g/kg]	Uncertainty [3] [g/kg]
DAS-68416-4 Soya [1]	10.0	1.7

1) The DAS-68416-4 soya is genetically modified and corresponds to the unique identifier DAS-68416-4.

2) The certified value is based on the masses of mixed dried genetically modified DAS-68416-4 soya seed powder and of dried non-modified soya seed powder, taking into account their respective purity with regard to DAS-68416-4 soya and their respective water content. The certified value is traceable to the SI.

3) The certified uncertainty is the expanded uncertainty with a coverage factor k = 2 corresponding to a level of confidence of about 95 % estimated in accordance with ISO/IEC Guide 98-3, Guide to the Expression of Uncertainty in Measurement (GUM:1995), ISO, 2008.

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 500 mg.

NOTE

European Reference Material ERM®-BF432c was produced and certified under the responsibility of the Institute for Reference Materials and Measurements of the European Commission's Joint Research Centre according to the principles laid down in the technical guidelines of the European Reference Materials® co-operation agreement between BAM-IRMM-LGC. Information on these guidelines is available on the internet (http://www.erm-crm.org).

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Signed:

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DESCRIPTION OF THE MATERIAL

ERM-BF432c is one of four DAS-68416-4 ground soya seed powder certified reference materials (CRMs) containing different mass fractions of this genetically modified soya. ERM-BF432c has been produced from whole seeds of homozygous DAS-68416-4 soya and non-modified soya both supplied by Dow AgroSciences (DAS, Oxon, UK). According to Commission Regulation (EC) No 65/2004 the genetically modified DAS-68416-4 soya has the unique identifier code DAS-68416-4.

The four CRMs (ERM-BF432a, ERM-BF432b, ERM-BF432c and ERM-BF432d) were produced and certified under the responsibility of the Institute for Reference Materials and Measurements of the European Commission's Joint Research Centre (EC-JRC-IRMM). The CRM is available in glass vials containing at least 1 g of dried soya seed powder closed in argon atmosphere.

ANALYTICAL METHODS USED FOR CERTIFICATION

Gravimetric preparation verified by event-specific real-time Polymerase Chain Reaction.

PARTICIPANTS

European Commission, Joint Research Centre, Institute for Reference Materials and Measurements (IRMM), Geel (BE), accredited to ISO Guide 34 and ISO/IEC 17025 (BELAC 268-TEST).

SAFETY INFORMATION

The usual laboratory safety precautions apply. The CRM does not contain viable seeds.

INSTRUCTIONS FOR USE

ERM-BF432c is intended to be used for calibration or quality control of methods for the detection of genetically modified food.

The dry CRM powder is hygroscopic. Users are therefore advised to close vials immediately after taking a sample.

A significant difference (95 % confidence level) between the DNA mass fraction in the two powders used for the production of ERM-BF432c was found. The user is reminded that this significant difference is likely to have an impact when using ERM-BF432c. Depending on the variety and the genetic composition of the unknown sample measured in connection with ERM-BF432c, real-time-PCR measurement results of ERM-BF432c and the unknown sample may differ relative to each other up to 16 % with U = 3 %. This difference may arise from the DNA mass difference between the non-genetically modified and genetically modified powders used for the production of ERM-BF432c and may depend also on the DNA extraction method selected. The user should bear in mind that DNA mass differences may additionally arise from the unknown sample depending on the composition of this sample and that these two effects may be additive.

STORAGE

Bottles should be stored dry and in the dark at maximum 4 °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.

LEGAL NOTICE

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NOTE

A detailed technical report is available on www.irmm.jrc.be. A paper copy can be obtained from the Joint Research Centre, Institute for Reference Materials and Measurements on request.

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