

JOINT RESEARCH CENTRE
Directorate F – Health, Consumers and Reference Materials

CERTIFICATE OF ANALYSIS

ERM[®] - BF410ep

SOYA BEAN POWDER		
	Mass fraction	
	Certified value ²⁾ [g/kg]	Uncertainty ³⁾ [g/kg]
GTS 40-3-2 soya bean ¹⁾	100	5
<p>1) Genetically modified soya bean with the unique identifier MON-Ø4Ø32-6.</p> <p>2) The certified value is based on the masses of mixed dried genetically modified MON-Ø4Ø32-6 soya bean powder and of dried non-genetically modified soya bean powder, taking into account their respective purity with regard to MON-Ø4Ø32-6 soya bean and their respective water content. The certified value is traceable to the International System of Units (SI).</p> <p>3) The uncertainty is the expanded uncertainty with a coverage factor $k = 2$ corresponding to a level of confidence of approximately 95 % estimated in accordance with ISO/IEC Guide 98-3, Guide to the Expression of Uncertainty in Measurement (GUM:1995), ISO, 2008.</p>		

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of soya bean powder to be used is 200 mg.

NOTE

European Reference Material ERM[®]-BF410ep was produced and certified under the responsibility 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-JRC-LGC. Information on these guidelines is available on the internet (<http://www.erm-crm.org>).

Accepted as an ERM[®], Geel, June 2017

Signed: 

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DESCRIPTION OF THE MATERIAL

ERM-BF410ep is one of the five MON-Ø4Ø32-6 soya bean powder certified reference materials (CRMs) containing different mass fractions of this genetically modified soya bean. ERM-BF410ep has been produced from whole seeds of non-genetically modified soya bean and genetically modified MON-Ø4Ø32-6 soya bean, both supplied by Monsanto, US. In accordance with Commission Regulation (EC) No 65/2004, the unique identifier code MON-Ø4Ø32-6 was assigned to the GTS 40-3-2 soya bean event. The CRM is supplied in amber glass bottles containing at least 1 g soya bean powder under argon atmosphere.

The five CRMs (ERM-BF410ap, ERM-BF410bp, ERM-BF410cp, ERM-BF410dp and ERM-BF410ep) were prepared and certified under the responsibility of the European Commission's Joint Research Centre.

ANALYTICAL METHODS USED FOR CERTIFICATION

Event-specific real-time polymerase chain reaction (PCR) for ERM-BF410ap and bp.

Gravimetry, verified by event-specific real-time PCR, for ERM-BF410cp, dp and ep.

PARTICIPANTS

European Commission's Joint Research Centre, accredited to ISO Guide 34 (BELAC No. 268-RM) and to ISO/IEC 17025 (BELAC No. 268-TEST).

SAFETY INFORMATION

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

INSTRUCTIONS FOR USE AND INTENDED USE

ERM-BF410ep is intended to be used for calibration or quality control of methods for the identification and quantification of genetically modified MON-Ø4Ø32-6 soya bean in food and feed.

The user is reminded that the difference (95 % confidence level) between the total DNA content in the two powders used for the production of ERM-BF410ep was found to be significant (due to the different size of non-GM and GM seeds) and is likely to have an impact when using this CRM. Depending on the composition of the unknown sample, real-time PCR measurement results of ERM-BF410ep may differ up to 23.9 ± 1.1 % (average $\pm U$) compared to the results of the unknown sample. This difference may depend also on the DNA extraction method selected and both effects may be additive.

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

STORAGE

Bottles should be stored dry and in the dark at 4 ± 3 °C.

Please note that the European Commission cannot be held responsible for changes that happen during storage of the material at the customer's premises.

LEGAL NOTICE

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NOTE

A detailed technical report is available on <http://crm.jrc.ec.europa.eu>. A paper copy can be obtained from the Joint Research Centre, Directorate F – Health, Consumers and Reference Materials on request.

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