JOINT RESEARCH CENTRE
Directorate F – Health and Food

REFERENCE MATERIAL CERTIFICATE

ERM®-BF446e

MAIZE SEED POWDER

Certified Values		
	Mass Fraction [2] [g/kg]	Uncertainty [3] [g/kg]
MIR162 [1]	100	11

1) Genetically modified maize with the unique identifier SYN-IR162-4.

2) Certified values are values that fulfil the highest standards of accuracy. The certified value and its uncertainty are traceable to the International System of Units (SI). The certified value is based on the masses of mixed and dried genetically modified MIR162 maize seed powder and of mixed and dried non-genetically modified maize seed powder, taking into account their respective purity with regard to MIR162 maize and their respective water content.

3) The uncertainty of the certified value is the expanded uncertainty with a coverage factor k = 2 corresponding to a level of confidence of 95 %, estimated in accordance with ISO 17034:2016 and ISO Guide 35:2017.

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 200 mg.

Geel, June 2022
Latest revision: June 2023

INFORMATION ONLY

Dr. Robert Koeber
Head of Unit Reference Materials
European Commission, Joint Research Centre
Directorate F – Health and Food
Retieseweg 111
2440 Geel, Belgium

DESCRIPTION OF THE MATERIAL

ERM-BF446e is one of five MIR162 maize seed powder certified reference materials (CRMs) containing different mass fractions of this genetically modified maize. ERM-BF446e has been produced from whole seeds of non-genetically modified maize and genetically modified maize both supplied by Syngenta Seeds, LLC (Clinton, IL, US). According to the information provided by Syngenta Crop Protection NV/SA (Brussels, BE), the MIR162 maize seeds are hemizygous and the MIR162 maize event was inherited from the female parent. In accordance with Commission Regulation (EC) No 65/2004, the unique identifier code SYN-IR162-4 was assigned to the MIR162 maize event. The CRM is supplied in amber glass vials containing at least of 1 g maize seed powder under argon atmosphere.

ANALYTICAL METHODS USED FOR CHARACTERISATION

Gravimetry.
Event-specific quantitative polymerase chain reaction (qPCR).

PARTICIPANTS

The following laboratories performed measurements in the scope of one or more of the following studies for characterisation, homogeneity, stability, confirmation and or purity:

European Commission, Joint Research Centre, Directorate F – Health, Consumers and Reference Materials (Geel, BE)

National Measurement Laboratory LGC (Teddington, UK)

Syngenta Crop Protection LLC (Durham, NC, US)

SAFETY INFORMATION

The usual laboratory safety precautions apply.

INTENDED USE

ERM-BF446e shall only be used for calibration or quality control of methods for the identification and quantification of genetically modified MIR162 maize in food and feed.

INSTRUCTIONS FOR USE

Care should be taken to avoid moisture uptake once the units are opened, as the material is hygroscopic. The user should close any unit immediately after taking a sample.

Dispose of in accordance with good laboratory practice.

Please note that repeated sampling or use has not been tested and occurs under the responsibility of the user.

For more information about the use of GMO CRMs, please see ERM-Application Note 4: Use of Certified Reference Materials for the Quantification of GMO in Food and Feed, and for general information on handling of reference materials, please see ERM Application Note 6, both available on https://crm.jrc.ec.europa.eu/e/132/User-support-Application-Notes.

STORAGE

The materials should be stored at (4 ± 3) °C in the dark.

Please note that the stability of samples after opening has not been tested. The European Commission cannot be held responsible for changes that happen to samples after opening or when the material is stored differently from the stated storage conditions at the customer's premises.

For more information regarding the shelf life of reference materials please see ERM Application Note 7, available on https://crm.jrc.ec.europa.eu/e/132/User-support-Application-Notes.

LEGAL NOTICE

Neither the European Commission, 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 the Joint Research Centre of the European Commission.

No right other than what is explicitly granted herein may be deemed to have been granted by implication. Any use other than for the purpose specified under the intended use, including but not limited to acts impinging on the intellectual property rights of third parties, shall be under the sole responsibility of the recipient/purchaser.

NOTE

A detailed certification report is available at https://crm.jrc.ec.europa.eu/.

European Commission – Joint Research Centre
Directorate F – Health and Food
Retieseweg 111, 2440 Geel (Belgium)
Telephone: +32-(0)14-571.705
jrc-rm-distribution@ec.europa.eu