

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

REFERENCE MATERIAL CERTIFICATE

ERM[®] - BF411g

DRIED MAIZE POWDER		
Mass Fraction		
	Certified value ²⁾ [g/kg]	Uncertainty ³⁾ [g/kg]
Bt-176 maize ¹⁾	1000	+ 0 - 53

1) Bt-176 maize is genetically modified and corresponds to the unique identifier SYN-EV176-9.

2) This certified reference material has been produced from genetically modified Bt-176 maize seeds. The certified value is based on the genetic purity of the maize seed powder with regard to Bt-176. In total 56 seeds from the whole batch were grown and tested individually for the presence of the Bt-176 genetic modification. All seeds tested positive. With 95 % confidence, the true Bt-176 maize mass fraction of the material is above 947 g/kg. The certified value is traceable to the International System of Units (SI).

3) The asymmetric uncertainty is based on the 95 % confidence interval from the Poisson distribution of the tested seeds. With 95 % confidence, the true Bt-176 maize mass fraction of the material is therefore between 947 and 1000 g/kg. If using ERM-BF411g for calibration the value 1000 g/kg with an expanded uncertainty of + 0 / - 53 g/kg should be used. The 53 g/kg corresponds to a standard uncertainty of 53 g/kg / $\sqrt{3}$ = 31 g/kg.

This certificate is valid for one year after purchase.

Sales date:

The minimum amount of sample to be used is 100 mg.

Geel, August 2020

INFORMATION ONLY

Signed:

Dr Robert Koeber
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DESCRIPTION OF THE MATERIAL

ERM-BF411g is supplied in amber glass vials containing approximately 1 g maize powder closed under argon atmosphere. ERM-BF411g is part of a set of CRMs of dried maize powder with different mass fractions of dried powder from genetically modified Bt-176 maize. According to Commission Regulation (EC) No 65/2004 the Bt-176 maize received the unique identifier code SYN-EV176-9. Users are informed that this reference material has been produced from whole genetically modified seeds (event variety Garona Bt176) delivered by Syngenta Seeds S.A.S, Néarc, France. According to the information provided by Syngenta the genetically modified donor for the heterozygous Bt-176 maize was the male parent.

ANALYTICAL METHODS USED FOR CHARACTERISATION

Event-specific quantitative polymerase chain reaction (PCR)

PARTICIPANTS

European Commission, Joint Research Centre, Directorate F – Health, Consumers and Reference Materials, Geel, BE (accredited to ISO 17034:2016 for production of certified reference materials, BELAC No. 268-RM and to ISO/IEC 17025 BELAC No. 268-TEST*).

National Measurement Laboratory LGC (Teddington, UK)

* Measurements within the scope of accreditation to ISO/IEC 17025.

SAFETY INFORMATION

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

INTENDED USE

ERM-BF411g is intended to be used for calibration or quality control of methods for the identification and quantification of genetically modified Bt-176 maize in food and feed.

INSTRUCTIONS FOR USE

When setting up a calibration curve the value of 1000 g/kg with an expanded uncertainty of $+ 0 / - 53$ g/kg should be used. The 53 g/kg corresponds to a standard uncertainty of $53 \text{ g/kg} / \sqrt{3} = 31 \text{ g/kg}$.

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

For general information on handling of reference materials and of GMO Reference materials in particular, please see ERM Application Notes 4 and 6, available on <https://crm.jrc.ec.europa.eu/e/132/User-support-Application-Notes>.

STORAGE

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

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>.

Please note that the stability of opened samples has not been tested and repeated use of the material occurs under the responsibility of the user. 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 certification report is available at <https://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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