

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

CERTIFICATE OF ANALYSIS

ERM[®] - BC403

CUCUMBER		
Mass fraction		
	Certified value ³⁾ [mg/kg]	Uncertainty ⁴⁾ [mg/kg]
Acetamiprid ¹⁾	0.064	0.004
Azoxystrobin ²⁾	0.639	0.030
Carbendazim ¹⁾	0.074	0.004
Chlorpyrifos	0.064	0.005
Cypermethrin	0.045	0.007
Diazinon	0.051	0.004
α-Endosulfan	0.031	0.006
Fenitrothion	0.054	0.007
Imazalil ¹⁾	0.044	0.004
Imidacloprid ¹⁾	0.627	0.026
Iprodione	0.57	0.05
Malathion ²⁾	0.052	0.007
Methomyl ¹⁾	0.059	0.004
Tebuconazole ²⁾	0.0611	0.0026
Thiabendazole ¹⁾	0.056	0.003

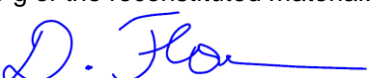
¹⁾ As determined by liquid chromatography-mass spectrometry.
²⁾ As determined by chromatography-mass spectrometry.
³⁾ Certified values are values that fulfil the highest standards of accuracy and represent the unweighted mean value of the means of accepted sets of data, each set being obtained in a different laboratory and/or with a different method of determination. The certified value and its uncertainty are traceable to the International System of units (SI).
⁴⁾ The uncertainty is the expanded uncertainty of the certified value with a coverage factor $k = 2$ (for α-endosulfan $k = 2.78$) 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 2.5 g of the reconstituted material.

Geel, May 2018

Signed: 

Dr Doris Florian
Head of Unit Reference Materials
European Commission, Joint Research Centre
Directorate F – Health, Consumers and Reference Materials
Retieseweg 111
B-2440 Geel, Belgium

DESCRIPTION OF THE MATERIAL

The CRM is available in sets of two glass vials containing each approximately 3.2 g of dried cucumber.

ANALYTICAL METHODS USED FOR CERTIFICATION

A variety of extraction and purification methods were used in combination with liquid and/or gas chromatography coupled to tandem mass spectrometry.

PARTICIPANTS

Agrolab S.A., Tessaloniki, EL

(measurements under the scope of ISO/IEC 17025 accreditation by Hellenic Accreditation System; accreditation number 44-4)

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

(accredited to ISO Guide 34 for production of certified reference materials, BELAC No. 268-RM; measurements under the scope of ISO/IEC 17025 accreditation BELAC No. 268-TEST)

European Reference Laboratory for Pesticides in Fruits and Vegetables, Almería, ES

Finnish Customs Laboratory, Tullilaboratorio, Helsinki, FI

(measurements under the scope of ISO/IEC 17025 accreditation by Finas; accreditation number T006)

GALAB Laboratories GmbH, Geesthacht, DE

(measurements under the scope of ISO/IEC 17025 accreditation by Deutsche Akkreditierungsstelle; accreditation number D-PL-14234-01-00)

Laboratorio Agroalimentario Valencia, Valencia, ES

(measurements under the scope of ISO/IEC 17025 accreditation by ENAC; accreditation number 184/LE405)

Laboratorio Cantonale, Bellinzona, CH

(measurements under the scope of ISO/IEC 17025 accreditation by Swiss Accreditation Service; accreditation number STS-0467)

Laboratório Regional de Veterinária e Segurança Alimentar, Funchal, PT

(measurements under the scope of ISO/IEC 17025 accreditation by Instituto Português de Acreditação; accreditation number L0509-1)

Labor Friedle GmbH, Tegernheim, DE

(measurements under the scope of ISO/IEC 17025 accreditation by Deutsche Akkreditierungsstelle; accreditation number D-P-14646-03-00)

Landeslabor Berlin Brandenburg, Frankfurt, DE

(measurements under the scope of ISO/IEC 17025 accreditation by Deutsche Akkreditierungsstelle; accreditation number D-PL-18424-02-00)

Livsmedelsverket, Uppsala, SE

(measurements under the scope of ISO/IEC 17025 accreditation by SWEDAC; accreditation number 1457)

Norsk institutt for bioøkonomi, Ås, NO

(measurements under the scope of ISO/IEC 17025 accreditation by Norsk Akkreditering; accreditation number TEST 035)

Pesticides Control Laboratory, Department of Agriculture, Food and the Marine, Backweston, Celbridge, Co Kildare, IE

(measurements under the scope of ISO/IEC 17025 accreditation by Irish National Accreditation Board; accreditation number 121T)

Reactiva Laboratorio S.L., Almería, ES

(measurements under the scope of ISO/IEC 17025 accreditation by ENAC; accreditation number 543/LE1458)

Institut Scientifique de Santé Publique, Brussels, BE

(measurements under the scope of ISO/IEC 17025 accreditation by BELAC; accreditation number 081-TEST)

SAFETY INFORMATION

The ERM-BC403 is intended for laboratory use only. The usual laboratory safety measures apply.

INSTRUCTIONS FOR USE AND INTENDED USE

The material consists of two amber glass vials containing 3.2 g dried cucumber each.

To make one bottle ready for use, the material has to be reconstituted according to the following procedure:

Leave the vial to thaw at room temperature. Remove the cap and add 72.0 g deionised water to the vial. Record the mass of water added. Recap the vial and shake gently for 2 minutes on a horizontal shaker. The material is then ready to use. After reconstitution, the sample should be used within a period of 2 hours maximum.

Reconstituted subsamples are taken out from the bottle by pipette, weighted and internal standard added subsequently (if needed) before further sample treatment. The final mass fraction of the added (internal) standards sample should match the range of the calibration.

The main purpose of this material is to assess method performance, i.e. for checking accuracy of analytical results/calibration. As any reference material, it can be used for establishing control charts or performing validation studies.

Use as a calibrant

It is not recommended to use this matrix material as calibrant. If used nevertheless, the uncertainty of the certified value shall be taken into account in the estimation of the measurement uncertainty.

STORAGE

The material should be stored at -70 ± 10 °C in the dark.

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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