

CERTIFICATE

Matrix certified reference material of green tea containing selected pesticides

METRANAL® CRM AN-BM03

This Certificate is designed in accordance with ISO Guide 31

Description:

The certified reference material of green tea AN-BM03 was prepared by spiking selected relevant organic compounds into the original natural matrix. Selected pesticides are certified.

Packing:

30 g of powder of the respective green tea with a particle size of less than 200 µm in amber glass bottle. The sample is stabilized by radiation 25kGy.

Intended use:

This certified reference materials is intended primarily for use in realizing metrological traceability, validation of analytical methods and the transfer of property values to other materials of similar composition.

Recommended analytical methods for method dependent measurements:

Gas and liquid chromatography

Specification:

The date of production: March 2022

Shelf life: 3 years from the date of production

Metrological traceability:

Metrological traceability is realized by using certified calibration standard solutions for the calibration of measurement methods used (direct traceability to SI unit) and/or by simultaneous analysis of a matrix CRM (RM) of similar composition.

Homogeneity and stability:

Homogeneity and short term stability has been demonstrated according to the ISO GUIDE 35. This CRM will be monitored for over the period of its validity.

Certified and indicative values and their uncertainties:

The certified and indicative values of selected pesticides are summarized in Table 1. The overall means evaluated have been given a status of certified and indicative values using the following criteria: data should be available from at least 5 and 3 accepted laboratory means for calculation of the overall mean for certified and indicative value, respectively. At combined uncertainties presented, the contribution of uncertainty of characterization of a particular property value is dominant.

Table 1: Certified and indicative values of selected pesticides.

analytes	AN-BM03	
	concentration [µg/kg]	uncertainty [µg/kg]
Acetamiprid	90.0	9.1
Bifenthrin	(99.3)	
Buprofezine	14.8	1.0
Carbendazin	50.5	6.8
Chlorfenapyr	193	34
Chlorpyrifos	243	49
Clothianidin	192	23
Cyhalothrine	(151)	
Cypermethrine	(193)	
Dicofole	(149)	
Difenoconazole	178	23
α-endosulfan	63.5	15.1
β-endosulfan	67.0	12.1
Fenpropathrin	89.0	5.9
Flubendiamide	143	21
Fipronil	55.5	5.3
Imidacloprid	35.0	5.5
Indoxacarb	268	18
Metamitron	61.0	8.2
Metalaxyl	90.5	14.9
Methomyl	79.0	7.0
Pendimethalin	170	33
Propargite	31.0	4.3
Pyridaben	214	18
Tebuconazole	68.5	6.5
Thiacloprid	70.5	4.1
Thiamethoxam	57.5	8.3
Triazophos	188	23

All values corrected to a dry mass at 105°C

Uncertainty – expanded combined uncertainty (k=2)

() indicative value

This CRM will be monitored for over the period of its validity. If substantive changes of reference values occur, Analytika®, spol. s r.o. will notify the purchaser.

Storing and instruction for use:

This CRM has to be stored in original bottle at -18°C (optimal is in a freezer). The material should be analysed in the "as received" state and its dry weight should be determined on non-analysed aliquots oven-dried at 105°C till the constant weight. The material in the bottle must be rehomogenized before each use by mechanical shaking of the content for 1-2 minutes. The bottle should be opened a minimum of 2 minutes after rehomogenization in order to prevent an escape of fine powder particles from the bottle into the environment and their sedimentation.

Note:

Detailed information about the production, homogeneity testing and characterization of this CRM are described in the Certification report, which is available on request.

Producer:

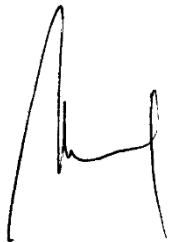
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Quality management systems of company ANALYTIKA[®], spol. s r.o.:

ČSN EN ISO 9001:2016
ČSN EN ISO/IEC 17025:2018
ČSN EN ISO 17034:2017

Manager of Department of RM:

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Date of the first issue of certificate: 18.03.2022
Certificate revision date:

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Version of certificate: 01