aokin ReferenceMatrixMaterial

AFLA OTA

for analysis of Aflatoxin total (AFLA)
and Ochratoxin A (OTA) in Paprika

Order No.: RMM-34-1752r
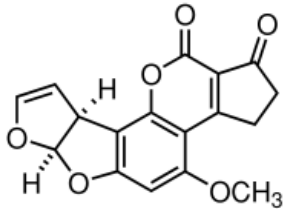
Aflatoxin B1 (AFLA)
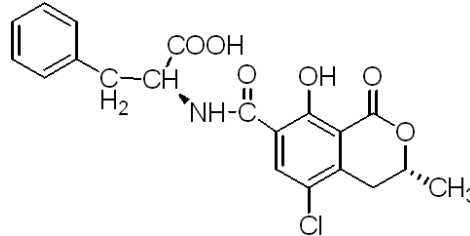
Ochratoxin A (OTA)

Specification

Lot No.	3417522102119275
Matrix Type	Paprika
Analyte	Aflatoxin total (AFLA), Ochratoxin A (OTA)
Weight/Volume	50 g
Storage	-18 °C
Retest	06/2024

	Concentration x_{PT} [µg/kg]	data points n	satisfactory range $x_{PT} \pm 2\,\sigma_{PT}$ [µg/kg]	uncertainty* $2\,u(x_{PT})$[µg/kg]
Aflatoxin B1	9,40	13	5,26 – 13,54	2,02
Aflatoxin B2	1,24	11	0,69 – 1,79	0,22
Aflatoxin G1	3,64	13	2,04 – 5,24	0,90
Aflatoxin G2	1,19 **	9	0,28 – 2,09 **	nd
Aflatoxin total	15,80	13	6,36 – 25,24	2,92
Ochratoxin A	5,80	11	3,25 – 8,35	1,44

*Expanded uncertainty with k=2 for approximately 95% level of confidence (PA/PH/OMCL(18)153R1 CORR Evaluation of Measurement Uncertainty - Annex 2.5).

**Submitted results have a high uncertainty $[u(x\,pT\,)]\,2\,[\sigma\,PT\,]\,2\,/>0.5\%$
concentration (arithmetic mean) is provided for information only, coefficient of variation 75,71 %

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aokin is ISO 9001 certified and works according to GLP and ISO 17025.

FB-RMM-34-1752r-R10
Errors and changes reserved.

Comments

aokin reference matrix material is naturally contaminated and homogenized. Concentration of the analyte is determinate in a proficiency round. 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 such as HPLC-MS/MS, HPLC/FLD, UHPLC-MS/MS.
The certified value and its uncertainty are traceable to the International System of Units (SI) as chemical mass fraction as µg/kg. The assigned value, the satisfactory range and the expanded uncertainty are given.
The minimum amount of sample to be used is 10 g.

Calculation of the assigned value x_{PT}

The Assigned Value is the value attributed to a particular property of interlaboratory proficiency test (definition from ISO13528:2016). x_{PT} is derived from participants quantitative results obtained with confirmatory analysis. The procedure for determining is from the Algorithm A (ISO 13528:2016) or from the median.

The standard uncertainty is expanded by a factor f = 1,25 and is calculated as:
$$u(x_{PT}) = f \; {}^{\sigma_{PT}}\!/\!{}_{\sqrt{n}} \quad \text{(uncertainty of the characterization)}$$
where:
- σ_{PT} is the robust estimate of the participant standard deviation;
- $\sigma_{PT} = b \cdot x_{PT}$ where b is the relative robust estimate of the participant standard deviation
- n is the number of participants used in calculating the robust assigned values.

The satisfactory range is calculated from the expanded (k=2) standard deviation of the proficiency assessment:
The satisfactory range equals $x_{PT} \pm 2\,\sigma_{PT}$.