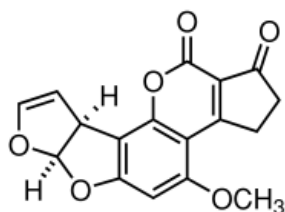
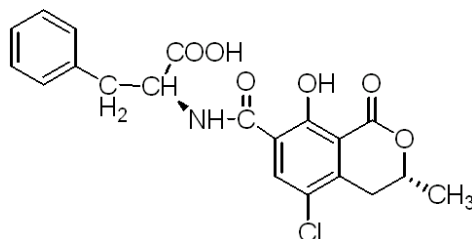


AFLA OTA

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



Aflatoxin B1 (AFLA)



Ochratoxin A (OTA)

Specification

Lot No.	341604220112275
Matrix Type	Animal feed
Analyte	Aflatoxin total (AFLA), Ochratoxin A (OTA)
Weight/Volume	50 g
Storage	-18 °C
Retest	01/2025

	Concentration x_{PT} [$\mu\text{g}/\text{kg}$]	data points n	satisfactory range $x_{PT} \pm 2 \sigma_{PT}$ [$\mu\text{g}/\text{kg}$]	uncertainty* $2 u(x_{PT})$ [$\mu\text{g}/\text{kg}$]
Aflatoxin B1	presence**	16	nd	nd
Aflatoxin B2	1,46	13	0,71 – 2,21	0,38
Aflatoxin G1	4,20	14	2,07 – 6,33	1,06
Aflatoxin G2	presence**	10	nd	nd
Aflatoxin total	15,36	15	5,38 – 25,34	3,82
Ochratoxin A	presence**	7	nd	nd

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

**It was not possible to assign a value or an uncertainty due to a bimodal distribution of data. Arithmetic mean was 8,74 $\mu\text{g}/\text{kg}$ for Aflatoxin B1, 1,10 $\mu\text{g}/\text{kg}$ for Aflatoxin G2 and 6,84 $\mu\text{g}/\text{kg}$ for Ochratoxin A.

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, LC-MS/MS, UHPLC.

The certified value and its uncertainty are traceable to the International System of Units (SI) as chemical mass fraction as $\mu\text{g}/\text{kg}$. 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:

$$u(x_{PT}) = f \frac{\sigma_{PT}}{\sqrt{n}} \text{ (uncertainty of the characterization)}$$

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 $x_{PT} \pm 2 \sigma_{PT}$.