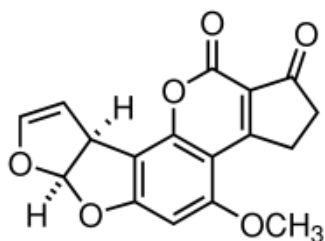


## AFLA

for analysis of Aflatoxin total (AFLA) in Corn



Aflatoxin B1 (AFLA)

### Specification

Lot No.	003185002180918275
Matrix Type	Corn
Analyte	Aflatoxin total (AFLA)
Weight/Volume	50 g
Storage	-18 °C
Retest	02/2026

	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	19,53	26	8,23 - 30,83	2,14
Aflatoxin B2	1,00	21	0,56 - 1,44	0,12
Aflatoxin G1	7,48**	26	nd	nd
Aflatoxin G2	< 1,00	13	nd	nd
Aflatoxin total	27,76	25	12,52 - 42,99	3,46

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

\*\*Results have a high uncertainty, arithmetic mean shown; satisfactory range estimated by coefficient of variation of 58,13 % for Aflatoxin G1.

## 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 HPL, HPLC-MS/MS, HPLC/FLD, HPLC/MS, LC-MS/MS, UHPLC-MS/MS.

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:

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