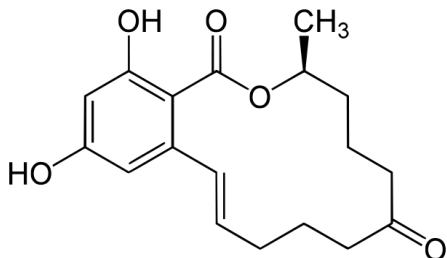


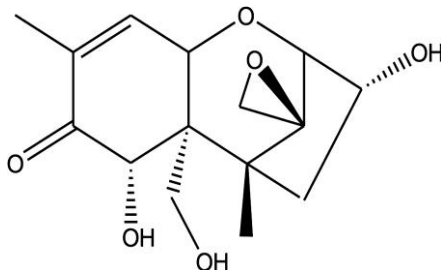
ZON DON AFLA OTA FUM

Order No.: RMM-12345-6600r

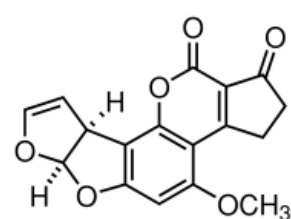
for analysis of Zearalenone (ZON), Deoxynivalenol (DON), Aflatoxin total (AFLA), Ochratoxin A (OTA) and Fumonisin total (FUM) in Corn



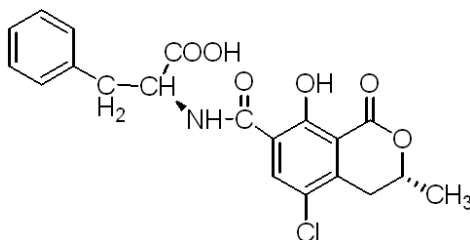
Zearalenone (ZON)



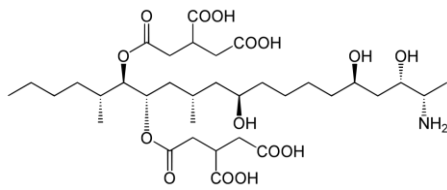
Deoxynivalenol (DON)



Aflatoxin B1 (AFLA)



Ochratoxin A (OTA)



Fumonisin B1 (FUM)

Specification

Lot No.	123456600260907275
Matrix Type	Corn
Analyte	Zearalenone (ZON), Deoxynivalenol (DON), Aflatoxin total (AFLA), Ochratoxin A (OTA), Fumonisin total (FUM)
Weight/Volume	40 g
Storage	-15/-25 °C
Shipping	ambient
Retest	09/2029

	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]
Zearalenone	177,11	21	94,50 - 259,72	27,42
Deoxynivalenol	653,50	18	369,11 - 937,89	112,00

Aflatoxin B1	12,27	30	4,65 - 19,89	1,98
Aflatoxin B2	4,99	26	2,61 - 7,37	0,92
Aflatoxin G1	4,65	26	1,66 - 7,65	1,08
Aflatoxin G2	presence**	8	nd	nd
Aflatoxin total	22,38	23	8,81 - 35,95	4,82
Ochratoxin A	6,79	17	3,13 - 10,45	1,36
Fumonisin B1	1505,50	18	847,64 - 2163,36	264,84
Fumonisin B2	364,18	17	209,13 - 519,23	53,12
Fumonisin total	1917,45	18	1072,20 - 2762,70	355,22

*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 some results below LOD for Aflatoxin G2 at $< 0,5 \mu\text{g/kg}$. Arithmetic mean at $0,66 \mu\text{g/kg}$

***If $u(x_{PT}) \geq 0.3 \sigma_{PT}$ the standard uncertainty of the assigned value is included in the assessments.

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/DAD, HPLC/MS, HPLC/UV, HPLC/MS, HPLC/QTOF, HPLC/FLD, HPTLC-MS/MS, UHPTLC-MS/MS, LC-MS/MS, ELISA, FLD, Lateral flow, aokin.

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

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

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 $x_{PT} \pm 2 \sigma_{PT}$. If $u(x_{PT}) \geq 0.3 \sigma_{PT}$ the standard uncertainty of the assigned value is included in the assessments.