aokin *ReferenceMatrixMaterial*

DON T2/HT2

for analysis of Deoxynivalenol (DON)
and T2- and HT2-Toxin (T2/HT2) in Wheat

Order No.: RMM-278-2603r
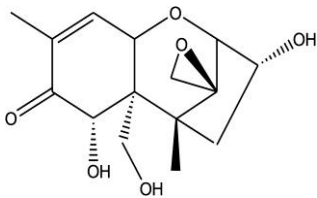
Deoxynivalenol (DON)
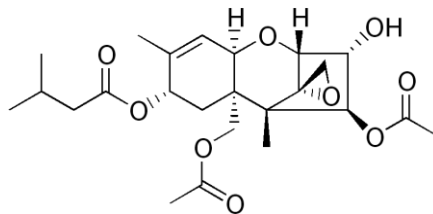
T2-Toxin (T2)
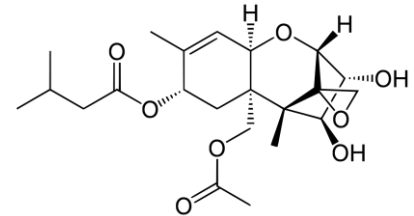
HT2-Toxin (HT2)

Specification

Lot No.	2782603230118275
Matrix Type	Wheat
Analyte	Deoxynivalenol (DON), T2- and HT2-Toxin (T2/HT2)
Weight/Volume	50 g
Storage	-18 °C
Retest	01/2026

	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]
Deoxynivalenol	1307,90	10	784,74 – 1831,06	191,02
T2-Toxin	presence**	8	nd	nd
HT2-Toxin	75,50	8	34,67 – 116,33	19,92
T2/HT2-Toxin total	89,71	8	48,44 – 130,98	15,94

*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.

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/UV, LC-MS/MS, UHPLC-MS/MS, HPLC/FLD, UHPLC.
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 $x_{PT} \pm 2\ \sigma_{PT}$.