QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 27

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis BT11 27

General Information

In this report an overview is given of analytical data for this sample collected in our proficiency testing program. The consensus values are calculated using a robust statistical model. With this NDA model mean and standard deviation are calculated using all reported data when at least 4 results are left after removal of reported 'lower than' (<) and 0 (= zero) values. No outliers are removed.

This report is divided into two sections: Consensus Values and Indicative Values. The division is made on the reliability of the data. Consensus Values are based on at least 10 results while the relative uncertainty is smaller than 6.25%. Indicative Values are based on a relative uncertainty of maximum 35% with at least 4 and less than 10 results or a relative uncertainty higher than 6.25%.

For each determinand the following parameters are given: mean, standard deviation, coefficient of variation, number of results, median, MAD (Median of Absolute Deviation) and the uncertainty in the assigned value. The confidence limits (at 95 % probabilty) are calculated for these determinands.

The results of each determinand is expressed on a wet weight basis.

Sample information

QUASIMEME reference materials cover a range of natural Shellfish toxins species from contaminated waters from the North Sea and/or Mediterranean.

This BT11 sample 27 of Mussel (Mytilus Edulis) from Marine Institute, Galway, Ireland is prepared for the QUASIMEME proficiency programs. The results on which the values in this report are based were taken from the periods given in the following table.

Year.Round	Program	Sample Round Id
2022.2	BT11	QST327BT
2020.1	BT11	QST283BT

Consensus Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
Free-DTX1	µg/kg	167	39.2	23.4	67	170	26.9	6.0	158 - 177
free-Okadaic-Acid	µg/kg	24.3	6.91	28.4	54	26.4	4.60	1.18	22.4 - 26.2
Total-free-OA+DTX1+DTX2	µg OA eq./kg	190	49.2	25.9	62	200	34.4	7.8	178 - 203
Total-DTX1	µg/kg	216	57.3	26.4	70	213	39.5	8.6	203 - 230
Total-Okadaic-Acid	µg/kg	41.6	11.88	28.6	61	42.5	8.10	1.90	38.5 - 44.6
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	259	77.6	29.9	67	265	54.0	11.9	241 - 278
Total OA group + PTX group	µg OA eq./kg	256	65.2	25.4	47	260	44.2	11.9	237 - 275
YTX	mg/kg	0.236	0.0441	18.7	70	0.239	0.0306	0.0066	0.225 - 0.246
homo-YTX	mg/kg	0.979	0.1980	20.2	68	1.006	0.1420	0.0300	0.931 - 1.03
45-OH-homo-YTX	mg/kg	0.364	0.0898	24.7	54	0.377	0.0595	0.0153	0.339 - 0.388
Total-YTX	mg YTX eq./kg	1.56	0.246	15.8	60	1.60	0.170	0.040	1.50 - 1.63

Indicative Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
AZA-3	µg/kg	1.21	0.928	76.4	10	1.64	0.731	0.367	0.561 - 1.87
Free-DTX2	µg/kg	5.53	3.292	59.5	12	8.14	2.390	1.188	3.46 - 7.60
45-OH-YTX	mg/kg	0.121	0.0434	35.8	49	0.130	0.0300	0.0077	0.109 - 0.134