QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 18

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis BT11 18

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 18 of Blue mussel (Mytilus edulis) whole flesh tissue from Marine Institute, 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
2020.1	BT11	QST281BT
2018.1	BT11	QST245BT
2016.1	BT11	QST209BT

Consensus Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
AZA-1	µg/kg	1330	171	12.9	107	1300	116	21	1295 - 1360
AZA-2	µg/kg	342	51.9	15.2	105	341	35.9	6.3	332 - 352
AZA-3	µg/kg	295	38.3	13.0	104	296	25.8	4.7	287 - 302
AZA-total	µg AZA eq./kg	2380	248	10.4	100	2370	170	31	2329 - 2427
Free-DTX2	µg/kg	256	48.1	18.8	105	256	32.6	5.9	247 - 265
free-Okadaic-Acid	µg/kg	245	45.1	18.4	105	241	30.5	5.5	236 - 254
Total-free-OA+DTX1+DTX2	µg OA eq./kg	413	76.2	18.4	94	412	52.5	9.8	398 - 429
Total-DTX2	µg/kg	357	61.7	17.3	99	356	42.2	7.8	344 - 369
Total-Okadaic-Acid	µg/kg	434	65.0	15.0	97	432	43.7	8.2	421 - 448
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	646	96.9	15.0	92	650	65.2	12.6	626 - 666
Total OA group + PTX group	µg OA eq./kg	647	103.6	16.0	79	652	68.9	14.6	624 - 670

Indicative Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
Free-DTX1	µg/kg	3.14	1.959	62.4	13	4.40	1.600	0.679	1.97 - 4.31
Total-DTX1	µg/kg	3.99	2.605	65.3	13	6.89	1.893	0.903	2.43 - 5.55
PTX-2	µg/kg	0.614	0.2129	34.7	5	0.624	0.1350	0.1190	0.369 - 0.858
YTX	mg/kg	0.0087	0.0043	49.8	15	0.0100	0.0030	0.0014	0.0063 - 0.0110
Total-YTX	mg YTX eq./kg	0.0090	0.0038	42.7	12	0.0100	0.0026	0.0014	0.0066 - 0.0114