



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 19



Certificate of Analysis BT11 19

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 % probability) 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 19 of Extract from Blue mussel (*Mytilus edulis*) 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
2022.2	BT11	QST326BT
2021.2	BT11	QST308BT
2016.2	BT11	QST220BT



Consensus Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
AZA-1	µg/kg	76.7	14.01	18.3	112	77.8	9.53	1.65	74.1	-	79.3
AZA-2	µg/kg	25.6	3.67	14.3	108	25.6	2.62	0.44	24.9	-	26.3
AZA-3	µg/kg	18.9	3.63	19.2	108	19.0	2.52	0.44	18.2	-	19.6
AZA-total	µg AZA eq./kg	151	23.3	15.4	108	151	16.0	2.8	147	-	156
Free-DTX1	µg/kg	12.4	3.09	24.9	98	12.8	2.20	0.39	11.8	-	13.0
Free-DTX2	µg/kg	43.8	7.13	16.3	110	44.3	4.80	0.85	42.4	-	45.1
free-Okadaic-Acid	µg/kg	12.9	2.91	22.5	100	13.0	2.00	0.36	12.3	-	13.5
Total-free-OA+DTX1+DTX2	µg OA eq./kg	51.7	11.50	22.3	106	50.7	7.99	1.40	49.5	-	53.9
Total-DTX1	µg/kg	17.1	4.73	27.7	91	17.5	3.29	0.62	16.1	-	18.1
Total-DTX2	µg/kg	73.0	15.70	21.5	101	74.0	10.54	1.95	69.9	-	76.1
Total-Okadaic-Acid	µg/kg	48.4	11.84	24.5	101	49.6	8.17	1.47	46.0	-	50.7
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	110	24.9	22.6	100	110	17.0	3.1	105	-	115
Total OA group + PTX group	µg OA eq./kg	108	22.3	20.5	74	109	15.0	3.2	103	-	114
YTX	mg/kg	0.0067	0.0024	35.5	52	0.0076	0.0016	0.0004	0.0061	-	0.0074



Indicative Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
PTX-2	µg/kg	0.588	0.2625	44.6	17	0.690	0.1800	0.0796	0.454 - 0.723
45-OH-YTX	mg/kg	0.0026	0.0013	50.6	19	0.0030	0.0009	0.0004	0.0020 - 0.0033
Total-YTX	mg YTX eq./kg	0.0077	0.0031	40.2	41	0.0081	0.0021	0.0006	0.0067 - 0.0086