



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 21



Certificate of Analysis BT11 21

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 21 of Mussel extract (*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
2020.2	BT11	QST290BT
2019.2	BT11	QST273BT
2018.2	BT11	QST255BT
2017.2	BT11	QST239BT



Consensus Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
AZA-1	µg/kg	13.5	2.55	18.9	140	14.0	1.80	0.27	13.1	-	13.9
AZA-2	µg/kg	3.88	0.714	18.4	112	3.97	0.490	0.084	3.75	-	4.02
AZA-3	µg/kg	3.99	0.887	22.2	110	4.18	0.612	0.106	3.83	-	4.16
AZA-total	µg AZA eq./kg	25.4	5.15	20.3	126	26.0	3.50	0.57	24.5	-	26.3
Free-DTX2	µg/kg	64.0	13.95	21.8	139	64.2	9.76	1.48	61.7	-	66.4
free-Okadaic-Acid	µg/kg	11.7	2.16	18.5	132	12.0	1.50	0.24	11.30	-	12.05
Total-free-OA+DTX1+DTX2	µg OA eq./kg	51.4	11.24	21.9	125	51.3	7.80	1.26	49.4	-	53.4
Total-DTX2	µg/kg	75.1	18.92	25.2	117	77.2	13.10	2.19	71.7	-	78.6
Total-Okadaic-Acid	µg/kg	19.0	4.01	21.1	107	19.9	2.80	0.48	18.2	-	19.8
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	64.8	13.75	21.2	112	65.5	9.47	1.62	62.2	-	67.3
Total OA group + PTX group	µg OA eq./kg	64.4	12.12	18.8	99	65.0	8.40	1.52	62.0	-	66.8
YTX	mg/kg	0.0321	0.0070	21.7	119	0.0328	0.0049	0.0008	0.0308	-	0.0334
homo-YTX	mg/kg	0.307	0.0536	17.4	130	0.311	0.0373	0.0059	0.298	-	0.316
45-OH-homo-YTX	mg/kg	0.165	0.0601	36.5	95	0.175	0.0390	0.0077	0.152	-	0.177
Total-YTX	mg YTX eq./kg	0.436	0.1118	25.7	114	0.451	0.0798	0.0131	0.415	-	0.457



Indicative Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
PTX-2	µg/kg	0.431	0.2266	52.6	30	0.573	0.1750	0.0517	0.346 - 0.515
45-OH-YTX	mg/kg	0.0248	0.0170	68.3	78	0.0317	0.0130	0.0024	0.0210 - 0.0287