



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 18



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 % 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 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
2023.2	BT11	QST344BT
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		
free-Okadaic-Acid	µg/kg	242	45.7	18.9	142	240	29.1	4.8	234	-	249
Free-DTX2	µg/kg	256	52.5	20.5	141	256	32.4	5.5	248	-	265
Total-free-OA+DTX1+DTX2	µg OA eq./kg	408	74.9	18.4	125	406	51.7	8.4	395	-	421
Total-Okadaic-Acid	µg/kg	432	74.1	17.1	134	430	42.2	8.0	420	-	445
Total-DTX2	µg/kg	359	67.9	18.9	135	356	41.3	7.3	348	-	371
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	649	104.9	16.2	126	652	64.3	11.7	630	-	667
AZA-1	µg/kg	1327	204.6	15.4	145	1308	127.6	21.2	1294	-	1361
AZA-2	µg/kg	340	60.2	17.7	142	341	37.5	6.3	330	-	350
AZA-3	µg/kg	295	49.9	16.9	141	297	28.8	5.3	286	-	303
AZA-total	µg AZA eq./kg	2374	332.9	14.0	137	2373	187.8	35.6	2318	-	2431
Total OA group + PTX group	µg OA eq./kg	648	109.0	16.8	96	652	65.5	13.9	626	-	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	3.31	2.466	74.5	16	4.45	1.750	0.771	2.00 - 4.62
Total-DTX1	µg/kg	3.42	2.978	87.0	16	6.67	2.506	0.931	1.84 - 5.00
YTX	mg/kg	0.0093	0.0051	54.7	26	0.0100	0.0030	0.0013	0.0073 - 0.0114
Total-YTX	mg YTX eq./kg	0.0097	0.0051	52.3	22	0.0102	0.0030	0.0014	0.0075 - 0.0120