QUASIMEME

**Quality assurance of information
for marine environmental monitoring**

Certificate of Analysis

PSP shellfish toxins

REFERENCE MATERIAL

BT12 sample 21

WAGENINGEN
UNIVERSITY & RESEARCH

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 BT12 sample 21 of Mix green shelled and blue mussel 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
2023.2	BT12	QST348BT
2022.1	BT12	QST321BT
2020.2	BT12	QST295BT

Consensus Values   BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
STX	µmol/kg	0.658	0.1501	22.8	98	0.662	0.0912	0.0190	0.627	-	0.688
GTX-2	µmol/kg	1.87	0.310	16.6	35	1.87	0.202	0.065	1.76	-	1.97
GTX-3	µmol/kg	0.601	0.1027	17.1	35	0.600	0.0580	0.0217	0.566	-	0.636
GTX-5	µmol/kg	7.75	1.646	21.3	94	7.86	1.167	0.212	7.41	-	8.08
C2	µmol/kg	1.82	0.468	25.8	31	1.80	0.277	0.105	1.64	-	1.99
dc-STX	µmol/kg	0.473	0.1426	30.1	90	0.483	0.0860	0.0188	0.444	-	0.503
dc-GTX3	µmol/kg	0.157	0.0383	24.3	28	0.163	0.0196	0.0090	0.143	-	0.172
Total toxicity	µgSTXdiHCleq./kg	1533	380.4	24.8	102	1545	230.0	47.1	1458	-	1607
GTX-2,3	µmol/kg	1.98	0.502	25.4	59	1.94	0.300	0.082	1.85	-	2.11
C-1,2	µmol/kg	6.86	1.882	27.5	64	6.96	1.090	0.294	6.39	-	7.33

Indicative Values   BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits	
GTX-1	µmol/kg	0.0838	0.0487	58.1	12	0.105	0.0345	0.0176	0.0532 -	0.114
C1	µmol/kg	6.70	2.531	37.8	33	7.00	1.371	0.551	5.81 -	7.60
dc-GTX2	µmol/kg	0.545	0.1676	30.8	32	0.570	0.1095	0.0370	0.485 -	0.605
GTX-1,4	µmol/kg	0.584	0.6243	106.9	30	0.892	0.4587	0.1425	0.351 -	0.817
dc-GTX-2,3	µmol/kg	0.579	0.2459	42.5	49	0.595	0.1450	0.0439	0.508 -	0.649