QUASIMEME

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

Certificate of Analysis

PSP shellfish toxins

REFERENCE MATERIAL

BT12 sample 20

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 20 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
2023.1	BT12	QST338BT
2021.2	BT12	QST312BT
2020.1	BT12	QST286BT

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits	
STX	µmol/kg	0.340	0.0836	24.6	95	0.340	0.0480	0.0107	0.323 -	0.357
GTX-2	µmol/kg	0.770	0.2231	29.0	36	0.786	0.1275	0.0465	0.695 -	0.846
GTX-3	µmol/kg	0.273	0.0746	27.3	35	0.279	0.0427	0.0158	0.248 -	0.299
GTX-5	µmol/kg	3.85	0.932	24.2	93	3.87	0.572	0.121	3.66 -	4.04
C1	µmol/kg	2.87	0.806	28.1	33	2.96	0.441	0.175	2.59 -	3.16
dc-STX	µmol/kg	0.324	0.1153	35.6	88	0.326	0.0755	0.0154	0.300 -	0.349
dc-GTX3	µmol/kg	0.0944	0.0231	24.5	30	0.0946	0.0147	0.0053	0.0858 -	0.103
Total toxicity	µgSTXdiHCleq./kg	759	240.7	31.7	97	775	153.1	30.5	710 -	807
GTX-2,3	µmol/kg	0.885	0.2476	28.0	63	0.910	0.1400	0.0390	0.823 -	0.948
C-1,2	µmol/kg	3.00	0.920	30.6	62	3.00	0.595	0.146	2.77 -	3.24

Indicative Values   BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits	
NEO	µmol/kg	0.0758	0.0679	89.5	14	0.266	0.0885	0.0227	0.0369 -	0.115
C2	µmol/kg	0.793	0.3159	39.8	32	0.796	0.1970	0.0698	0.679 -	0.907
dc-GTX2	µmol/kg	0.288	0.1245	43.2	30	0.298	0.0785	0.0284	0.242 -	0.334
GTX-1,4	µmol/kg	0.549	0.3477	63.4	23	0.688	0.1720	0.0906	0.399 -	0.698
dc-GTX-2,3	µmol/kg	0.326	0.2013	61.8	36	0.362	0.1445	0.0419	0.258 -	0.394