



# QUASIMEME

Quality assurance of information  
for marine environmental monitoring

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## Certificate of Analysis



PSP shellfish toxins

REFERENCE MATERIAL

BT12 sample 16

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## Certificate of Analysis BT12 16

### 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 BT12 sample 16 of Blue mussel + Mediterranean 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
2021.1	BT12	QST302BT
2020.1	BT12	QST284BT
2019.2	BT12	QST276BT
2018.1	BT12	QST250BT



## Consensus Values BT12

### Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
dc-STX	µmol/kg	0.550	0.1400	25.4	105	0.550	0.0940	0.0171	0.523	-	0.577
GTX-2	µmol/kg	4.59	0.779	16.9	44	4.49	0.564	0.147	4.36	-	4.83
GTX-3	µmol/kg	1.39	0.241	17.3	42	1.40	0.168	0.047	1.32	-	1.47
STX	µmol/kg	1.25	0.236	18.9	116	1.24	0.162	0.027	1.20	-	1.29
Total toxicity	µgSTXdiHCleq./kg	1780	290	16.3	108	1800	196	35	1720	-	1831
GTX-2,3	µmol/kg	5.01	1.181	23.6	69	5.06	0.800	0.178	4.73	-	5.30



### Indicative Values BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
GTX-1	µmol/kg	0.112	0.0537	47.9	18	0.141	0.0358	0.0158	0.0857 - 0.139
GTX-4	µmol/kg	0.0450	0.0404	89.8	15	0.0500	0.0285	0.0131	0.0228 - 0.0673
GTX-5	µmol/kg	0.0177	0.0135	76.5	10	0.0300	0.0113	0.0054	0.0082 - 0.0273
NEO	µmol/kg	0.179	0.1757	98.1	30	0.318	0.1375	0.0401	0.114 - 0.245
GTX-1,4	µmol/kg	0.213	0.1823	85.4	20	0.253	0.1375	0.0509	0.128 - 0.298