



# QUASIMEME

Quality assurance of information  
for marine environmental monitoring

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## Certificate of Analysis



PSP shellfish toxins

REFERENCE MATERIAL

BT12 sample 21

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## Certificate of Analysis BT12 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 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
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		
C-1,2	µmol/kg	6.75	1.477	21.9	44	6.77	1.030	0.278	6.30	-	7.20
dc-STX	µmol/kg	0.475	0.1267	26.7	59	0.488	0.0880	0.0206	0.442	-	0.508
GTX-2	µmol/kg	1.88	0.286	15.2	22	1.88	0.196	0.076	1.76	-	2.01
GTX-3	µmol/kg	0.589	0.0831	14.1	22	0.596	0.0590	0.0221	0.553	-	0.626
GTX-5	µmol/kg	7.77	1.499	19.3	62	7.91	1.056	0.238	7.39	-	8.15
STX	µmol/kg	0.667	0.1103	16.5	66	0.673	0.0766	0.0170	0.640	-	0.694
Total toxicity	µgSTXdiHCleq./kg	1540	346	22.5	67	1570	236	53	1456	-	1625
GTX-2,3	µmol/kg	1.97	0.436	22.1	40	2.00	0.309	0.086	1.83	-	2.11



### Indicative Values BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
C1	µmol/kg	6.99	2.339	33.5	20	7.21	1.621	0.654	5.90	-	8.08
C2	µmol/kg	1.81	0.465	25.7	19	1.80	0.297	0.133	1.58	-	2.03
dc-GTX2	µmol/kg	0.568	0.1566	27.6	19	0.574	0.1090	0.0449	0.493	-	0.643
dc-GTX-2,3	µmol/kg	0.595	0.2662	44.7	32	0.675	0.1882	0.0588	0.499	-	0.691
dc-GTX3	µmol/kg	0.155	0.0356	23.0	18	0.154	0.0235	0.0105	0.137	-	0.173
GTX-1,4	µmol/kg	0.760	0.7223	95.1	22	1.111	0.5384	0.1925	0.440	-	1.08