



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



PSP shellfish toxins

REFERENCE MATERIAL

BT12 sample 22



Certificate of Analysis BT12 22

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, the 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 8 results and a maximum relative uncertainty of 6.25%. Indicative Values are based on a maximum relative uncertainty of 35% and a minimum of 4 and maximum of 7 results, or a relative uncertainty greater than 6.25% when there are at least 8 results.

For each determinand the following parameters are given: mean, standard deviation, coefficient of variation, number of results, median, MAD (Median of Absolute Deviation), the uncertainty of the mean (consensus or indicative) value and the relative uncertainty.

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 22 of Mussel (*Perna caniculus*) 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
2025.1	BT12	QST374BT
2024.2	BT12	QST365BT
2023.1	BT12	QST339BT
2021.1	BT12	QST304BT



Consensus Values BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
STX	μmol/kg	0.970	0.249	25.6	134	0.999	0.149	0.027	2.77
GTX-2	μmol/kg	5.12	0.786	15.4	45	5.17	0.412	0.146	2.86
GTX-3	μmol/kg	1.66	0.322	19.3	43	1.70	0.200	0.061	3.69
GTX-5	μmol/kg	5.44	1.62	29.8	125	5.43	0.848	0.181	3.33
C1	μmol/kg	4.90	1.48	30.2	39	4.94	0.840	0.297	6.05
dc-STX	μmol/kg	0.617	0.226	36.6	122	0.637	0.140	0.026	4.14
dc-GTX2	μmol/kg	0.705	0.220	31.2	42	0.732	0.134	0.042	6.01
dc-GTX3	μmol/kg	0.221	0.070	31.6	41	0.226	0.046	0.014	6.18
Total toxicity	μgSTXdiHCleq./kg	2409	530	22.0	131	2434	317	57.9	2.40
GTX-2,3	μmol/kg	5.36	1.42	26.4	91	5.42	1.04	0.186	3.46
C-1,2	μmol/kg	4.83	1.39	28.8	90	4.90	0.813	0.184	3.80



Indicative Values BT12

Method: Toxins(SF) - BT12

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
NEO	μmol/kg	0.157	0.271	173.1	23	0.373	0.268	0.071	45.1
GTX-1	μmol/kg	0.072	0.061	85.0	14	0.100	0.034	0.021	28.4
GTX-4	μmol/kg	0.089	0.121	137.1	15	0.122	0.112	0.039	44.2
GTX-6	μmol/kg	0.054	0.138	253.9	9	0.779	0.738	0.057	106
C2	μmol/kg	1.36	0.517	38.1	40	1.27	0.380	0.102	7.53
dc-NEO	μmol/kg	0.062	0.133	215.2	10	0.305	0.297	0.053	85.1
GTX-1,4	μmol/kg	1.01	0.808	80.4	48	1.27	0.625	0.146	14.5
C-3,4	μmol/kg	0.130	0.257	197.6	9	0.767	0.524	0.107	82.3
dc-GTX-2,3	μmol/kg	0.676	0.295	43.7	76	0.695	0.200	0.042	6.26