



# QUASIMEME

Quality assurance of information  
for marine environmental monitoring

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## Certificate of Analysis



DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 24

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## Certificate of Analysis BT11 24

### 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 BT11 sample 24 of Blue mussel homogenate (*Mytilus edulis*) 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	BT11	QST300BT
2018.2	BT11	QST256BT



## Consensus Values BT11

### Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
AZA-1	µg/kg	420	71.4	17.0	71	420	49.5	10.6	404	-	437
AZA-2	µg/kg	116	18.9	16.4	68	117	12.9	2.9	111	-	120
AZA-3	µg/kg	76.1	11.16	14.7	68	77.0	7.65	1.69	73.4	-	78.8
AZA-total	µg AZA eq./kg	732	108.3	14.8	66	728	75.6	16.7	706	-	759
free-Okadaic-Acid	µg/kg	33.7	6.15	18.3	64	33.8	4.12	0.96	32.2	-	35.2
Total-free-OA+DTX1+DTX2	µg OA eq./kg	37.7	9.84	26.1	56	37.8	6.90	1.64	35.1	-	40.3
Total-DTX2	µg/kg	12.2	3.02	24.8	32	12.9	2.05	0.67	11.1	-	13.3
Total-Okadaic-Acid	µg/kg	67.4	11.16	16.6	67	67.7	7.60	1.70	64.7	-	70.1
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	71.7	9.81	13.7	60	73.1	6.69	1.58	69.2	-	74.2
Total OA group + PTX group	µg OA eq./kg	71.9	10.16	14.1	52	73.1	6.84	1.76	69.1	-	74.8



### Indicative Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
Free-DTX1	µg/kg	1.44	0.917	63.8	7	2.94	0.610	0.433	0.618 - 2.26
Free-DTX2	µg/kg	11.2	3.60	32.3	32	12.1	2.34	0.80	9.86 - 12.5
Total-DTX1	µg/kg	1.39	0.974	70.0	7	4.39	0.760	0.460	0.520 - 2.26