QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

Sediment

REFERENCE MATERIAL

Sediment sample 65

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis Sediment 65

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 dried sediment.

Sample information

QUASIMEME reference materials cover a range of natural Marine sediment species from contaminated waters from the North Sea and/or Mediterranean. There is no spiking, mixing or other alterations of the samples. For sample preparation the sediment samples are dried at 40 oC and milled to pass a 0.5 mm sieve.

This Sediment sample 65 of Mix sediment harbor and open sea from Rotterdam harbor / Barrow in Furness 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
2021.2	MS7	QBC069MS
2021.2	MS8	QPF016MS

Consensus Values MS7

Method: Brominated Flame Retardants - MS7

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
BDE047	µg/kg	0.384	0.0290	7.6	10	0.391	0.0200	0.0115	0.364	-	0.405
BDE099	µg/kg	0.366	0.0357	9.8	10	0.364	0.0240	0.0141	0.340	-	0.391

Indicative Values MS7

Method: Brominated Flame Retardants - MS7

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
BDE028	µg/kg	0.0593	0.0075	12.6	7	0.0585	0.0043	0.0035	0.0526	-	0.0660
BDE100	µg/kg	0.0968	0.0250	25.8	9	0.1000	0.0170	0.0104	0.0780	-	0.116
BDE153	µg/kg	0.0950	0.0271	28.5	9	0.0998	0.0191	0.0113	0.0746	-	0.115
BDE154	µg/kg	0.0609	0.0134	22.1	7	0.0630	0.0090	0.0063	0.0489	-	0.0728
BDE183	µg/kg	0.0774	0.0352	45.4	9	0.0796	0.0256	0.0147	0.0509	-	0.104
BDE209	µg/kg	43.7	9.38	21.5	7	41.9	6.26	4.43	35.3	-	52.1

Indicative Values MS8

Method: Perfluorinated alkyl substances - MS8

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
n-PFOS	µg/kg	0.456	0.0697	15.3	4	0.428	0.0528	0.0435	0.359	-	0.552
total PFOS	µg/kg	0.510	0.0814	16.0	6	0.497	0.0551	0.0415	0.428	-	0.591
PFUnDA	µg/kg	0.0548	0.0026	4.7	4	0.0558	0.0020	0.0016	0.0512	-	0.0584