QUASIMEME

Quality assurance of information for marine environmental monitoring

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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, 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 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
2024.2	MS7	QBC082MS
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	Rel.Uncert. %
BDE028	µg/kg	0.060	0.006	10.5	17	0.061	0.004	0.002	3.17
BDE047	µg/kg	0.386	0.037	9.6	20	0.388	0.022	0.010	2.69

Indicative Values MS7

Method: Brominated Flame Retardants - MS7

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
BDE099	µg/kg	0.359	0.094	26.3	21	0.370	0.067	0.026	7.18
BDE100	µg/kg	0.101	0.035	35.2	19	0.102	0.019	0.010	10.1
BDE153	µg/kg	0.098	0.038	38.7	19	0.104	0.024	0.011	11.1
BDE154	µg/kg	0.062	0.018	28.2	15	0.064	0.010	0.006	9.09
BDE183	µg/kg	0.068	0.042	62.0	13	0.080	0.031	0.015	21.5
BDE209	µg/kg	45.5	8.94	19.6	15	47.4	5.46	2.89	6.34
BDE66	µg/kg	0.017	0.006	38.1	6	0.017	0.003	0.003	19.4
BDE85	µg/kg	0.014	0.009	65.3	7	0.017	0.006	0.004	30.8
BDE49	µg/kg	0.178	0.031	17.3	4	0.186	0.017	0.019	10.8

Indicative Values MS8

Method: Perfluorinated alkyl substances - MS8

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
n-PFOS	µg/kg	0.455	0.104	22.8	4	0.428	0.053	0.065	14.3
PFUnDA	µg/kg	0.055	0.004	6.8	4	0.056	0.002	0.002	4.26
total-PFOS	µg/kg	0.501	0.104	20.8	6	0.497	0.055	0.053	10.6