QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

Sediment

REFERENCE MATERIAL

Sediment sample 76

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis Sediment 76

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 76 of Oostende spiked from Oostende harbor spiked 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
2023.1	MS6	QSP086MS
2025.1	MS8	QPF029MS
2023.2	MS8	QPF024MS

Indicative Values MS6

Method: Organometals - MS6

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Tributyltin (TBT)	µg Sn/kg	12.1	3.27	27.0	16	12.3	2.30	1.02	8.45
Dibutyltin (DBT)	µg Sn/kg	10.2	2.29	22.5	15	9.83	1.59	0.739	7.27
Monobutyltin (MBT)	µg Sn/kg	40.8	20.9	51.1	12	41.1	15.5	7.53	18.4
Triphenyltin (TPhT)	µg Sn/kg	15.6	3.28	21.0	9	16.5	1.48	1.37	8.75

Consensus Values MS8

Method: Perfluorinated alkyl substances - MS8

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
n-PFOS	µg/kg	2.16	0.318	14.7	20	2.11	0.171	0.089	4.10
PFOSA	µg/kg	1.03	0.129	12.5	21	1.02	0.069	0.035	3.42
PFBA	µg/kg	0.902	0.138	15.3	21	0.906	0.091	0.038	4.16
PFPeA	µg/kg	0.914	0.104	11.3	21	0.934	0.065	0.028	3.09
PFHxA	µg/kg	1.20	0.130	10.8	22	1.21	0.078	0.035	2.88
PFOA	µg/kg	1.09	0.122	11.3	23	1.09	0.070	0.032	2.93
PFNA	µg/kg	1.14	0.123	10.8	22	1.13	0.067	0.033	2.89
PFDA	µg/kg	0.783	0.084	10.7	22	0.788	0.070	0.022	2.86
PFUnDA	µg/kg	1.16	0.157	13.5	23	1.14	0.098	0.041	3.52
PFDoA	µg/kg	0.549	0.057	10.4	22	0.553	0.037	0.015	2.77
PFTrDA	µg/kg	0.921	0.179	19.4	23	0.897	0.101	0.047	5.06
PFTeDA	µg/kg	1.01	0.149	14.7	21	1.00	0.089	0.041	4.00
n-PFBS	µg/kg	1.38	0.132	9.5	16	1.41	0.090	0.041	2.98
n-PFHps	µg/kg	1.18	0.197	16.8	16	1.18	0.107	0.062	5.25
GenX	µg/kg	1.20	0.186	15.5	18	1.21	0.115	0.055	4.57
total-PFOS	µg/kg	2.52	0.283	11.2	23	2.60	0.266	0.074	2.93
total-PFBS	µg/kg	1.34	0.151	11.2	9	1.34	0.110	0.063	4.68
total-PFHpS	µg/kg	1.14	0.168	14.7	9	1.11	0.077	0.070	6.13

Indicative Values MS8

Method: Perfluorinated alkyl substances - MS8

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
PFHpA	µg/kg	0.021	0.009	46.0	7	0.022	0.005	0.004	21.7
PFODA	µg/kg	0.594	0.226	38.0	13	0.641	0.121	0.078	13.2
PFBSA	µg/kg	0.153	0.042	27.6	13	0.152	0.026	0.015	9.56
PFHxSA	µg/kg	0.229	0.089	38.8	6	0.215	0.043	0.045	19.8