

QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis



Sediment

REFERENCE MATERIAL

Sediment sample 54





Certificate of Analysis Sediment 54

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.

Please note: Most WEPAL-QUASIMEME reference materials are found to be stable over the long term (>10 years) for most determinand/matrix combinations. There are a few exceptions known to us as being less stable over the long term. These are organotins in sediment (MS6), ASP in shellfish (BT7), some PAHs and PCBs in sediment (SETOC) and N-NH₄ (as N) in clay soils (ISE).

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 54 of Open sea sediment from Open sea sediment near 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		
2022.1	MS2	QOR150MS		







Method: Chlorinated organics - MS2									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
pp'-DDE	μg/kg	0.110	0.045	40.8	12	0.119	0.024	0.016	14.7
pp'-DDT	μg/kg	0.102	0.072	70.6	10	0.125	0.045	0.029	27.9
pp'-DDD	μg/kg	0.307	0.099	32.3	13	0.308	0.059	0.034	11.2
HCB	μg/kg	0.148	0.066	44.8	9	0.165	0.031	0.028	18.6
PCB28	μg/kg	0.136	0.054	39.5	13	0.140	0.030	0.019	13.7
PCB31	μg/kg	0.098	0.015	15.5	7	0.100	0.010	0.007	7.33
PCB52	μg/kg	0.157	0.055	35.1	13	0.149	0.031	0.019	12.2
PCB101	μg/kg	0.272	0.069	25.5	15	0.272	0.048	0.022	8.22
PCB105	μg/kg	0.062	0.023	37.3	5	0.072	0.012	0.013	20.9
PCB118	μg/kg	0.169	0.050	29.6	14	0.168	0.034	0.017	9.87
PCB138+PCB163	μg/kg	0.379	0.161	42.7	6	0.469	0.104	0.082	21.8
PCB153	μg/kg	0.378	0.181	48.0	16	0.390	0.109	0.057	15.0
PCB180	μg/kg	0.177	0.101	56.9	15	0.206	0.076	0.033	18.4
PCB138	μg/kg	0.339	0.138	40.7	14	0.365	0.102	0.046	13.6
PCB66	μg/kg	0.130	0.022	17.0	4	0.138	0.012	0.014	10.6
PCB110	μg/kg	0.193	0.054	28.1	6	0.195	0.041	0.028	14.3
PCB149	μg/kg	0.402	0.172	42.8	8	0.404	0.105	0.076	18.9
PCB170	μg/kg	0.090	0.034	37.4	7	0.102	0.021	0.016	17.7
PCB187	μg/kg	0.109	0.019	17.6	4	0.116	0.010	0.012	11.0
PCB151	μg/kg	0.107	0.041	38.5	4	0.122	0.018	0.026	24.1
Method: Carbon - MS2									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
TOC	%	0.254	0.043	16.8	11	0.257	0.023	0.016	6.35