QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

Halogenated Organics in seawater

REFERENCE MATERIAL

AQ5 sample 118

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis AQ5 118

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-NH_4 (as N) in clay soils (ISE).

Sample information

QUASIMEME reference materials cover a range of natural SeaWater species from contaminated waters from the North Sea and/or Mediterranean.

This AQ5 sample 118 of Low salinity seawater with spike solution from North Sea, the Netherlands 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
2025.1	AQ5	QOC115SW

Consensus Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
pp'-DDD	ng/l	71.0	7.48	10.5	9	72.3	5.21	3.12	4.39
PCB118	ng/l	77.1	10.5	13.6	8	75.7	6.78	4.64	6.02
PCB138	ng/l	92.8	11.8	12.7	9	92.1	6.85	4.91	5.30
PCB153	ng/l	74.9	10.4	13.8	9	75.3	6.10	4.31	5.76
PCB180	ng/l	57.6	5.22	9.1	8	57.0	3.08	2.31	4.00

Indicative Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
a-HCH	ng/l	68.4	25.9	37.8	10	68.9	20.0	10.2	14.9
g-HCH	ng/l	178	78.8	44.3	10	186	38.6	31.1	17.5
Dieldrin	ng/l	258	39.6	15.3	9	264	23.4	16.5	6.38
pp'-DDE	ng/l	100	23.5	23.5	10	101	14.4	9.30	9.28
pp'-DDT	ng/l	196	57.8	29.5	10	184	25.7	22.8	11.6
HCB	ng/l	64.4	12.0	18.6	8	65.1	5.45	5.29	8.22
Isodrin	ng/l	77.8	11.6	14.9	6	76.0	8.50	5.93	7.63
Endrin	ng/l	94.2	27.1	28.7	9	91.8	17.8	11.3	12.0
Aldrin	ng/l	86.9	26.9	30.9	9	88.0	13.6	11.2	12.9
op'-DDT	ng/l	217	45.0	20.8	8	219	21.3	19.9	9.17
b-HCH	ng/l	58.4	14.8	25.3	10	59.1	10.1	5.85	10.0
HCBD	ng/l	121	17.7	14.6	4	119	8.50	11.1	9.12
Trifluralin	ng/l	46.9	9.79	20.9	6	46.1	5.07	4.99	10.7
Endosulphan-I	ng/l	100	27.3	27.2	6	103	12.5	13.9	13.9
1-2-4-TCB	ng/l	71.7	7.95	11.1	5	72.2	4.80	4.44	6.20
1-3-5-TCB	ng/l	33.5	2.30	6.9	4	33.2	1.07	1.43	4.28
1-2-3-TCB	ng/l	143	19.9	13.9	5	143	6.60	11.1	7.77
d-HCH	ng/l	47.1	19.0	40.2	9	49.4	13.6	7.90	16.8
Pentachlorobenzene	ng/l	188	39.5	21.0	6	192	16.0	20.1	10.7
PCB28	ng/l	27.1	13.4	49.5	7	26.8	6.20	6.33	23.4
PCB52	ng/l	64.1	20.2	31.5	9	70.9	11.2	8.40	13.1
PCB101	ng/l	67.2	15.4	22.9	8	69.6	8.91	6.80	10.1
PCB105	ng/l	36.7	3.90	10.7	6	36.4	2.33	1.99	5.44
PCB156	ng/l	24.8	2.50	10.1	4	24.1	1.30	1.56	6.29
Heptachlor	ng/l	34.5	11.7	33.9	6	34.5	6.53	5.97	17.3
Heptachlorepoxide	ng/l	33.4	14.8	44.2	5	39.0	9.09	8.25	24.7