QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

Halogenated Organics in seawater

REFERENCE MATERIAL

AQ5 sample 108

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis AQ5 108

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.

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 108 of Seawater with spike solution from North Sea 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	AQ5	QOC105SW

Consensus Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
a-HCH	ng/l	14.0	1.74	12.4	10	14.2	1.20	0.69	12.8 - 15.2
b-HCH	ng/l	5.24	0.732	14.0	10	5.16	0.500	0.289	4.72 - 5.75
g-HCH	ng/l	14.8	1.46	9.9	10	14.9	1.05	0.58	13.8 - 15.9
HCB	ng/l	7.47	0.593	7.9	10	7.45	0.447	0.234	7.05 - 7.89
pp'-DDD	ng/l	6.92	0.958	13.8	10	7.05	0.705	0.379	6.25 - 7.60
op'-DDT	ng/l	11.2	1.26	11.3	10	11.4	0.92	0.50	10.3 - 12.0

Indicative Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
d-HCH	ng/l	4.77	1.069	22.4	9	4.90	0.797	0.445	3.96 - 5.57
HCBD	ng/l	7.48	1.740	23.3	5	7.68	1.280	0.973	5.48 - 9.48
Aldrin	ng/l	16.8	5.79	34.4	9	18.0	4.20	2.41	12.5 - 21.2
Dieldrin	ng/l	11.0	0.91	8.2	9	11.3	0.65	0.38	10.4 - 11.7
Endrin	ng/l	7.46	1.165	15.6	9	8.00	0.900	0.486	6.58 - 8.34
Isodrin	ng/l	7.21	2.151	29.8	8	7.30	1.487	0.951	5.46 - 8.97
pp'-DDE	ng/l	4.66	1.123	24.1	10	4.91	0.805	0.444	3.86 - 5.45
pp'-DDT	ng/l	13.7	3.90	28.6	10	13.9	2.65	1.54	10.9 - 16.4
Endosulphan-I	ng/l	3.55	0.500	14.1	8	3.55	0.350	0.221	3.15 - 3.96
Endosulphan-II	ng/l	3.11	0.334	10.7	7	3.14	0.260	0.158	2.81 - 3.41
Pentachlorobenzene	ng/l	4.56	0.680	14.9	8	4.70	0.480	0.301	4.00 - 5.11
Trifluralin	ng/l	9.08	2.105	23.2	8	9.80	1.500	0.931	7.37 - 10.8
PCB28	ng/l	32.9	12.49	38.0	8	33.1	8.90	5.52	22.7 - 43.1
PCB52	ng/l	11.2	3.75	33.6	7	11.6	2.60	1.77	7.81 - 14.5
PCB101	ng/l	6.08	1.641	27.0	6	6.39	1.090	0.837	4.44 - 7.72
PCB118	ng/l	12.6	2.38	18.9	7	12.1	1.43	1.12	10.4 - 14.7
PCB138	ng/l	22.4	3.73	16.7	8	22.7	2.30	1.65	19.3 - 25.4
PCB153	ng/l	25.4	2.76	10.9	8	25.7	1.95	1.22	23.1 - 27.6
PCB180	ng/l	3.76	0.403	10.7	6	3.87	0.295	0.206	3.35 - 4.16
Heptachlor	ng/l	7.57	2.418	32.0	7	7.20	1.700	1.142	5.40 - 9.73
Heptachlorepoxide	ng/l	4.14	0.775	18.7	6	4.26	0.598	0.395	3.37 - 4.91