QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

Halogenated Organics in seawater

REFERENCE MATERIAL

AQ5 sample 112

WAGENINGEN
UNIVERSITY & RESEARCH

Certificate of Analysis AQ5 112

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 112 of Low salinity seawater with spike solution from North Sea (diluted) 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	AQ5	QOC109SW

Consensus Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
a-HCH	ng/l	90.2	10.90	12.1	11	90.0	6.39	4.11	82.9	-	97.4
pp'-DDT	ng/l	65.6	8.09	12.3	12	64.6	4.73	2.92	60.5	-	70.7
op'-DDT	ng/l	71.0	11.59	16.3	11	69.7	4.89	4.37	63.3	-	78.7
b-HCH	ng/l	34.1	5.38	15.8	11	32.3	2.70	2.03	30.5	-	37.7

Indicative Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits
g-HCH	ng/l	146	31.9	21.8	11	148	19.9	12.0	125 - 167
Dieldrin	ng/l	34.6	6.51	18.8	10	35.7	3.30	2.57	30.1 - 39.2
pp'-DDE	ng/l	34.4	10.56	30.7	12	34.6	5.54	3.81	27.8 - 41.0
pp'-DDD	ng/l	30.5	6.69	21.9	11	31.0	3.40	2.52	26.1 - 34.9
HCB	ng/l	111	36.1	32.7	11	102	18.9	13.6	86.5 - 135
Isodrin	ng/l	22.9	10.92	47.8	8	21.8	6.98	4.83	13.9 - 31.8
Endrin	ng/l	38.4	6.35	16.5	10	38.9	3.08	2.51	34.0 - 42.9
Aldrin	ng/l	36.7	21.13	57.5	10	39.2	12.89	8.35	21.8 - 51.6
HCBD	ng/l	48.9	14.42	29.5	6	46.8	7.78	7.36	34.5 - 63.3
Trifluralin	ng/l	55.7	4.32	7.7	7	55.0	2.00	2.04	51.9 - 59.6
Endosulphan-I	ng/l	19.6	6.41	32.7	7	20.5	3.74	3.03	13.9 - 25.3
Endosulphan-II	ng/l	11.6	1.95	16.8	7	11.7	1.30	0.92	9.83 - 13.3
1-3-5-TCB	ng/l	-	-	-	4	35.9	2.5	-	- - -
1-2-3-TCB	ng/l	-	-	-	4	62.7	6.3	-	- - -
d-HCH	ng/l	26.6	4.38	16.5	10	26.4	2.69	1.73	23.5 - 29.6
Pentachlorobenzene	ng/l	42.9	5.66	13.2	9	42.6	4.30	2.36	38.7 - 47.2
PCB28	ng/l	55.3	28.14	50.9	8	56.0	18.00	12.44	32.3 - 78.2
PCB52	ng/l	53.6	18.18	33.9	10	53.5	8.40	7.19	40.8 - 66.4
PCB101	ng/l	30.7	13.56	44.1	8	33.0	5.80	5.99	19.7 - 41.8
PCB105	ng/l	-	-	-	4	18.5	2.1	-	- - -
PCB118	ng/l	60.7	13.01	21.4	9	60.8	9.20	5.42	50.9 - 70.5
PCB138	ng/l	63.6	12.50	19.6	10	62.3	7.05	4.94	54.8 - 72.4
PCB153	ng/l	56.1	6.96	12.4	9	55.0	4.00	2.90	50.8 - 61.3
PCB180	ng/l	42.0	10.26	24.4	9	42.0	4.00	4.27	34.3 - 49.7
Heptachlor	ng/l	31.8	19.60	61.6	7	35.0	11.90	9.26	14.3 - 49.4
Heptachlorepoxide	ng/l	-	-	-	5	13.7	8.3	-	- - -