



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



Halogenated Organics in seawater

REFERENCE MATERIAL

AQ5 sample 109



Certificate of Analysis AQ5 109

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 % probability) 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 109 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
2022.1	AQ5	QOC106SW



Consensus Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
b-HCH	ng/l	24.2	3.36	13.9	10	24.3	2.37	1.33	21.8	-	26.5
g-HCH	ng/l	121	14.4	11.9	10	124	8.7	5.7	111	-	131
pp'-DDD	ng/l	25.2	3.03	12.0	10	25.7	2.00	1.20	23.1	-	27.3



Indicative Values AQ5

Method: PCBs&OCP - AQ5

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
a-HCH	ng/l	74.4	12.77	17.2	10	77.0	8.18	5.05	65.4	-	83.4
d-HCH	ng/l	19.0	3.60	19.0	9	19.1	2.60	1.50	16.2	-	21.7
HCB	ng/l	73.9	11.73	15.9	10	73.6	8.00	4.64	65.6	-	82.2
HCBD	ng/l	42.0	0.99	2.3	5	42.0	0.70	0.55	40.8	-	43.1
Aldrin	ng/l	23.5	8.55	36.4	9	25.0	5.90	3.56	17.1	-	30.0
Dieldrin	ng/l	69.8	13.70	19.6	9	68.0	9.60	5.71	59.4	-	80.1
Endrin	ng/l	26.2	8.40	32.1	9	27.0	5.80	3.50	19.9	-	32.5
Isodrin	ng/l	26.7	8.06	30.1	8	29.0	5.68	3.56	20.2	-	33.3
pp'-DDE	ng/l	40.9	7.16	17.5	10	41.0	5.00	2.83	35.8	-	45.9
op'-DDT	ng/l	7.88	1.845	23.4	10	8.05	1.305	0.729	6.58	-	9.18
pp'-DDT	ng/l	49.7	16.34	32.9	10	49.1	11.85	6.46	38.2	-	61.2
Endosulphan-I	ng/l	8.82	2.267	25.7	8	9.69	1.635	1.002	6.98	-	10.7
Endosulphan-II	ng/l	17.3	4.93	28.5	8	18.1	3.60	2.18	13.3	-	21.3
Pentachlorobenzene	ng/l	14.6	3.12	21.4	8	14.8	2.10	1.38	12.1	-	17.1
Trifluralin	ng/l	27.5	6.03	21.9	8	28.2	3.95	2.67	22.6	-	32.5
PCB28	ng/l	87.4	30.87	35.3	8	87.0	21.75	13.64	62.2	-	113
PCB52	ng/l	36.1	8.22	22.7	8	36.1	5.53	3.63	29.4	-	42.9
PCB101	ng/l	43.9	9.77	22.2	8	43.6	6.68	4.32	35.9	-	51.9
PCB105	ng/l	12.4	0.68	5.5	4	12.6	0.51	0.43	11.4	-	13.3
PCB118	ng/l	29.7	4.94	16.6	8	29.5	3.42	2.18	25.7	-	33.8
PCB138	ng/l	95.7	15.26	16.0	8	98.6	10.43	6.74	83.2	-	108
PCB153	ng/l	68.2	10.64	15.6	8	68.0	7.12	4.70	59.5	-	76.9
PCB180	ng/l	27.3	7.29	26.8	8	26.1	4.90	3.22	21.3	-	33.2
Heptachlor	ng/l	26.6	2.50	9.4	7	26.6	1.80	1.18	24.3	-	28.8
Heptachlorepoide	ng/l	19.9	5.20	26.1	6	21.2	3.95	2.66	14.7	-	25.1