



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



Volatile Organics in seawater

REFERENCE MATERIAL

AQ6 sample 78



Certificate of Analysis AQ6 78

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 WEPA-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).

Sample information

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

This AQ6 sample 78 of Seawater spiked with volatiles 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	AQ6	QVC077SW



Indicative Values AQ6

Method: VOCs - AQ6

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Carbon-tetrachloride	µg/L	5.55	1.65	29.7	9	5.85	0.645	0.686	12.4
1-1-1-trichloroethane	µg/L	1.94	0.362	18.7	10	1.96	0.234	0.143	7.38
1-2-dichloroethane	µg/L	7.84	1.34	17.1	10	7.48	0.706	0.532	6.78
Tetrachloroethene	µg/L	1.44	0.289	20.1	10	1.42	0.120	0.114	7.93
Trichloroethene	µg/L	2.85	0.506	17.7	10	2.77	0.262	0.200	7.01
Chloroform	µg/L	3.20	0.625	19.5	10	3.25	0.401	0.247	7.72
1-1-2-trichloroethane	µg/L	2.06	0.317	15.4	9	2.11	0.170	0.132	6.42
Dichloromethane	µg/L	2.54	1.32	52.0	6	2.94	0.827	0.675	26.6
Benzene	µg/L	4.70	1.09	23.2	10	4.75	0.493	0.431	9.18
Styrene	µg/L	2.00	0.508	25.4	7	2.00	0.288	0.240	12.0
2-chlorotoluene	µg/L	1.99	0.312	15.7	6	1.93	0.129	0.159	8.01
4-chlorotoluene	µg/L	0.963	0.197	20.5	5	1.01	0.098	0.110	11.5
1,1-dichloroethane	µg/L	3.04	0.732	24.1	7	3.08	0.691	0.346	11.4
1,2-dichloropropane	µg/L	5.22	0.898	17.2	7	5.15	0.649	0.424	8.13
1,2-dichlorobenzene	µg/L	1.02	0.259	25.4	6	1.05	0.177	0.132	13.0
1,3-dichlorobenzene	µg/L	1.20	0.112	9.4	6	1.23	0.080	0.057	4.78
1,4-dichlorobenzene	µg/L	1.80	0.680	37.9	6	1.77	0.284	0.347	19.3
1,3,5-trimethylbenzene	µg/L	2.44	0.979	40.1	5	2.55	0.466	0.547	22.4
1,1,1,2-tetrachloroethane	µg/L	1.01	0.229	22.6	6	1.08	0.169	0.117	11.5
Chlorobenzene	µg/L	2.85	0.602	21.1	6	2.77	0.387	0.307	10.8
cis-1,2-dichloroethene	µg/L	2.72	0.529	19.5	8	2.57	0.325	0.234	8.60
trans-1,2-dichloroethene	µg/L	1.19	0.292	24.6	8	1.22	0.201	0.129	10.9
Toluene	µg/L	1.86	0.400	21.5	8	1.88	0.237	0.177	9.48
Ethylbenzene	µg/L	0.591	0.177	30.0	7	0.578	0.123	0.084	14.2
o-Xylene	µg/L	3.15	0.755	23.9	8	3.09	0.486	0.334	10.6
m+p-Xylene	µg/L	3.44	1.23	35.9	8	3.59	0.693	0.545	15.9
Isopropylbenzene	µg/L	1.34	0.195	14.6	7	1.30	0.100	0.092	6.89
n-Propylbenzene	µg/L	1.33	0.064	4.8	4	1.33	0.029	0.040	3.01