QUASIMEME

Quality assurance of information for marine environmental monitoring

Certificate of Analysis

Nutrients in Estuarine and low salinity Seawater

REFERENCE MATERIAL

AQ2 sample 209

WAGENINGEN
UNIVERSITY & RESEARCH

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 AQ2 sample 209 of Low salinity seawater unspiked from Baltic 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
2023.2	AQ2	QNU402EW

Consensus Values   AQ2

Method: Nutrients - AQ2

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
TOTAL-N	µmol/l	8.40	1.422	16.9	23	8.14	0.944	0.371	7.79	-	9.02
Silicate	µmol/l	2.85	0.234	8.2	34	2.86	0.117	0.050	2.76	-	2.93

Indicative Values   AQ2

Method: Nutrients - AQ2

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits	
Nitrite	µmol/l	0.0156	0.0122	78.5	14	0.0185	0.0075	0.0041	0.0086 -	0.0226
Ammonia	µmol/l	0.346	0.1128	32.6	25	0.348	0.0620	0.0282	0.300 -	0.393
TOxN	µmol/l	0.0729	0.0561	76.9	15	0.0717	0.0383	0.0181	0.0421 -	0.104
TOTAL-P	µmol/l	0.0607	0.0394	64.8	14	0.0623	0.0335	0.0132	0.0381 -	0.0833
Phosphate	µmol/l	0.0272	0.0176	65.0	17	0.0235	0.0085	0.0054	0.0181 -	0.0362
Nitrate	µmol/l	0.0799	0.0714	89.4	12	0.0965	0.0579	0.0258	0.0349 -	0.125