QUASIMEME

**Quality assurance of information
for marine environmental monitoring**

Certificate of Analysis

Nutrients in Seawater

REFERENCE MATERIAL

AQ1 sample 183

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.

Sample information

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

This AQ1 sample 183 of Seawater unspiked from Atlantic Ocean 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
2024.1	AQ1	QNU403SW

Method: Nutrients - AQ1

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Ammonia	µmol/l	0.850	0.160	18.8	38	0.840	0.085	0.032	3.81
TOTAL-N	µmol/l	15.5	2.25	14.5	25	15.5	1.49	0.561	3.63
TOTAL-P	µmol/l	0.213	0.041	19.3	22	0.210	0.023	0.011	5.15

Method: Salinity - AQ1

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Salinity	psu	32.0	0.015	0.0	22	32.0	0.008	0.004	0.013
Salinity indicative	psu	32.0	0.581	1.8	13	32.1	0.270	0.201	0.630

Method: Nutrients - AQ1

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Nitrite	µmol/l	0.014	0.010	71.1	13	0.021	0.011	0.003	24.6
TOxN	µmol/l	0.054	0.041	75.3	17	0.059	0.029	0.012	22.8
Silicate	µmol/l	0.159	0.157	98.6	23	0.195	0.102	0.041	25.7
Phosphate	µmol/l	0.031	0.033	107.8	26	0.035	0.023	0.008	26.4
Nitrate	µmol/l	0.044	0.029	65.3	8	0.053	0.011	0.013	28.8