

AQ-11 Chlorophyll and Phaeopigments in Seawater	
Year: 2024	Participants: 45 laboratories expected
Number of rounds: 2 per year	Start exercise: 1 April, 1 October
Number of materials: 2 per round	Sample size: filter

Participation form	Timetable	PT Scheme	Costs
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This study covers the determination of chlorophyll and phaeopigments in seawater and estuarine water. Normally, filtered residues are prepared from seawater or estuarine water. Occasionally, filtered residues are prepared from freshwater.

Test Materials

Test materials are prepared from seawater or estuarine water and sub-sampled onto Whatman GF/F, 47 mm filter papers each test material is immediately 'flash frozen' in liquid nitrogen. Selected filters at regular intervals are chosen from each batch prepared, for homogeneity testing. Homogeneity testing is performed by analyzing 10 different filters for at least chlorophyll-a as guide determinand. The test materials are homogeneous for the purposes of the LP study. The filter samples provided are not very stable at room temperature conditions for longer period. Therefore, samples are shipped on frozen (-80°C) icepacks and laboratories are instructed to store the samples under frozen conditions upon receipt. It is our advise to analyze the samples as soon as possible when received.

Determinands and Concentration Ranges

The pigments to be determined are given in the table below. The table also shows:

- The expected concentration range for the determinands in the test materials.
- The constant and proportional error that will be used for assessment of the results.

Determinand	Unit	Concentration Range	Error	
		Filtered Residues	Const	Prop
Chlorophyll-a	µg/L	0.1-50	0.2	17.5%
Chlorophyll-b [§]	µg/L	0.01-10	0.15	20.0%
Chlorophyll-c	µg/L	0.02-5	0.3	20.0%
Phaeopigments [§]	µg/L	0.02-2.5	0.10	25.0%
Chlorophyll-a (HPLC)	µg/L	0.1-50	0.01	25.0%
Chlorophyll-b (HPLC)	µg/L	0.01-10		
Chlorophyll-c (HPLC) [§]	µg/L	0.02-5		
Chlorophyll-a (corrected)	µg/L	0.1-50	0.15	17.5%

[§]Determinands are not in the scope of accreditation.