AQ-13 Polycyclic Aromatic Hydrocarbons in Seawater	
Year: 2024	Participants: 15 laboratories expected
Number of rounds: 1 per year	Start exercise: 1 April
Number of materials: 3 per round	Sample size: 750-1000 ml

Participation form | Timetable | PT Scheme | Costs

This study covers the determination of PAHs in seawater test materials.

Test Materials

The seawater for this study is collected from the Eastern Atlantic Ocean and is filtered to remove bacteria and particles. The test materials are spiked, thoroughly mixed and dispensed into glass bottles for distribution.

Homogeneity of the test materials is assumed, as they are produced in bulk. The test materials are stable for the purposes of the exercise.

Determinands and Concentration Ranges

The PAHs to be determined are given in the table below. The table also shows:
- The expected concentration range for the determinands in the spiked test materials.
- The constant and proportional error that will be used for assessment of the results.

Determinand*	Unit	Concentration range			Error	
		Seawater (sediment spiked)	Seawater (spiked)	Low Salinity Seawater (spiked)	Const	Prop
Acenaphthene	µg/L	0.02-20	0.2-5	0.5-20	0.02	20.0%
Acenaphthylene	µg/L	0.01-1	0.5-10	0.5-20	0.07	20.0%
Anthracene	µg/L	0.2-20	0.05-2	0.5-10	0.05	20.0%
Benzo[a]anthracene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	25.0%
Benzo[a]pyrene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	25.0%
Benzo[b]fluoranthene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	25.0%
Benzo[e]pyrene	µg/L	0.1-10	0.001-0.1	0.01- 0.5		
Benzo[k]fluoranthene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	25.0%
Benzo[g,h,i]perylene	µg/L	0.02-2	0.001-0.1	0.01- 0.5	0.01	25.0%
Chrysene	µg/L	0.1-10	0.001-0.1	0.01- 0.5		
Dibenzo[ah]anthracene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	25.0%
Fluorene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	20.0%
Fluoranthene	µg/L	0.4-40	0.05-2	0.1-10	0.01	25.0%
Indeno(1,2,3-cd)pyrene	µg/L	0.2-40	0.02-1	0.1-5	0.01	25.0%
Naphthalene	µg/L	0.1-10	0.5-10	1-50	0.1	22.5%

Determinand*	Unit	Concentration range			Error	
		Seawater (sediment spiked)	Seawater (spiked)	Low Salinity Seawater (spiked)	Const	Prop
Phenanthrene	µg/L	0.2-50	0.05-2	0.5-10	0.1	17.5%
Pyrene	µg/L	0.1-10	0.001-0.1	0.01- 0.5	0.01	25.0%
Total Petroleum-Hydrocarbons	µg/L	0.1-10	0.001-0.1	0.01- 5		

* This exercise is not in the scope of accreditation.