

AQ-13 Polycyclic Aromatic Hydrocarbons in Seawater					
Year	2021	Number of Rounds / Year	1	Number of Materials	3
Distribution	April (15 laboratories expected)				
Participation fee	€600,=				

Introduction

This study covers the determination of PAH's 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 PAH's 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.

Where available the AA-EQS (EU-WFD) is given.

Determinand	Unit	Concentration range			Error		AA-EQS
		Seawater (Sediment Spiked)	Seawater (Spiked)	Low Salinity Seawater (spiked)	Const	Prop	
Acenaphthene	µg/L	0.02—20	0.2—5	0.5 - 20	0.01	12.5%	
Acenaphthylene	µg/L	0.01—1	0.5—10	0.5 - 20	0.01	12.5%	
Anthracene	µg/L	0.2—20	0.05—2	0.5 - 10	0.01	12.5%	0.1
Benzo[a]anthracene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	
Benzo[a]pyrene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	0.05
Benzo[b]fluoranthene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	0.03
Benzo[e]pyrene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	
Benzo[k]fluoranthene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	0.03
Benzo[g,h,i]perylene	µg/L	0.02—2	0.001—0.1	0.01- 0.5	0.01	12.5%	0.002
Chrysene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	
Dibenzo[ah]anthracene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	
Fluorene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	
Fluoranthene	µg/L	0.4—40	0.05—2	0.1 - 10	0.01	12.5%	0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.2—40	0.02—1	0.1 - 5	0.01	12.5%	0.002
Naphthalene	µg/L	0.1—10	0.5—10	1 - 50	0.01	12.5%	1.2
Phenanthrene	µg/L	0.2—50	0.05—2	0.5 - 10	0.01	12.5%	
Pyrene	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	
Total petroleum-hydrocarbons	µg/L	0.1—10	0.001—0.1	0.01- 0.5	0.01	12.5%	

AA-EQS for benzo[g,h,i]perylene and Indeno(1,2,3-cd)pyrene is indicated as the some of those determinands.

AA-EQS for benzo[b]fluoranthene and benzo[k]fluoranthene is indicated as the some of those determinands.

These determinands are not in the scope of the accreditation.