

MS-3 Polycyclic Aromatic Hydrocarbons in Sediment					
Year	2021	Number of Rounds / Year	2	Number of Materials	2
Distribution	April, October (30 laboratories expected)				
Participation fee	€625,=				

### Introduction

This study covers the determination of Polycyclic Aromatic Hydrocarbons (PAHs) and total organic carbon (TOC) in marine sediment.

### Test Materials

The test materials cover a range of natural sediments from contaminated waters from the North Sea and/or Mediterranean. Each batch of material is prepared in bulk. The level of within and between sample homogeneity for the sediment is determined. All materials show to be homogeneous and stable for the purpose of the test.

### 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 test materials.
- The constant and proportional error that will be used for assessment of the results.

Determinand	Unit	Concentration Range	Error		AA-EQS
		Sediment	Const	Prop	
Acenaphthene	µg/kg	2–2000	0.1	12.5%	
Acenaphthylene	µg/kg	1–1000	0.2	12.5%	
Anthracene	µg/kg	2–500	0.1	12.5%	
Benzo[a]anthracene	µg/kg	10–1500	0.1	12.5%	
Benzo[a]fluorene	µg/kg	10–1000	0.5	12.5%	
Benzo[a]pyrene	µg/kg	10–1500	0.1	12.5%	
Benzo[b]fluoranthene	µg/kg	10–1500	0.5	12.5%	
Benzo[k]fluoranthene	µg/kg	10–1000	0.1	12.5%	
Benzo[e]pyrene	µg/kg	10–1500	0.2	12.5%	
Benzo[g,h,i]perylene	µg/kg	10–1500	0.2	12.5%	
Chrysene	µg/kg	10–1500	0.2	12.5%	
Chrysene+Triphenylene	µg/kg	10–3000	0.2	12.5%	
Triphenylene	µg/kg	20–3000	0.5	12.5%	
Dibenz[a,h]anthracene	µg/kg	5–500	0.05	12.5%	
Dibenzo[a,i]pyrene	µg/kg		0.5	12.5%	
Dibenzothiophene	µg/kg	2–200	0.1	12.5%	
Fluoranthene	µg/kg	20–4000	0.2	12.5%	
Fluorene	µg/kg	2–1000	0.1	12.5%	
Indeno[1,2,3-cd]pyrene	µg/kg	10–1500	0.2	12.5%	
Naphthalene	µg/kg	10–4000	0.5	12.5%	
1-methylnaphthalene	µg/kg		0.2	12.5%	
2-methylnaphthalene	µg/kg		0.2	12.5%	
1-methylanthracene	µg/kg		0.2	12.5%	
2-methylanthracene	µg/kg		0.2	12.5%	
Perylene	µg/kg	10–500	0.2	12.5%	
Phenanthrene	µg/kg	10–3000	0.5	12.5%	
1-methylphenanthrene	µg/kg		0.2	12.5%	
2-Methylphenanthrene	µg/kg	5–1000	0.5	12.5%	
3,6-Dimethylphenanthrene	µg/kg	1–500	0.5	12.5%	
Pyrene	µg/kg	10–4000	0.2	12.5%	
1-Methylpyrene	µg/kg	2–500	0.5	12.5%	
1,2-benzodiphenylene sulfide	µg/kg		0.2	12.5%	
TOC	%	0.2–10	0.02	12.5%	
C1-phenanthrenes/anthracenes	µg/kg		0.5	12.5%	
C2-phenanthrenes/anthracenes	µg/kg		0.5	12.5%	
C3-phenanthrenes/anthracenes	µg/kg		0.5	12.5%	
C1-pyrenes/fluoranthenes	µg/kg		0.5	12.5%	

C2-pyrenes/fluoranthenes	µg/kg		0.5	12.5%	
C1-chrysenes	µg/kg		0.5	12.5%	
C2-chrysenes	µg/kg		0.5	12.5%	
C1-benzofluoranthenes	µg/kg		0.5	12.5%	
C1-dibenzothiophenes	µg/kg		0.2	12.5%	
C2-dibenzothiophenes	µg/kg		0.2	12.5%	
C3-dibenzothiophenes	µg/kg		0.2	12.5%	
C1-naphtalenes	µg/kg		0.2	12.5%	
C2-naphtalenes	µg/kg		0.2	12.5%	
C3-naphtalenes	µg/kg		0.2	12.5%	
Total petroleum hydrocarbons	mg/kg		0.2	12.5%	
PN	%		0.02	12.5%	

Only determinands in **bold** are in the scope of the accreditation.