

BT-4 Polycyclic Aromatic Hydrocarbons in Biota	
Year: 2024	Participants: 35 laboratories expected
Number of rounds: 2 per year	Start exercise: 1 April, 1 October
Number of materials: 2 per round	Sample size: 30-50 g

[Participation form](#)
[Timetable](#)
[PT Scheme](#)
[Costs](#)

This study covers the determination of Polycyclic Aromatic Hydrocarbons (PAHs) and total and extractable lipid in shellfish tissue test materials.

## Test Materials

The test materials consist of natural shellfish species from contaminated waters from the North Sea and/or Mediterranean. The supplied wet shellfish tissues are homogenised and sterilised by autoclaving. These test materials have shown to be stable over a number of years when stored at room temperature.

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

Determinand*	Unit	Concentration range	Error	
		Shellfish Tissue	Const	Prop
<b>Acenaphthene</b>	µg/kg	0.5-100	0.5	25.0%
<b>Acenaphthylene</b>	µg/kg	0.2-5	0.4	25.0%
<b>Anthracene</b>	µg/kg	0.2-10	0.3	25.0%
<b>Benzo[a]anthracene</b>	µg/kg	0.2-20	0.15	20.0%
Benzo[a]fluorene	µg/kg			
<b>Benzo[a]pyrene</b>	µg/kg	0.2-5	0.1	25.0%
<b>Benzo[b]fluoranthene</b>	µg/kg	0.2-10	0.25	25.0%
<b>Benzo[k]fluoranthene</b>	µg/kg	0.2-10	0.1	25.0%
<b>Benzo[e]pyrene</b>	µg/kg	0.2-10	0.2	25.0%
<b>Benzo[g,h,i]perylene</b>	µg/kg	0.2-10	0.15	20.0%
<b>Chrysene</b>	µg/kg	0.2-20	0.15	22.5%
<b>Chrysene+Triphenylene</b>	µg/kg	0.2-20	0.1	25.0%
Triphenylene	µg/kg	0.1-10		
<b>Dibenz[a,h]anthracene</b>	µg/kg	0.2-5	0.1	17.5%
Dibenzo[a,i]pyrene	µg/kg			
Dibenzothiophene	µg/kg	0.2-5	0.25	25.0%
<b>Fluoranthene</b>	µg/kg	5-50	0.4	20.0%
Fluorene	µg/kg	1-50	0.3	25.0%
<b>Indeno[1,2,3-cd]pyrene</b>	µg/kg	0.2-5	0.2	25.0%

Determinand*	Unit	Concentration range	Error	
		Shellfish Tissue	Const	Prop
<b>Naphthalene</b>	µg/kg	1-100	0.6	25.0%
1-methylnaphthalene	µg/kg			
2-methylnaphthalene	µg/kg			
1-methylanthracene	µg/kg			
2- methylanthracene	µg/kg			
1 methylphenanthrene	µg/kg			
Perylene	µg/kg	0.1-5	0.5	20.0%
<b>Phenanthrene</b>	µg/kg	2-50	1	25.0%
<b>2-Methylphenanthrene</b>	µg/kg	0.2-20	1.2	10.0%
<b>3,6-Dimethylphenanthrene</b>	µg/kg	0.2-10		
1,2-benzodiphenylene sulfide	µg/kg			
<b>Pyrene</b>	µg/kg	1-50	0.4	20.0%
1-Methylpyrene	µg/kg			
Benzo Fluoranthenes (a+b+j+k)	µg/kg			
<b>Total-Lipid</b>	%		0.4	7.5%
Extractable-Lipid	%			
C1-dibenzothiophenes	µg/kg			
C2-dibenzothiophenes	µg/kg			
C3-dibenzothiophenes	µg/kg			
<b>C1-phenanthrenes/anthracenes</b>	µg/kg			
C2-phenanthrenes/anthracenes	µg/kg			
C3-phenanthrenes/anthracenes	µg/kg			
C1-pyrenes/fluoranthenes	µg/kg			
C2-pyrenes/fluoranthenes	µg/kg			
C1-chrysenes	µg/kg			
C2-chrysenes	µg/kg			
C1-benzofluoranthenes	µg/kg			
Total petroleum hydrocarbons	µg/kg	0.1-50		

\* Determinands which are not in bold are not in the scope of accreditation