

AQ-5 Halogenated Organics in Seawater	
Year: 2024	Participants: 12 laboratories expected
Number of rounds: 1 per year	Start exercise: 1 April
Number of materials: 3 per round	Sample size: 1000 ml

[Participation form](#)
[Timetable](#)
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This study covers the determination of halogenated organics 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 low salinity test material is prepared by dilution with ultra-pure demineralised water. The test materials are thoroughly mixed and dispensed into one-litre glass bottles. The participants are asked to dilute the supplied standard solutions using the supplied seawater test materials to produce the spiked test materials.

Homogeneity of the test materials is assumed, as they are spiked to the same concentration level. The test materials are stable for the purposes of the exercise.

## Determinands and Concentration Ranges

The organochlorines 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	
		Low Salinity Seawater (spiked)	Seawater (spiked)	Const	Prop
$\alpha$ -HCH	ng/L	2-500	0.2-20	0.5	15.0%
$\beta$ -HCH	ng/L	1-500	0.2-20	0.5	17.5%
$\gamma$ -HCH	ng/L	2-500	0.5-20	0.5	20.0%
$\delta$ -HCH	ng/L	1-500	0.2-20	0.5	25.0%
HCB	ng/L	0.5-200	0.1-10	0.15	25.0%
HCBD	ng/L	2-500	0.2-20	0.75	25.0%
Aldrin	ng/L	2-1000	1-20	0.01	25.0%
Dieldrin	ng/L	2-1000	1-20	0.75	20.0%
Endrin	ng/L	2-1000	1-20	0.5	25.0%
Isodrin	ng/L	2-1000	1-20	0.75	25.0%
pp'-DDD	ng/L	1-500	0.1-10	0.5	25.0%
pp'-DDE	ng/L	1-500	0.2-10	0.01	25.0%
op'-DDT	ng/L	1-500	0.2-20	0.3	25.0%
pp'-DDT	ng/L	1-500	0.2-20	0.2	25.0%
Endosulphan-I	ng/L	1-200	0.2-10	0.5	25.0%

Determinand*	Unit	Concentration Range		Error	
		Low Salinity Seawater (spiked)	Seawater (spiked)	Const	Prop
Endosulphan-II	ng/L	0.5-200	0.1-10	0.5	25.0%
Pentachlorobenzene	ng/L	2-1000	0.2-10	0.15	25.0%
1,2,3-TCB	ng/L	2-500	1-20		
1,2,4-TCB	ng/L	5-1000	1-20		
1,3,5-TCB	ng/L	2-500	0.5-20		
Trifluralin	ng/L	2-500	0.5-20	1.25	25.0%
PCB28	ng/L	2-500	0.5-20	0.2	25.0%
PCB31	ng/L	2-500	0.5-20		
PCB52	ng/L	2-500	0.5-20	0.1	22.5%
PCB101	ng/L	2-500	0.5-20	0.25	25.0%
PCB105	ng/L	2-500	0.5-20		
PCB118	ng/L	2-500	0.5-20	0.5	22.5%
PCB138	ng/L	2-500	0.5-20	0.01	25.0%
PCB138+PCB163	ng/L	2-500	0.5-20		
PCB153	ng/L	2-500	0.5-20	0.5	22.5%
PCB156	ng/L	2-500	0.5-20		
PCB180	ng/L	2-500	0.5-20	0.25	25.0%
Heptachlor	ng/L	2-500	0.5-20		
Cis-Heptachlorepoxyde	ng/L	2-500	0.5-20		

\* This exercise is not in the scope of accreditation.