

BT-1 Trace Metals in Biota					
Year	2021	Number of Rounds / Year	2	Number of Materials	2
Distribution		April, October (50 laboratories expected)			
Participation fee		€750,=			

Introduction

This study covers the determination of trace metals, ash weight, dry weight and total and extractable lipid in biota test materials.

Test Materials

The test materials cover a range of natural biota species from contaminated waters from the North Sea and/or Mediterranean. The supplied biota test materials can consist of fish muscle, fish liver and shellfish tissue. Wet biota test materials are homogenised and sterilised by autoclaving. These biota test materials have been shown to be stable over a number of years when stored at room temperature.

Determinands and concentration ranges

The trace metals 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		EQS
		Fish Liver Tissue	Fish Muscle Tissue	Shellfish Tissue	Const	Prop	
Aluminium	mg/kg	1 - 100	0.5 - 10	2 - 50	0.2	12.5%	
Arsenic	mg/kg	1 - 5	1 - 10	0.2 - 10	0.02	12.5%	
Barium	µg/kg	5 - 500	5 - 500	200 - 10000	0.2	12.5%	
Cadmium	µg/kg	5-1000	0.5-50	10-500	20	12.5%	
Calcium	mg/kg	20 - 1000	50 - 5000	50 - 2000	10	12.5%	
Chromium	µg/kg	20-1000	50-500	10-5000	20	12.5%	
Cobalt	µg/kg	10 - 500	1 - 100	10 - 500	0.2	12.5%	
Copper	µg/kg	2000-10000	100-1000	50-10000	100	12.5%	
Iron	mg/kg	10 - 500	5 - 200	5 - 200	0.2	12.5%	
Lead	µg/kg	10-1000	5-50	10-1000	5	12.5%	
Magnesium	mg/kg	50 - 1000	50 - 1000	100 - 2000	10	12.5%	
Manganese	µg/kg	200 - 5000	50 - 5000	500 - 5000	0.2	12.5%	
Mercury	µg/kg	20-100	10-1000	2-500	2	12.5%	20
Molybdene	µg/kg	20 - 500	2 - 200	10 - 500	0.2	12.5%	
Nickel	µg/kg	20-1000	10-200	10-2000	20	12.5%	
Potassium	mg/kg	500 - 5000	500 - 5000	500 - 5000	10	12.5%	
Selenium	µg/kg	200-5000	50-2000	200-1000	10	12.5%	
Silver	µg/kg	20-1000	0.5-50	1-500	5	12.5%	
Sodium	mg/kg	200 - 5000	200 - 5000	1000 - 10000	10	12.5%	
Uranium	µg/kg	0.2 - 50	0.2 - 50	2 - 100	0.2	12.5%	
Vanadium	µg/kg	5 - 200	5 - 200	50 - 5000	0.2	12.5%	
Zinc	mg/kg	10-50	2-10	2-200	2	12.5%	
Ash-weight	%				0.1	12.5%	
Dry-weight	%				0.1	12.5%	
Total-Lipid	%				0.1	12.5%	
Extractable-Lipid	%				0.1	12.5%	

In addition to the parameters given in this table, we will add several additional metals into the dataset form on the Participant's sites. There you will find e.g. Li, Be, P, S, Sc, Ti, Rb, Sr, Y, Zr, Pd, Sn, Sb, Te, Cs, La, Ce, Nd, Ta, W, Pt, Au, Tl, Bi, Th and MeHg. In case enough participants report results these additional metals will be added permanently to the programme.

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