

FW-2 Metals in freshwater (metalen in oppervlaktewater)	
Year: 2023	Participants: 12 laboratories expected
Number of rounds: 1 per year	Period exercise: 20 March – 10 April
Number of materials: 3 per round	Sample size: 1000 ml

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

This study covers the determination of trace metals in freshwater test materials and participation is open for all laboratories worldwide. A request to participate can be made by sending an e-mail to wepalquasimeme@wur.nl.

Test Materials

The test materials are prepared in bulk from filtered (1 mm) freshwater. All test materials are preserved with 2 ml trace metal analysis grade nitric acid per litre of test material. Normally one blank freshwater and two spiked freshwater samples are supplied for each exercise. Homogeneity of the test materials is assumed, as they were prepared in bulk and thoroughly mixed, before being dispensed into 1 litre polypropylene bottles for distribution. The test materials are stable for the purposes of the exercise.

Determinands and Concentration Ranges

Determinand*	Unit	Concentration Range	Error	
			Const	Prop
Al - Aluminium	µg/l			
As - Arsenic	µg/l	1-20		
B - Boron	µg/l	1-100		
Ba - Barium	µg/l	1-200		
Be - Beryllium	µg/l	1-5		
Cd - Cadmium	µg/l	1-5		
Co - Cobalt	µg/l	1-20		
Cr - Chromium	µg/l	1-50		
Cu - Copper	µg/l	1-50		
Fe - Iron	mg/l	1-5		
Hg - Mercury	µg/l	0.1-1		
Mn - Manganese	µg/l	1-200		
Mo - Molybdene	µg/l	1-20		
Ni - Nickel	µg/l	1-50		
Pb - Lead	µg/l	1-50		
Sb - Antimony	µg/l	1-20		
Se - Selenium	µg/l	1-20		
Sn - Stannum	µg/l	1-200		
Tl - Thallium	µg/l			
U - Uranium	µg/l			
V - Vanadium	µg/l	1-100		
Zn - Zinc	µg/l	1-50		

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Determinand*	Unit	Concentration Range	Error	
			Const	Prop
Ca - Calcium	mg/l	>50		
K - Kalium	mg/l	>10		
Mg - Magnesium	mg/l	>25		
Na - Sodium	mg/l	>50		

* This exercise is not in the scope of accreditation.