

FW-1 Metals in wastewater (metalen in afvalwater)	
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 wastewater test materials and participation is open for all laboratories world-wide. 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) wastewater. All test materials are preserved with 2 ml trace metal analysis grade nitric acid per litre of test material. Normally one blank wastewater and two spiked wastewater 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	mg/l	20-200		
Ag - Silver	µg/l	25-250		
As - Arsenic	µg/l	10-50		
Ba - Barium	µg/l			
Be - Beryllium	µg/l	5-50		
Cd - Cadmium	µg/l	5-50		
Ce - Cerium	µg/l			
Co - Cobalt	µg/l	5-50		
Cr - Chromium	µg/l	100-1000		
Cu - Copper	µg/l	100-1000		
Fe - Iron	mg/l	20-200		
Hg - Mercury	µg/l	2-20		
Mn - Manganese	mg/l	20-200		
Mo - Molybdene	µg/l	100-1000		
Ni - Nickel	µg/l	100-1000		
Pb - Lead	µg/l	100-1000		
Sb - Antimony	µg/l	5-50		
Se - Selenium	µg/l	500-5000		
Sn - Stannum	µg/l	100-1000		
Sr - Strontium	µg/l			

[Back to index](#)

Determinand*	Unit	Concentration Range	Error	
			Const	Prop
Ti - Titanium	µg/l	100-1000		
Tl - Thallium	µg/l			
U - Uranium	µg/l			
V - Vanadium	µg/l	100-1000		
Zn - Zinc	µg/l	100-1000		
Ca - Calcium	mg/l	>50		
K - Kalium	mg/l	>50		
Mg - Magnesium	mg/l	>25		
Na - Sodium	mg/l	>50		

* This exercise is not in the scope of accreditation.