Molybdate HR L M254

1 - 100 mg/L MoO_4 Mo2

Thioglycolate

Instrument specific information

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

Instrument Type	Cuvette	λ	Measuring Range
MD 100, MD 110, MD 600, MD 610, MD 640, XD 7000, XD 7500	ø 24 mm	430 nm	1 - 100 mg/L MoO_4

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Iron Reagent FE6	65 mL	56L006365

Application List

- Boiler Water
- Cooling Water

Sampling

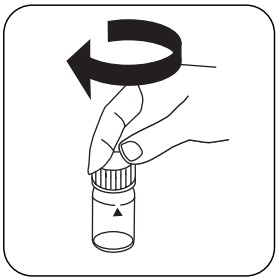
1. The test must take place immediately after taking the sample. Molybdate is deposited on the walls of the sample vessels, which leads to lower measurement results.

Determination of Molybdate HR with liquid reagent

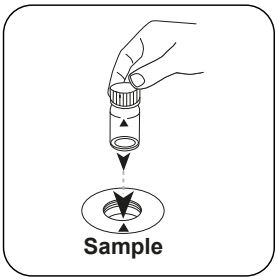
Select the method on the device.

For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500

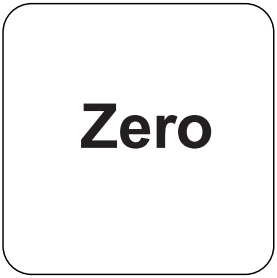
Fill 24 mm vial with **10 mL sample**.



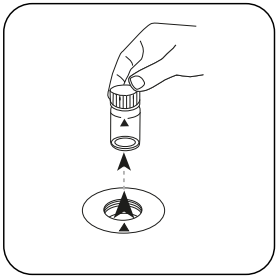
Close vial(s).



Place **sample vial** in the sample chamber. Pay attention to the positioning.

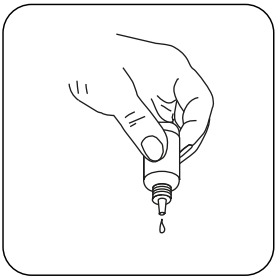


Press the **ZERO** button.

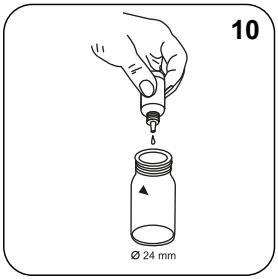


Remove the vial from the sample chamber.

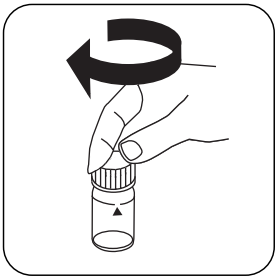
For devices that require **no ZERO measurement** , **start here**.



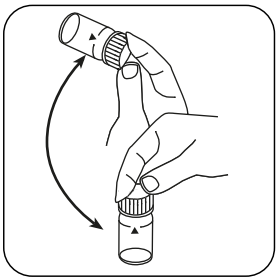
Hold cuvettes vertically and add equal drops by pressing slowly.



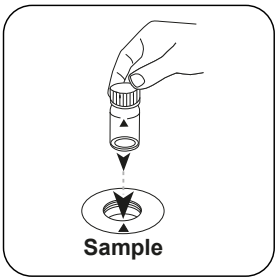
Add **10 drops Iron Reagent FE6**.



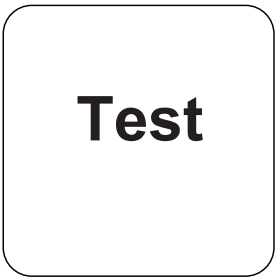
Close vial(s).



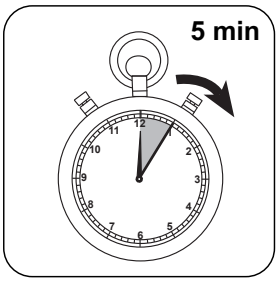
Invert several times to mix the contents.



Place **sample vial** in the sample chamber. Pay attention to the positioning.



Press the **TEST** (XD: **START**)button.



Wait for **5 minute(s) reaction time**.

Once the reaction period is finished, the measurement takes place automatically.

The result in mg/L Molybdate/ Molybdenum appears on the display.

Analyses

The following table identifies the output values can be converted into other citation forms.

Unit	Cite form	Scale Factor
mg/l	MoO_4	1
mg/l	Mo	0.6
mg/l	Na_2MoO_4	1.29

Chemical Method

Thioglycolate

Appendix

Calibration function for 3rd-party photometers

Conc. = $a + b \cdot Abs + c \cdot Abs^2 + d \cdot Abs^3 + e \cdot Abs^4 + f \cdot Abs^5$

	ø 24 mm	□ 10 mm
a	$2.04522 \cdot 10^{-1}$	$2.04522 \cdot 10^{-1}$
b	$5.4588 \cdot 10^{+1}$	$1.17364 \cdot 10^{+2}$
c		
d		
e		
f		

Interferences

Removeable Interferences

1. Interference from niobium, tantalum, titanium, and zirconium are masked with citric acid.
2. Interference from vanadium(V) is masked with potassium fluoride.

Bibliography

Photometrische Analyse, Lange/ Vjedelek, Verlag Chemie 1980