

Molybdate HR L

M254

1 - 100 mg/L MoO<sub>4</sub>

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	$\lambda$	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 <sub>4</sub>

## Material

Required material (partly optional):

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

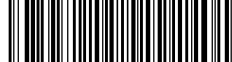
## Application List

- 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.





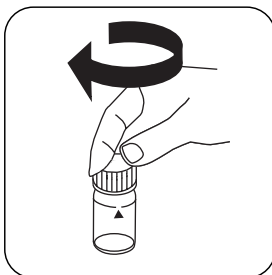
## Determination of Molybdate HR with liquid reagent

Select the method on the device.

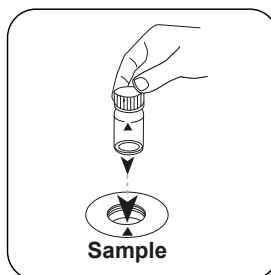
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



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



Close vial(s).



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

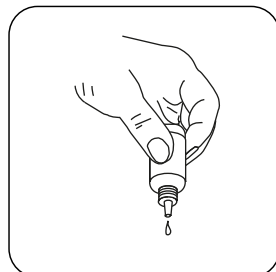


Press the **ZERO** button.

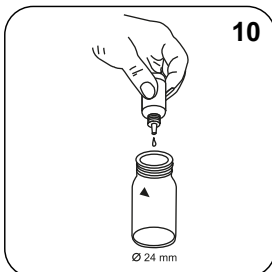


Remove the vial from the sample chamber.

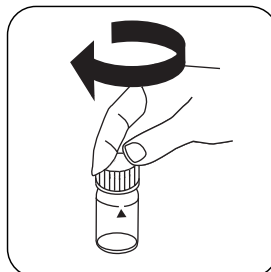
For devices that require **no ZERO measurement**, start here.



Hold cuvettes vertically and add equal drops by pressing slowly.



Add **10 drops Iron Reagent FE6**.



Close vial(s).



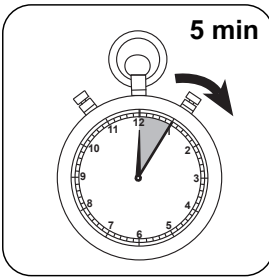
Invert several times to mix the contents.



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

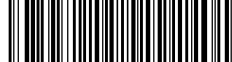


Press the **TEST** (XD: **START**) button.



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 <sub>4</sub>	1
mg/l	Mo	0.6
mg/l	Na <sub>2</sub> MoO <sub>4</sub>	1.29

## Chemical Method

Thioglycolate

## Appendix

### Calibration function for 3rd-party photometers

Conc. = a + b•Abs + c•Abs<sup>2</sup> + d•Abs<sup>3</sup> + e•Abs<sup>4</sup> + f•Abs<sup>5</sup>

	ø 24 mm	□ 10 mm
a	2.04522 • 10 <sup>-1</sup>	2.04522 • 10 <sup>-1</sup>
b	5.4588 • 10 <sup>+1</sup>	1.17364 • 10 <sup>+2</sup>
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