

Sulphide L

M366

8 - 1400 µg/L S²⁻

Methylene Blue

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
SpectroDirect, XD 7000, XD 7500	ø 24 mm	665 nm	8 - 1400 µg/L S ²⁻
MD 600, MD 610, MD 640, MultiDirect	ø 24 mm	660 nm	15 - 1400 µg/L S ²⁻

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
VARIO Sulphide Reagent Set	1 pc.	535170
VARIO Sulphide Reagent 1	100 mL	531310
VARIO Sulphide Reagent 2	100 mL	531320

Application List

- Drinking Water Treatment
- Raw Water Treatment
- Waste Water Treatment

Sampling

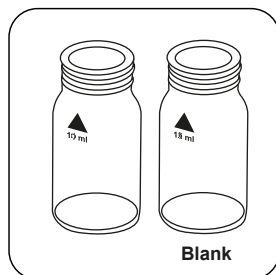
1. During sampling, exposure to air must be minimised to avoid losses.
2. The analysis must be carried out immediately after sampling.



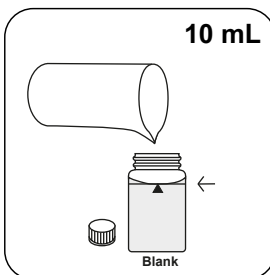


Determination of Sulphide with VARIO liquid reagent

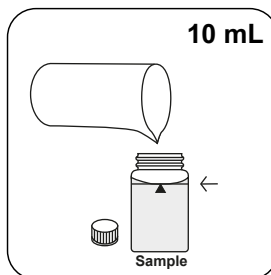
Select the method on the device.



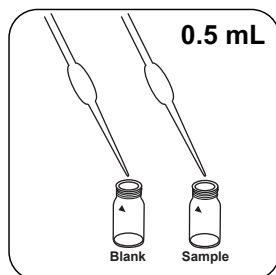
Prepare two clean 24 mm vials. Mark one as a blank.



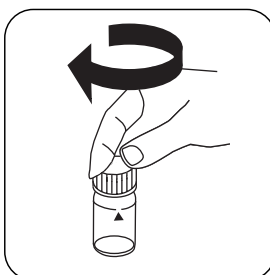
Put **10 mL deionised water** in the blank.



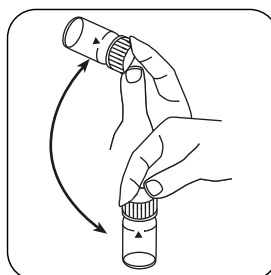
Put **10 mL sample** in the sample vial.



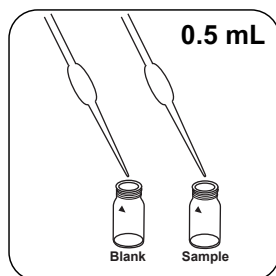
Add **0.5 mL VARIO Sulfide 1 solution** to each vial.



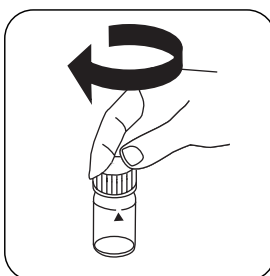
Close vial(s).



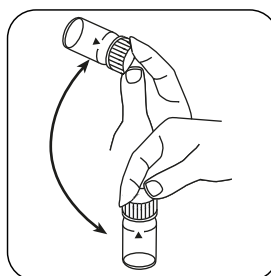
Invert several times to mix the contents.



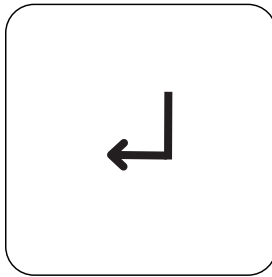
Add **0.5 mL VARIO Sulfide 2 solution** to each vial.



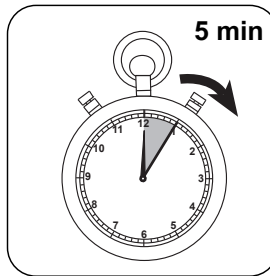
Close vial(s).



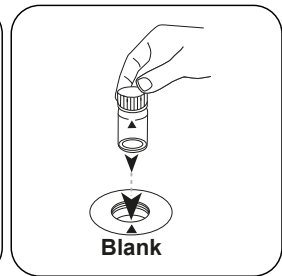
Invert several times to mix the contents.



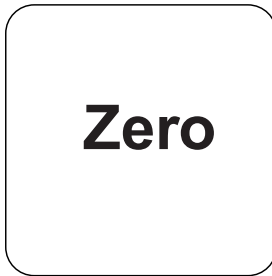
Press the **ENTER** button.



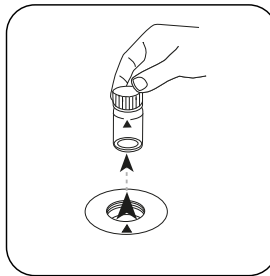
Wait for **5 minute(s) reaction time**.



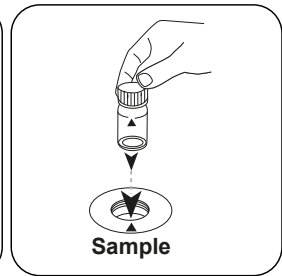
Place **blank** in the sample chamber. Pay attention to the positioning.



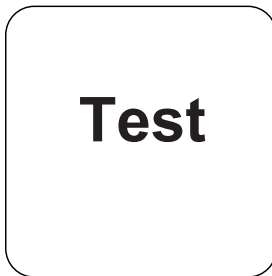
Press the **ZERO** button.



Remove the **vial** from the sample chamber.



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



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

The result in **µg/L Sulphide** appears on the display.



Analyses

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

Unit	Cite form	Scale Factor
µg/l	S ²⁻	1
µg/l	H ₂ S	1.0629

Chemical Method

Methylene Blue

Appendix

Calibration function for 3rd-party photometers

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

	∅ 24 mm	□ 10 mm
a	0.0000 • 10 ⁺⁰	0.0000 • 10 ⁺⁰
b	4.7431 • 10 ⁺²	1.0198 • 10 ⁺³
c	5.6021 • 10 ⁺¹	2.5896 • 10 ⁺²
d		
e		
f		

Interferences

Persistent Interferences

1. Strongly reducing substances can interfere with colour development.

Interference	from / [mg/L]
Ba	20



Method Validation

Limit of Detection	8 µg/L
Limit of Quantification	24 µg/L
End of Measuring Range	1400 µg/L
Sensitivity	609 µg/L/Abs
Confidence Intervall	40 µg/L
Standard Deviation	18 µg/L
Variation Coefficient	2.7%

Derived from

Standard Method 4500-S²-D