



Sulphate HR PP

M361

50 - 1000

Bariumsulphate Turbidity

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 600, MD 610, MD 640, MultiDirect, SpectroDirect, XD 7000, XD 7500	ø 24 mm	530 nm	50 - 1000

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
VARIO Sulfa 4 F10	Powder / 100 pc.	532160
Deionised Water	100 mL	461275
Deionised Water	250 mL	457022

The following accessories are required.

Accessories	Packaging Unit	Part Number
Round cuvette 24 mm ø, set of 5	1 Set	197629
Automatic pipette, 1-5 ml	1 pc.	419076
Pipette tips, 1-5 ml (white) 100 pc.	1 pc.	419066

Application List

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

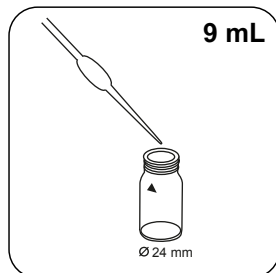




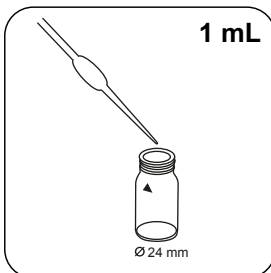
Determination of Sulphate HR with powder packs

Select the method on the device.

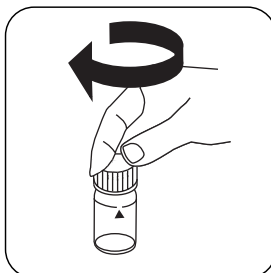
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



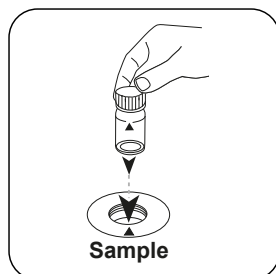
Fill 24 mm vial with **9 mL deionised water**.



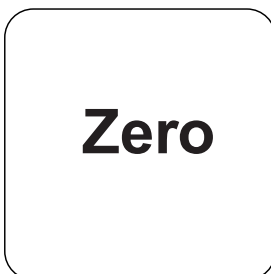
Put **1 mL sample** in the vial.



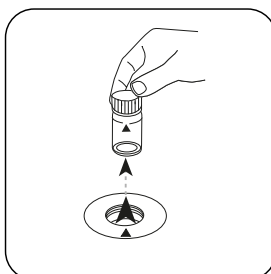
Close vial(s).



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

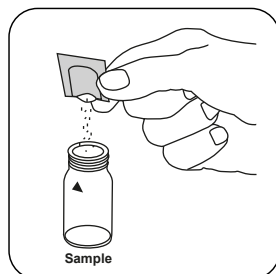


Press the **ZERO** button.

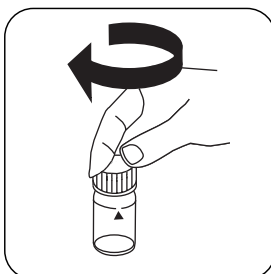


Remove the vial from the sample chamber.

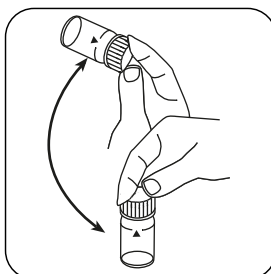
For devices that require **no ZERO measurement**, start here.



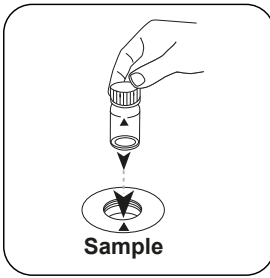
Add **Vario Sulpha 4/ F10 powder pack**.



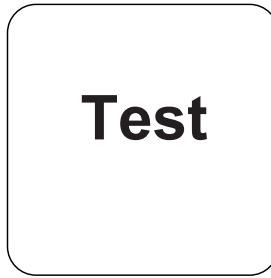
Close vial(s).



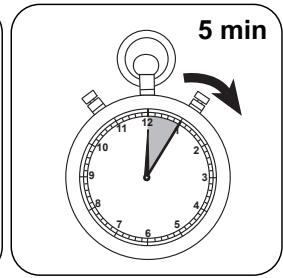
Invert several times to mix the contents.



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 Sulphate appears on the display.



Chemical Method

Bariumsulphate Turbidity

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	$2.42421 \cdot 10^{+1}$	$2.42421 \cdot 10^{+1}$
b	$1.07243 \cdot 10^{+3}$	$2.30572 \cdot 10^{+3}$
c	$-1.11466 \cdot 10^{+3}$	$-5.15249 \cdot 10^{+3}$
d	$7.93311 \cdot 10^{+2}$	$7.88423 \cdot 10^{+3}$
e	$-1.88194 \cdot 10^{+2}$	$-4.02124 \cdot 10^{+3}$
f		

Method Validation

Limit of Detection	2.91 mg/L
Limit of Quantification	8.74 mg/L
End of Measuring Range	1,000 mg/L
Sensitivity	516 mg/L / Abs
Confidence Intervall	56.16 mg/L
Standard Deviation	23.22 mg/L
Variation Coefficient	4.42 %