

Sulphite 10 T

M368

0.1 - 12 mg/L SO₃

DTNB

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 | □ 10 mm | 405 nm | 0.1 - 12 mg/L SO ₃ |

Material

Required material (partly optional):

| Reagents | Packaging Unit | Part Number |
|------------|----------------|-------------|
| Sulfite LR | Tablet / 100 | 518020BT |

Application List

- Waste Water Treatment
- Galvanization

Notes

Variations in the length of the vial can extend the measuring range:

- 10 mm vial: 0.1 mg/L - 10 mg/L, solution: 0.01
- 20 mm vial: 0.05 mg/L - 5 mg/L, solution: 0.01
- 50 mm vial: 0.02 mg/L - 2 mg/L, solution: 0.001

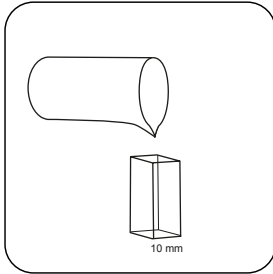




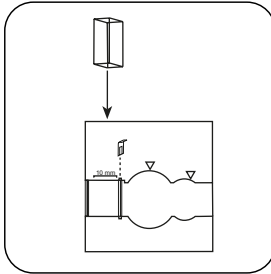
Determination of Sulphite with Tablet

Select the method on the device.

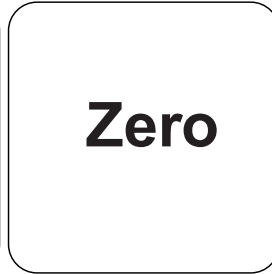
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



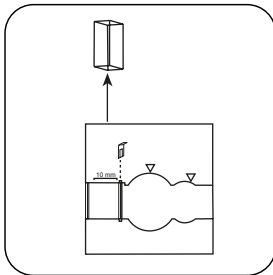
Fill **10 mm vial** with **sample**.



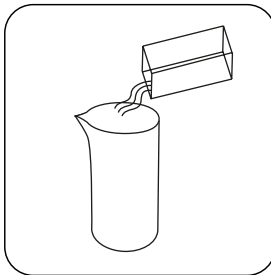
Place **sample vial** in the sample chamber. • Pay attention to the positioning.



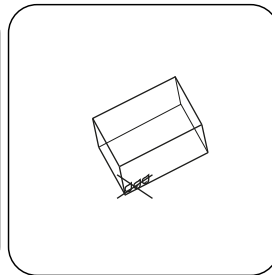
Press the **ZERO** button.



Remove **vial** from the sample chamber.

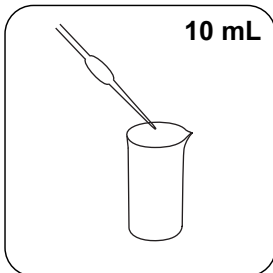


Empty vial.

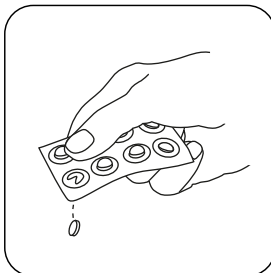


Dry the vial thoroughly.

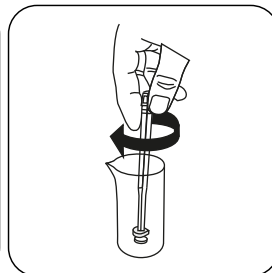
For devices that require **no ZERO measurement**, start here.



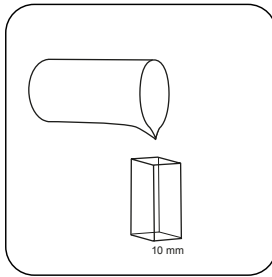
Put **10 mL sample** in the sample vessel.



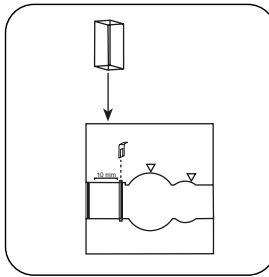
Add **SULFITE LR tablet**.



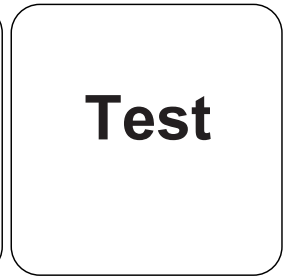
Crush tablet(s) by rotating slightly and dissolve.



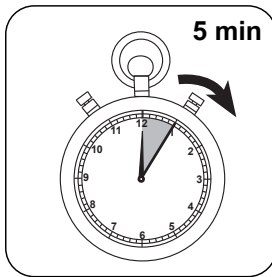
Fill **10 mm vial** with **sample**.



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 Sulphite 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 | SO ₃ ²⁻ | 1 |
| mg/l | Na ₂ SO ₃ | 1.5743 |

Chemical Method

DTNB

Appendix

Calibration function for 3rd-party photometers

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

□ 10 mm

| | |
|---|-----------------------------|
| a | -4.72981 • 10 ⁻¹ |
| b | 6.87211 • 10 ⁺⁰ |
| c | |
| d | |
| e | |
| f | |

Bibliography

R.E. Humphrey, M.H. Ward, W. Hinze, Spectrophotometric determination of sulphite with 4,4'-dithio-dipyridine and 5,5'-dithiobis(2-nitrobenzoic acid), Anal. Chem., 1970, 42 (7), pp 698–702