



Sulphite T

M370

0.1 - 5 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
MD 600, MD 610, MD 640, MultiDirect	ø 24 mm	430 nm	0.1 - 5 mg/L SO ₃
XD 7000, XD 7500	ø 24 mm	408 nm	0.1 - 6 mg/L SO ₃
SpectroDirect	ø 24 mm	405 nm	0.05 - 4 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





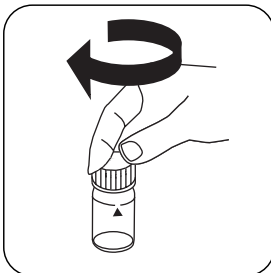
Determination of Sulphite with Tablet

Select the method on the device.

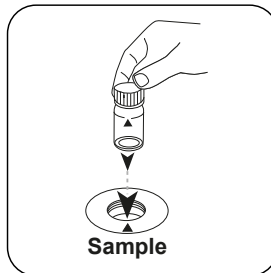
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



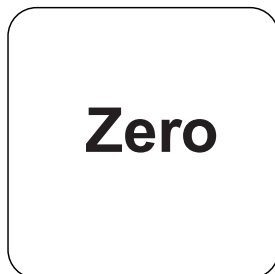
Fill 24 mm vial with **10 mL sample**.



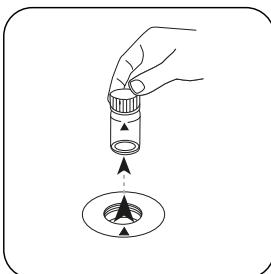
Close vial(s).



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

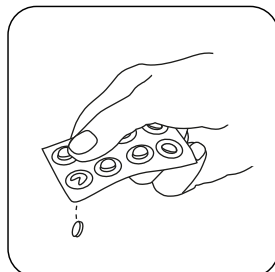


Press the **ZERO** button.

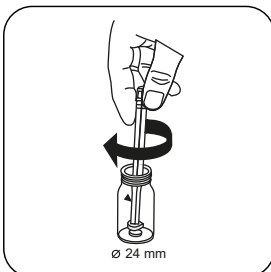


Remove the vial from the sample chamber.

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



Add **SULFITE LR tablet**.



Crush tablet(s) by rotating slightly.



Close vial(s).



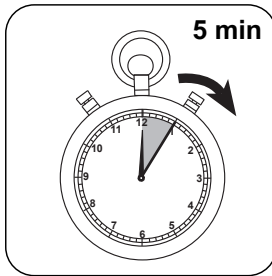
Dissolve tablet(s) by inverting.



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

Conc. = a + b•Abs + c•Abs² + d•Abs³ + e•Abs⁴ + f•Abs⁵

	∅ 24 mm	□ 10 mm
a	-2.67453•10 ⁻¹	-4.42153•10 ⁻¹
b	2.78503•10 ⁺⁰	6.69645•10 ⁺⁰
c		
d		
e		
f		

Method Validation

Limit of Detection	0.04 mg/L
Limit of Quantification	0.118 mg/L
End of Measuring Range	6.0 mg/L
Sensitivity	2.815 mg/L / Abs
Confidence Intervall	0.081 mg/L
Standard Deviation	0.033 mg/L
Variation Coefficient	1.41 %

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