

Silicate T

M350

0.05 - 4 mg/L SiO<sub>2</sub>

Si

Silicomolybdenum 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	$\lambda$	Measuring Range
MD 100, MD 600, MD 610, MD 640, MultiDirect	ø 24 mm	660 nm	0.05 - 4 mg/L SiO <sub>2</sub>
SpectroDirect, XD 7000, XD 7500	ø 24 mm	820 nm	0.05 - 4 mg/L SiO <sub>2</sub>

## Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Silica No. 1	Tablet / 100	513130BT
Silica No. 1	Tablet / 250	513131BT
Silica No. 2	Tablet / 100	513140BT
Silica No. 2	Tablet / 250	513141BT
Silica PR	Tablet / 100	513150BT
Silica PR	Tablet / 250	513151BT
Set Silica No. 1/No. 2 100 Pc.#	100 each	517671BT
Set Silica No. 1/No. 2 250 Pc.#	250 each	517672BT

## Application List

- Boiler Water
- Raw Water Treatment

## Notes

1. The tablets must be added in the correct sequence.





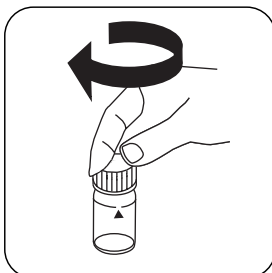
## Determination of Silicon Dioxide with Tablet

Select the method on the device.

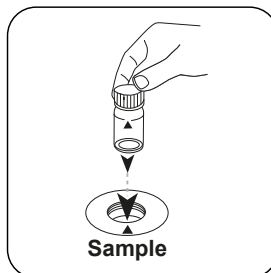
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



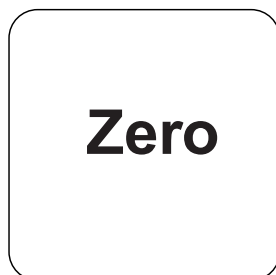
Fill 24 mm vial with **10 mL sample**.



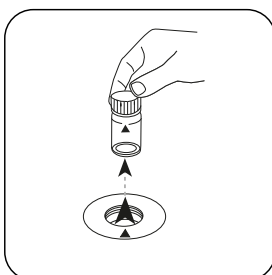
Close vial(s).



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

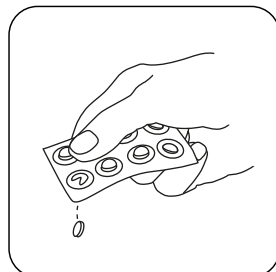


Press the **ZERO** button.

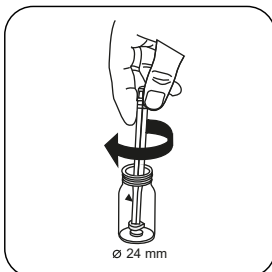


Remove the vial from the sample chamber.

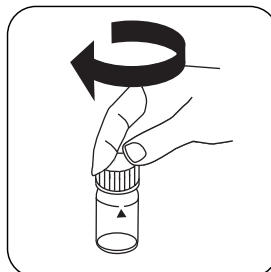
For devices that require **no ZERO measurement**, start here.



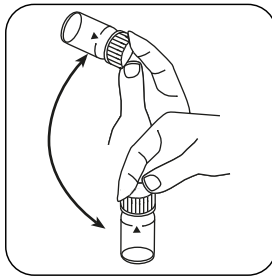
Add **SILICA No. 1 tablet**.



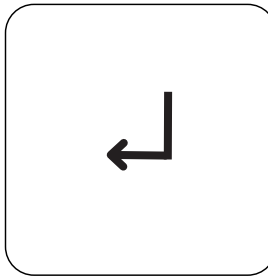
Crush tablet(s) by rotating slightly.



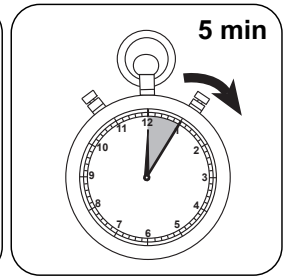
Close vial(s).



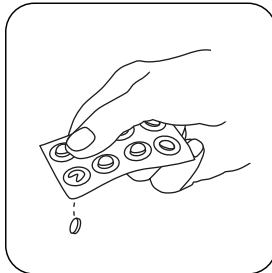
Dissolve tablet(s) by inverting.



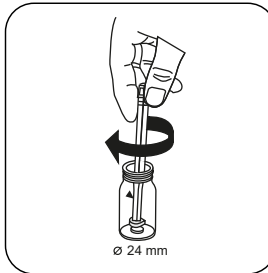
Press the **ENTER** button.



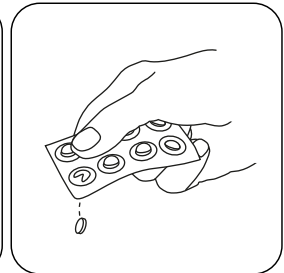
Wait for **5 minute(s)** reaction time.



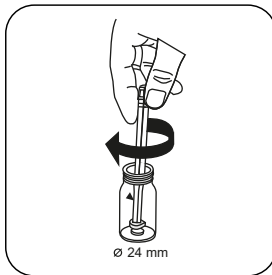
Add **SILICA PR** tablet.



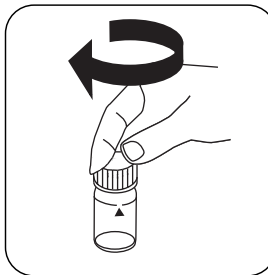
Crush tablet(s) by rotating slightly.



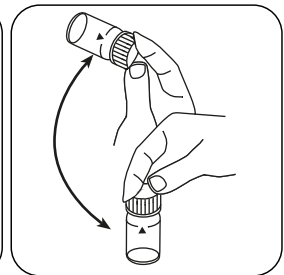
Add **SILICA No. 2** tablet .



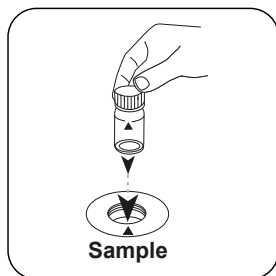
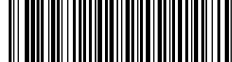
Crush tablet(s) by rotating slightly.



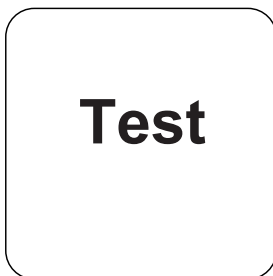
Close vial(s).



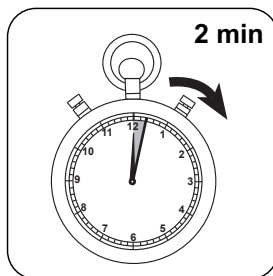
Dissolve tablet(s) by inverting.



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



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



Wait for **2 minute(s) reaction time**.

Once the reaction period is finished, the measurement takes place automatically.

The result in mg/L Silica 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	SiO <sub>2</sub>	1
mg/l	Si	0.47

## Chemical Method

Silicomolybdenum Blue

## 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>

	∅ 24 mm	□ 10 mm
a	-4.74138 • 10 <sup>-2</sup>	-4.74138 • 10 <sup>-2</sup>
b	1.53143 • 10 <sup>-0</sup>	3.29257 • 10 <sup>-0</sup>
c		
d		
e		
f		

## Interferences

### Removeable Interferences

- Phosphate does not interfere under the reaction conditions.

### Derived from

Standard Method 4500-SiO<sub>2</sub> C

\* including stirring rod, 10 cm