

Silicate L

M353

0.1 - 8 mg/L SiO<sub>2</sub>

Heteropolyblue

## 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 600, MD 610, MD 640, XD 7000, XD 7500	ø 24 mm	660 nm	0.1 - 8 mg/L SiO <sub>2</sub>

## Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Silica LR L	1 pc.	56R023856
KS104-Silica Reagent 1	65 mL	56L010465
KS105-Silica Reagent 2	65 mL	56L010565
KP106-Silica Reagent 3	10 g	56P010610

## Application List

- Boiler Water
- Raw Water Treatment

## Preparation

1. The measuring spoon supplied with the reagents must be used for the correct dosage.
2. To get accurate results the sample temperature must be between 20 °C and 30 °C.





## Determination of Silicon dioxide with liquid reagent

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**.



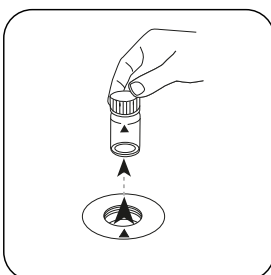
Close vial(s).



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

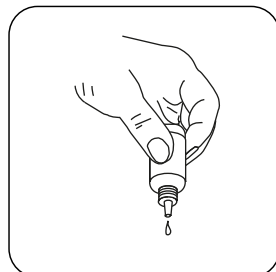


Press the **ZERO** button.

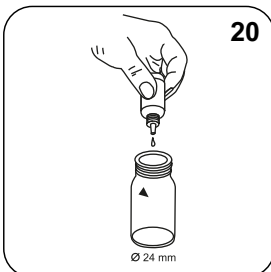


Remove the vial from the sample chamber.

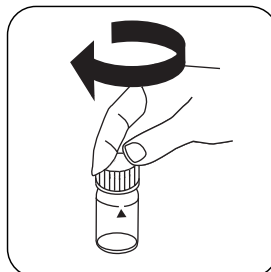
For devices that require **no ZERO measurement**, start here.



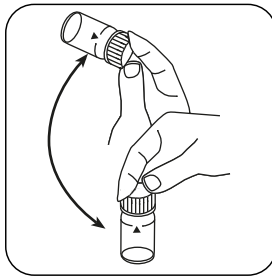
Hold cuvettes vertically and add equal drops by pressing slowly.



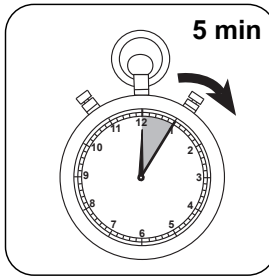
Add **20 drops KS104 (Silica Reagent 1)**.



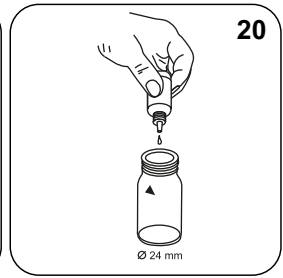
Close vial(s).



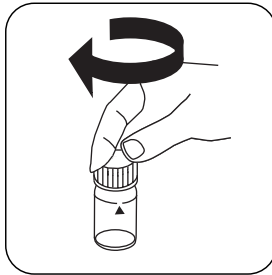
Invert several times to mix the contents.



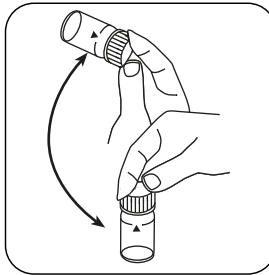
Wait for **5 minute(s) reaction time**.



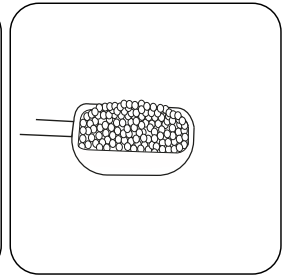
Add **20 drops KS105 (Silica Reagent 2)**.



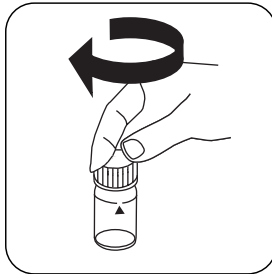
Close vial(s).



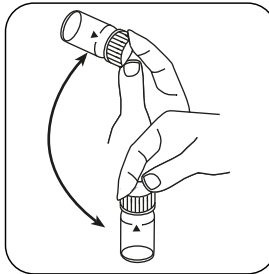
Invert several times to mix the contents.



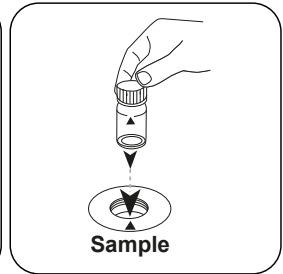
Add a **measuring scoop KP106 (Silica Reagent 3)**.



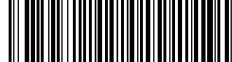
Close vial(s).



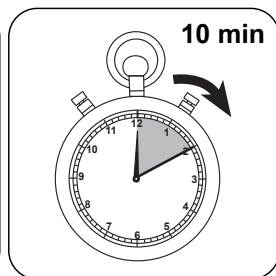
Swirl around to dissolve the powder.



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



# Test



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

Wait for **10 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

Heteropolyblue

## 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>

	ø 24 mm	□ 10 mm
a	-7.53464 • 10 <sup>-1</sup>	-7.53464 • 10 <sup>-1</sup>
b	4.10695 • 10 <sup>-0</sup>	8.82994 • 10 <sup>-0</sup>
c		
d		
e		
f		

## Interferences

### Persistent Interferences

- At a temperature below 20 °C no complete reaction occurs, thus reducing findings are to be expected.

### Derived from

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