LCW028 Silicic acid

DOC312.53.94385

0.01–0.80 mg/L Silicic acid (SiO_2), 0.005–0.400 mg/L Silicon (Si) LCW028

Scope and application: For boiler water, drinking water and process analysis.

Test preparation

Test storage

Storage temperature: 15–25 °C (59–77 °F)

pH/Temperature

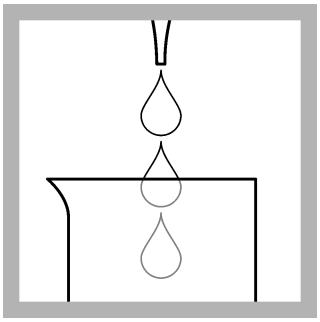
The pH of the water sample must be between pH 3–10.

The temperature of the water sample and reagents must be between 15–25 °C (59–77 °F).

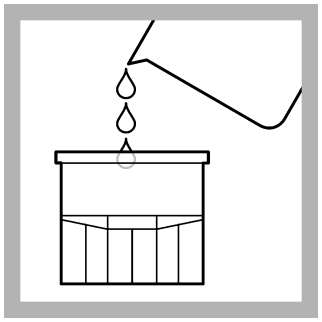
Before starting

Review safety information and expiration date on the package.
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.
Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

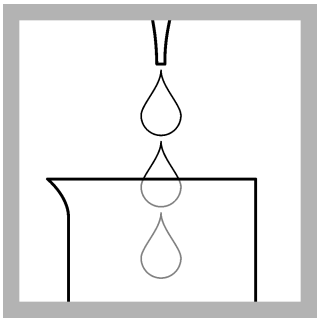
Procedure



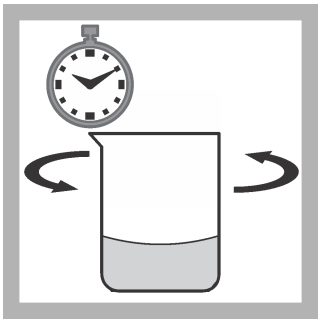
1. Blank:
Pipet into a plastic beaker:
25.0 mL sample.



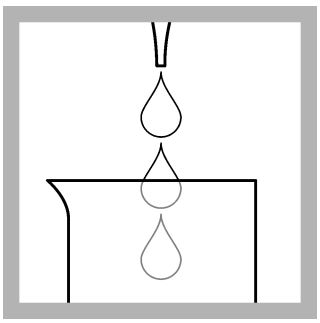
2. Transfer to a
50 mm rectangular cuvette.



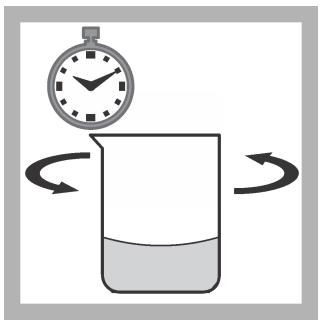
3. Sample:
Pipet into a plastic beaker:
25.0 mL sample and
1.0 mL solution A.



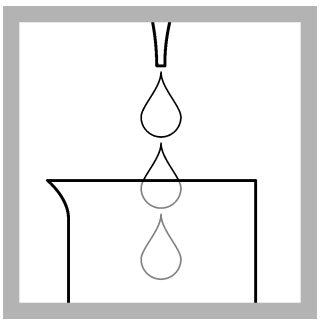
4. Mix and wait **3 minutes**.



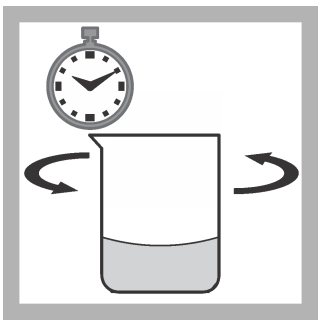
5. Pipet into the beaker:
1.0 mL solution B.



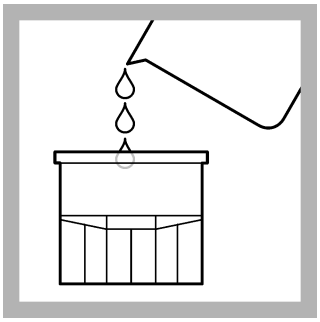
6. Mix and wait **3 minutes**.



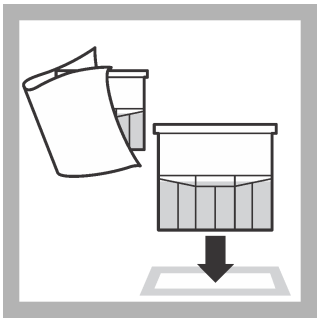
7. Pipet into the beaker:
1.0 mL solution C.



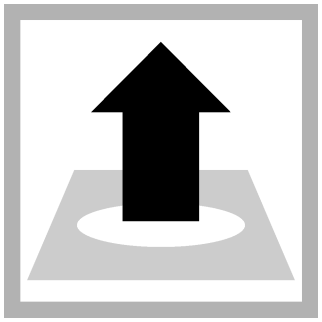
8. Mix and allow to stand for
25 minutes.



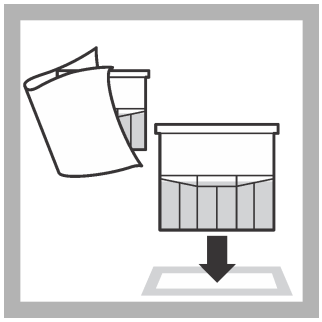
9. Transfer to a **50 mm rectangular cuvette**.



10. Thoroughly clean the outside of the blank and insert the blank into the cell holder.
Go to **Stored Programs**.
Select the test: push **ZERO**.



11. Remove the blank.



12. Thoroughly clean the outside of sample cuvette and insert the sample cuvette into the cell holder.
Push **READ**.

Interferences

Phosphates interfere with the determination.

The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

Removal of Interferences

Phosphate interference can be eliminated by the addition of a spatula-tipfull of oxalic acid.

Summary of method

In an acidic solution, dissolved silicic acid or silicates react with ammonium molybdate to form a yellow-coloured silicomolybdic acid. If a reducing agent is added a blue dye is formed.

HACH LANGE GMBH
Willstätterstraße 11
D-40549 Düsseldorf
Tel. +49 (0) 2 11 52 88-0
Fax +49 (0) 2 11 52 88-143
info-de@hach.com
www.hach.com

© Hach Company/HACH Lange GmbH, 2019. All rights reserved.
11/2019, Edition 1