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Test 7-25

visocolor® Powder Pillows

Silica HR

Reagent set for the photometric determination of the silica content in water and sea water samples.

Measuring range:
2-210 mg/L SiO_2
1-100 mg/L Si

Method:
Photometric determination of the silica content using the silicomolybdate method analogous to APHA 4500-Si D.

Hazard warning:
Information regarding safety can be found on the box' label and in the safety data sheet. You can download the SDS from ***www.mn-net.com/SDS***.

Procedure:
Requisite accessories: 2 test tubes 16 mm OD (REF 91680) or 2 test tubes 24 mm OD (REF 936101), special filter 450 nm

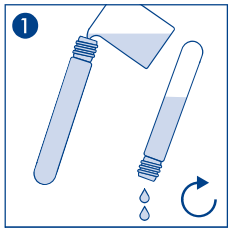
1. Rinse test tube several times with sample *(pH value of sample must be between pH 3 and 13)*

Blank (optional):

2. Fill one test tube with 5 mL of sample
3. Clean test tube
4. Place test tube in photometer as blank value and adjust for zero

Sample:

5. Fill another test tube with 5 mL of sample
6. Add content of 1 Powder Pillow “molybdate reagent”
7. Add content of 1 Powder Pillow “acid reagent”
8. Close test tube and vigorously shake until the solid material has dissolved
9. Wait for 3 min
10. Add content of 1 Powder Pillow “citric acid reagent”
11. Close test tube and shake well
12. Clean test tube
13. Wait for a 2 min reaction time
14. Measure



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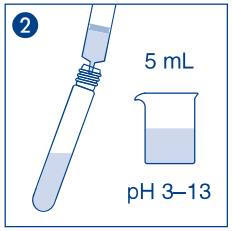

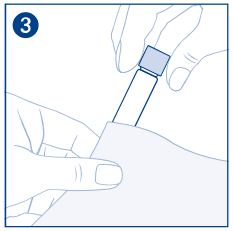

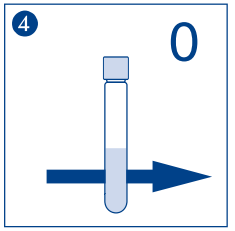

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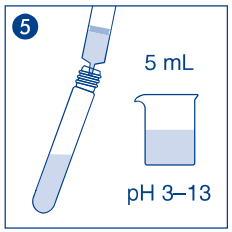

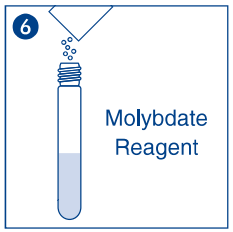

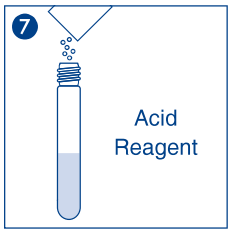

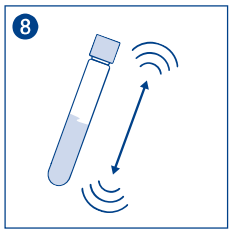

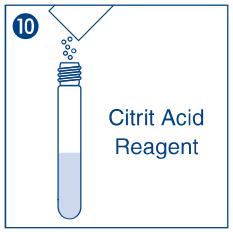

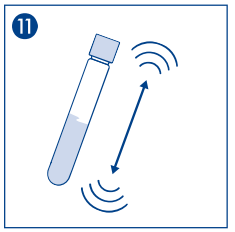

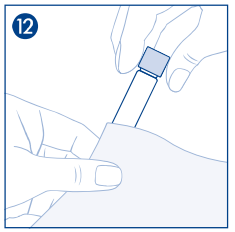

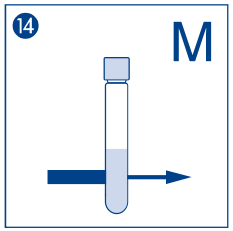

Measurement:
See manual for all MACHEREY-NAGEL photometers.
It should be ensured that any distilled water used for dilution is silica-free (REF 918912).
After use, rinse out test tubes thoroughly and seal them.
This method is also suitable for the analysis of sea water.

Interferences:
The following will not interfere: < 600 mg/L PO_4^{3-}
The following will interfere: large amounts of $Fe^{2+/3+}$, oxidising agents, sulphides
According to APHA 4500-Si D, there is a modification of the silica which does not react with molybdate. This molybdate-unreactive form can be converted into the reactive species through heating or fusing with a base (e.g. digestion with sodium bicarbonate $NaHCO_3$).

Disposal of samples:
Information regarding disposal can be found in the safety data sheet. You can download the SDS from ***www.mn-net.com/SDS***.

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