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Doc No :	PDAE302
Date :	01-02-2025
Brand :	AQUASOL
Product Code:	AE302

PRODUCT DATA SHEET

1 INFORMATION

Code - AE302 Name - Silica Test Kit

Range - 5 - 80 PPM (Mg/L) No of Tests - 400 Shelf Life - 24 Months

2 METHOD

Ammonium molybdate at pH approximately 1.2 reacts with silica and any phosphate present to produce heteropoly acid. Oxalic acid is added to destroy the Molybdophosphoric acid but not the molybdosilicic acid. Even if phosphate is known to be absent, the addition of oxalic acid is highly desirable and is a mandatory step in this method. Molybdate – unreactive silica can be converted to molybdate reactive form by heating or fusing with alkali.
The intensity of the yellow colour is proportional to the concentrations of 'molybdate – reactive 'silica.

3 APPLICATION

Drinking Water, Mineral Water, Well Water, Swimming Pool Water, Surface and Ground Water, Aquaculture, Boiler Water, Process Water, Industrial Wastewater, Effluent Water, Cooling System Water, Chiller Water etc

4 INTERFERENCE

Tannin, large amount of iron, colour, Turbidity, Sulphide and phosphate interfere. Treatment with oxalic acid eliminate interference form phosphate and decrease interference from tannin.

5 METHOD CONTROL

To Check test reagents,

To prepare 1000 ppm Silica standard solution - Take 4.731 gms of $Na_2SiO_3*9H_2O$ in a 1000 ml standard volumetric flask , Add Silica free demineralised Water mix well , dilute it with demineralised water up to 1000ml mark , stir well. Dilute this standard solution with distilled water to 0.1 mg/l SiO_2 and analyse as described in procedure card.

6 REAGENTS AND ACCESSORIES

Reagents: SL1(1Nos), SL2(1Nos), LS2(1Nos)
Accessories: 25 ml Test Jar(1Nos), Procedure Label(1Nos), Syringe, comparator tube(2 Nos.)Colour chart

7 STORAGE

The test reagents are stable up to the date stated on the pack when stored closed at ambient temperature.

8 REFERENCE

APHA Standard Methods, 22nd ed., Method 4500-SiO_2 C – Standard Methods for Chemical Analysis of Water and Waste water.

9 DIRECTION FOR USE

1)Take 5 ml. of prepared* sample in plastic test jar.
2)Add in a rapid succession 3 drops of reagent SL 1 and 6 drops of reagent SL 2.
3)Mix the contents thoroughly. Keep for 5 minutes.
4)Now Add 6 drops of reagent LS 2 and mix thoroughly. Wait for 2 minutes.
5)Transfer the contents in small comparator tube provided here.
6)Read the ppm Silica as follows:
a)Place the comparator tube on the inner white circle, on the colour comparison chart.
b)View from the top of the comparator tube to compare the sample colour and the colour around.
c)Read the ppm SILICA as SiO_2 after arriving at the correct match.

*Prepared Sample: The pH of water should be preferably neutral. Therefore neutralize highly acidic or alkaline sample to pH 6.5 to 7.5.