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**Doc No :** TDSAE312**Date :** 01-02-2024**Type :** AQUASOL**Product Code:** AE312**PRODUCT DATA SHEET****1 INFORMATION**

CODE: AE312

PARAMETER: Silica (Low Level)

RANGE: 0.0 TO 0.1 ppm as SiO<sub>2</sub>**2 METHOD**

Silica reacts with ammonium molybdate under acidic conditions to produce yellow molybdosilicic acid, which is reduced by aminonaphtholsulfonic acid to form heteropoly blue. The resulting blue colour is directly proportional to the silica concentration of the sample. Results are expressed as ppm (mg/L) SiO<sub>2</sub>.

**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 from phosphate and decrease interference from tannin.

**5 METHOD CONTROL**

To Check test reagents,

Prepare 1000 ppm Silica standard solution -

Take 4.731 gms of Na<sub>2</sub>SiO<sub>3</sub>\*9H<sub>2</sub>O 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<sub>2</sub> and analyse as described in procedure card.

**6 REAGENTS AND ACCESSORIES**

Reagents: LS1 (1No), LS2 (2 No), LS3 (1 No)

Accessories: 25 ml test jar (2Nos), Procedure Label(1Nos), 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<sub>2</sub> D – Standard Methods for Chemical Analysis of Water and Waste water, BUNTING, W.E. 1944, MILTON, R.F. 1951.

**9 DIRECTION FOR USE**

- 1)Take 25 ml of sample in a glass test jar provided.
- 2)Add 35 drops of reagent LS1. Mix well. Wait for 5 minutes.
- 3)Add 65 drops of reagent LS2. Mix well.
- 4)Add 15 drops of reagent LS3 and mix the content thoroughly. Wait for 10 minutes.
- 5)Read the ppm SILICA as follows:
  - a)Place the test jar on the inner white circle of the colour comparison chart.
  - b)View from top of both the tube to compare the sample colour and the colour around.
  - c)Read the ppm SILICA as SiO<sub>2</sub> after arriving at the correct match from the colour chart.

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