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Doc No : PDAE216**Date :** 01-02-2025**Brand :** AQUASOL**Product Code:** AE216**PRODUCT DATA SHEET****1 INFORMATION**

Code - AE216

Name - Sulphite Test Kit

Range - 5 - 100 PPM (Mg/L)

No of Tests - 300

Shelf Life - 24 Months

2 METHOD

In acidified sample, the starch indicator is used to indicate end point of iodide- iodate titration of sulphite (SO₃). The result is expressed as mg/l (ppm) SO₃.

3 APPLICATION

Boiler water, process water (added sulphite)

Sample Handling: Sulphite is rapidly destroyed by atmospheric oxygen. Contact with air must be minimized and sample manipulation (shaking, filtering, etc.) should be avoided. Analysis should be performed immediately after collection. Sample temperatures should be below 50°C at the time of analysis.

4 INTERFERENCE

The presence of other oxidisable materials, such as sulphide, thiosulphate, & Fe²⁺ ions, can cause high results for sulphite. Sulfamic acid is added to the sample during analysis to prevent interference from nitrite. Some metal ion such as Cu²⁺, may catalyse the oxidation of SO₃²⁻ to SO₄²⁻ when the sample is exposed to air, thus leading to low results. minimize oxidation of sulphite to sulphate by metals such as copper, the reagent is formulated with EDTA. Ascorbic acid (Vitamin C) will cause false high test results.

5 METHOD CONTROL

To Check test reagents, Prepare 1000 ppm sulphite standard(as Na₂SO₃):- Dissolve 1.0 gm Sodium Sulphite in distilled water and make up the volume to one liter in standard volumetric flask. Dilute this standard solution with distilled water to 50 mg/l Na₂SO₃, analyse as described in procedure card.

6 REAGENTS AND ACCESSORIES

Reagents: ST1(1No), ST2(2No), AK1(1No), AK2(1No)

Accessories: 25ML Plastic Test Jar(1Nos), Procedure Label(1Nos), Plastic Spoon(1Nos)

7 STORAGE

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

8 REFERENCEAPHA Standard Methods, 22nd ed., Method 4500- SO₃ - B – Standard Methods for Chemical Analysis of Water and Waste water. IS 3025 (Part 40): 1991**9 DIRECTION FOR USE**

Directions for Use:

1. Take 10 ml of water sample to be tested in the test jar.
2. Add 2 drops of AK 1 (Alkalinity indicator).
3. If a pink colour does not appear, proceed to step 5.
4. If a pink colour appears, then drop wise add AK 2 (Alkalinity neutralizer) until the colour disappears. Then proceed to step 5.
5. Add 2 spoonfuls (provided herewith) of ST 1 and mix well.
6. Now drop wise* add ST 2, counting the number of drops while mixing, until the colour changes from colourless to blue.

Calculations:

Sulphite as ppm Na₂SO₃ = 5 x (Number of drops of ST 2)

AE 216 is recommended for use in detecting Sulphite residue in boiler water or in water where Sulphite has been added.

Note: Sample should be neutralize using AK 1 & AK 2 reagent to get correct reading of Sulphite residue. Very high Sulphite content (above prescribe range) may not show the colour change, unless suitably dilute.