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Doc No : TDSAE404**Date :** 01-02-2024**Type :** AQUASOL**Product Code:** AE404**PRODUCT DATA SHEET****1 INFORMATION**

CODE: AE404

PARAMETER: Bromine

RANGE: - 0.1 - 2.0 ppm as Br₂**2 METHOD**

N, N-diethyl-p-phenylenediamine is used as an indicator in the titrimetric procedure with ferrous ammonium sulfate. The procedure is simplified to give only Bromine, in the absence of Iodine, free and total chlorine. Bromine reacts with DPD indicator to produce a red colour. Results are expressed as ppm (mg/L) Br₂.

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

Many strong oxidizing agents interfere in the measurement of Bromine in DPD method. Such interference include Chlorine, chlorine dioxide, iodine, permanganate, hydrogen peroxide, and ozone. However, the reduced form of these compounds like chloride, iodide, manganous ion, and oxygen, in the absence of other oxidant, do not interfere. Permanganate, Mn⁺⁷, interferes positively. Nitrogen trichloride, if present may react partially as bromine in the amperometric, DPD method. Cupric copper may interfere positively. Chromate in excess of 2 mg/l interferes with end point determination. Nitrite at concentrations up to at least 5 ppm does not interfere. Ferric iron and hydrogen peroxide at concentrations comparable to the test range do not interfere with this chemistry. Chloramines present at concentrations within the test range do not interfere significantly during Bromine analysis. Samples with extreme pHs or that are highly buffered should be adjusted to pHs of approximately 6 - 7 prior to analysis.

5 REAGENTS AND ACCESSORIES

Reagents: FC1 (1No), BR2(1 no),

Accessories: 25 ml Test jar, Plastic Spoon, Procedure Label(1Nos).

6 STORAGE

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

7 REFERENCE

APHA Standard Methods, 21st ed., Method 4500-Cl G - 2000.

8 DIRECTION FOR USE

Direction for Use:

1. Take 10 ml water sample to be tested in the test jar.
2. Add one spoonful (provided here) of FC 1
3. Mix well to dissolve.
4. If a pink colour does not develop Bromine is absent.
5. If a pink colour appears, Bromine is present.
6. Now drop wise * add Br₂ counting the number of drops while mixing, until the pink colour disappears.

Calculations:

Bromine as ppm Bromine = 0.1 X (No. of drops of Br₂)

IMPORTANT:

1. After the end point (colourless) has been reached, if the pink colour reappears on keeping, then this has to be ignored.
2. Close the lid of the FC 1 bottle immediately after the use.

*This procedure is valid in the absence of chlorine and iodine in water sample.