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Doc No : PDAE235**Date :** 01-02-2024**Type :** AQUASOL**Product Code:** AE235**PRODUCT DATA SHEET****1 INFORMATION**

CODE: AE235

PARAMETER: TOTAL CHLORINE

RANGE: 0.1-2.0 mg/l as Cl

2 METHOD

the combine chlorine in the water sample is oxidized by adding oxidizing agent (KI) chlorine oxidized by these method and free chlorine available in sample give combined chlorine that is total chlorine it is measured by ferrous ammonium sulphate as titrant using N,N-diethyl-p-phenylenediamine as indicator.

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 free chlorine in DPD method. Such interference include bromine, chlorine dioxide, iodine, permanganate, hydrogen peroxide, and ozone. However, the reduced form of these compounds like bromide, 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 free chlorine 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 free chlorine analysis. Samples with extreme pHs or that are highly buffered should be adjusted to pHs of approximately 6 - 7 prior to analysis.

5 METHOD CONTROL

To Check test reagents,

Prepare 4 ppm chlorine standard :- Take 0.1 ml 4% sodium hypochlorite solution in 1 liter standard volumetric flask. dilute it to 1000ml with demineralised water. Then Determine the concentration of prepared chlorine standard by Iodometric method, and analyse as described in procedure card.

6 REAGENTS AND ACCESSORIES

Reagents: TC1(1Nos), FC2(1Nos)

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

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-Cl F – Standard Methods for Chemical Analysis of Water and Waste water.

9 DIRECTION FOR USE:

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

Calculations:

Total Chlorine as ppm Cl = 0.1 X (No. of drops of FC 2)

Note:

- a)Once the end point (colourless) has reached, kindly ignore if the pink colour reappears after sometime.
- b)Reagent TC 1 is highly sensitive to moisture, kindly close the lid of the bottle immediately after the use.
- c)Ensure that only dry spoon is used to handle the TC 1 Reagent.