



## TEST METHOD FOR ZINC IN INDUSTRIAL & TREATED WATER (RANGE: 0-4.0 mg/L Zn)

### PRODUCT INFORMATION FLYER

#### **BACKGROUND OF THE TEST:**

Zinc based cooling water treatment is sometime used in the industries and sometime zinc is analyzed in a water sample either due to addition of Zinc in water for mineral water purposes or for any other particular reasons. Nuclotrasis offers user friendly test method with ease of handling the relevant reagents and other equipments used in the analysis. Zinc test relies on Lambert Beer's Law of spectrometry where zinc in the sample react with ZINCON indicator under critically controlled conditions to selectively analyze Zinc in presence of other metals and under alkaline buffered conditions to form *intense blue* color complex.

#### **REAGENTS/EQUIPMENTS/APPARATUS:**

- Provided 10 mL marked glass vial (*Item Code: 02-01*)
- Any Suitable Spectrophotometer
- Relevant Cuvette or cell of Photometer
- NUCLOTRASIS ZINC-I BUFFER SOLUTION (*Item Code: 01-18-1*)
- NUCLOTRASIS ZINC-II REAGENT (*Item Code: 01-18-2*)
- NUCLOTRASIS ZINC-III REAGENT (*Item Code: 01-18-3*)
- NUCLOTRASIS ZINC-IV REAGENT (*Item Code: 01-18-4*)

#### **SAMPLE COLLECTION & PREPARATION**

- Make sure to immediately analyze the sample after collection of sample.
- Ensure to collect sample in a suitable and designated bottle for a specific sample.
- Ensure to conduct this test at room temperatures.

#### **TEST PROCEDURE:**

1. Take sample to 10 mL mark into the provided vial (*Item Code: 02-01*) and call it as "A".
2. Similarly take 10 mL deionized water in another cuvette or test tube for reagent blank and call it as "B".
3. In the sample, add 10 drops NUCLOTRASIS ZINC-I BUFFER SOLUTION (*Item Code: 01-18-1*) and mix gently.
4. Then add 5 drops NUCLOTRASIS ZINC-II REAGENT (*Item Code: 01-18-2*) and mix gently.
5. Then add 5 drops NUCLOTRASIS ZINC-III REAGENT (*Item Code: 01-18-3*) and mix well.
6. Then add 10 drops of NUCLOTRASIS ZINC-IV REAGENT (*Item Code: 01-18-4*) in the sample, cap the vial and shake vigorously. Allow to stand for three (3) minutes for full color development.
7. First run reagent blank "B" to achieve blanking.
8. Then run test sample "A" and note the Photometer display reading in  $\mu\text{g/L}$  or  $\text{mg/L}$ . In case photometer is not available, match the developed color with the provided soft copy color comparator of this ZINC test kit.
9. Multiply the reading with dilution factor 1.15.

**REFERENCES:** Standard Methods for the Examination of Water and Wastewater