

**RAKIRO BIOTECH SYSTEMS PVT LTD**

R-466, TTC Industrial Area, MIDC

Rabale, Navi Mumbai - 400701

Tel No. +91-022-47804040

Email :- sales@rakiro.net

Doc No : PDAE214**Date :** 01-02-2024**Type :** AQUASOL**Product Code:** AE214**PRODUCT DATA SHEET****1 INFORMATION**

CODE: AE214

PARAMETER: ALKALINITY

RANGE: 5-100, 25-500 mg/l as CaCO₃**2 METHOD**

Total or "M" alkalinity is determined using a acid titrant and a bromocresol green/methyl red indicator. The end point of the titration occurs at pH 4.5. Results are expressed in ppm (mg/L) calcium carbonate (CaCO₃).

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

The determination is interfered with when the water sample contains - in addition to carbonic acid and its salts - compounds that exert a buffering effect at pH 8.2 or 4.3 (e.g. humic acid salts, phosphates, polyphosphates, citrates, tartrates), or else when the water sample exhibits an intrinsic coloration or turbidity that makes it difficult to clearly discern any change in color.

5 METHOD CONTROL

To Check test reagents,

Prepare 1000 mg/l Alkalinity standard- Dissolve 1.4 gm NaHCO₃(dried at 110°C) in distilled water & dilute to 1000 ml.

Dilute this standard solution with distilled water to 50 mg/l CaCO₃, and 250 mg/l CaCO₃ and analyse as described in procedure card.

6 REAGENTS AND ACCESSORIES

Reagents: AK1(1Nos), AK5(1Nos), AK6(1Nos), AK4(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 2320-B– Standard Methods for Chemical Analysis of Water and Waste water. LARSON, T.E. & L.M. HENLEY 1955. Determination of low alkalinity or acidity in water. Anal Chem. 27:851.

9 DIRECTION FOR USE:

1. Take 10 ml of water sample in the test jar. Add 2 drops of AK 1. Mix well. If a pink colour does not appear, this indicates P Alkalinity is nil. Then proceed to step No. 4.

2. If a pink colour appears, this indicates presence P Alkalinity

3. Then drop wise* add AK 5 counting the number of drops while mixing until the pink colour disappears (N drops).

4. To this solution add one spoonful (provided herewith) of AK 4. The sample will turn green.

5. Now drop wise* add AK 5# counting the number of drops while mixing. Until the colour changes from green to reddish violet (N 1 drops).

if the expected Alkalinity is more than 100 ppm, then use AK 6 instead of AK 5.

Calculations:

P Alkalinity ppm as CaCO₃ = 5 X (N of Drops of AK 5)

M or Total Alkalinity ppm as CaCO₃ = 5 X (N + N 1 drops of AK 5)

P Alkalinity ppm as CaCO₃ = 25 X (N drops of AK 6)

M or Total Alkalinity ppm as CaCO₃ = 25 X (N + N 1 drops of AK 6)