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Doc No :	PDAE451
Date :	01-02-2025
Brand :	AQUASOL
Product Code:	AE451

PRODUCT DATA SHEET

1 **INFORMATION**

Code - AE451 Name - Aluminium Test Kit

Range - 0.0 - 1.5 PPM (Mg/L) No of Tests - 100 Shelf Life - 12 Months

2 **METHOD**

With Eriochrome cyanine R dye, dilute aluminum solutions buffered to a pH of 6.0 produce a red to pink complex. the intensity of the developed colour is influenced by the aluminum concentration, reaction time, temperature, pH, alkalinity and conc of other ions in sample. to compensate for colour and turbidity, the aluminium in one portion of sample is complexed with EDTA to provide a blank. the interference of iron and manganese, two elements commonly found in water when aluminum is present is eliminated by adding ascorbic acid.

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**

Negative errors are caused by both fluoride and polyphosphates. When the fluoride conc is constant, the percentage error decreases with increasing amounts of aluminum. Because the fluoride conc often is known or can be determined readily, fairly accurate results can be obtained by adding the known amount of fluoride to the set of standards orthophosphate in conc under 10mg/l does not interfere. The interference caused by even small amount of alkalinity is removed by acidifying the sample just beyond the neutralization point of methyl orange.

6 **REAGENTS AND ACCESSORIES**

Reagents: AL1(1Nos), AL2(1Nos), AL3(1Nos), AL4(1Nos).
Accessories: 25ml plastic Test Jar(1Nos), Procedure Label(1Nos), colour chart, spoon.Comparator tube .

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**

Low Level (0 - 0.15 ppm)
1.Take 25 ml. of water sample to be tested in the Plastic test jar.
2. Add 15 drops of AL 1 and one spoonful (provided herewith) of AL 2. Mix well to dissolve.
3. Add 45 drops of AL3, Mix well.
4.Then add 3 drops of AL4, mix the contents thoroughly by swirling the test jar and let the mixture stand for 15 minutes.
4)Transfer the content in small comparator tube (full fill) provided here.
5)Read the ppm ALUMINIUM as follows:
a)Place the comparator tube on the small inner (white) circle, of the low level colour comparison chart and view from the top.
b)Match the colours by moving the tube from one circle to another.
c)Read the ppm ALUMUNIUM as Al after arriving at the correct match.

High Level (0 - 1.5 ppm)
1.Take 10 ml. of water sample to be tested in the Plastic test jar.
2. Add 6 drops of AL 1 and one spoonful (provided herewith) of AL 2. Mix well to dissolve.
3. Add 15 drops of AL3, Mix well.
4.Then add 4 drops of AL4, mix the contents thoroughly by swirling the test jar and let the mixture stand for 15 minutes.
6)Read the ppm ALUMINIUM as follows:
a)Place the test jar on the white circle of high level colour comarision chart and View from the top.
b)Match the colours by moving the tube from one circle to another.
c)Read the ppm ALUMUNIUM as Al after arriving at the correct match.
* Note: Sample pH should be preferably neutral. Neutralize the sample to phenolphthalein end point before testing by using dilute acid or alkali .