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Determination of Oxydol in Aqueous Medium and Filthy Aqueous Medium

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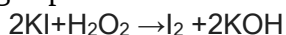
Abstract

Oxydol is also known as Hydrogen Peroxide and laundry reagent. The medium may be water. The method used to determine the Hydrogen peroxide concentration (Oxydol, mg/L) in water and waste water is briefly discussed. This method covers the range from 3.0 to 100 mg/L. Oxydol has many benefits as a water treatment compared to other methods. This unassuming compound is a powerful oxidizer—more so than chlorine. There's an also specific benefit to using it over other agents. Why Oxydol is Better: Unlike chlorine will not leave a chemical residual in the water. Hydrogen peroxide converts hydrogen sulphide gas, and iron present to a solid particle which is then removed by a back-washing self-cleaning carbon filtration system.

Keywords- Oxydol, Filthy, Splash, etc.

1. Principle:

Hydrogen peroxide reacts with potassium iodide and its convert to iodine



2. Reagent and chemical:

*Make the solution again if coloured

- Hydrogen peroxide (50 %).
- Reagent A : 33.0 g potassium iodide, 1.0 g sodium hydroxide, and 0.1 g ammonium molybdate tetrahydrate dissolved and diluted to 500 ml with deionized water. This solution should be kept in the dark to inhibit the oxidation of iodide

Reagent B : 10.0 g of potassium hydrogen phthalate dissolved in deionized water and diluted to 500 ml.

3. Apparatus:

- Pipette 10 mL
- Volumetric flask 100 mL

4. Procedure :

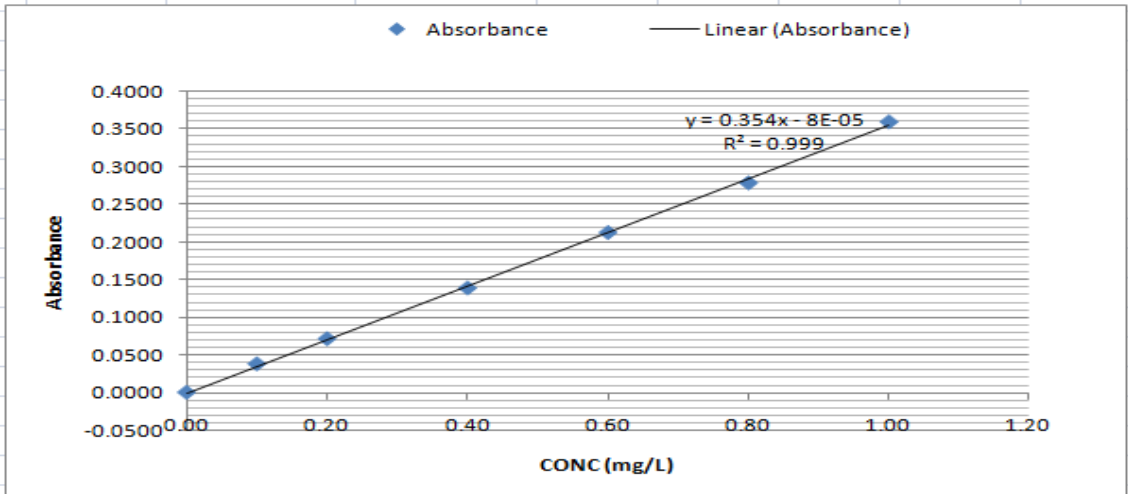
- For calibration Take 3.0 ml Reagent A , 3.0 ml Reagent B and 0.10 ,0.20,0.40,0.60 and 0.80 and 1.00 ml of 100 mg/L in 100 ml volumetric flask and makeup with Milliporewater. (0.10 to 1.0 mg/L)
- Take 3.0 ml Reagent A, 3.0 ml Reagent B and 90 ml filter sample. in 100 ml volumetricflask makeup with Millipore water
- Shake well and stand it in dark for 30 min. yellow colored developed
- After 30 min .read the absorbance at 371 and plot a graph between

5. Reporting of results: The test results reported in mg/L.

6. Calculation:

$H2O2\text{ mg/l} = \text{Conc. Mg Per Lt} \times \text{Volome Makeup/ Sample Volume (ml)}$

conc(mg/L)	Absorbance
0.00	0.0000
0.10	0.0380
0.20	0.0715
0.40	0.1389
0.60	0.2127
0.80	0.2787
1.00	0.3599



Conclusion-

Handled chemicals with care. Refer MSDS of respective chemicals. Use PPE- Apron, PVC gloves (nitrile) & safety goggles to avoid direct contact and splash of chemicals and samples. Conc. Hydrochloric acid is highly corrosive. Always add acid in water (handle with care). The results are shown in graph and data table. It is a reagent with fragrance and can be used to clean ears and clothes. The chemical formula is H_2O_2 with molecular weight 34.00 in round figures.

References-

01. Agrawal A , Kumar P & Singh D, Analysis of Nucleating Agent (NA-27) in Polypropylene Samples By ICP MS, International Journal of Multidisciplinary Research Education Analysis & Development- IJMREAD ,2021,01:01 ,71-80
02. Agrawal A, Dwivedi D.K & Shrivastava R, Analysis of Morpholine in Water by UV Visible Spectrophotometer, International Journal of Multidisciplinary Research Education Analysis & Development- IJMREAD ,2021,01:01 , 81-89
03. Jim Hopkins "[Partners turn decrepit detergent into boffo start-up](#)". USA Today. [McLean, Virginia: Gannett Company](#). 2001,01: 01,01
04. Jim Fair "[ChemPro Inc. to merge with Redox Brands](#)". Spartanburg Herald- Journal/GoUpState Journal. New York Times Co.2006,01: 01,01
05. Upadhyay B.D., Kumar P & Upadhyay S.K., Determination of Physico-Chemical Parameters of Ground Water at Hathras city in Winter, International Journal of Multidisciplinary Research Education Analysis & Development- IJMREAD ,2021,01:01 , 06-19
