

SKILL ENHANCEMENT COURSE

SEC-1

Water Analysis

Unit-I:

Introduction, water sources (ground water, surface water, municipal water supplies)

Characteristics of water, water standards.

Simple water analysis techniques for

a] Physical parameter

B] Chemical parameter

Color, odour, turbidity, hardness ($\text{Ca}^{+2}/\text{Mg}^{+2}$) TDS, pH, alkalinity, conductivity, dissolve oxygen(DO), chloride, sulphate, nitrate, fluoride.

Unit-II

Biological oxygen demand(BOD) and chemical oxygen demand(COD) some important water analysis equipment/instruments. Interpretation of water quality parameter.

Unit-III:

Estimation of the hardness of the given sample of water by standard EDTA method. Determination of carbonate, bicarbonate and hydroxide alkalinity of water sample. Determination of concentration of chlorides in the given sample of water. Determination of the amount of dissolve oxygen (DO) in the given sample of water by Winkler's method.

Books Recommended:

1. Industrial Chemistry (Including Chemical Engineering) : B.K. Sharma: Goyal Publishing House
2. Engineering Chemistry by Jain & Jain, Goyal Publishing House
3. Water Pollution by B.K. Sharma.

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