

CHEMISTRY & ENVIRONMENTAL ENGINEERING LABORATORY

Purpose: To perform physical, chemical, and biological analysis of water samples, surface water, wastewater, etc. It helps in demonstrating the quality of parameters to build quality. Helps in identifying threats from external environment.

Course: Environmental Engineering Laboratory

S. No.	Experiment Name	Equipment Used
1	To determine pH and temperature of given water sample.	Digital pH meter
2	To determine total solids, suspended solids and dissolved solids in given water sample.	Oven, Evaporating Dishes, Desiccator, Muffle Furnace
3	To determine the optimal dose of alum for coagulation for given water sample.	Jar test apparatus, One liter beakers - 6 Nos, Graduated pipette, Turbidity meter
4	To determine the specific conductivity of given water sample.	Digital conductivity meter
5	To find the turbidity in given water sample.	Nephelo – Turbidity meter
6	To determine the concentration of chlorides in the given water sample.	Burette, Pipette, Conical flask, Measuring cylinder
7	To determine the type and extent of alkalinity in given water sample.	Burette, Pipette, Conical flask, Measuring cylinder
8	To determine the type and extent of acidity in given water sample.	Burette, Pipette, Conical flask, Measuring cylinder
9	To determine temporary and permanent hardness of given water sample.	Burette, Pipette, Conical flask, Measuring cylinder
10	To determine the concentration of Dissolved Oxygen in given water sample.	Burette, Pipette, Conical flask, Measuring cylinder, BOD Bottle
11	To determine the Biological Oxygen Demand (BOD) of given wastewater sample.	BOD Bottles, Incubator, Digital Dissolved Oxygen Meter
12	To find out Chemical Oxygen Demand (COD) of given wastewater sample.	Burette, Pipette, Conical flask, Measuring cylinder, COD Digestor, Spectrophotometer



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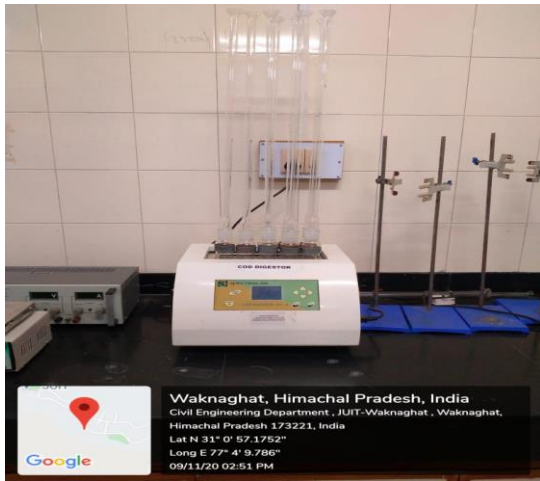
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Course: Chemistry Laboratory

Course Lab work is an integral part of chemistry. It allows students to explore chemical

Objectives: concepts and acquire scientific skills in an atmosphere that mimics a professional scientific environment

S. No.	Experiment Name	Equipment Used
1	To Prepare N/10 Standard Solution of NaOH.	Burette, Pipette, Conical flask, Measuring cylinder, beaker
2	To Determine Strength of Given Oxalic Acid Solution	Burette, Pipette, Conical flask, Measuring cylinder, Beaker
3	To Prepare 0.1 M (Approximately) Standardized Sodium Carbonate	Burette, Pipette, Conical flask, Measuring cylinder, Beaker
4	To Determine the Alkalinity of a Given Water Sample.	Burette, Pipette, Conical flask, Measuring cylinder, Beaker
5	To Determine the Acidity of Given Water Sample	Burette, Pipette, Conical flask, Measuring cylinder, Beaker
6	To Determine the Amount of Carbon Dioxide in a Given Water Sample	Burette, Pipette, Conical flask, Measuring cylinder, Beaker
7	To Determine the Viscosities of Given Organic Liquids with the Help of Ostwald Viscometer	Beaker, Pipette, Ostwald Viscometer, Stopwatch, Specific Gravity Bottle
8	To Determine the Surface Tension of Given Organic Liquids with the help of Stalagmometer	Stalagmometer, Specific Gravity Bottle, Small Rubber Tubing with Screw Pinch-Cork, Pipette, Beaker
9	To Determine the Chloride Content of Given Water Sample	Burette, Pipette, Conical Flask, Measuring Cylinder, Beaker
10	To Determine Total Hardness of Given Water Sample by EDTA Method	Burette, Pipette, Conical Flask, Measuring Cylinder, Beaker
11	To Determine the pH Values of Different Water Samples.	Digital pH Meter, Beaker

