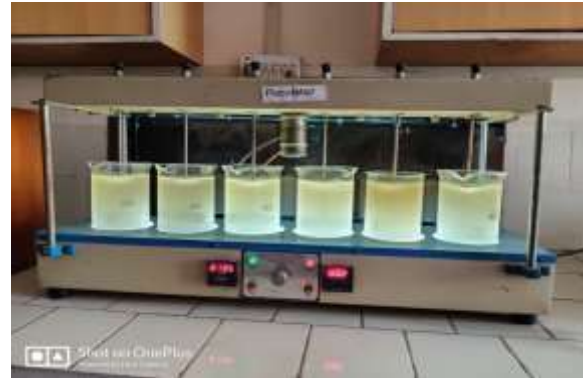




लोक स्वास्थ्य अभियांत्रिकी प्रयोगशाला Public Health Engineering Lab

Major Equipments:

- Digital Nephelometer
- Digital Colony Counter
- Sound Level Meter
- Kjeldhal's Apparatus
- Digital pH Meter
- Aeration Unit
- BOD Incubator
- Flocculator (Jar Testing)
- Spectrophotometer
- Distillation Unit
- Digital DO Meter
- Oven
- Horizontal Autoclave



**Professor In-Charge
PHE Lab:**

Prof. Deepak Rastogi
(+91-9826333895)

Physical In-Charge:

Mr. R. K. Dixit
(+91-9981223097)

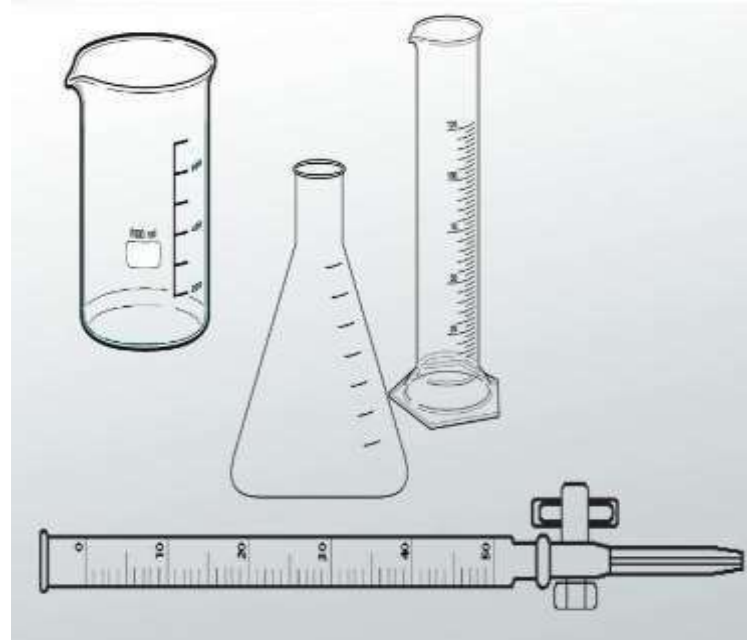
Department Of Civil Engineering



लोक स्वास्थ्य अभियांत्रिकी प्रयोगशाळा Health Engineering Lab

Important Chemicals And Reagents:

- N/50 Sulphuric Acid
- N/50 Hydrochloric Acid
- N/50 EDTA Solution
- N/35.5 Silver Nitrate Solution
- N/50 NaOH Solution
- Methyl Orange Indicator
- Phenolphthalein Indicator
- Potassium Chromate Indicator
- Erichrome Black-T Indicator
- Ammonia Buffer Solution



Important Glass Wares:

- Burette
- Pipette
- Conical Flask
- Measuring Cylinder
- Beaker
- Jars



लोक स्वास्थ्य अभियांत्रिकी प्रयोगशाला Health Engineering Lab

Safety Rules To Be Followed In The Laboratory:

1. Wear a full length, long sleeved laboratory coat or chemical resistant apron.
2. Wear shoes that adequately cover the whole foot. Do not wear sandals, open-toed shoes or high heeled shoes in the laboratory.
3. Wear loose clothing in laboratory to enhance comfort.
4. Do not wear dangling jewellery during lab hours.
5. Secure long hair as long hair can accidentally fall into flames or chemicals.
6. Do not smell or taste any chemicals in the laboratory.
7. Do not pipette out acids and other reagents with mouth.
8. Never eat, drink or smoke while working in the laboratory.
9. Handle glass wares cautiously. Never use broken or chipped glass wares.
10. Keep your work place clean and tidy.
11. Wash your hands after contact with chemicals used in the laboratory.



लोक स्वास्थ्य अभियांत्रिकी प्रयोगशाला Health Engineering Lab

Additional Safety Guidelines:

1. Never work alone in the laboratory.
2. Do not an on-going experiment unattended.
3. Clean your working area, equipment and apparatus after completing the experiment.
4. Treat every chemical as if it is hazardous.
5. Never lift any glassware, reagents or apparatus above eye level.

Laboratory Instructions:

1. Carry bags are to be kept at specified place in the laboratory.
2. During laboratory hours, no students are allowed to go out of the laboratory without permission.
3. Students are required to bring laboratory files and calculator for laboratory work.
4. Students are to maintain strict discipline, silence and cleanliness in the laboratory.
5. No equipments should be handled by students without learning its operation from the laboratory assistant.



लोक स्वास्थ्य अभियांत्रिकी प्रयोगशाला Health Engineering Lab

List of Experiment [Environmental Engineering Lab (110509)]:

1. Determination of pH value in a given water / waste water sample.
2. Determination of Total Solids and Suspended Solids in a given water / waste water sample.
3. Determination of Dissolve Solids in a given water sample.
4. Determination of Chloride concentration in a given water / waste water sample.
5. Determination of Turbidity in a given water / waste water sample.
6. Determination of Acidity in a given water / waste water sample.
7. Determination of Total Alkalinity in a given water / waste water sample.
8. Determination of Hardness in a given water / waste water sample.
9. Determination of DO concentration in a given water / waste water sample.
10. Determination of B.O.D concentration in a given waste water sample.
11. Determination of C.O.D concentration in a given waste water sample.
12. Determination of Optimum Dose of Coagulants required for the treatment in a given water sample.
13. Determination of MPN in a given water sample.



लोक स्वास्थ्य अभियांत्रिकी प्रयोगशाला Health Engineering Lab

Course Outcomes [Environmental Engineering Lab-1 (110509)]:

Upon completion of the course, the students will be able to:

CO1: Follow sampling procedure & other guidelines for sampling & analysis of water & waste water sample.

CO2: Check various water & waste water quality parameters.

CO3: Improve the water & waste water quality by suggesting suitable corrective measures.

CO4: Train others on various ways of improving the quality of water & waste water

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