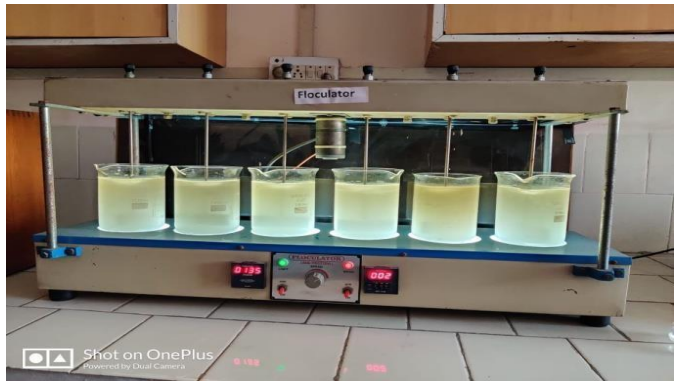
दषि त जल प्रयोगशाला

Waste Water Lab

Major Equipments:

- Atomic Adsorbtion Spectrophotometer
- UV-VIS
- Digital Colony Counter
- Digital Photo Colorimeter
- Digital Flame PhotoMeter
- Flocculator (Jar Testing)
- Peritistatic Pump
- Conductivity Meter



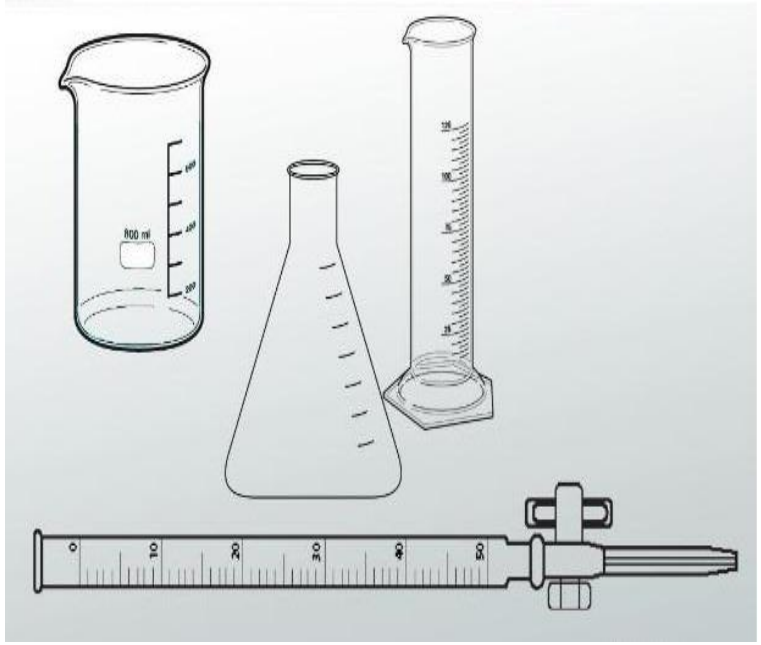
Laboratory In-Charge:
Prof. A.K.Saxena
(+91-9425341422)

Physical In-Charge:
Mr. R.K. Dixit
(+91-9981223097)

Department Of Civil Engineering

Important Chemicals And Reagents:

- N/50 Sulphuric Acid
- N/50 Hydrochloric Acid
- Nitric Acid
- Silver Nitrate
- Sodium Hydroxide
- Potassium Chromate
- Ammonium Buffer
- Salicyclic Acid
- Various element Stock Solutions
- Distilled Water
- Double Distilled Water



Important Glass Wares:

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

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.

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.

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Atomic absorption spectrophotometer (AAS) :

Atomic absorption spectrophotometer analyzes the concentration of elements in a liquid sample based on energy absorbed on wavelengths of light (190 to 900 nm). It includes a flame burner to atomize the sample, a monochromator, and a photon detector. It is used in environmental testing, metal analysis, semiconductor manufacturing, petroleum and chemical production, and in pharmaceuticals.

General Information-
Make- Shimadzu
Model- AA6300
Lamps Available -As, Cr, Cu, Fe, Hg, Na, Ni, Zn
Fuel: Acetylene
Oxidants: Air

Ultraviolet–Visible Spectrophotometer (UV-Vis):

Ultraviolet–visible spectroscopy or ultraviolet–visible spectrophotometry (UV–Vis or UV/Vis) refers to absorption spectroscopy or reflectance spectroscopy in part of the ultraviolet and the full, adjacent visible spectral regions. This means it uses light in the visible and adjacent ranges. The absorption or reflectance in the visible range directly affects the perceived color of the chemicals involved. In this region of the electromagnetic spectrum, atoms and molecules undergo electronic transitions. Absorption spectroscopy is complementary to fluorescence spectroscopy, in that fluorescence deals with transitions from the excited state to the ground state, while absorption measures transitions from the ground state to the excited state.

General Information-
Make- ELICO
Model- BL-198