



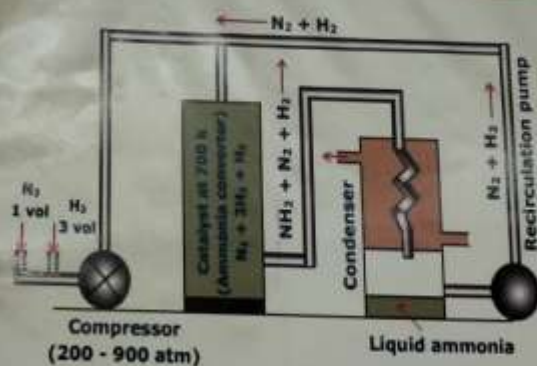
Shri Swami Vivekanand Shikshan Sanstha's
**LAL BAHADUR SHASTRI COLLEGE OF
ART'S, SCIENCE & COMMERCE, SATARA.**



Lab Safety Rules

- 1) Do not taste, smell & play with the chemicals.
- 2) Work areas should be kept clean and tidy at all times.
- 3) Labels and equipment instructions must be read carefully before use.
- 4) No eating, drinking permitted in the laboratory.
- 5) Follow the instructions of waste disposals. Never discard chemicals through the sink or to a regular trash.
- 6) Never mix the wastes. Mixing may result in explosions and serious injuries.
- 7) Use the fume hoods for the reactions in which toxic or irritating vapors are evolved.
- 8) Long hair and loose clothing must be confined while in a laboratory.
- 9) Securely replace lids, caps, and stoppers after removing reagents from containers.
- 10) Do not invite anyone into the laboratory.
- 11) Never pour water into concentrated acid.
- 12) Before leaving the laboratory, make sure your work area is clean and dry and also ensure that all gas, water, vacuum, and air valves are completely turned off.
- 13) Thoroughly wash your hands before leaving the laboratory.
- 14) Use your own napkin in the laboratory and do not use this napkin outside the laboratory.
- 15) Always wear apron in the laboratory.

MANUFACTURE OF AMMONIA BY HABER'S PROCESS



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INSTRUCTIONS FOR CHEMICAL FUME HOOD

- * **Make sure the hood is working.**
- * **Move arms slowly in and out of the hood.**
- * **Remember do not put your face inside the hood.**
- * **Minimize storage of chemicals in the hood.**
- * **Do not place power strips or surge protectors in the hood.**
- * **Plug in all electrical equipments outside of the hood.**
- * **Keep the hood area clear and rear vent obstructed.**
- * **Remove flammables and unnecessary stuff.**





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INSTRUCTIONS FOR WEIGHING BALANCE

- * **Switch on the power button.**
- * **Tare after placing watch glass on weighing pan.**
- * **Do not spill chemicals inside the balance**
- * **Clean balance after use.**
- * **Always handle a balance with care.**





LAL Bahadur Shastri College of Arts, Science & Commerce, Sarana
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- Plug in all electrical equipments outside of the hood.
- Keep the hood area clear and never vent obstructed.
- Remove Substrates and unnecessary stuff.

FUME HOOD



Lal Bahadur Shastri College of Arts,
Science & Commerce, Satara.



Department of Physics

General Instructions

- Student should remain present for the practical in the laboratory at the scheduled time according to time-table.
- Students should report to the incharge for the allotment of the experiment to be performed.
- He/She should collect required apparatus from laboratory assistant.
- Do not start the experiment without permission of the teacher.
- While making connections in case of electrical experiment keep switch and key of source open and do not pass the current without permission of concern teacher.
- While performing experiment with optical instrument, care should be taken that glass lenses, prisms, grating and other glass materials should not fall on the floor.
- Get information about the instrument from the concern teacher before using it (for example - CRO, frequency generator, ammeter, voltmeter, multimeter, spectrometer etc.)
- Each and every instrument should be handled carefully. Do not play with instruments.
- Do not waste your time chitchatting with other students. Observe the total discipline in the laboratory.
- Every student should remain present regularly. In case of any difficulty he/she should seek the permission of concern teacher.
- Protect from electric shock.
- Every student should wear I-card compulsory
- Use of Mobile is strictly prohibited in Lab



Shri Swami Vivekanand Shikshan Sanstha's

**LAL BHADUR SHASTRI COLLEGE OF
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Department of Chemistry

Effluent Treatment Plant

Objectives -

The waste water from laboratories is either acidic or alkaline it contains organic as well as inorganic impurities. If such a water is discharged to drainage it causes water pollution from water resource & creates harmful effects on living life. To avoid this waste water is treated in ETP plant & then discharged to drainage.

Working of ETP Plant-

Waste water from all the laboratories is collected in the bottom storage tank & is pumped in neutralization tank by electric motor. The pH of water is checked by the portable pH meter. As per the pH of water it may be neutralized by using either acid or alkali.

The treated water is circulated to the settling chamber & is allowed to stand for required period & is circulated through filtration chamber in which organic impurities & coloring matter get adsorbed on the gravel and charcoal beds fixed in chamber. Water which is free from impurities discharged in the drainage.

2021-12-21(Tue) 01:05(pm)



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- Use of Mobile is strictly prohibited in Lab

SOP for Laminar Air Flow

Operating procedures:-

1. Check and make sure that the area is clean & free from the previous product and any other materials related to previous products.
2. Ensure that the instrument is clean, free from dust and placed in such a position, that any air dust while opening the air-lock door do not affect the positive pressure of the instrument.
3. Switch on the mains.
4. There are three switches and a pressure barometer side panel of the instrument
Switch (1) AIR-FLOW
Switch (2) LIGHT
Press 'switch (1)' to start the AIR-FLOW through the HEPA Filters
5. The AIR-FLOW should be kept 'ON' for about 5 minutes before carrying out any work under laminar flow.
6. Check the level of red-oil indicator should be at 10 to 15 mm mark of water column, when AIR-FLOW is 'ON'.
7. Switch 'OFF' the instrument when not in use.

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LAL BHADUR SHASTRI MAHAYDALAYA,
SATARA



DEPARTMENT OF MICROBIOLOGY LABORATORY INSTRUCTIONS

1. Always wear an apron while working in the laboratory.
2. Do not use the apron for wiping infectious material and apparatus.
3. Never keep books, purses, bags, etc on the working bench.
4. Always wash your hands with soap in running tap water before and after the work.
5. Avoid putting hands on face and never put pencil into your mouth particularly, as you may get yourself infected.
6. Do not drink or eat in the laboratory.
7. Handle microscopes and culture tubes carefully.
8. Always keep the burner at distance from the organic solvents.
9. Clean the working table when the work is completed.
10. Clean lenses of objectives with tissue paper.
11. Record your results at time.
12. Discard all used glassware such as test tubes, pipettes, dirty plates in a receptacle meant for it.
13. Report all accidents, breakages, cutting to the laboratory in charge immediately.
14. For any difficulty, ask your Laboratory assistant or concerned teachers.



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SOP for Hot Air Oven

Operating procedures:-

1. Ensure that the instrument and its surroundings are clean.
2. Switch on the Mains.
3. Switch on the fan by push upside the switch at the front panel to ON position.
4. Set the required temperature of hot air oven by up and down buttons, digital temperature controller to set the temperature
5. The screen shows the current temperature of oven and set temperature of oven.
6. At the end of operation switch off the fan by push downside the switch at the front panel to 'OFF' position
7. Switch off the Mains.





LAL BAHADUR SHASTRI MAHAYDIALAYA,
SATARA



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P.G. DEPARTMENT OF ZOOLOGY
Laboratory Safety Rules and Recommendations

Follow the laboratory instructions strictly

- 1) Wear the apron before entering into the laboratory.
- 2) Do not use mobile phones in laboratory.
- 3) Do not eat and drink in laboratory.
- 4) Handle the microscope and laboratory equipments carefully.
- 5) No chemicals should be disposed in the sink unless instructed to do so.
- 6) Never pipette out the liquids with mouth. Always use the suction pump.
- 7) When heating or carrying out reactions in test tube, never point mouth of tube at your neighbor or yourself.
- 8) Use the laboratory resources like light and water properly.
- 9) Turn off gas source when burner is not in use.
- 10) Handle the specimens, chemicals and glasswares carefully and safely.
- 11) Use extra cautions when working with scalpels, knives, glass tubes or other sharp objects.
- 12) Discard needles, razor blades, scalpel blades and other sharp equipments in the container.
- 13) Clean your laboratory tables and keep all cleaned equipments to its proper place.
- 14) Wash your hands before you leave the laboratory.



2021-12-21(Tue) 01:09(pm)



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