Minutes of Audit Committee meeting

The Audit Committee meeting was held on 20.06.2022 & 24.08.2022 at 3.00 PM in Room No. 114, Aryabhatta Bhawan, School of Earth, Biological and Environmental Sciences, CUSB, Gaya and discussed with stakeholders to submit the same to the committee on or before 27.06.2022. However, the departmental representatives asked for time to prepare the document and information as per format. The Audit Committee visited the Department of Life Sciences, Department of Environmental Science, Central Instrumentation Facility and Department of Chemistry, CUSB, Gaya, on dates given below and advised them to submit the list of chemicals and equipment's as per format.

1. The committee visited and inspected the Department of Life Science, along with internal members Dr. Tara Kashav and Dr. Naveen Kumar Singh on 27.06.2022 The list of chemicals and equipment's was submitted by the department on 05.07.2022.
2. The Central Instrumentation Facility, was visited and inspected by the committee along with internal members Prof. Rizwanul Haque and Dr. N.L. Devi on 27.06.2022. The list of chemicals and equipment's was submitted by them 29.06.2022.
3. The audit report of Department of Life Science and CIF was finalized on 07.07.2022
4. The committee visited and inspected the Department of Environmental Science, along with internal members Dr. Rajesh Kumar Ranjan and Dr. Prashant on 29.06.2022. They submitted the list of chemicals and equipment's on 15.07.2022 (dated 30.06.2022).
5. The audit report of Department of Environmental Science was finalized on 29.07.2022
6. The committee visited and inspected the Department of Chemistry, along with internal members Dr. Jagannath Roy and Dr. Angad Singh on 30.06.2022. They submitted the list of chemicals and equipment's on 24.08.2022 to the committee.

The committee in general found the information acceptable and advised for improvement wherever necessary and reflected in the data sheet of each department. The committee observation is as follows.

a) The committee suggest that physical audit for chemicals, consumable and equipment's should be done in each department every year in the month of April by the committee constituted by the Head of the Department. The list should be prepared and signed by Technician/Laboratory attendant and countersign by laboratory incharge.
b) The department should also designate a faculty as a Laboratory Incharge.
c) The list of equipment's of both categories (i) working and (ii) non-working should be prepared. Also, action taken report should be prepared to repair or replace the non-functioning equipment.

The meeting ended with thanks from the chair.

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Prof. Durg Vijai Singh | Prof. Sanjay Prakash Srivastava | Dr. Durg Vijay Singh

Dr. Tara Kashav, **Life Science** | Dr. Rajesh K. Ranjan, **Environmental Science** | Dr. Jagannath Roy, **Chemistry** | Prof. R. Haque, **CIF**

Dr. Naveen K. Singh, **Life Science** | Dr. Prashant, **Environmental Science** | Dr. Angad K. Singh, **Chemistry** | Dr. NL Devi, **CIF**

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A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual	✓				
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual	✓				
Chemical Waste Policy Manual	✓				
Noise Policy Manual	✓				
Chemical Hygiene Plan manual	✓				
Current Safety Data Sheets (SDS)	✓				
Infection Prevention Manual	✓				
Radiation Safety Manual	✓				
Disaster Preparedness Manual	✓				
Site-specific (Laboratory) Fire Plan Manual	✓				
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?	✓				
Are storage areas well organized and free of clutter?	✓				
Is shelving stable and not overloaded?	✓				
Is shelving stable, free of extraneous material and not too high?	✓				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓				Need additional tables (equipment) To keep table top equipments
Are chemical storage facilities in good condition?	✓				
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	✓				
General work space, storage areas, and bench tops appear uncluttered and orderly.	✓				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.	✓				
Trash bags & sharps containers are removed	✓				

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when full.					
Corrective Action:	**Completed by:**				**Date:**
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?	V				For students only
If YES. How frequent?	V				At the bagining of semester
Working Environment					
Is the room temperature comfortable?	V				
Are windows in clean & safe condition?	V				
Are blinds fitted to reduce glare or temperature?	V				
Is lighting adequate in all area?	V				
Is extra lighting provided for close work where needed?	V				
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?	V				Gloves & Goggles only
Manual Handling					
Are stepladders or footstools used to reach high shelves?	V				
Are heavy & awkward items stored at waist height where possible?	V				
Are trolleys or barrows available for moving heavy or large loads?	V				Common Facility
Biological Safety					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?	V				
Are all sharps disposed of in an approved puncture-resistant container?	V				
During transport, are all potentially infectious materials placed in a secondary leak-proof container?	V				
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?	V				
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end	V				

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of the procedure or immediately following a spill?						
Are personnel aware of appropriate biological spill procedures?	✓					Lab safety Manual Available
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?	✓					
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?	✓					
Have all biological safety cabinets been certified in the past year?	✓					Recently Installed C
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?	✓					
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?	✓					
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?	✓					
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)	✓					Inappropriate (Required)
Food and drinks stored and consumed away from toxic materials?	✓					
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?	✓					
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?	✓					
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).	✓					
Inventory of Biological Agents is submitted annually to CUSB.		✓				
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).	✓					
Are drying facilities available in the lab?	✓					
Are there enough toilets for men and women within reasonable distance?	✓					
Are toilets & washbasins clean & in working	✓					Inadequate

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order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?	✓				No warm running water, No shelf, no towels, but Needed

Corrective Action:	Completed by:	Date:

Cold Room Safety

Cold room has an emergency release mechanism.				✓	
Cardboard is not stored in the area.				✓	
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.				✓	
General housekeeping is observed and the area is organized, uncluttered, and sanitary.				✓	
Expired/abandoned samples are not stored.				✓	

Kitchenettes / Tea Rooms

Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?	✓				
Are rest & eating facilities provided outside the lab?		✓			Required
Is drinking water available?	✓				
Are power points & cables a safe distance from wet areas?	✓				
Are microwave oven door seals clean and undamaged?	✓				
Is a fire blanket provided where electric cookers are used?		✓			Required

Corrective Action:	Completed by:	Date:

Laser Safety

Laser SOP available to authorized users and training documented.				✓	
Laser controlled areas are posted with appropriate caution signs.				✓	
Beam stops are present at the end of all beam paths and are non-combustible.				✓	
Approved safety glasses are available.				✓	

Corrective Action:	Completed by:	Date:

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Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			Mock drill required
Are employees familiar with the location of fire extinguishers and pull alarms?	✓				
Are all fire alarms visible, unobstructed, and accessible?	✓				
Is the fire alarm audible from all parts of the lab?			✓		Mock drill required
Are aisles kept clear and unobstructed at all times?	✓				
Are open flames or Bunsen burners used in the lab?	✓				
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?	✓				
Are fire hose reels regularly checked?		✓			Needed
Are all fire extinguishers regularly checked?		✓			Needed
Visually, do the fire sprinklers and/or detector heads appear free from damage?			✓		
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.			✓		
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.	✓				
Fire alarm strobes are visible from all locations.	✓				
Are supplies of flammables and combustible liquids reasonable for the lab's needs?	✓				
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?	✓				
Do all workers know where the outside assembly point is located?	✓				Mock drill required
Is emergency power adequate for the functioning of the lab?		✓			Needed
Does the lab avoid placing electrical devices near water sources?	✓				
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?		✓			Electrical wiring is in process
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?	✓				Electrical wiring is in process to avoid occasional use of extension cords

Corrective Action:	Completed by:	Date:

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Chemical Safety and Management					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?	✓				Manual Available
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?		✓			Needed
Are potentially reactive chemicals stored separately?	✓				
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?	✓				
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____			✓		
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____			✓		
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____		✓		✓	
Are chemical fume hood work surfaces free of clutter?		✓		✓	
Are chemical storage cabinets well-maintained and free of rust?	✓				
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?		✓			Needed
Are employees aware of how to report major chemical spills appropriately?	✓				
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?		✓			
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?	✓				
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are	✓				

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irritating, corrosive, toxic by contact or absorption)?					
Are eyewashes tested and documented on a weekly basis?			✓		Needed
Is there appropriate signage indicating the location of the eyewash?			✓		
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?	✓				
Is the storage and use of liquid nitrogen confined to a well-ventilated area?	✓				
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?		✓			
Is eating and drinking prohibited in areas in which hazardous chemicals are used?	✓				
Is the lab aware of and <u>compliant</u> with the Guidelines for Sink Disposal of Chemical Substances?	✓				
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?	✓				
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)	✓				Need improvement
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*	✓				
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?	✓				Need improvement
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?	✓				
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?				✓	
Is the lab using autoclave tape that contains lead?				✓	
Chemical Hygiene Plan (CHP) is available to	✓				

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personnel working with hazardous chemicals. Lab specific CHP is current and documented.						
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.	✓					
Chemical inventory is submitted annually.	✓					
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.	✓					
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.	✓					
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).	✓					
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.	✓					
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).	✓					
Chemical containers are kept closed.	✓					
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.	✓					
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.	✓					
Corrective Action:	**Completed by:**				**Date:**	
Radiation Safety:						
Are any radioactive substances handled in the lab?				✓		
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?				✓		
Is main door is marked with the sign of Radioactive warning?				✓		
Are there clear instructions for the use of radioactive materials?				✓		
Is there a safe method of storage?				✓		
Is there a safe method of disposal?				✓		
Are all radioactive substances correctly labeled?				✓		
Are workers health checks, if required, up to date?				✓		

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RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?				✓		
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?	✓					
Are SOPs or safe working rules specific to the laboratory developed and implemented?	✓					
Are staff trained or instructed on the SOPs and lab safety rules?	✓				Need regular training for update to staff	
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?	✓				Maintenance and service record of equipments available in the department	
Is the signage on the laboratory door or entrance correct, adequate and up to date?	✓					
Have all current staff/students working in this lab undertaken the specific lab induction.		✓			Students - Yearly induction Staff - Needed induction	
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?				✓		
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?	✓					
Are there an adequate number of exits?	✓					
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?		✓			Required	
People with Disabilities						
Is there access for people with impaired mobility?	✓					
Is there access to disabled toilets within reasonable distance?	✓					
Do emergency evacuation procedures include people with disabilities?	✓					
Compressed Gas Cylinders						
Gas name/label on shoulder of each cylinder clearly legible?	✓					

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Are fuel cylinders separated from oxidizing cylinders?		✓			
Are cylinders secured by brackets or chains?	✓				No extra cylinder available
Are empty cylinders separate from full cylinders & clearly identified?					
Are acetylene cylinders that are not in use stored outside of building?				✓	
Are all gas cylinders stored in a well ventilated area?	✓				
Are cylinder valves closed when not in use?	✓				
Does testing for gas leaks occur?	✓				
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)	✓				
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.	✓				
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).	✓				
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.	✓				

Corrective Action:	**Completed by:**	**Date:**

Electrical Installations/ Electrical Safety

Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?	✓				
Are adequate power points available & unobstructed?		✓			Electrical wiring is in process.
Are switches & power points in good condition (no cracks, loose face plates)?	✓				Replacement of one switch is urgently required
Are double adaptors or piggy back adaptors avoided?	✓				
Are circuit breakers & main isolators clearly marked?	✓				Electrical wiring is in process
Is excessive use of extension cords avoided?	✓				Electrical Wiring is in process
Is temporary wiring avoided?	✓				
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?	✓				

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Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?	✓				
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	✓				In few cases upgradation needed

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment

Are operating instructions/safety signs adequate & clear?	✓				
Are safety glasses areas clearly sign posted?	✓				
Are emergency stop switches accessible, red in colour?		✓			
Do interlocks on machine guards operate, with regular testing?			✓		
Are moving parts, belt drives, shafts, fans appropriately guarded?				✓	
Are machines & equipment free from obstruction?	✓				
Is there adequate distance between machines & equipment?	✓				
Are all Lasers pointing away from doorways and corridors?				✓	
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?	✓				

Corrective Action:	Completed by:	Date:

First Aid

Are there trained first aid personnel?		✓			Trained person needed
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?	✓				Install First Aid Box at ENTRY/EXIST door/ Suitable place, should be visible
Are first aid personnel identifiable?	✓				Not in the department

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Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?		✓			
Have emergency procedures been established for specific hazardous circumstances including spills?	✓				Manual available
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin		✓			
Are staffs adequately trained to deal with minor spills?		✓			Manual available to follow if required
Are staffs aware of response procedures for minor and major spills?		✓			Manual available to follow, if required
Are emergency plans and contact numbers displayed?		✓			Required
Are regular evacuation drills carried out?		✓			Mock drill required
Are emergency manifests established for the area and available in an accessible area to emergency staff?	✓				
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.	✓				
A chemical and/or biological spill kit for minor spills is available.		✓			
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).	✓				First Aid Kit available
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.	✓				
Registration is current & emergency contact numbers/location details are posted.	✓	✓			
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.	✓				

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,	✓				

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noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."	✓				
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."	✓				
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.	✓				
Entry doors kept closed at all times and locked when unoccupied to maintain security.	✓				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation

Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.				✓	
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.				✓	
Access to CFH/LEV is unobstructed.				✓	
Fume hood inspection certification is current performed annually by CUSB.				✓	
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)				✓	
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.	✓				Recently installed
Is there enough fresh air, without draughts?	✓				
Is extra ventilation systems provided to remove fumes?		✓			
Are ventilation systems tested annually?		✓			

Corrective Action:	Completed by:	Date:

Waste Management

Hazardous waste containers are labeled with contents, accumulation start date, and generator.	✓				
Waste containers are kept closed to prevent off gassing discharge.	✓				
Hazardous wastes are removed for disposal	✓				

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before the 12-month accumulation limit.					
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.	✓				
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.	✓				
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.	✓				
Biological waste is collected in approved bag and disposed of in a timely manner.	✓	✓			Needed appropriate container & bags.

Corrective Action:	Completed by:	Date:

Equipment Safety

Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.				✓	
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).				✓	
Ladders are labeled with the approved warning stickers and are inspected before each use.				✓	
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).				✓	

Corrective Action:	Completed by:	Date:

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सेवा में,
विभागाध्यक्ष,
महोदय,
उपरोक्त विषय से आप सभी को अवगत कराने के लिए माननीय अध्यक्ष आईक्यूएसी से निर्देश प्राप्त हुए हैं कि नैक की तैयारी के तहत प्रयोगशालाओं का ऑडिट भी किया जाना चाहिए। इसकी तैयारियों से संबंधित कुछ सुझाव दस्तावेज के रूप में तैयार किए गए हैं। कृपया अपनी तैयारी में अधिक से अधिक संबंधित सुझावों को शामिल करें।
अतः आपसे अनुरोध है कि अपने विभाग की सभी प्रकार की प्रयोगशालाओं की तैयारी यथाशीघ्र दस्तावेजों के सुझावों का पालन करते हुए समय से पूर्ण करने का कष्ट करें।
एक टीम के अध्यक्ष आपसे यथाशीघ्र संपर्क करेंगे और आपके विभाग से संबंधित प्रयोगशालाओं के ऑडिट की तिथि निर्धारित करेंगे।
सम्बंधित दल को आप से और आप के विभाग से पूर्ण सहयोग की अपेक्षा का विश्वास है।
धन्यवाद।
आपका भवदीय।
वेंकटेश

To,
The Head of Department,
Sir,
In order to make you all aware of the above subject, instructions have been received from Hon'ble Chairman IQAC that as part of the NAAC's preparation, the laboratories should also be audited. Some suggestions related to its preparations have been prepared in the form of documents. Please include as many related suggestions as possible in your preparation.
Therefore, you are requested to complete the preparation of all types of laboratories of your department as soon as possible following the suggestions of the documents and complete them on time. A team head will contact you as soon as possible and schedule an audit of the laboratories belonging to your department.
The concerned team is confident of expecting full cooperation from you and your department. Thank you.
With best regards,
venktesh

Department Names

1	Department of Life Science	9	Department of Computer Science
2	Department of Environmental Science	10	Department of Mass Communication and Media
3	Department of Bioinformatics	11	Department of Physical Education
4	Department of Geology	12	Department of Commerce and Business Studies
5	Department of Biotechnology	13	Department of Psychological Science
6	Department of Pharmacy	14	Department of Economic Studies and Policies
7	Department of Chemistry	15	Central Instrumentation Facility
8	Department of Physics	16	Common Computer Lab

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Safety Resources: Are the following readily available in the Laboratory?

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Noise Policy Manual				✓	
Chemical Hygiene Plan manual	✓				
Current Safety Data Sheets (SDS)	✓	✓			
Infection Prevention Manual				✓	
Radiation Safety Manual	✓				
Disaster Preparedness Manual		✓			
Site-specific (Laboratory) Fire Plan Manual	✓				
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?	✓				
Are storage areas well organized and free of clutter?	✓				
Is shelving stable and not overloaded?				✓	
Is shelving stable, free of extraneous material and not too high?				✓	
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓				
Are chemical storage facilities in good condition?	✓				
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	✓				
General work space, storage areas, and bench tops appear uncluttered and orderly.	✓				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.	✓				
Trash bags & sharps containers are removed	✓				

24/8/2022 24/08/2022 24/08/2022

when full.					
Corrective Action:	**Completed by:**				**Date:**
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?		✓			For Student only
If YES. How frequent?		✓			At the beginning of the semester
Working Environment					
Is the room temperature comfortable?	✓				
Are windows in clean & safe condition?	✓				
Are blinds fitted to reduce glare or temperature?	✓				
Is lighting adequate in all area?	✓				
Is extra lighting provided for close work where needed?					
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?			✓		Manual available only
Manual Handling					
Are stepladders or footstools used to reach high shelves?	✓				
Are heavy & awkward items stored at waist height where possible?	✓				
Are trolleys or barrows available for moving heavy or large loads?	✓				
Biological Safety					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?				✓	
Are all sharps disposed of in an approved puncture-resistant container?				✓	
During transport, are all potentially infectious materials placed in a secondary leak-proof container?				✓	
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?				✓	
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end				✓	

of the procedure or immediately following a spill?					
Are personnel aware of appropriate biological spill procedures?				✓	
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?				✓	
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?				✓	
Have all biological safety cabinets been certified in the past year?				✓	
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?	✓				
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?	✓				
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?	✓				
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)			✓		
Food and drinks stored and consumed away from toxic materials?	✓				
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?			✓		
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?			✓		
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).				✓	
Inventory of Biological Agents is submitted annually to CUSB.				✓	
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).				✓	
Are drying facilities available in the lab?				✓	
Are there enough toilets for men and women within reasonable distance?	✓				
Are toilets & washbasins clean & in working	✓				

order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?	✓				No warm running water, no shab, no towel, but needed

Corrective Action:	Completed by:	Date:

Cold Room Safety					
Cold room has an emergency release mechanism.				✓	
Cardboard is not stored in the area.				✓	
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.				✓	
General housekeeping is observed and the area is organized, uncluttered, and sanitary.				✓	
Expired/abandoned samples are not stored.				✓	

Kitchenettes / Tea Rooms					
Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?	✓				
Are rest & eating facilities provided outside the lab?		✓			Required
Is drinking water available?	✓				
Are power points & cables a safe distance from wet areas?	✓				
Are microwave oven door seals clean and undamaged?				✓	
Is a fire blanket provided where electric cookers are used?				✓	

Corrective Action:	Completed by:	Date:

Laser Safety					
Laser SOP available to authorized users and training documented.				✓	
Laser controlled areas are posted with appropriate caution signs.				✓	
Beam stops are present at the end of all beam paths and are non-combustible.				✓	
Approved safety glasses are available.				✓	

Corrective Action:	Completed by:	Date:

CIF

Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			Mock drill required
Are employees familiar with the location of fire extinguishers and pull alarms?	✓				
Are all fire alarms visible, unobstructed, and accessible?	✓				
Is the fire alarm audible from all parts of the lab?			✓		mock drill required
Are aisles kept clear and unobstructed at all times?	✓				
Are open flames or Bunsen burners used in the lab?	✓				
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?	✓				
Are fire hose reels regularly checked?		✓			Needed
Are all fire extinguishers regularly checked?		✓			Needed
Visually, do the fire sprinklers and/or detector heads appear free from damage?			✓		
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.			✓		
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.	✓				
Fire alarm strobes are visible from all locations.	✓				
Are supplies of flammables and combustible liquids reasonable for the lab's needs?	✓				
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?	✓				
Do all workers know where the outside assembly point is located?	✓				mock drill required
Is emergency power adequate for the functioning of the lab?	✓				
Does the lab avoid placing electrical devices near water sources?	✓				
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?	✓				
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?	✓				

Corrective Action:	Completed by:	Date:

Chemical Safety and Management					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?	✓				Mannual available
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?		✓			Needed
Are potentially reactive chemicals stored separately?	✓				
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?	✓				
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____				✓	
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____				✓	
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____				✓	
Are chemical fume hood work surfaces free of clutter?				✓	
Are chemical storage cabinets well-maintained and free of rust?	✓				
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?		✓			
Are employees aware of how to report major chemical spills appropriately?	✓				
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?	✓				
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?	✓				
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are		✓			Needed

CIF

irritating, corrosive, toxic by contact or absorption)?					
Are eyewashes tested and documented on a weekly basis?			✓	✓	
Is there appropriate signage indicating the location of the eyewash?			✓		
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?				✓	
Is the storage and use of liquid nitrogen confined to a well-ventilated area?				✓	
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?	✓				
Is eating and drinking prohibited in areas in which hazardous chemicals are used?	✓				
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?	✓				
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?		✓			
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)			✓		
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*	✓				
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?		✓			
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?	✓				
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?				✓	
Is the lab using autoclave tape that contains lead?				✓	
Chemical Hygiene Plan (CHP) is available to	✓				

personnel working with hazardous chemicals. Lab specific CHP is current and documented.						
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.	✓					
Chemical inventory is submitted annually.	✓					
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.	✓					
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.	✓					
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).	✓					
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.	✓					
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).	✓					
Chemical containers are kept closed.	✓					
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.	✓					
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.	✓					
Corrective Action:	**Completed by:**				**Date:**	
Radiation Safety:						
Are any radioactive substances handled in the lab?				✓		
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?				✓		
Is main door is marked with the sign of Radioactive warning?				✓		
Are there clear instructions for the use of radioactive materials?				✓		
Is there a safe method of storage?				✓		
Is there a safe method of disposal?				✓		
Are all radioactive substances correctly labeled?				✓		
Are workers health checks, if required, up to date?				✓		

RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?				✓		
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?	✓					
Are SOPs or safe working rules specific to the laboratory developed and implemented?	✓					
Are staff trained or instructed on the SOPs and lab safety rules?	✓					
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?	✓					
Is the signage on the laboratory door or entrance correct, adequate and up to date?			✓			
Have all current staff/students working in this lab undertaken the specific lab induction.		✓			Needed	Staff Induction
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?				✓		
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?	✓					
Are there an adequate number of exits?	✓					
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?		✓				
People with Disabilities						
Is there access for people with impaired mobility?	✓					
Is there access to disabled toilets within reasonable distance?	✓					
Do emergency evacuation procedures include people with disabilities?	✓					
Compressed Gas Cylinders						
Gas name/label on shoulder of each cylinder clearly legible?	✓					

Are fuel cylinders separated from oxidizing cylinders?	✓				
Are cylinders secured by brackets or chains?	✓				
Are empty cylinders separate from full cylinders & clearly identified?	✓				
Are acetylene cylinders that are not in use stored outside of building?	✓			✓	
Are all gas cylinders stored in a well ventilated area?	✓				
Are cylinder valves closed when not in use?	✓				
Does testing for gas leaks occur?	✓				
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)	✓				
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.	✓				
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).	✓				
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.	✓				
Corrective Action:	**Completed by:**				**Date:**
Electrical Installations/ Electrical Safety					
Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?	✓				
Are adequate power points available & unobstructed?	✓				
Are switches & power points in good condition (no cracks, loose face plates)?	✓				
Are double adaptors or piggy back adaptors avoided?	✓				
Are circuit breakers & main isolators clearly marked?	✓				
Is excessive use of extension cords avoided?	✓				
Is temporary wiring avoided?	✓				
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?	✓				

Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?	✓				
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	✓				

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment

Are operating instructions/safety signs adequate & clear?	✓				
Are safety glasses areas clearly sign posted?	✓				
Are emergency stop switches accessible, red in colour?		✓			
Do interlocks on machine guards operate, with regular testing?			✓		
Are moving parts, belt drives, shafts, fans appropriately guarded?				✓	
Are machines & equipment free from obstruction?	✓				
Is there adequate distance between machines & equipment?	✓				
Are all Lasers pointing away from doorways and corridors?				✓	
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?	✓				

Corrective Action:	Completed by:	Date:

First Aid

Are there trained first aid personnel?		✓			
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?	✓				
Are first aid personnel identifiable?	✓				Not in the Dept.

Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?		✓			
Have emergency procedures been established for specific hazardous circumstances including spills?	✓				
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin		✓			
Are staffs adequately trained to deal with minor spills?		✓			
Are staffs aware of response procedures for minor and major spills?		✓			
Are emergency plans and contact numbers displayed?		✓			
Are regular evacuation drills carried out?		✓			
Are emergency manifests established for the area and available in an accessible area to emergency staff?	✓				
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.		✓			Needed
A chemical and/or biological spill kit for minor spills is available.		✓			
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).			✓		
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.	✓				
Registration is current & emergency contact numbers/location details are posted.		✓			
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.	✓				

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,	✓				

noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."	✓				
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."	✓				
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.	✓				
Entry doors kept closed at all times and locked when unoccupied to maintain security.	✓				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation					
Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.				✓	
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.				✓	
Access to CFH/LEV is unobstructed.				✓	
Fume hood inspection certification is current performed annually by CUSB.				✓	
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)				✓	
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.				✓	
Is there enough fresh air, without draughts?	✓				
Is extra ventilation systems provided to remove fumes?		✓			
Are ventilation systems tested annually?		✓			

Corrective Action:	Completed by:	Date:

Waste Management					
Hazardous waste containers are labeled with contents, accumulation start date, and generator.	✓		✓		
Waste containers are kept closed to prevent off gassing discharge.	✓		✓		
Hazardous wastes are removed for disposal	✓		✓		

CIF

before the 12-month accumulation limit.					
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.				✓	
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.				✓	
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.				✓	
Biological waste is collected in approved bag and disposed of in a timely manner.				✓	

Corrective Action:	Completed by:	Date:

Equipment Safety

Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.				✓	
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).		✓			Needed
Ladders are labeled with the approved warning stickers and are inspected before each use.				✓	
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).				✓	

Corrective Action:	Completed by:	Date:

24/8/2022

24/08/2022

Department of Computer Science

सेवा में,
विभागाध्यक्ष,
महोदय,
उपरोक्त विषय से आप सभी को अवगत कराने के लिए माननीय अध्यक्ष आईक्यूएसी से निर्देश प्राप्त हुए हैं कि नैक की तैयारी के तहत प्रयोगशालाओं का ऑडिट भी किया जाना चाहिए। इसकी तैयारियों से संबंधित कुछ सुझाव दस्तावेज के रूप में तैयार किए गए हैं। कृपया अपनी तैयारी में अधिक से अधिक संबंधित सुझावों को शामिल करें।
अतः आपसे अनुरोध है कि अपने विभाग की सभी प्रकार की प्रयोगशालाओं की तैयारी यथाशीघ्र दस्तावेजों के सुझावों का पालन करते हुए समय से पूर्ण करने का कष्ट करें।
एक टीम के अध्यक्ष आपसे यथाशीघ्र संपर्क करेंगे और आपके विभाग से संबंधित प्रयोगशालाओं के ऑडिट की तिथि निर्धारित करेंगे।
सम्बंधित दल को आप से और आप के विभाग से पूर्ण सहयोग की अपेक्षा का विश्वास है।
धन्यवाद।
आपका भवदीय।
वेंकटेश

To,
The Head of Department,
Sir,
In order to make you all aware of the above subject, instructions have been received from Hon'ble Chairman IQAC that as part of the NAAC's preparation, the laboratories should also be audited. Some suggestions related to its preparations have been prepared in the form of documents. Please include as many related suggestions as possible in your preparation.
Therefore, you are requested to complete the preparation of all types of laboratories of your department as soon as possible following the suggestions of the documents and complete them on time. A team head will contact you as soon as possible and schedule an audit of the laboratories belonging to your department.
The concerned team is confident of expecting full cooperation from you and your department.
Thank you.
With best regards,
venktesh

Department Names

1	Department of Life Science	9	Department of Computer Science
2	Department of Environmental Science	10	Department of Mass Communication and Media
3	Department of Bioinformatics	11	Department of Physical Education
4	Department of Geology	12	Department of Commerce and Business Studies
5	Department of Biotechnology	13	Department of Psychological Science
6	Department of Pharmacy	14	Department of Economic Studies and Policies
7	Department of Chemistry	15	Central Instrumentation Facility
8	Department of Physics	16	Common Computer Lab

PJ [illegible] 7/7/22

P.K. Singh 06.07.2022

Jainath Yadav 06/07/2022

A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual				✓	
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual				✓	
Chemical Waste Policy Manual				✓	
Noise Policy Manual				✓	
Chemical Hygiene Plan manual				✓	
Current Safety Data Sheets (SDS)					
Infection Prevention Manual				✓	
Radiation Safety Manual				✓	
Disaster Preparedness Manual					
Site-specific (Laboratory) Fire Plan Manual					
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?	✓				
Are storage areas well organized and free of clutter?	✓				
Is shelving stable and not overloaded?	✓				
Is shelving stable, free of extraneous material and not too high?	✓				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓				
Are chemical storage facilities in good condition?				✓	
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	✓				
General work space, storage areas, and bench tops appear uncluttered and orderly.	✓				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.				✓	
Trash bags & sharps containers are removed				✓	

when full.					

Corrective Action:	Completed by:	Date:

General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?	✓				
If YES. How frequent?					ones for new Student/employee
Working Environment					
Is the room temperature comfortable?		✓			
Are windows in clean & safe condition?	✓				
Are blinds fitted to reduce glare or temperature?	✓				
Is lighting adequate in all area?		✓			
Is extra lighting provided for close work where needed?		✓			
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?				✓	
Manual Handling					
Are stepladders or footstools used to reach high shelves?		✓			
Are heavy & awkward items stored at waist height where possible?				✓	
Are trolleys or barrows available for moving heavy or large loads?		✓			
Biological Safety					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?				✓	
Are all sharps disposed of in an approved puncture-resistant container?				✓	
During transport, are all potentially infectious materials placed in a secondary leak-proof container?				✓	
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?				✓	
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end				✓	

of the procedure or immediately following a spill?				✓	
Are personnel aware of appropriate biological spill procedures?				✓	
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?				✓	
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?				✓	
Have all biological safety cabinets been certified in the past year?				✓	
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?				✓	
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?				✓	
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?				✓	
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)				✓	
Food and drinks stored and consumed away from toxic materials?				✓	
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?				✓	
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?				✓	
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).				✓	
Inventory of Biological Agents is submitted annually to CUSB.				✓	
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).				✓	
Are drying facilities available in the lab?				✓	
Are there enough toilets for men and women within reasonable distance?				✓	
Are toilets & washbasins clean & in working				✓	

order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?				✓	

Corrective Action:	Completed by:	Date:

Cold Room Safety

Cold room has an emergency release mechanism.				✓	
Cardboard is not stored in the area.				✓	
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.				✓	
General housekeeping is observed and the area is organized, uncluttered, and sanitary.				✓	NA applicable as no cold room available
Expired/abandoned samples are not stored.				✓	
				✓	

Kitchenettes / Tea Rooms

Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?				✓	
Are rest & eating facilities provided outside the lab?				✓	
Is drinking water available?				✓	
Are power points & cables a safe distance from wet areas?				✓	
Are microwave oven door seals clean and undamaged?				✓	
Is a fire blanket provided where electric cookers are used?				✓	
				✓	

Corrective Action:	Completed by:	Date:

Laser Safety

Laser SOP available to authorized users and training documented.				✓	
Laser controlled areas are posted with appropriate caution signs.				✓	
Beam stops are present at the end of all beam paths and are non-combustible.				✓	
Approved safety glasses are available.				✓	
				✓	
				✓	

Corrective Action:	Completed by:	Date:

Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			
Are employees familiar with the location of fire extinguishers and pull alarms?	✓				
Are all fire alarms visible, unobstructed, and accessible?	✓				
Is the fire alarm audible from all parts of the lab?	✓				
Are aisles kept clear and unobstructed at all times?	✓				
Are open flames or Bunsen burners used in the lab?				✓	
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?			✓		
Are fire hose reels regularly checked?			✓		
Are all fire extinguishers regularly checked?			✓		
Visually, do the fire sprinklers and/or detector heads appear free from damage?			✓		
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.			✓		
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.			✓		
Fire alarm strobes are visible from all locations.			✓		
Are supplies of flammables and combustible liquids reasonable for the lab's needs?				✓	
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?				✓	
Do all workers know where the outside assembly point is located?	✓				
Is emergency power adequate for the functioning of the lab?	✓				
Does the lab avoid placing electrical devices near water sources?	✓				
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?		✓			
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?		✓			

Corrective Action:	Completed by:	Date:

Chemical Safety and Management					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?				✓	
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?				✓	
Are potentially reactive chemicals stored separately?				✓	
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?				✓	
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____				✓	
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____				✓	
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____				✓	
Are chemical fume hood work surfaces free of clutter?				✓	
Are chemical storage cabinets well-maintained and free of rust?				✓	
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?				✓	
Are employees aware of how to report major chemical spills appropriately?				✓	
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?				✓	
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?				✓	
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are				✓	

irritating, corrosive, toxic by contact or absorption)?				✓	
Are eyewashes tested and documented on a weekly basis?				✓	
Is there appropriate signage indicating the location of the eyewash?				✓	
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?				✓	
Is the storage and use of liquid nitrogen confined to a well-ventilated area?				✓	
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?				✓	
Is eating and drinking prohibited in areas in which hazardous chemicals are used?				✓	
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?				✓	
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?				✓	
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)				✓	
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*				✓	
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?				✓	
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?				✓	
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?				✓	
Is the lab using autoclave tape that contains lead?				✓	
Chemical Hygiene Plan (CHP) is available to				✓	

personnel working with hazardous chemicals. Lab specific CHP is current and documented.				✓		
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.				✓		
Chemical inventory is submitted annually.				✓		
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.				✓		
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.				✓		
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).				✓		
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.				✓		
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).				✓		
Chemical containers are kept closed.				✓		
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.				✓		
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.				✓		
Corrective Action:			**Completed by:**		**Date:**	
Radiation Safety:						
Are any radioactive substances handled in the lab?				✓		
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?				✓		
Is main door is marked with the sign of Radioactive warning?				✓		
Are there clear instructions for the use of radioactive materials?				✓		
Is there a safe method of storage?				✓		
Is there a safe method of disposal?				✓		
Are all radioactive substances correctly labeled?				✓		
Are workers health checks, if required, up to date?				✓		

RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?	✓					During practical Examination
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?	✓					
Are SOPs or safe working rules specific to the laboratory developed and implemented?	✓					
Are staff trained or instructed on the SOPs and lab safety rules?	✓					
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?		✓				
Is the signage on the laboratory door or entrance correct, adequate and up to date?	✓					
Have all current staff/students working in this lab undertaken the specific lab induction.	✓					
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?				N/A		
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?		✓				
Are there an adequate number of exits?	✓					
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?		✓				
People with Disabilities						
Is there access for people with impaired mobility?		✓				
Is there access to disabled toilets within reasonable distance?	✓					
Do emergency evacuation procedures include people with disabilities?		✓				
Compressed Gas Cylinders						
Gas name/label on shoulder of each cylinder clearly legible?				✓		

Are fuel cylinders separated from oxidizing cylinders?				✓	
Are cylinders secured by brackets or chains?				✓	
Are empty cylinders separate from full cylinders & clearly identified?				✓	
Are acetylene cylinders that are not in use stored outside of building?				✓	
Are all gas cylinders stored in a well ventilated area?				✓	
Are cylinder valves closed when not in use?				✓	
Does testing for gas leaks occur?				✓	
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)				✓	
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.				✓	
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).				✓	
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.				✓	

Corrective Action:	Completed by:	Date:

Electrical Installations/ Electrical Safety

Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?	✓				on loging complaint
Are adequate power points available & unobstructed?	✓				
Are switches & power points in good condition (no cracks, loose face plates)?		✓			
Are double adaptors or piggy back adaptors avoided?	✓				
Are circuit breakers & main isolators clearly marked?	✓				
Is excessive use of extension cords avoided?	✓				
Is temporary wiring avoided?		✓			
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?			✓		

Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?		✓			
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	✓				

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment

Are operating instructions/safety signs adequate & clear?				✓	
Are safety glasses areas clearly sign posted?				✓	
Are emergency stop switches accessible, red in colour?				✓	
Do interlocks on machine guards operate, with regular testing?				✓	
Are moving parts, belt drives, shafts, fans appropriately guarded?				✓	
Are machines & equipment free from obstruction?				✓	
Is there adequate distance between machines & equipment?				✓	
Are all Lasers pointing away from doorways and corridors?				✓	
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?				✓	

Corrective Action:	Completed by:	Date:

First Aid

Are there trained first aid personnel?		✓			
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?		✓			
Are first aid personnel identifiable?		✓			

Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?		✓			
Have emergency procedures been established for specific hazardous circumstances including spills?				✓	
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin				✓	
Are staffs adequately trained to deal with minor spills?				✓	
Are staffs aware of response procedures for minor and major spills?				✓	
Are emergency plans and contact numbers displayed?	✓				
Are regular evacuation drills carried out?		✓			
Are emergency manifests established for the area and available in an accessible area to emergency staff?		✓			
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.		✓			
A chemical and/or biological spill kit for minor spills is available.				✓	
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).				✓	
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.				✓	
Registration is current & emergency contact numbers/location details are posted.	✓				
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.	✓				

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,					

noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."				✓	
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."				✓	
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.	✓				
Entry doors kept closed at all times and locked when unoccupied to maintain security.	✓				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation

Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.				✓	
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.				✓	
Access to CFH/LEV is unobstructed.				✓	
Fume hood inspection certification is current performed annually by CUSB.				✓	
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)				✓	
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.				✓	
Is there enough fresh air, without draughts?				✓	
Is extra ventilation systems provided to remove fumes?				✓	
Are ventilation systems tested annually?				✓	
				✓	

Corrective Action:	Completed by:	Date:

Waste Management

Hazardous waste containers are labeled with contents, accumulation start date, and generator.				✓	
Waste containers are kept closed to prevent off gassing discharge.				✓	
Hazardous wastes are removed for disposal				✓	

before the 12-month accumulation limit.				✓	
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.				✓	
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.				✓	
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.				✓	
Biological waste is collected in approved bag and disposed of in a timely manner.				✓	

Corrective Action:	Completed by:	Date:

Equipment Safety					
Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.				✓	
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).				✓	
Ladders are labeled with the approved warning stickers and are inspected before each use.				✓	
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).				✓	

Corrective Action:	Completed by:	Date:

Checklist Equipment

(For Laboratory Audit)

Check	Quarries	Remarks / Activity
☑	Does the laboratory have a clear register of all the equipment present?	Stock Register
☑	Does the equipment register contain the following details for each piece of equipment? (tick off) Identity Label Serial number Manufacturer name Date of purchase Date of putting into service Location Condition Frequency of maintenance Date of previous maintenance Date of next scheduled maintenance Remarks	Stock Register
☑	Is all critical / major equipment functional?	Yes
☑	Has the laboratory identified critical / major needs for specific pieces of equipment that must be present in order for the piece of equipment to function?	Yes
☐	Is the SOP for Procurement and Reception of Equipment demonstrably authorized by Laboratory Assistant or Technical Assistant?	No
☐	Are all technical staff members aware of the existence of the SOP and do they know when to use it?	Yes
☑	Have all pieces of equipment that have a direct influence on the outcome of course / examinations been validated?	Yes
☑	Are all findings of validations (both validation of examination methods and validation of equipment) documented in validation reports?	~~Not Docu~~ No
☐	Are SOPs present for all pieces of equipment?	Yes
☑	Has all equipment in the laboratory been labeled?	
☐	Does the laboratory have a designated laboratory – in – change and aware about responsibilities?	Yes
☐	Does the laboratory have a Maintenance Log Sheet for each piece of equipment that shows what maintenance has been performed at which moment to which piece of equipment?	Yes

☐	Does the laboratory use log sheets to record usage of specific pieces of equipment where necessary?	Yes
☐	Do staff members know how and when to fill out Usage Log Sheets / log books for each piece of equipment?	Yes
☐	Are the Usage Log Sheets placed near the piece of equipment they have been developed for?	NO
☐	Are Maintenance Log Sheets of equipment stored orderly in the Equipment Archive?	~~No~~ Yes
☐	Is the method of maintenance and calibration of equipment documented?	~~NO~~ Yes
☐	Is the budget needed for the maintenance and calibration of equipment calculated and documented?	Yes
☒	Have funds been identified for annual maintenance and calibration of equipment?	No (centralized maintence)
☐	Have funds been identified for training of a staff member for internal maintenance and calibration of equipment?	No
☐	Is a preventive maintenance program in place for all pieces of equipment?	No
☐	Does the laboratory demonstrably adhere to this program?	

Note:

Corrective Action:	Completed by:	Date:

सेवा में,
विभागाध्यक्ष,
महोदय,
उपरोक्त विषय से आप सभी को अवगत कराने के लिए माननीय अध्यक्ष आईक्यूएसी से निर्देश प्राप्त हुए हैं कि नैक की तैयारी के तहत प्रयोगशालाओं का ऑडिट भी किया जाना चाहिए। इसकी तैयारियों से संबंधित कुछ सुझाव दस्तावेज के रूप में तैयार किए गए हैं। कृपया अपनी तैयारी में अधिक से अधिक संबंधित सुझावों को शामिल करें।
अतः आपसे अनुरोध है कि अपने विभाग की सभी प्रकार की प्रयोगशालाओं की तैयारी यथाशीघ्र दस्तावेजों के सुझावों का पालन करते हुए समय से पूर्ण करने का कष्ट करें।
एक टीम के अध्यक्ष आपसे यथाशीघ्र संपर्क करेंगे और आपके विभाग से संबंधित प्रयोगशालाओं के ऑडिट की तिथि निर्धारित करेंगे।
सम्बंधित दल को आप से और आप के विभाग से पूर्ण सहयोग की अपेक्षा का विश्वास है।
धन्यवाद।
आपका भवदीय।
वेंकटेश

To,
The Head of Department,
Sir,
In order to make you all aware of the above subject, instructions have been received from Hon'ble Chairman IQAC that as part of the NAAC's preparation, the laboratories should also be audited. Some suggestions related to its preparations have been prepared in the form of documents. Please include as many related suggestions as possible in your preparation.
Therefore, you are requested to complete the preparation of all types of laboratories of your department as soon as possible following the suggestions of the documents and complete them on time. A team head will contact you as soon as possible and schedule an audit of the laboratories belonging to your department.
The concerned team is confident of expecting full cooperation from you and your department. Thank you.
With best regards,
venktesh

Department Names

1	Department of Life Science	9	Department of Computer Science
2	Department of Environmental Science	10	Department of Mass Communication and Media
3	Department of Bioinformatics	11	Department of Physical Education
4	Department of Geology	12	Department of Commerce and Business Studies
5	Department of Biotechnology	13	Department of Psychological Science
6	Department of Pharmacy	14	Department of Economic Studies and Policies
7	Department of Chemistry	15	Central Instrumentation Facility
8	Department of Physics	16	Common Computer Lab

CHEMISTRY / PHYSICS

A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual	✓				
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual	✓				
Chemical Waste Policy Manual	✓				
Noise Policy Manual				✓	
Chemical Hygiene Plan manual	✓				
Current Safety Data Sheets (SDS)		✓			
Infection Prevention Manual				✓	
Radiation Safety Manual	✓				
Disaster Preparedness Manual		✓			
Site-specific (Laboratory) Fire Plan Manual	✓				
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?	✓				
Are storage areas well organized and free of clutter?	✓				
Is shelving stable and not overloaded?	✓				
Is shelving stable, free of extraneous material and not too high?	✓				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓	✓			
Are chemical storage facilities in good condition?	✓	✓			Inadequate
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	✓				
General work space, storage areas, and bench tops appear uncluttered and orderly.	✓				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.	✓				
Trash bags & sharps containers are removed	·		✓		

24/8/2022 24/08/2022 24/08/22 24/08/2022

CHEMISTRY / PHYSICS

when full.					
Corrective Action:	**Completed by:**				**Date:**
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?	✓				For student only
If YES. How frequent?	✓				At the begning of Semester
	✓				
Working Environment					
Is the room temperature comfortable?	✓				
Are windows in clean & safe condition?	✓				
Are blinds fitted to reduce glare or temperature?					
Is lighting adequate in all area?	✓				
Is extra lighting provided for close work where needed?	✓				
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?	✓				Lab coat, mask and
Manual Handling					
Are stepladders or footstools used to reach high shelves?	✓				Available in Aryabhatta building
Are heavy & awkward items stored at waist height where possible?	✓				
Are trolleys or barrows available for moving heavy or large loads?	✓				
Biological Safety					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?	✓				
Are all sharps disposed of in an approved puncture-resistant container?	✓				
During transport, are all potentially infectious materials placed in a secondary leak-proof container?				✓	
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?			✓		Needed
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end				✓	

CHEMISTRY / PHYSICS

of the procedure or immediately following a spill?					
Are personnel aware of appropriate biological spill procedures?				✓	
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?				✓	
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?				✓	
Have all biological safety cabinets been certified in the past year?				✓	
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?	✓				
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?	✓				
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?	✓				
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)			✓		
Food and drinks stored and consumed away from toxic materials?					
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?			✓		
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?			✓		
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).				✓	
Inventory of Biological Agents is submitted annually to CUSB.				✓	
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).				✓	
Are drying facilities available in the lab?				✓	
Are there enough toilets for men and women within reasonable distance?	✓				
Are toilets & washbasins clean & in working	✓				

Jagannath Roy

CHEMISTRY / PHYSICS

order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?	✓				No warm running water, no soap, no towel, but needed

Corrective Action:	Completed by:	Date:

Cold Room Safety					
Cold room has an emergency release mechanism.				✓	
Cardboard is not stored in the area.				✓	
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.				✓	
General housekeeping is observed and the area is organized, uncluttered, and sanitary.				✓	
Expired/abandoned samples are not stored.				✓	
				✓	

Kitchenettes / Tea Rooms					
Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?	✓				
Are rest & eating facilities provided outside the lab?		✓			Required
Is drinking water available?	✓				
Are power points & cables a safe distance from wet areas?	✓				
Are microwave oven door seals clean and undamaged?				✓	
Is a fire blanket provided where electric cookers are used?				✓	

Corrective Action:	Completed by:	Date:

Laser Safety					
Laser SOP available to authorized users and training documented.				✓	
Laser controlled areas are posted with appropriate caution signs.				✓	
Beam stops are present at the end of all beam paths and are non-combustible.				✓	
Approved safety glasses are available.				✓	

Corrective Action:	Completed by:	Date:

CHEMISTRY / PHYSICS

Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			mock drill required
Are employees familiar with the location of fire extinguishers and pull alarms?	✓	✓			Training required for its operation.
Are all fire alarms visible, unobstructed, and accessible?	✓				
Is the fire alarm audible from all parts of the lab?			✓		mock drill required
Are aisles kept clear and unobstructed at all times?	✓				
Are open flames or Bunsen burners used in the lab?	✓				
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?	✓				
Are fire hose reels regularly checked?		✓			Needed
Are all fire extinguishers regularly checked?		✓			Needed
Visually, do the fire sprinklers and/or detector heads appear free from damage?			✓		
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.			✓		
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.	✓				
Fire alarm strobes are visible from all locations.	✓				
Are supplies of flammables and combustible liquids reasonable for the lab's needs?	✓				
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?	✓				
Do all workers know where the outside assembly point is located?	✓				mock drill required
Is emergency power adequate for the functioning of the lab?	✓				
Does the lab avoid placing electrical devices near water sources?	✓				
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?	✓				
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?	✓				

Corrective Action:	Completed by:	Date:

CHEMISTRY / PHYSICS

Chemical Safety and Management					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?	✓				manual available
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?		✓			Needed
Are potentially reactive chemicals stored separately?	✓				
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?	✓				
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____				✓	
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____				✓	
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____				✓	
Are chemical fume hood work surfaces free of clutter?				✓	
Are chemical storage cabinets well-maintained and free of rust?	✓				
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?		✓			
Are employees aware of how to report major chemical spills appropriately?	✓				
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?	✓				
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?	✓				
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are	✓				

CHEMISTRY / PHYSICS

irritating, corrosive, toxic by contact or absorption)?					
Are eyewashes tested and documented on a weekly basis?			✓		
Is there appropriate signage indicating the location of the eyewash?			✓		
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?				✓	
Is the storage and use of liquid nitrogen confined to a well-ventilated area?				✓	
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?				✓	
Is eating and drinking prohibited in areas in which hazardous chemicals are used?	✓				
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?	✓				
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?	✓				
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)			✓		
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*	✓				
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?		✓			
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?	✓				
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?				✓	
Is the lab using autoclave tape that contains lead?				✓	
Chemical Hygiene Plan (CHP) is available to	✓				

CHEMISTRY / PHYSICS

personnel working with hazardous chemicals. Lab specific CHP is current and documented.						
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.	✓					
Chemical inventory is submitted annually.	✓					
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.	✓					
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.	✓					
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).	✓					
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.	✓					
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).	✓					
Chemical containers are kept closed.	✓					
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.	✓					
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.	✓					
Corrective Action:	**Completed by:**				**Date:**	
Radiation Safety:						
Are any radioactive substances handled in the lab?				✓		
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?				✓		
Is main door is marked with the sign of Radioactive warning?				✓		
Are there clear instructions for the use of radioactive materials?				✓		
Is there a safe method of storage?				✓		
Is there a safe method of disposal?				✓		
Are all radioactive substances correctly labeled?				✓		
Are workers health checks, if required, up to date?				✓		

CHEMISTRY / PHYSICS

RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?				✓		
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?	✓					
Are SOPs or safe working rules specific to the laboratory developed and implemented?	✓					
Are staff trained or instructed on the SOPs and lab safety rules?	✓					
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?	✓					
Is the signage on the laboratory door or entrance correct, adequate and up to date?			✓			
Have all current staff/students working in this lab undertaken the specific lab induction.		✓			Needed Staff induction	
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?				✓		
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?	✓					
Are there an adequate number of exits?	✓					
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?	✓					
People with Disabilities						
Is there access for people with impaired mobility?	✓					
Is there access to disabled toilets within reasonable distance?	✓					
Do emergency evacuation procedures include people with disabilities?	✓					
Compressed Gas Cylinders						
Gas name/label on shoulder of each cylinder clearly legible?	✓					

CHEMISTRY / PHYSICS

Are fuel cylinders separated from oxidizing cylinders?	✓				
Are cylinders secured by brackets or chains?	✓				
Are empty cylinders separate from full cylinders & clearly identified?	✓				
Are acetylene cylinders that are not in use stored outside of building?				✓	
Are all gas cylinders stored in a well ventilated area?	✓				
Are cylinder valves closed when not in use?	✓				
Does testing for gas leaks occur?	✓				
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)	✓				
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.	✓				
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).	✓				
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.	✓				
Corrective Action:	**Completed by:**				**Date:**

Electrical Installations/ Electrical Safety

Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?	✓				
Are adequate power points available & unobstructed?	✓				
Are switches & power points in good condition (no cracks, loose face plates)?	✓				
Are double adaptors or piggy back adaptors avoided?	✓				
Are circuit breakers & main isolators clearly marked?	✓				
Is excessive use of extension cords avoided?	✓				
Is temporary wiring avoided?	✓				
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?	✓				

CHEMISTRY / PHYSICS

Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?	✓				
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	✓				

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment

Are operating instructions/safety signs adequate & clear?	✓				
Are safety glasses areas clearly sign posted?	✓				
Are emergency stop switches accessible, red in colour?		✓			
Do interlocks on machine guards operate, with regular testing?			✓		
Are moving parts, belt drives, shafts, fans appropriately guarded?				✓	
Are machines & equipment free from obstruction?	✓				
Is there adequate distance between machines & equipment?	✓				
Are all Lasers pointing away from doorways and corridors?				✓	
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?	✓				

Corrective Action:	Completed by:	Date:

First Aid

Are there trained first aid personnel?		✓			
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?	✓				
Are first aid personnel identifiable?	✓				Not in the Dept.

CHEMISTRY / PHYSICS

Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?		✓			
Have emergency procedures been established for specific hazardous circumstances including spills?	✓				
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin		✓			
Are staffs adequately trained to deal with minor spills?		✓			
Are staffs aware of response procedures for minor and major spills?		✓			
Are emergency plans and contact numbers displayed?		✓			
Are regular evacuation drills carried out?		✓			
Are emergency manifests established for the area and available in an accessible area to emergency staff?	✓				
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.		✓			Needed
A chemical and/or biological spill kit for minor spills is available.		✓			
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).			✓		
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.	✓				
Registration is current & emergency contact numbers/location details are posted.		✓			
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.	✓				

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,	✓				

CHEMISTRY / PHYSICS

noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."	✓				
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."	✓				
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.	✓				
Entry doors kept closed at all times and locked when unoccupied to maintain security.	✓				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation

Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.				✓	
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.				✓	
Access to CFH/LEV is unobstructed.				✓	
Fume hood inspection certification is current performed annually by CUSB.				✓	
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)				✓	
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.				✓	
Is there enough fresh air, without draughts?	✓				
Is extra ventilation systems provided to remove fumes?		✓			
Are ventilation systems tested annually?		✓			

Corrective Action:	Completed by:	Date:

Waste Management

Hazardous waste containers are labeled with contents, accumulation start date, and generator.			✓		
Waste containers are kept closed to prevent off gassing discharge.			✓		
Hazardous wastes are removed for disposal			✓		

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before the 12-month accumulation limit.					
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.				✓	
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.				✓	
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.				✓	
Biological waste is collected in approved bag and disposed of in a timely manner.				✓	

Corrective Action:	Completed by:	Date:

Equipment Safety

Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.				✓	
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).		✓			Needed
Ladders are labeled with the approved warning stickers and are inspected before each use.				✓	
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).				✓	

Corrective Action:	Completed by:	Date:

24/8/2022

24/08/2022

24/08/2022

24/08/2022

Department of Bioinformatics

A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual				✓	
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual				✓	
Chemical Waste Policy Manual				✓	
Noise Policy Manual				✓	
Chemical Hygiene Plan manual				✓	
Current Safety Data Sheets (SDS)				✓	
Infection Prevention Manual				✓	
Radiation Safety Manual				✓	
Disaster Preparedness Manual		✓			
Site-specific (Laboratory) Fire Plan Manual		✓			
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?				✓	
Are storage areas well organized and free of clutter?				✓	
Is shelving stable and not overloaded?	✓				
Is shelving stable, free of extraneous material and not too high?	✓				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓				
Are chemical storage facilities in good condition?				✓	
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).				✓	
General work space, storage areas, and bench tops appear uncluttered and orderly.				✓	
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.	✓			✓	
Trash bags & sharps containers are removed				✓	

27/5/22

when full.					
Corrective Action:	**Completed by:**			**Date:**	
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?		✓			
If YES. How frequent?					
Working Environment					
Is the room temperature comfortable?		✓			
Are windows in clean & safe condition?	✓				
Are blinds fitted to reduce glare or temperature?	✓				
Is lighting adequate in all area?	✓				
Is extra lighting provided for close work where needed?				✓	
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?				✓	
Manual Handling					
Are stepladders or footstools used to reach high shelves?				✓	
Are heavy & awkward items stored at waist height where possible?				✓	
Are trolleys or barrows available for moving heavy or large loads?		✓		✓	
Biological Safety (NOT Applicable)					
Are hand washing sinks available in all areas where work involving potentially infectious materials is performed?				✓	
Are all sharps disposed of in an approved puncture-resistant container?					
During transport, are all potentially infectious materials placed in a secondary leak-proof container?					
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?					
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end					

of the procedure or immediately following a spill?					
Are personnel aware of appropriate biological spill procedures?					
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?					
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?					
Have all biological safety cabinets been certified in the past year?					
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?					
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?					
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?					
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)					
Food and drinks stored and consumed away from toxic materials?					
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?					
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?					
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).					
Inventory of Biological Agents is submitted annually to CUSB.					
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).					
Are drying facilities available in the lab?					
Are there enough toilets for men and women within reasonable distance?					
Are toilets & washbasins clean & in working					

order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?					

Corrective Action:	Completed by:	Date:

Cold Room Safety (NA)

Cold room has an emergency release mechanism.					
Cardboard is not stored in the area.					
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.					
General housekeeping is observed and the area is organized, uncluttered, and sanitary.					
Expired/abandoned samples are not stored.					

Kitchenettes / Tea Rooms (NA)

Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?					
Are rest & eating facilities provided outside the lab?					
Is drinking water available?					
Are power points & cables a safe distance from wet areas?					
Are microwave oven door seals clean and undamaged?					
Is a fire blanket provided where electric cookers are used?					

Corrective Action:	Completed by:	Date:

Laser Safety (NA)

Laser SOP available to authorized users and training documented.					
Laser controlled areas are posted with appropriate caution signs.					
Beam stops are present at the end of all beam paths and are non-combustible.					
Approved safety glasses are available.					

Corrective Action:	Completed by:	Date:

PPS

24.6.22

Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			
Are employees familiar with the location of fire extinguishers and pull alarms?			✓		
Are all fire alarms visible, unobstructed, and accessible?		✓			
Is the fire alarm audible from all parts of the lab?			✓		
Are aisles kept clear and unobstructed at all times?	✓				
Are open flames or Bunsen burners used in the lab?				✓	
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?		✓			
Are fire hose reels regularly checked?		✓			
Are all fire extinguishers regularly checked?		✓			
Visually, do the fire sprinklers and/or detector heads appear free from damage?		✓			
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.			✓		
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.		✓			
Fire alarm strobes are visible from all locations.			✓		
Are supplies of flammables and combustible liquids reasonable for the lab's needs?				✓	
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?			✓	✓	
Do all workers know where the outside assembly point is located?			✓		
Is emergency power adequate for the functioning of the lab?			✓		
Does the lab avoid placing electrical devices near water sources?				✓	
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?			✓		
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?	✓				

Corrective Action:	Completed by:	Date:

24/6/22

24.6.22

Chemical Safety and Management						
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?						
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?						
Are potentially reactive chemicals stored separately?						
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?						
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____						
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____						
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____						
Are chemical fume hood work surfaces free of clutter?						
Are chemical storage cabinets well-maintained and free of rust?						
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?						
Are employees aware of how to report major chemical spills appropriately?						
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?						
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?						
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are						

irritating, corrosive, toxic by contact or absorption)?						
Are eyewashes tested and documented on a weekly basis?						
Is there appropriate signage indicating the location of the eyewash?						
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?						
Is the storage and use of liquid nitrogen confined to a well-ventilated area?						
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?						
Is eating and drinking prohibited in areas in which hazardous chemicals are used?						
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?						
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?						
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)						
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*						
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?						
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?						
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?						
Is the lab using autoclave tape that contains lead?						
Chemical Hygiene Plan (CHP) is available to						

personnel working with hazardous chemicals. Lab specific CHP is current and documented.						
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.						
Chemical inventory is submitted annually.						
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.						
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.						
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).						
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.						
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).						
Chemical containers are kept closed.						
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.						
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.						

Corrective Action:	**Completed by:**	**Date:**

Radiation Safety: (NA)

Are any radioactive substances handled in the lab?							
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?							
Is main door is marked with the sign of Radioactive warning?							
Are there clear instructions for the use of radioactive materials?							
Is there a safe method of storage?							
Is there a safe method of disposal?							
Are all radioactive substances correctly labeled?							
Are workers health checks, if required, up to date?							

RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?		✓				
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?		✓				
Are SOPs or safe working rules specific to the laboratory developed and implemented?	✓					
Are staff trained or instructed on the SOPs and lab safety rules?	✓					
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?	✓					
Is the signage on the laboratory door or entrance correct, adequate and up to date?	✓					
Have all current staff/students working in this lab undertaken the specific lab induction.	✓					
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?				✓		
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?	✓	✓				
Are there an adequate number of exits?		✓				
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?		✓				
People with Disabilities						
Is there access for people with impaired mobility?	✓					
Is there access to disabled toilets within reasonable distance?			✓			
Do emergency evacuation procedures include people with disabilities?			✓			
Compressed Gas Cylinders						
Gas name/label on shoulder of each cylinder clearly legible?						

(MA)

PJS

Are fuel cylinders separated from oxidizing cylinders?					
Are cylinders secured by brackets or chains?					
Are empty cylinders separate from full cylinders & clearly identified?					
Are acetylene cylinders that are not in use stored outside of building?					
Are all gas cylinders stored in a well ventilated area?					
Are cylinder valves closed when not in use?					
Does testing for gas leaks occur?					
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)					
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.					
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).					
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.					

Corrective Action:	Completed by:	Date:

Electrical Installations/ Electrical Safety

Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?			✓		
Are adequate power points available & unobstructed?		✓			
Are switches & power points in good condition (no cracks, loose face plates)?		✓			
Are double adaptors or piggy back adaptors avoided?	✓				
Are circuit breakers & main isolators clearly marked?			✓		
Is excessive use of extension cords avoided?	✓				
Is temporary wiring avoided?		✓			
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?			✓		

Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?		✓			
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	✓				

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment

Are operating instructions/safety signs adequate & clear?				✓	
Are safety glasses areas clearly sign posted?				✓	
Are emergency stop switches accessible, red in colour?				✓	
Do interlocks on machine guards operate, with regular testing?				✓	
Are moving parts, belt drives, shafts, fans appropriately guarded?				✓	
Are machines & equipment free from obstruction?	✓				
Is there adequate distance between machines & equipment?	✓				
Are all Lasers pointing away from doorways and corridors?				✓	
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?	✓				

Corrective Action:	Completed by:	Date:

First Aid

Are there trained first aid personnel?		✓			
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?		✓			
Are first aid personnel identifiable?		✓			

PPS

Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?		✓			
Have emergency procedures been established for specific hazardous circumstances including spills?				✓	
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin				✓	
Are staffs adequately trained to deal with minor spills?				✓	
Are staffs aware of response procedures for minor and major spills?				✓	
Are emergency plans and contact numbers displayed?		✓			
Are regular evacuation drills carried out?		✓			
Are emergency manifests established for the area and available in an accessible area to emergency staff?		✓			
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.				✓	
A chemical and/or biological spill kit for minor spills is available.				✓	
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).		✓			
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.			✓		
Registration is current & emergency contact numbers/location details are posted.		✓			
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.			✓		

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,				✓	

24.6.22

noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."				✓	
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."		✓			
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.	✓			✓	
Entry doors kept closed at all times and locked when unoccupied to maintain security.	✓				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation

Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.				✓	
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.				✓	
Access to CFH/LEV is unobstructed.				✓	
Fume hood inspection certification is current performed annually by CUSB.				✓	
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)		✓		✓	
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.			✓		
Is there enough fresh air, without draughts?	✓				
Is extra ventilation systems provided to remove fumes?				✓	
Are ventilation systems tested annually?				✓	

Corrective Action:	Completed by:	Date:

Waste Management (N/A)

Hazardous waste containers are labeled with contents, accumulation start date, and generator.					
Waste containers are kept closed to prevent off gassing discharge.					
Hazardous wastes are removed for disposal					

before the 12-month accumulation limit.					
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.					
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.					
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.					
Biological waste is collected in approved bag and disposed of in a timely manner.					

Corrective Action:	Completed by:	Date:

Equipment Safety

Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.					
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).					
Ladders are labeled with the approved warning stickers and are inspected before each use.					
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).					

Corrective Action:	Completed by:	Date:

Note:

24.6.22

Checklist Equipment

(For Laboratory Audit)

Check	Quarries	Remarks / Activity
☐	Does the laboratory have a clear register of all the equipment present?	Yes (A common steel register)
☐	Does the equipment register contain the following details for each piece of equipment? (tick off) Identity Label Serial number Manufacturer name Date of purchase Date of putting into service Location Condition Frequency of maintenance Date of previous maintenance Date of next scheduled maintenance Remarks	Yes.
☐	Is all critical / major equipment functional?	NO (under maintenance)
☐	Has the laboratory identified critical / major needs for specific pieces of equipment that must be present in order for the piece of equipment to function?	NA
☐	Is the SOP for Procurement and Reception of Equipment demonstrably authorized by Laboratory Assistant or Technical Assistant?	NA
☐	Are all technical staff members aware of the existence of the SOP and do they know when to use it?	NA
☑	Have all pieces of equipment that have a direct influence on the outcome of course / examinations been validated?	Yes
☐	Are all findings of validations (both validation of examination methods and validation of equipment) documented in validation reports?	NA
☐	Are SOPs present for all pieces of equipment?	NA
☐	Has all equipment in the laboratory been labeled?	Yes
☐	Does the laboratory have a designated laboratory – in – change and aware about responsibilities?	NO
☐	Does the laboratory have a Maintenance Log Sheet for each piece of equipment that shows what maintenance has been performed at which moment to which piece of equipment?	Yes (in common register for all computers)

☐	Does the laboratory use log sheets to record usage of specific pieces of equipment where necessary?	NA
☐	Do staff members know how and when to fill out Usage Log Sheets / log books for each piece of equipment?	NA
☐	Are the Usage Log Sheets placed near the piece of equipment they have been developed for?	NA
☐	Are Maintenance Log Sheets of equipment stored orderly in the Equipment Archive?	
☐	Is the method of maintenance and calibration of equipment documented?	NA
☐	Is the budget needed for the maintenance and calibration of equipment calculated and documented?	NA
☐	Have funds been identified for annual maintenance and calibration of equipment?	Through AMC
☐	Have funds been identified for training of a staff member for internal maintenance and calibration of equipment?	NO
☐	Is a preventive maintenance program in place for all pieces of equipment?	yes.
☐	Does the laboratory demonstrably adhere to this program?	NA

Note:

Additional computers are required on urgent basis as we are not able to fulfill the requirement of existing strength of students. Addition of students through elective courses further worsen the situation.

ACs are essential for computer lab, replacement of old non-working ACs are required with new ACs.

24/06/2022 24/6/2022

Corrective Action:	Completed by:	Date:
☐		

27/6/2022

सेवा में,
विभागाध्यक्ष,
महोदय,
उपरोक्त विषय से आप सभी को अवगत कराने के लिए माननीय अध्यक्ष आईक्यूएसी से निर्देश प्राप्त हुए हैं कि नैक की तैयारी के तहत प्रयोगशालाओं का ऑडिट भी किया जाना चाहिए। इसकी तैयारियों से संबंधित कुछ सुझाव दस्तावेज के रूप में तैयार किए गए हैं। कृपया अपनी तैयारी में अधिक से अधिक संबंधित सुझावों को शामिल करें।
अतः आपसे अनुरोध है कि अपने विभाग की सभी प्रकार की प्रयोगशालाओं की तैयारी यथाशीघ्र दस्तावेजों के सुझावों का पालन करते हुए समय से पूर्ण करने का कष्ट करें।
एक टीम के अध्यक्ष आपसे यथाशीघ्र संपर्क करेंगे और आपके विभाग से संबंधित प्रयोगशालाओं के ऑडिट की तिथि निर्धारित करेंगे।
सम्बंधित दल को आप से और आप के विभाग से पूर्ण सहयोग की अपेक्षा का विश्वास है।
धन्यवाद।
आपका भवदीय।
वेंकटेश

To,
The Head of Department,
Sir,
In order to make you all aware of the above subject, instructions have been received from Hon'ble Chairman IQAC that as part of the NAAC's preparation, the laboratories should also be audited. Some suggestions related to its preparations have been prepared in the form of documents. Please include as many related suggestions as possible in your preparation.
Therefore, you are requested to complete the preparation of all types of laboratories of your department as soon as possible following the suggestions of the documents and complete them on time. A team head will contact you as soon as possible and schedule an audit of the laboratories belonging to your department.
The concerned team is confident of expecting full cooperation from you and your department. Thank you.
With best regards,
venktesh

Department Names

1	Department of Life Science	9	Department of Computer Science
2	Department of Environmental Science	10	Department of Mass Communication and Media
3	Department of Bioinformatics	11	Department of Physical Education
4	Department of Geology	12	Department of Commerce and Business Studies
5	Department of Biotechnology	13	Department of Psychological Science
6	Department of Pharmacy	14	Department of Economic Studies and Policies
7	Department of Chemistry	15	Central Instrumentation Facility
8	Department of Physics	16	Common Computer Lab

A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual				✓	
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual				✓	
Chemical Waste Policy Manual				✓	
Noise Policy Manual				✓	
Chemical Hygiene Plan manual				✓	
Current Safety Data Sheets (SDS)				✓	
Infection Prevention Manual				✓	
Radiation Safety Manual				✓	
Disaster Preparedness Manual				✓	
Site-specific (Laboratory) Fire Plan Manual				✓	
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?	✓				
Are storage areas well organized and free of clutter?	✓				
Is shelving stable and not overloaded?	✓				
Is shelving stable, free of extraneous material and not too high?	✓				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓				
Are chemical storage facilities in good condition?				✓	
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	✓			✓	
General work space, storage areas, and bench tops appear uncluttered and orderly.	✓				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.				✓	
Trash bags & sharps containers are removed				✓	

when full.					
Corrective Action:	**Completed by:**				**Date:**
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?	✓				
If YES. How frequent?	1				
Working Environment					
Is the room temperature comfortable?	✓				
Are windows in clean & safe condition?	✓				
Are blinds fitted to reduce glare or temperature?	✓				
Is lighting adequate in all area?	✓				
Is extra lighting provided for close work where needed?	✓				
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?				✓	
Manual Handling					
Are stepladders or footstools used to reach high shelves?				✓	
Are heavy & awkward items stored at waist height where possible?				✓	
Are trolleys or barrows available for moving heavy or large loads?				✓	
Biological Safety (NA)					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?				✓	
Are all sharps disposed of in an approved puncture-resistant container?					
During transport, are all potentially infectious materials placed in a secondary leak-proof container?					
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?					
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end					

of the procedure or immediately following a spill?					
Are personnel aware of appropriate biological spill procedures?					
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?					
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?					
Have all biological safety cabinets been certified in the past year?					
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?					
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?					
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?					
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)					
Food and drinks stored and consumed away from toxic materials?					
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?					
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?					
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).					
Inventory of Biological Agents is submitted annually to CUSB.					
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).					
Are drying facilities available in the lab?					
Are there enough toilets for men and women within reasonable distance?					
Are toilets & washbasins clean & in working					

order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?					
Corrective Action:	**Completed by:**				**Date:**
Cold Room Safety (NA)					
Cold room has an emergency release mechanism.					
Cardboard is not stored in the area.					
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.					
General housekeeping is observed and the area is organized, uncluttered, and sanitary.					
Expired/abandoned samples are not stored.					
Kitchenettes / Tea Rooms					
Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?	✓				
Are rest & eating facilities provided outside the lab?				✓	
Is drinking water available?	✓				
Are power points & cables a safe distance from wet areas?	✓				
Are microwave oven door seals clean and undamaged?				✓	
Is a fire blanket provided where electric cookers are used?				✓	
Corrective Action:	**Completed by:**				**Date:**
Laser Safety (NA)					
Laser SOP available to authorized users and training documented.					
Laser controlled areas are posted with appropriate caution signs.					
Beam stops are present at the end of all beam paths and are non-combustible.					
Approved safety glasses are available.					
Corrective Action:	**Completed by:**				**Date:**

Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			
Are employees familiar with the location of fire extinguishers and pull alarms?	✓				
Are all fire alarms visible, unobstructed, and accessible?	✓				
Is the fire alarm audible from all parts of the lab?	✓				
Are aisles kept clear and unobstructed at all times?					
Are open flames or Bunsen burners used in the lab?					
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?					
Are fire hose reels regularly checked?					
Are all fire extinguishers regularly checked?				✓	
Visually, do the fire sprinklers and/or detector heads appear free from damage?	✓				
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.	✓				
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.	✓				
Fire alarm strobes are visible from all locations.	✓				
Are supplies of flammables and combustible liquids reasonable for the lab's needs?	✓				
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?	✓				
Do all workers know where the outside assembly point is located?	✓				
Is emergency power adequate for the functioning of the lab?				✓	
Does the lab avoid placing electrical devices near water sources?				✓	
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?		✓			
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?		✓			

Corrective Action:	Completed by:	Date:

Chemical Safety and Management (NA)					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?					
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?					
Are potentially reactive chemicals stored separately?					
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?					
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____					
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____					
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____					
Are chemical fume hood work surfaces free of clutter?					
Are chemical storage cabinets well-maintained and free of rust?					
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?					
Are employees aware of how to report major chemical spills appropriately?					
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?					
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?					
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are					

irritating, corrosive, toxic by contact or absorption)?					
Are eyewashes tested and documented on a weekly basis?					
Is there appropriate signage indicating the location of the eyewash?					
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?					
Is the storage and use of liquid nitrogen confined to a well-ventilated area?					
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?					
Is eating and drinking prohibited in areas in which hazardous chemicals are used?					
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?					
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?					
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)					
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*					
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?					
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?					
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?					
Is the lab using autoclave tape that contains lead?					
Chemical Hygiene Plan (CHP) is available to					

personnel working with hazardous chemicals. Lab specific CHP is current and documented.					
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.					
Chemical inventory is submitted annually.					
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.					
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.					
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).					
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.					
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).					
Chemical containers are kept closed.					
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.					
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.					
Corrective Action:	**Completed by:**			**Date:**	
Radiation Safety: (NA)					
Are any radioactive substances handled in the lab?					
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?					
Is main door is marked with the sign of Radioactive warning?					
Are there clear instructions for the use of radioactive materials?					
Is there a safe method of storage?					
Is there a safe method of disposal?					
Are all radioactive substances correctly labeled?					
Are workers health checks, if required, up to date?					

RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?						
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?	✓					
Are SOPs or safe working rules specific to the laboratory developed and implemented?	✓					
Are staff trained or instructed on the SOPs and lab safety rules?	✓					
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?	✓					
Is the signage on the laboratory door or entrance correct, adequate and up to date?	✓					
Have all current staff/students working in this lab undertaken the specific lab induction.	✓					
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?					✓	
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?	✓					
Are there an adequate number of exits?	✓					
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?	✓					
People with Disabilities						
Is there access for people with impaired mobility?	✓					
Is there access to disabled toilets within reasonable distance?		✓				
Do emergency evacuation procedures include people with disabilities?	✓					
Compressed Gas Cylinders (NA)						
Gas name/label on shoulder of each cylinder clearly legible?						

Are fuel cylinders separated from oxidizing cylinders?					
Are cylinders secured by brackets or chains?					
Are empty cylinders separate from full cylinders & clearly identified?					
Are acetylene cylinders that are not in use stored outside of building?					
Are all gas cylinders stored in a well ventilated area?					
Are cylinder valves closed when not in use?					
Does testing for gas leaks occur?					
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)					
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.					
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).					
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.					
Corrective Action:	**Completed by:**				**Date:**
Electrical Installations/ Electrical Safety					
Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?	✓				
Are adequate power points available & unobstructed?	✓				
Are switches & power points in good condition (no cracks, loose face plates)?	✓				
Are double adaptors or piggy back adaptors avoided?	✓				
Are circuit breakers & main isolators clearly marked?					
Is excessive use of extension cords avoided?	✓				
Is temporary wiring avoided?	✓				
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?	✓				

Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?					
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	✓				

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment (NA)					
Are operating instructions/safety signs adequate & clear?					
Are safety glasses areas clearly sign posted?					
Are emergency stop switches accessible, red in colour?					
Do interlocks on machine guards operate, with regular testing?					
Are moving parts, belt drives, shafts, fans appropriately guarded?					
Are machines & equipment free from obstruction?					
Is there adequate distance between machines & equipment?					
Are all Lasers pointing away from doorways and corridors?					
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?					

Corrective Action:	Completed by:	Date:

First Aid					
Are there trained first aid personnel?					
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?		✓			
Are first aid personnel identifiable?	✓				

Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?		✓			
Have emergency procedures been established for specific hazardous circumstances including spills?		✓			
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin		✓			
Are staffs adequately trained to deal with minor spills?		✓			
Are staffs aware of response procedures for minor and major spills?	✓				
Are emergency plans and contact numbers displayed?	✓				
Are regular evacuation drills carried out?		✓			
Are emergency manifests established for the area and available in an accessible area to emergency staff?		✓			
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.		✓			
A chemical and/or biological spill kit for minor spills is available.				✓	
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).		✓			
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.				✓	
Registration is current & emergency contact numbers/location details are posted.	✓				
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.				✓	

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,				✓	

noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."				✓	
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."				✓	
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.	✓				
Entry doors kept closed at all times and locked when unoccupied to maintain security.	✓				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation (NA)

Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.					
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.					
Access to CFH/LEV is unobstructed.					
Fume hood inspection certification is current performed annually by CUSB.					
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)					
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.					
Is there enough fresh air, without draughts?					
Is extra ventilation systems provided to remove fumes?					
Are ventilation systems tested annually?					

Corrective Action:	Completed by:	Date:

Waste Management (NA)

Hazardous waste containers are labeled with contents, accumulation start date, and generator.					
Waste containers are kept closed to prevent off gassing discharge.					
Hazardous wastes are removed for disposal					

R. K. Kamdhar.
27/06/2022

before the 12-month accumulation limit.		D			
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.		D			
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.		D			
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.		D			
Biological waste is collected in approved bag and disposed of in a timely manner.		D			

Corrective Action:	Completed by:	Date:

Equipment Safety					
Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.			N/O		
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).		D			
Ladders are labeled with the approved warning stickers and are inspected before each use.			N/O		
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).				N/A	

Corrective Action:	Completed by:	Date:

23/06/22

सेवा में,
विभागाध्यक्ष,
महोदय,
उपरोक्त विषय से आप सभी को अवगत कराने के लिए माननीय अध्यक्ष आईक्यूएसी से निर्देश प्राप्त हुए हैं कि नैक की तैयारी के तहत प्रयोगशालाओं का ऑडिट भी किया जाना चाहिए। इसकी तैयारियों से संबंधित कुछ सुझाव दस्तावेज के रूप में तैयार किए गए हैं। कृपया अपनी तैयारी में अधिक से अधिक संबंधित सुझावों को शामिल करें।
अतः आपसे अनुरोध है कि अपने विभाग की सभी प्रकार की प्रयोगशालाओं की तैयारी यथाशीघ्र दस्तावेजों के सुझावों का पालन करते हुए समय से पूर्ण करने का कष्ट करें।
एक टीम के अध्यक्ष आपसे यथाशीघ्र संपर्क करेंगे और आपके विभाग से संबंधित प्रयोगशालाओं के ऑडिट की तिथि निर्धारित करेंगे।
सम्बंधित दल को आप से और आप के विभाग से पूर्ण सहयोग की अपेक्षा का विश्वास है।
धन्यवाद।
आपका भवदीय।
वेंकटेश

To,
The Head of Department,
Sir,
In order to make you all aware of the above subject, instructions have been received from Hon'ble Chairman IQAC that as part of the NAAC's preparation, the laboratories should also be audited. Some suggestions related to its preparations have been prepared in the form of documents. Please include as many related suggestions as possible in your preparation.
Therefore, you are requested to complete the preparation of all types of laboratories of your department as soon as possible following the suggestions of the documents and complete them on time. A team head will contact you as soon as possible and schedule an audit of the laboratories belonging to your department.
The concerned team is confident of expecting full cooperation from you and your department.
Thank you.
With best regards,
venktesh

Department Names

1	Department of Life Science	9	Department of Computer Science
2	Department of Environmental Science	10	Department of Mass Communication and Media
3	Department of Bioinformatics	11	Department of Physical Education
4	Department of Geology	12	Department of Commerce and Business Studies
5	Department of Biotechnology	13	Department of Psychological Science
6	Department of Pharmacy	14	Department of Economic Studies and Policies
7	Department of Chemistry	15	Central Instrumentation Facility
8	Department of Physics	16	Common Computer Lab

A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual					
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual				✓	
Chemical Waste Policy Manual				✓	
Noise Policy Manual					
Chemical Hygiene Plan manual				✓	
Current Safety Data Sheets (SDS)				✓	
Infection Prevention Manual				✓	
Radiation Safety Manual				✓	
Disaster Preparedness Manual				✓	
Site-specific (Laboratory) Fire Plan Manual	✓				
Laboratory Housekeeping					
Are passageways unobstructed?	✓				
Are floors, walls and ceilings clean and well maintained?	✓				
Are bench tops, drawers and sinks clean and well maintained?	✓				
Are storage areas well organized and free of clutter?	✓				
Is shelving stable and not overloaded?	✓				
Is shelving stable, free of extraneous material and not too high?	✓				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	✓				
Are chemical storage facilities in good condition?				✓	
Are walkways free of obstruction?	✓				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	✓				
General work space, storage areas, and bench tops appear uncluttered and orderly.	✓				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	✓				
No glass containers are stored on the floor.	✓				
Trash bags & sharps containers are removed	✓				

when full.					
Corrective Action:	**Completed by:**				**Date:**
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?					
If YES. How frequent?					
Working Environment					
Is the room temperature comfortable?	✓				
Are windows in clean & safe condition?	✓				
Are blinds fitted to reduce glare or temperature?	✓				
Is lighting adequate in all area?	✓				
Is extra lighting provided for close work where needed?	✓				
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?				✓	
Manual Handling					
Are stepladders or footstools used to reach high shelves?				✓	
Are heavy & awkward items stored at waist height where possible?				✓	
Are trolleys or barrows available for moving heavy or large loads?				✓	
Biological Safety NA					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?				-	
Are all sharps disposed of in an approved puncture-resistant container?				-	
During transport, are all potentially infectious materials placed in a secondary leak-proof container?				-	
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?				-	
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end				-	

of the procedure or immediately following a spill?					
Are personnel aware of appropriate biological spill procedures?					
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?					
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?					
Have all biological safety cabinets been certified in the past year?					
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?					
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?					
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?	✓				
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)					
Food and drinks stored and consumed away from toxic materials?	✓				
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?					
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?					
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).					
Inventory of Biological Agents is submitted annually to CUSB.					
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).					
Are drying facilities available in the lab?					
Are there enough toilets for men and women within reasonable distance?	✓				
Are toilets & washbasins clean & in working	✓				

order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?	✓				
Corrective Action:	**Completed by:**				**Date:**
Cold Room Safety N.A.					
Cold room has an emergency release mechanism.					
Cardboard is not stored in the area.					
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.					
General housekeeping is observed and the area is organized, uncluttered, and sanitary.					
Expired/abandoned samples are not stored.					
Kitchenettes / Tea Rooms					
Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?	✓				
Are rest & eating facilities provided outside the lab?	✓				
Is drinking water available?	✓				
Are power points & cables a safe distance from wet areas?	✓				
Are microwave oven door seals clean and undamaged?				✓	
Is a fire blanket provided where electric cookers are used?				✓	
Corrective Action:	**Completed by:**				**Date:**
Laser Safety N.A.					
Laser SOP available to authorized users and training documented.					
Laser controlled areas are posted with appropriate caution signs.					
Beam stops are present at the end of all beam paths and are non-combustible.					
Approved safety glasses are available.					
Corrective Action:	**Completed by:**				**Date:**

Fire Safety:					
Has each employee participated in at least one fire drill in the past year?		✓			
Are employees familiar with the location of fire extinguishers and pull alarms?	✓				
Are all fire alarms visible, unobstructed, and accessible?	✓				
Is the fire alarm audible from all parts of the lab?	✓				
Are aisles kept clear and unobstructed at all times?	✓				
Are open flames or Bunsen burners used in the lab?				✓	
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?	✓				
Are fire hose reels regularly checked?	✓				
Are all fire extinguishers regularly checked?	✓				
Visually, do the fire sprinklers and/or detector heads appear free from damage?					
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.					
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.					
Fire alarm strobes are visible from all locations.	✓				
Are supplies of flammables and combustible liquids reasonable for the lab's needs?					
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?					
Do all workers know where the outside assembly point is located?					
Is emergency power adequate for the functioning of the lab?					
Does the lab avoid placing electrical devices near water sources?	✓				
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?	✓				
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?					

Corrective Action:	Completed by:	Date:

Chemical Safety and Management NA					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?					
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?					
Are potentially reactive chemicals stored separately?					
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?					
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____					
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____					
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____					
Are chemical fume hood work surfaces free of clutter?					
Are chemical storage cabinets well-maintained and free of rust?					
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?					
Are employees aware of how to report major chemical spills appropriately?					
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?					
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?					
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are					

irritating, corrosive, toxic by contact or absorption)?					
Are eyewashes tested and documented on a weekly basis?					
Is there appropriate signage indicating the location of the eyewash?					
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?					
Is the storage and use of liquid nitrogen confined to a well-ventilated area?					
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?					
Is eating and drinking prohibited in areas in which hazardous chemicals are used?					
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?					
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?					
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)					
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*					
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?					
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?					
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?					
Is the lab using autoclave tape that contains lead?					
Chemical Hygiene Plan (CHP) is available to					

personnel working with hazardous chemicals. Lab specific CHP is current and documented.					
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.					
Chemical inventory is submitted annually.					
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.					
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.					
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).					
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.					
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).					
Chemical containers are kept closed.					
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.					
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.					
Corrective Action:	**Completed by:**			**Date:**	
Radiation Safety: NA					
Are any radioactive substances handled in the lab?					
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?					
Is main door is marked with the sign of Radioactive warning?					
Are there clear instructions for the use of radioactive materials?					
Is there a safe method of storage?					
Is there a safe method of disposal?					
Are all radioactive substances correctly labeled?					
Are workers health checks, if required, up to date?					

RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?						
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?						
Are SOPs or safe working rules specific to the laboratory developed and implemented?						
Are staff trained or instructed on the SOPs and lab safety rules?						
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?						
Is the signage on the laboratory door or entrance correct, adequate and up to date?						
Have all current staff/students working in this lab undertaken the specific lab induction.	✓					
Are floors clean, dry, and free from slip/trip hazards?	✓					
Is there a procedure on safe Laser usage?						
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	✓					
Are exit signs illuminated and clearly visible?	✓					
Are there an adequate number of exits?	✓					
Are all exiting doors unlocked?	✓					
Is emergency lighting installed?	✓					
People with Disabilities						
Is there access for people with impaired mobility?	✓					
Is there access to disabled toilets within reasonable distance?						
Do emergency evacuation procedures include people with disabilities?						
Compressed Gas Cylinders NA						
Gas name/label on shoulder of each cylinder clearly legible?						

Are fuel cylinders separated from oxidizing cylinders?					
Are cylinders secured by brackets or chains?					
Are empty cylinders separate from full cylinders & clearly identified?					
Are acetylene cylinders that are not in use stored outside of building?					
Are all gas cylinders stored in a well ventilated area?					
Are cylinder valves closed when not in use?					
Does testing for gas leaks occur?					
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)					
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.					
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).					
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.					
Corrective Action:	**Completed by:**				**Date:**
Electrical Installations/ Electrical Safety					
Are power leads in good condition, no trip hazards?	✓				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?					
Are adequate power points available & unobstructed?	✓				
Are switches & power points in good condition (no cracks, loose face plates)?	✓				
Are double adaptors or piggy back adaptors avoided?					
Are circuit breakers & main isolators clearly marked?					
Is excessive use of extension cords avoided?					
Is temporary wiring avoided?	✓				
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?					

Are excessive power boards being avoided?	✓				
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?					
Equipment does not have frayed or damaged wiring.	✓				
Extension cords are not being used as permanent wiring.	✓				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").					

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment					
Are operating instructions/safety signs adequate & clear?					
Are safety glasses areas clearly sign posted?					
Are emergency stop switches accessible, red in colour?					
Do interlocks on machine guards operate, with regular testing?					
Are moving parts, belt drives, shafts, fans appropriately guarded?					
Are machines & equipment free from obstruction?					
Is there adequate distance between machines & equipment?					
Are all Lasers pointing away from doorways and corridors?					
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?					

Corrective Action:	Completed by:	Date:

First Aid					
Are there trained first aid personnel?					
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?					
Are first aid personnel identifiable?					

Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?					
Have emergency procedures been established for specific hazardous circumstances including spills?					
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin					
Are staffs adequately trained to deal with minor spills?					
Are staffs aware of response procedures for minor and major spills?					
Are emergency plans and contact numbers displayed?					
Are regular evacuation drills carried out?					
Are emergency manifests established for the area and available in an accessible area to emergency staff?					
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.					
A chemical and/or biological spill kit for minor spills is available.					
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).					
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.					
Registration is current & emergency contact numbers/location details are posted.					
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.					

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,					

noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."					
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."					
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.					
Entry doors kept closed at all times and locked when unoccupied to maintain security.					

Corrective Action:	**Completed by:**	**Date:**

Engineering Controls & Ventilation					
Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.	✓				
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.					
Access to CFH/LEV is unobstructed.					
Fume hood inspection certification is current performed annually by CUSB.					
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)					
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.					
Is there enough fresh air, without draughts?					
Is extra ventilation systems provided to remove fumes?					
Are ventilation systems tested annually?					

Corrective Action:	**Completed by:**	**Date:**

Waste Management					
Hazardous waste containers are labeled with contents, accumulation start date, and generator.					
Waste containers are kept closed to prevent off gassing discharge.					
Hazardous wastes are removed for disposal					

before the 12-month accumulation limit.					
Secondary containers are used to store glass waste collection bottles to capture leaks/spills.					
Syringes and other sharps waste are disposed of in approved sharps container. Labeled as "biohazard" or "non-contaminated" sharps.					
Needles are not re-capped, bent, or broken and are disposed of immediately in appropriate container.					
Biological waste is collected in approved bag and disposed of in a timely manner.					

Corrective Action:	**Completed by:**	**Date:**

Equipment Safety					
Rotating machinery and high temperature devices have approved safeguards. Safety switches and emergency stops are working.					
Safety training for hazardous equipment is documented (SOP, training checklist, badge system).					
Ladders are labeled with the approved warning stickers and are inspected before each use.					
Radiation Producing Equipment is registered with CUSB and Nuclear Physics Section (Protection Section).					

Corrective Action:	**Completed by:**	**Date:**

23/6/22

23/6/22

PHARMACY.

सेवा में,
विभागाध्यक्ष,
महोदय,
उपरोक्त विषय से आप सभी को अवगत कराने के लिए माननीय अध्यक्ष आईक्यूएसी से निर्देश प्राप्त हुए हैं कि नैक की तैयारी के तहत प्रयोगशालाओं का ऑडिट भी किया जाना चाहिए। इसकी तैयारियों से संबंधित कुछ सुझाव दस्तावेज के रूप में तैयार किए गए हैं। कृपया अपनी तैयारी में अधिक से अधिक संबंधित सुझावों को शामिल करें।
अतः आपसे अनुरोध है कि अपने विभाग की सभी प्रकार की प्रयोगशालाओं की तैयारी यथाशीघ्र दस्तावेजों के सुझावों का पालन करते हुए समय से पूर्ण करने का कष्ट करें।
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सम्बंधित दल को आप से और आप के विभाग से पूर्ण सहयोग की अपेक्षा का विश्वास है।
धन्यवाद।
आपका भवदीय।
वेंकटेश

To,
The Head of Department,
Sir,
In order to make you all aware of the above subject, instructions have been received from Hon'ble Chairman IQAC that as part of the NAAC's preparation, the laboratories should also be audited. Some suggestions related to its preparations have been prepared in the form of documents. Please include as many related suggestions as possible in your preparation.
Therefore, you are requested to complete the preparation of all types of laboratories of your department as soon as possible following the suggestions of the documents and complete them on time. A team head will contact you as soon as possible and schedule an audit of the laboratories belonging to your department.
The concerned team is confident of expecting full cooperation from you and your department. Thank you.
With best regards,
venktesh

Department Names

1	Department of Life Science	9	Department of Computer Science
2	Department of Environmental Science	10	Department of Mass Communication and Media
3	Department of Bioinformatics	11	Department of Physical Education
4	Department of Geology	12	Department of Commerce and Business Studies
5	Department of Biotechnology	13	Department of Psychological Science
6	Department of Pharmacy ✓	14	Department of Economic Studies and Policies
7	Department of Chemistry	15	Central Instrumentation Facility
8	Department of Physics	16	Common Computer Lab

A – Acceptable/Meeting Requirements; D – Deficient/Not Meeting Requirements; N/O – Not Observed; N/A – Not Applicable

Safety Resources: Are the following readily available in the Laboratory?

Laboratories Safety Policies and Procedures Manual	A	D	N/O	NA	Comments
Health Safety Resources, Policies and Procedures Manual		D			
Standard on Occupational Exposure to Hazardous Chemicals in Laboratories Manual		D			
Chemical Waste Policy Manual		D			
Noise Policy Manual				NA	
Chemical Hygiene Plan manual		D			
Current Safety Data Sheets (SDS)		D			
Infection Prevention Manual		D			
Radiation Safety Manual				NA	
Disaster Preparedness Manual				NA	
Site-specific (Laboratory) Fire Plan Manual		D			
Laboratory Housekeeping					
Are passageways unobstructed?	A				
Are floors, walls and ceilings clean and well maintained?	A				
Are bench tops, drawers and sinks clean and well maintained?	A				
Are storage areas well organized and free of clutter?	A				
Is shelving stable and not overloaded?	A				
Is shelving stable, free of extraneous material and not too high?	A				
Is the workplace free from accumulation of equipment, redundant chemicals, contaminated waste or rubbish?	A				
Are chemical storage facilities in good condition?	A				
Are walkways free of obstruction?	A				
Surfaces appear to be cleaned and decontaminated after work is performed (no chemical residue, dust, biohazards, etc.).	A				
General work space, storage areas, and bench tops appear uncluttered and orderly.	A				
No slip, trip, or fall hazards are present. Aisles and exits are free from obstruction	A				
No glass containers are stored on the floor.	A				
Trash bags & sharps containers are removed	A				

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when full.	A				
Corrective Action:	**Completed by:**				**Date:**
General Safety Awareness					
Is there general safety awareness orientation of the "New Students and employees conducted?		D			
If YES. How frequent?					
Working Environment					
Is the room temperature comfortable?	A				
Are windows in clean & safe condition?	A				
Are blinds fitted to reduce glare or temperature?		D			
Is lighting adequate in all area?	A				
Is extra lighting provided for close work where needed?	A				
Personal Protective Equipment					
Is there personal protective equipment available in the laboratory?		D			
Manual Handling					
Are stepladders or footstools used to reach high shelves?		D			
Are heavy & awkward items stored at waist height where possible?			N/O		
Are trolleys or barrows available for moving heavy or large loads?			N/O		
Biological Safety					
Is hand washing sinks available in all areas where work involving potentially infectious materials is performed?	A				
Are all sharps disposed of in an approved puncture-resistant container?			N/O		
During transport, are all potentially infectious materials placed in a secondary leak-proof container?			N/O		
Are mechanical devices (i.e. forceps, hemostats, dust pans etc.) available and are they used by employees to pick up broken glassware?			N/O		
Are surfaces on which work involving blood and blood products is performed, routinely wiped down with an approved disinfectant at the end			N/O		

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of the procedure or immediately following a spill?					
Are personnel aware of appropriate biological spill procedures?		D			
Is regulated medical waste collected in containers that are clearly labeled or color-coded as "bio-hazardous"?			N/O		
Are all refrigerators and freezers used to store potentially infectious materials labeled with the universal biohazard symbol?		D			Refrigerator Not working properly
Have all biological safety cabinets been certified in the past year?		D			
Are eating, drinking, applying cosmetics and lip balm, and handling contact lenses prohibited in areas in which there is any risk of exposure to potentially infectious materials?			N/O		
Is the storage of food and drink prohibited in refrigerators, and other appliances, used to store potentially infectious materials, reagents, or hazardous chemicals?			N/O		
Workspaces (e.g., bench-tops, fume hoods, bio-safety cabinets) organized and clean?	A				
Flammable liquids (including flammable waste and glacial acetic acid) stored in flammable storage cabinets? (Note: Up to 10 gallons per control area (NOT individual lab) may be stored outside of cabinets.)			N/O		
Food and drinks stored and consumed away from toxic materials?				N/A	
"Chemical Waste Compliance" poster is posted in the location where hazardous waste is accumulated?			N/O		
Chemical containers and hazardous waste containers are clean, structurally sound, and closed when not in use?		D			
Approval is documented for work requiring additional registration (Animal research with IACUC, rDNA with IBC).		D			
Inventory of Biological Agents is submitted annually to CUSB.			N/O		
Approved disinfectant is in use and bleach solutions are freshly prepared (within 24 hours).		D			
Are drying facilities available in the lab?			N/O		
Are there enough toilets for men and women within reasonable distance?	A				
Are toilets & washbasins clean & in working		D			

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order?					
Are got & cold (or warm, normal) running water, soap and towels (or other cleaning / hand drying facilities) provided in the toilets?		D			

Corrective Action:	Completed by:	Date:

Cold Room Safety					
Cold room has an emergency release mechanism.			N/O		
Cardboard is not stored in the area.			N/O		
Asphyxiates and hazardous gases are not used in cold room, unless adequate ventilation is present.			N/O		
General housekeeping is observed and the area is organized, uncluttered, and sanitary.			N/O		
Expired/abandoned samples are not stored.			N/O		

Kitchenettes / Tea Rooms					
Are staff & Students warned & supervised to ensure there is no eating, drinking or smoking in the lab?			N/O		
Are rest & eating facilities provided outside the lab?		D			
Is drinking water available?		D			
Are power points & cables a safe distance from wet areas?			N/O		
Are microwave oven door seals clean and undamaged?			N/O		
Is a fire blanket provided where electric cookers are used?			N/O		

Corrective Action:	Completed by:	Date:

Laser Safety					
Laser SOP available to authorized users and training documented.				N/A	
Laser controlled areas are posted with appropriate caution signs.				N/A	
Beam stops are present at the end of all beam paths and are non-combustible.				N/A	
Approved safety glasses are available.				N/A	

Corrective Action:	Completed by:	Date:

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Fire Safety:					
Has each employee participated in at least one fire drill in the past year?			N/O		
Are employees familiar with the location of fire extinguishers and pull alarms?	A				
Are all fire alarms visible, unobstructed, and accessible?	A				
Is the fire alarm audible from all parts of the lab?		D			
Are aisles kept clear and unobstructed at all times?	A				
Are open flames or Bunsen burners used in the lab?			N/O		
Are all fire extinguishers/equipment suitable, appropriately located, mounted and identified?	A				
Are fire hose reels regularly checked?			N/O		
Are all fire extinguishers regularly checked?			N/O		
Visually, do the fire sprinklers and/or detector heads appear free from damage?	A				
Sprinkler heads are unobstructed with an 18" clearance below sprinkler heads around entire room.	A				
Fire extinguishers available, appropriate for type of hazard, inspection dates recorded, and unobstructed access with 3-feet clearance.	A				
Fire alarm strobes are visible from all locations.	A				
Are supplies of flammables and combustible liquids reasonable for the lab's needs?	A				
Are there fire extinguishers available in areas where flammable and combustible materials are handled and stored?	A				
Do all workers know where the outside assembly point is located?	A				
Is emergency power adequate for the functioning of the lab?	A				
Does the lab avoid placing electrical devices near water sources?	A				
Is all wiring in the lab in good condition (e.g. no damaged cords, etc.)?	A				
Does the lab avoid overloading outlets and using extension cords as substitutes for permanent wiring?	A				

Corrective Action:	Completed by:	Date:

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Chemical Safety and Management					
Are precautionary labels present on the containers of all hazardous chemicals that include the chemical name, type of hazard, and what to do if accidental contact occurs?	A				
Has annual review and evaluation of the effectiveness of the lab's Chemical Hygiene Plan been done?			N/O		
Are potentially reactive chemicals stored separately?	A				
Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? • Are acids and bases stored separately near floor level? • Are oxidizers separated from organics? • Are water-reactive separated from water sources?			N/O		
If formalin is handled in your lab, has formalin monitoring been done in the past? Date? _____			N/O		
Was formalin monitoring required and performed in the last year (as the result of a new or change in process or procedure)? Date? _____			N/O		
Have the lab's chemical fume hood(s) been certified in the past year? Date? _____			N/O		
Are chemical fume hood work surfaces free of clutter?			N/O		
Are chemical storage cabinets well-maintained and free of rust?	A				
Are appropriate supplies (e.g., spill kits) and instructions for use available in areas where potential spill of chemical hazards exist?			N/O		
Are employees aware of how to report major chemical spills appropriately?	A				
Are all compressed gas tanks secured in an upright position away from any open flames or other sources of heat?			N/O		
Is there no more than one extra cylinder of compressed, flammable gas at any one work station?			N/O		
Is there plumbed eyewash in every area where hazardous chemicals which may cause skin or eye damage are used (e.g. chemicals that are	A				

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irritating, corrosive, toxic by contact or absorption)?					
Are eyewashes tested and documented on a weekly basis?			N/O		
Is there appropriate signage indicating the location of the eyewash?		D			
When decanting or entering an open container of liquid nitrogen, are appropriate gloves and a face shield worn?			N/O		
Is the storage and use of liquid nitrogen confined to a well-ventilated area?			N/O		
Are secondary containers (i.e. plastic bottle carriers) available for transporting glass containers (larger than 500 ml) that contain hazardous chemicals?		D			Tray Available
Is eating and drinking prohibited in areas in which hazardous chemicals are used?		D			
Is the lab aware of and compliant with the Guidelines for Sink Disposal of Chemical Substances?	A				
Are chemical waste containers properly labeled (labeled "Waste *Name of Chemical*" and date waste is first placed in that container)?		D			
Are proper waste container management practices utilized during storage? (capped, in secondary containment, proper container, not overfilled, no visible contamination on outer container, not stored >90 days after start date)		D			
Is the lab using only designated waste containers for storage of waste? *Note: The lab must not reuse reagent containers for storage of waste.*			N/O		
Are unknown chemicals labeled as "Waste Unknown" and dated, and disposed of within **30 days**?			N/O		
Has the lab reviewed chemicals stored in the lab within the last year to sort out obsolete chemicals that need to be discarded?			N/O		
Is Universal Waste (used rechargeable batteries, fluorescent bulbs, or mercury thermometers) stored in the laboratory? If yes, are the containers labeled and dated? If yes, is the lab aware these waste items cannot be stored in the lab longer than one year?			N/O		
Is the lab using autoclave tape that contains lead?		D			
Chemical Hygiene Plan (CHP) is available to					

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personnel working with hazardous chemicals. Lab specific CHP is current and documented.	A					
Standard Operating Procedure (SOP) documented for particularly hazardous chemicals and/or high-risk procedures.	A					
Chemical inventory is submitted annually.	A					
Chemical containers are labeled with contents, appropriate hazard warnings, and expiration dates.	A					
Time-sensitive chemicals (i.e. peroxide formers) are labeled with date opened and removed as hazard waste when expired.		D				
Chemical storage is well organized and incompatible materials are segregated (oxidizers/flammables, acids/bases).		D				
Hazardous materials/liquids are stored below eye level (not on the floor) and are stored in secondary containers.			N/O			
Chemicals are stored in compatible containers and cabinets (acids in non-metal cabinets, flammables in approved cabinets, refrigeration).	A					
Chemical containers are kept closed.	A					
Unnecessary, unused, or outdated materials are removed for hazard waste disposal.			N/O			
Flammable liquid storage cabinets are properly labeled, kept closed, and have no materials stored on top of them.			N/O			
Corrective Action:	**Completed by:**				**Date:**	
Radiation Safety:						
Are any radioactive substances handled in the lab?				N/A		
If yes, are all employees aware of safe policies for handling tissues containing radioactive materials?				N/A		
Is main door is marked with the sign of Radioactive warning?				N/A		
Are there clear instructions for the use of radioactive materials?				N/A		
Is there a safe method of storage?				N/A		
Is there a safe method of disposal?				N/A		
Are all radioactive substances correctly labeled?				N/A		
Are workers health checks, if required, up to date?				N/A		

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RECORDKEEPING						
Findings identified on previous self-inspections have been corrected and corrections have been documented?	A					
Administrative and Miscellaneous						
Are laboratory safety behaviors consistent with organizational expectations?			N/O			
Are SOPs or safe working rules specific to the laboratory developed and implemented?	A					
Are staff trained or instructed on the SOPs and lab safety rules?	A					
Are records kept of personnel trained or instructed, maintenance & servicing, and testing of equipment?	A					
Is the signage on the laboratory door or entrance correct, adequate and up to date?	A					
Have all current staff/students working in this lab undertaken the specific lab induction.			N/O			
Are floors clean, dry, and free from slip/trip hazards?		D				
Is there a procedure on safe Laser usage?			N/O			
Corrective Action:	**Completed by:**				**Date:**	
Entry and Exits						
Are exits and corridors free from obstruction?	A					
Are exit signs illuminated and clearly visible?		D				
Are there an adequate number of exits?	A					
Are all exiting doors unlocked?	A					
Is emergency lighting installed?			N/O			
People with Disabilities						
Is there access for people with impaired mobility?	A					
Is there access to disabled toilets within reasonable distance?		D				
Do emergency evacuation procedures include people with disabilities?		D				
Compressed Gas Cylinders						
Gas name/label on shoulder of each cylinder clearly legible?			N/O			

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Are fuel cylinders separated from oxidizing cylinders?				N/A	
Are cylinders secured by brackets or chains?			N/O		
Are empty cylinders separate from full cylinders & clearly identified?			N/O		
Are acetylene cylinders that are not in use stored outside of building?				NA	
Are all gas cylinders stored in a well ventilated area?	A				
Are cylinder valves closed when not in use?	A				
Does testing for gas leaks occur?			N/O		
Cylinders properly chained, secured, and clearly labeled with contents. Storage in dry, ventilated, fire-resistant location. Caution signs posted for gas type hazard (flammable, toxic, oxidizer, etc.)	A				
Cylinder caps on reserve cylinders. Empty cylinders labeled and stored separately.	A				
Incompatible cylinders stored separately (oxygen/flammable 20' or 5' fire wall).			N/O		
Cylinder equipment (regulator, tubing, etc.) is compatible with gas and in proper working order.	A				

Corrective Action:	**Completed by:**	**Date:**

Electrical Installations/ Electrical Safety

Are power leads in good condition, no trip hazards?	A				
Is in-service inspection, testing & tagging of portable electrical equipment done in accordance with the procedure for Electrical Equipment Inspection and Testing?			N/O		
Are adequate power points available & unobstructed?	A				
Are switches & power points in good condition (no cracks, loose face plates)?	A				
Are double adaptors or piggy back adaptors avoided?	A				
Are circuit breakers & main isolators clearly marked?	A				
Is excessive use of extension cords avoided?	A				
Is temporary wiring avoided?	A				
Have electrical ignition sources been controlled in flammable environments (e.g. intrinsically safe fittings/equipment)?	A				

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Are excessive power boards being avoided?					
Is an appropriate fire extinguisher i.e., CO2 or dry powder available adjacent to any electrical switchboard?	A				
Equipment does not have frayed or damaged wiring.	A				
Extension cords are not being used as permanent wiring.	A				
Power strips are suitable for the load involved and are plugged directly into the outlet (not "daisy-chained").	A				

Corrective Action:	Completed by:	Date:

Machinery and Major Equipment					
Are operating instructions/safety signs adequate & clear?	A				
Are safety glasses areas clearly sign posted?		D			
Are emergency stop switches accessible, red in colour?			N/O		
Do interlocks on machine guards operate, with regular testing?			N/O		
Are moving parts, belt drives, shafts, fans appropriately guarded?	A				
Are machines & equipment free from obstruction?	A				
Is there adequate distance between machines & equipment?	A				
Are all Lasers pointing away from doorways and corridors?	A				
Can you hear someone two meters away talking in a normal voice, while machines/equipments are in use?			N/O		

Corrective Action:	Completed by:	Date:

First Aid					
Are there trained first aid personnel?		D			
Are there first aid kits available and adequately stocked for the types of hazards and level of risk i.e. chemical burns?		D			
Are first aid personnel identifiable?		D			

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Emergency Procedures					
Has an evacuation drill taken place in the last 12 months?			N/O		
Have emergency procedures been established for specific hazardous circumstances including spills?			N/O		
Are there suitable spill kits available, stocked and identifiable relevant to the area? i.e. Laboratory Spill Kit, 240L Wheelie Bin			N/O		
Are staffs adequately trained to deal with minor spills?			N/O		
Are staffs aware of response procedures for minor and major spills?			N/O		
Are emergency plans and contact numbers displayed?			N/O		
Are regular evacuation drills carried out?			N/O		
Are emergency manifests established for the area and available in an accessible area to emergency staff?			N/O		
Eye wash/safety shower in good working order, covers in place, and pathway unobstructed. Eyewash flushed monthly and date is documented. Personnel are aware of the eyewash/shower location and know how to operate the equipment.			N/O		
A chemical and/or biological spill kit for minor spills is available.			N/O		
First aid medication/antidotes are available and within expiration dates. (i.e. calcium gluconate for HF exposure).			N/O		
Access to electrical breaker panels and emergency shutoff controls is unobstructed with 3' clearance.			N/O		
Registration is current & emergency contact numbers/location details are posted.			N/O		
Evacuation routes are posted in common hallways. Personnel know the evacuation procedure, meeting site, and location of nearest fire alarm.			N/O		

Corrective Action:	Completed by:	Date:

General Practice					
Caution signs on the door and equipment for any specific hazards (UV, Laser, Radiation, Biohazard,		D			

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noise, high voltage, etc.)					
Food & household products used in chemical or hazard area are labeled "not for human consumption" or "lab use only."			N/O		
Household appliances (refrigerators, microwaves, blenders, grinders, etc.) are labeled for "lab use only."			N/O		
No evidence of eating, drinking, smoking, applying cosmetics, or mouth pipetting inside the space.				N/A	
Entry doors kept closed at all times and locked when unoccupied to maintain security.	A				

Corrective Action:	Completed by:	Date:

Engineering Controls & Ventilation

Chemical fume hood (CFH) not being used for chemical or equipment storage. Air foil & rear baffle unobstructed. Excess equipment is mounted to aid in air circulation.		D			
CFH sash is at or below minimum height (18") when in use and kept closed when not in use.		D			
Access to CFH/LEV is unobstructed.		D			
Fume hood inspection certification is current performed annually by CUSB.		D			
Local exhaust ventilation (LEV) is in use and in good working order (i.e. snorkel, dust collector)		D			
Biological Safety Cabinet (BSC) is certified, cleaned/decontaminated, not used with volatile chemicals or open flame. Vacuum lines w/filters and disinfectant traps. HEPA filter replacement.		D			
Is there enough fresh air, without draughts?		D			
Is extra ventilation systems provided to remove fumes?		D			
Are ventilation systems tested annually?			N/O		

Corrective Action:	Completed by:	Date:

Waste Management

Hazardous waste containers are labeled with contents, accumulation start date, and generator.		D			
Waste containers are kept closed to prevent off gassing discharge.		D			
Hazardous wastes are removed for disposal					

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