

INDIAN INSTITUTE OF TECHNOLOGY MANDI

SAFETY AUDIT CHECKLIST

Machine Tool and Equipment Safety Audit Checklist		Yes	No	NA
1	Are there enough PPEs (Personal Protective Equipment) like earmuff, safety goggles or face shield, welding helmets, lab coats, safety shoes etc. and emergency kits available in the lab?			
2	Are fixed machine guards in position and secured?			
3	Are interlocking guards fitted and working?			
4	Are all work area and passageway floors in good condition, kept clear and free from tripping and slipping hazards?			
5	Is there any visible fume, dust, mist or spray, or can it be smelt?			
6	Is all machinery and equipment kept clean and properly maintained?			
7	Is sufficient clearance provided around and between machines to allow for safe operations, set up and servicing, material handling and waste removal?			
8	Is equipment and machinery securely placed and anchored to prevent tipping or other movement that could result in personal injury?			
9	Is there a power shut-off switch within reach of the operator's position at each machine?			
10	Are start/stop and other operational buttons clearly marked and accessible?			
11	Are emergency stop controls are provided, clearly marked, and accessible?			
12	Are sharps containers within arm's reach of the work area?			
13	Are all pulleys and belts within 7 feet of the floor or working level properly guarded?			
14	Are all moving chains and gears properly guarded?			
15	Are provisions made to prevent machines from automatically starting when power is restored following a power failure or shut down?			
16	Are methods provided to protect the operator and other employees in the machine area from hazards created at the point of operation, rotating parts, flying chips and sparks?			
17	Are machine guards secure and arranged so they do not cause a hazard while in use?			
18	Are saws used for ripping equipped with anti-kickback devices and spreaders?			
19	Have standard operating procedures been developed for use of machinery and equipment?			
20	Are rotating or moving parts of equipment guarded to prevent physical contact?			
21	Are all cord-connected, electrically operated tools and equipment effectively grounded or of the approved double insulated type?			
22	Are electrical, pneumatic, and hydraulic hoses on powder-operated tools in good condition?			
23	Are appropriate warning signs posted on or near machinery and equipment?			
24	Are Lock Out Tag Out (LOTO) procedures provided for applicable machinery and/or equipment?			
25	Are only authorized and trained personnel permitted to use welding, cutting, or brazing equipment?			
26	Are welders and other nearby workers provided with flash shields during welding operations?			
27	Is suitable fire extinguishing equipment available for immediate use?			
28	Do eye protection, helmets, hand shields and goggles meet appropriate standards?			
Name of the Laboratory/Dept.				
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Signature:				
Remarks:				

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SAFETY AUDIT CHECKLIST				
Gas Cylinder Safety Audit Checklist		Yes	No	NA
1	Is there proper label for all gas cylinders?			
2	Any gas cylinder without label stored in the lab?			
3	Cylinders received from suppliers are with valve caps ?			
4	Is the due date of hydrostatic pressure testing displayed on the gas cylinder ?			
5	Are gas cylinders obstructing exits?			
6	Are gas detectors installed in the laboratory?			
7	Are trolleys available for moving gas cylinders?			
8	Are gas cylinders chained to the trolleys while transporting?			
9	Are gas cylinders stored near heat sources?			
10	Is there gas cabinets in labs?			
11	Are pyrophoric gas cabinets provided with fire sprinkler?			
12	Flame and gas detector installed for pyrophoric gases?			
13	Whether non return valves installed in gas lines?			
14	Auto shut off valves provided for pyrophoric and toxic gases?			
15	Leak detection solution/portable gas detector available in the lab?			
16	Whether gas cabinets labeled?			
17	Labels provided on gas pipe lines?			
18	Whether materials used for pipelines and other fittings compatible with the gas?			
19	Is the right gas regulator used for the gas?			
20	Are regulators tested periodically?			
21	Is the date of installation mentioned on the gas regulator?			
22	Whether safety glasses worn by personnel while working with gas cylinders?			
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SAFETY AUDIT CHECKLIST

Fire Safety Audit Checklist		Yes	No	NA
1	Are the Exits in the laboratory padlocked/blocked?			
2	Fire extinguishers available within 15 meters?			
3	Whether fire extinguishers easily accessible?			
4	Whether personnel in the lab are aware of fire extinguisher operation?			
5	Whether emergency contact numbers displayed in the lab?			
6	Are flammable chemicals stored in safety cabinets?			
7	Whether flammable chemicals stored near open flames/hot surfaces?			
8	Whether safety cans in use for storing flammable chemicals?			
9	Are flammable chemicals and oxidisers stored separately in the lab?			
10	Grounding and bonding done while transferring flammable liquids?			
11	Any combustible materials stored near halogen lamps/electric bulbs?			
12	Date of installation and expiry displayed on lead acid batteries?			
13	Whether terminals of batteries kept insulated?			
14	Unwanted combustible materials accumulated/ stored inside the lab?			
15	Are air conditioners run continuously?			
16	Is there a fire detection system installed in the laboratory?			
17	Is there an emergency assembly point for the Dept.			
18	Whether fire drills are conducted in the Dept.?			
19	Whether vehicle parking around the Dept. will cause obstruction to fire service vehicle?			
20	Are vehicles parked in front of fire hydrants?			

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SAFETY AUDIT CHECKLIST						
Electrical Safety Audit Checklist				Yes	No	NA
1	Any damage to the insulation of electrical cables?					
2	Any non insulated electrical joints?					
3	Any cables lying near hot plates?					
4	Any damaged sockets/plug points in the lab?					
5	Any bare wires inserted into plug point?					
6	Whether grounding of equipment with metal body done?					
7	Are portable tools double insulated?					
8	Whether circuit breakers in the lab clearly labeled?					
9	Main switch for cutting off supply to the lab marked?					
10	Any obstruction in front of the distribution board?					
11	Are multi plug sockets in use?					
12	Proper tags attached to equipment out of order/ under repair?					
13	Whether electrical cables are laid along the passage?					
14	Is there periodic maintenance of air conditioners?					
15	Whether metallic objects or jewelry worn by personnel conducting electrical experiments?					
16	Insulating mats provided for high voltage experiments?					
17	Are live parts of the experimental setup properly insulated or protected to prevent contact?					
18	Caution labels displayed near high voltage experiment setups?					
19	Any openings on switch/panel boards?					
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SAFETY AUDIT CHECKLIST				
Bio Safety Audit Checklist		Yes	No	NA
1	Whether lab coats used for laboratory work are full sleeve and with snap buttons?			
2	Are there enough lab coats for all personnel working in the lab (at least two per person)?			
3	Is there a designated location for hanging\storing used lab coats?			
4	Whether hand gloves worn are pulled over the cuff of the lab coat?			
5	Are sandals used in the laboratory?			
6	Whether personal protective equipment used during autoclave operation?			
7	Are syringe needles recapped after use?			
8	Are needles removed from the syringe after use?			
9	Whether tweezers available for picking up contaminated sharps?			
10	Are puncture proof containers used for collecting sharp waste?			
11	Are sharps mixed with general waste for disposal?			
12	Are sharps containers within arm's reach of the work area?			
13	Are solid biohazard waste collected in bins with autoclavable bags?			
14	Is there any handling of human/animal body fluids on the work bench?			
15	Are bio specimens transported in leak proof secondary containers?			
16	Any glass containers used for storing/transporting biosamples?			
17	Is biohazard label displayed on the doors of BSL 2 labs?			
18	Hand wash facility and liquid soap available in the lab?			
19	Whether record books/laptop used/kept on the work bench?			
20	Whether containers used for storing biosamples properly labeled?			
21	Whether biosafety cabinets decontaminated before and after use?			
22	Is the date/due date of testing displayed on the biosafety cabinet?			
23	Any open flames used in the BSC?			
24	Any aerosol generating activity conducted outside the biosafety cabinet?			
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SAFETY AUDIT CHECKLIST				
Chemical Safety Audit Checklist		Yes	No	NA
A — General Laboratory Safety				
1	Are appropriate PPEs (lab coats, gloves, safety goggles) available, used, and in good condition?			
2	Is the laboratory clean, organized, and free from slip/trip hazards?			
3	Are food, drinks, and personal belongings kept outside chemical-handling areas?			
4	Are hand washing facilities accessible and supplied with soap and running water?			
B — Chemical Storage & Segregation				
5	Are chemicals stored according to compatibility groups?			
6	Are flammable liquids stored inside certified flammable-storage cabinets?			
7	Are corrosive liquids stored in corrosion-resistant cabinets or secondary containment?			
8	Are gas cylinders secured with chains or straps?			
9	Are chemical refrigerators rated for laboratory/flammable storage?			
10	Are peroxide-forming chemicals labeled with date received and date opened?			
11	Are chemical containers kept closed when not in use?			
C — Labeling, Documentation & Inventory				
12	Are all chemical containers labeled with chemical name, concentration, hazard, and date?			
13	Are secondary containers clearly labeled?			
14	Are Safety Data Sheets accessible and updated?			
15	Is the chemical inventory updated and reviewed periodically?			
D — Chemical Handling & Work Practices				
16	Are SOPs available for hazardous chemicals and high-risk procedures?			
17	Are personnel trained in correct chemical handling procedures?			
18	Are chemicals handled away from bench edges to prevent spills?			
19	Are pipetting aids used (no mouth pipetting)?			
20	Are incompatible chemicals never stored or used together without controls?			
E — Fume Hoods & Ventilation				
21	Are fume hoods certified and functioning with proper face velocity?			
22	Is the sash positioned at recommended height?			
23	Are fume hoods free from excess clutter?			
24	Are volatile or toxic chemicals handled only inside fume hoods?			
F — Waste Handling & Disposal				
25	Are chemical waste containers properly labeled?			
26	Is chemical waste segregated?			
27	Are waste containers kept closed except during waste addition?			
28	Are waste disposal procedures followed?			
G — Emergency Equipment & Response				
29	Are emergency showers unobstructed and tested?			
30	Are eyewash stations functional and tested regularly?			
31	Are fire extinguishers accessible and inspected?			
32	Are chemical spill kits available and stocked?			
33	Are emergency contacts posted clearly?			
H — Training & Authorization				
34	Are personnel trained in chemical safety and emergency procedures?			

35	Are training records updated?			
36	Are only authorized personnel allowed to handle high-risk chemicals?			
I — Equipment Safety				
37	Are heating mantles, hot plates, and ovens in good working condition?			
38	Are electrical cords and sockets free from damage?			
39	Are vacuum pumps fitted with solvent traps or filters?			
40	Is glassware intact and stored properly?			
J — Housekeeping & Spill Prevention				
41	Are spill trays used where needed?			
42	Are work surfaces clean and free of residues?			
43	Are chemical transport procedures followed?			
K — High Hazard Chemicals				
44	Are reactive chemicals stored properly?			
45	Are high-hazard reactions conducted with shielding or in fume hoods?			
46	Are temperature/pressure monitoring devices used when required?			
Name of the Laboratory/Dept. Audit Done by: Signature: Remarks:				