



INAYA MEDICAL COLLEGES كليات العناية الطبية الأهلية



INAYA MEDICAL COLLEGES RESPIRATORY THERAPY PROGRAM LABORATORY SAFETY MANUAL



REVISED JULY 2019

TABLE OF CONTENTS

Ι.	DEFINITIONS		2
П.	Introduction		3
III.	SCOPE	AND APPLICATION	4
	Α.	Laboratory Safety Program	4
IV.	STANDARD OPERATING PROCEDURES		6
	А.	General Safety Guidelines	6
	В.	Eating, Drinking, and Smoking	7
	C.	Housekeeping and Maintenance	7
	D.	Sharps Safety	8
	E.	Spills and Accident Reporting	9
	F.	Audits	10
V.	7. STANDARD LABORATORY CONTROL MEASURES		11
	Α.	Hygiene Practices	11
	В.	Safety Equipment	12
	C.	Personal Protective Equipment	13
	D.	Activities Subject to Approval	15
VI.	SAFE I	HANDLING REQUIREMENTS IN THE LABORATORY	16
	А.	Compressed Gas Hazards	16
VII.	Respir	atory Therapy Laboratory Student Agreement	18

I. DEFINITIONS

Exposure: The concentration or amount of a particular agent (chemical, biological, electrical, electromagnetic field (EMF), or physical) that reaches a target organism, system or subpopulation in a specific frequency for a defined duration.

Hazard: A potential for harm. The term is often associated with a hazardous material such as agent, condition, or activity that if left uncontrolled, can result in an injury, illness, loss of property, or damage to the environment. Hazards are intrinsic properties of agents, conditions, or activities.

Hazard analysis: A term used to express the complete process of hazard identification, evaluation, and control.

Hazard control: A barrier, such as a device, measure, or limit, used to minimize the potential consequences associated with a hazard.

Hazard evaluation: The qualitative and, wherever possible, quantitative description of the inherent properties of an agent or situation having the potential to cause adverse effects. (Adapted from the World Health Organization definition for "hazard characterization")
Hazard identification: The identification of the type and nature of adverse effects that an agent, operation or equipment has as inherent capacity to cause in an organism, system or (sub) population.

Physical hazard: A class of hazards that include cold, ergonomics, explosions, fire, heat, high pressure, high vacuum, mechanical, nonionizing radiation, ionizing radiation, noise, vibration, and so forth.

Sharps: items that are used to cut or puncture skin or body parts, including needles, scalpels and lancets. Also, broken glass, glass septum vials, glass pipets, razor blades, and sharp teeth and nails of research animals are considered as sharps. Safety precautions are necessary to prevent injury and exposure.

Laboratory: A facility where the laboratory stores or uses of hazardous materials as a part of teaching and research. It is a workplace where relatively small quantities of hazardous materials are used on a nonproduction basis.

Laboratory worker: Refers to career lab staff, undergraduate students, graduate students, postdoctoral researchers, volunteers, or visiting scholars.

Risk: The probability or likelihood that a consequence will occur.

II. INTRODUCTION

Laboratory Safety Manual Objective

It is the intent of the Respiratory Therapy Program to provide a safe and healthy laboratory environment to all laboratory occupants through the establishment and maintenance of a Comprehensive Laboratory Safety Program.

The Laboratory Safety Manual minimizes the risk of injury or illness to employees and students by ensuring that they have the training, information, support, and equipment that are needed to work safely in Respiratory laboratories.

This Laboratory Safety Manual provides control measures essential for protecting all laboratory occupants from common hazards found in the respiratory laboratory. These controls consist of, but are not limited to, policies, guidelines, standard operating procedures, personal protective equipment, and laboratory audits.

It, also, describes a minimum level of safe practices that are expected from all individuals (faculty, staff, and students) involved in the laboratory operation.

III. SCOPE AND APPLICATION

A. Laboratory Safety Program

Department Chairs

- 1. Appoint appropriate individuals to serve as Laboratory Committee with its chair as Laboratory Coordinator.
- Ensure that all authorized personnel allowed access to the laboratories where hazardous materials are used have received all necessary and required training in laboratory safety policies and procedures.
- 3. Ensure that responsible parties comply with the appropriate provisions of the General Laboratory Safety Manual.
- 4. Ensure that appropriate facilities and safety equipment are available and appropriate PPE is used for research and teaching activities involving hazardous materials.

Principle Investigator

- A Principal Investigator (PI) is a faculty member, a research professional, or laboratory director/coordinator who is provides guidance to a laboratory using hazardous materials.
- 2. Ensuring that all laboratory personnel have the proper training before allowing them to work in a laboratory using hazardous materials.
- 3. Ensure that all applicable safety and compliance records are maintained as required by College policy.

Laboratory Personnel

- Laboratory Personnel may include faculty members, research professionals, research assistants, academic professionals, laboratory directors, laboratory assistants, or students who are associated with a laboratory using hazardous materials.
- 2. Obtain training on protocols, hazard controls, specific hazards and emergency procedures before working in a laboratory using hazardous materials.
- 3. Follow and obey general safety rules and guidelines described in the GLSM.

- 4. Read, understand, and follow standard operating procedure for unique laboratory and high hazard operations.
- 5. Immediately report any potentially hazardous operations to the Principle Investigator or Laboratory Safety Coordinator promptly.
- 6. Wear the appropriate personal protective equipment and personal apparel which must include low heeled, closed toed shoes and garments covering the legs. Shorts, sandals, flip-flops, short skirts, tank tops/open midriff tops, and dangling jewelry are not allowed when working or in the direct vicinity of hazardous material.

Equipment Operations

- 1. Maintenance or repair problems (mechanical, electrical, plumbing) reported in a reasonable time period.
- 2. If repairs cannot be made in a timely manner, then the Laboratory Committee members should be notified with an anticipated completion date as soon as possible.
- 3. Upon completion of repairs to safety equipment, Laboratory Committee should be notified.

Laboratory Audits and Walk-throughs

The Auditing Team will arrange a meeting with the Laboratory Coordinator on a scheduled basis in order to audit the lab and to review all elements of the GLSM with laboratory instructors. The Auditing Team will also conduct random walk-throughs in laboratories to ensure that the guidelines written in the GLSM are observed and to offer consultation to the Laboratory Coordinator, or Departmental Chair if concerns are discovered.

After the Auditing Team's audit, any concern will be reviewed and a report will be issued to the Laboratory Coordinator. Laboratories are expected to correct items of concerns as soon as possible and file a written response to the Vice Dean's Office.

The Vice Dean's Office will request follow-up laboratory inspections as it deems necessary in order to preserve safety in Respiratory Therapy Program laboratory space.

III. STANDARD OPERATING PROCEDURES

The Laboratory Safety Manual offers generic safety guidelines and standard operating procedures for laboratories on campus. Be aware that this document contains a minimum set of guidelines, regulations, and recommendations required to maintain a safe working environment, and does not provide laboratory workers, research students, or teaching assistants with specific standard operating procedures necessary to work in their respective laboratories. It is the responsibility of the Laboratory Coordinator to develop specific standard operating procedures for his/her laboratory.

A. General Safety Guidelines

Standard operating procedures must be readily available to all laboratory employees. The following guidelines have been established to minimize or eliminate hazards in the laboratory. These guidelines have also been provided to maintain a safe laboratory environment. It is the responsibility of each person that enters into the laboratory to understand the safety and health hazards associated with potential hazardous materials and equipment in the laboratory. It is also the individual's responsibility to practice the following general safety guidelines at all times:

- Laboratory access should be restricted to authorized people, and keep the door locked when the lab is unoccupied.
- Protect your body from directly contact with hazardous materials by wearing appropriate PPE.
- Always know the hazards associated with the materials that are being utilized in the lab.
- 4. Always wear appropriate protective clothing.
- 5. Confine long hair and loose clothing. Do not wear high-heeled shoes, open- toed shoes, sandals or shoes made of woven material.
- 6. Always wash hands and arms with soap and water after removing gloves and before leaving the laboratory area. This applies even if you have been wearing gloves.
- 7. Never perform any hazardous work when alone in the laboratory. At least two people should be present. An instructor must supervise students at all times.

- 8. Never perform unauthorized work, preparations or experiments.
- 9. Never engage in horseplay, pranks or other acts of mischief in laboratory space.
- 10. Be familiar with the location of emergency equipment fire alarm, fire extinguisher.Know the appropriate emergency response procedures.
- 11. Use equipment and hazardous materials only for their intended purposes.
- 12. Never mouth pipet chemicals when transferring solutions. Instead, you should always use a pipet bulb to transfer solutions.
- 13. Keep equipment back from the edge of the lab bench to prevent spillage.
- 14. Support all beakers and flasks with clamps. Do not use cracked or chipped glassware.
- 15. Report any accident, however minor, immediately.

B. Eating and Drinking, and Smoking

Eating, drinking, smoking, gum chewing, applying cosmetics, and taking medicine in laboratories are strictly prohibited from being stored, prepared, or consumed.

- 1. Food, beverages, cups, and other drinking should not be stored in areas where hazardous materials are handled or stored.
- 2. Laboratory refrigerators, ice chests, and cold rooms are not allowed for food or beverage storage intended for human consumption.
- 3. Glassware or utensils used for laboratory operations must never be used to prepare or consume food or beverages.
- 4. Laboratory water sources and deionized water should not be used for drinking water.
- 5. Laboratory materials should never be consumed or tasted.

C. Housekeeping and Maintenance

In the laboratory, keeping things clean and organized can provide a healthy and safer environment.

Maintain the following in the laboratory at all times:

- 1. Flammable materials kept away from ignition sources
- 2. Incompatible materials and chemicals must be separated
- 3. Fume hoods maintained and uncluttered

- 4. Keep drawers and cabinet doors closed and electrical cords off the floor to avoid tripping hazards.
- 5. Keep aisles clear of obstacles such as boxes, chemical containers, and other storage items.
- 6. Avoid slipping hazards by cleaning up spilled liquids promptly.
- 7. keep the floor free of loose equipment such as stirring rods, glass beads, stoppers, and other such hazards.
- 8. Never block or even partially block the path to an exits or to emergency equipment, such as eyewash, shower, spill kit, fire extinguishers.
- 9. Use the required procedure for the proper disposal of chemical wastes and solvents.

Supplies and laboratory equipment on shelves should have sufficient clearance so that, in case of a fire, the fire sprinkler heads are able to carry out their function. The work area should be kept clean and uncluttered, with hazardous materials and equipment properly stored. Clean the work area upon completion of a task and at the end of the day. The custodial staff is only expected to perform routine duties such as cleaning the floor and emptying the general trash.

D. Sharps Safety

Many types of sharp devices are used in laboratory to inject agents, to draw blood, and to dissect tissues.

Responsibilities:

- 1. Identify sharp instruments in laboratory procedures.
- 2. Faculties and student must be trained before use sharp instruments.
- 3. Avoid recapping needles.
- 4. Never leave an uncapped needle exposed in the work area.
- 5. Appropriate sharps container must be used to collect sharps.

E. Spills and Accident Reporting

Spills

It is the responsibility of each individual using hazardous materials to become familiar with the emergency response procedures dictated by the manufacturer of such materials. Small spills and minor incidents should be handled by properly trained laboratory personnel.

The following procedures should be followed in the event of a small hazardous materials spill:

- 1. Notify people and evacuate all nonessential personnel from the spill area.
- 2. Apply First Aid procedures to exposed or contaminated personnel
- 3. Use appropriate Respirators and PPE such as gloves, lab coats, goggles and aprons to prevent exposure and injuries.
- 4. Use a laboratory spill kit and confine the spill, if this can be done without risk of injury or contamination.
- 5. Never remove sharp materials with hands. Use mechanical device such as tongs.
- 6. Wash hands and other exposed skin after completing clean-up.

The following general rules should be followed in the event of a *major* hazardous materials spill or other incident:

1. QUICKLY EVALUATE THE SITUATION

Ask the following questions:

- Is someone injured or requires immediate medical attention?
- Is the spill manageable with the personnel and resources in the laboratory?
- Is there a danger to others outside the laboratory?
- 2. Evacuate the area immediately.
- ACTIVATE EVACUATION (FIRE) ALARM, IF NECESSARY, FOR THE BUILDING Be familiar with the sound of the alarm system in your facility. If the spill/incident could threaten the health of individuals in the building, activate the alarm.
- 4. CALL THE Civil Defense AT 998 FOR HELP

Tell dispatcher as much detail as possible about the spill/incident. If possible, locate

a Material Safety Data Sheet.

5. ATTEND TO LIFE-THREATENING INJURIES

The primary concern in the event of an emergency is to protect life and health of others. Only give First Aid treatment to the level at which you have been trained.

6. ASSIST EMERGENCY RESPONDERS AS NEEDED

Should emergency assistance be summoned, emergency responders will arrive on the scene and take control of the incident. Cooperate with them to the fullest extent possible.

F. Audits

Regular laboratory audits will assist the Respiratory Therapy Program in its mission to maintain a laboratory environment that is inherently safe for its employees. Audits will be conducted to ensure the effective communication of the Respiratory Therapy Program's Laboratory Safety Program. The ability of any laboratory to operate in a manner that minimizes risk to personnel and the environment is dependent on laboratory users who understand and carry out prudent practices for the safe handling, storing, and disposing of chemical, biological, and radioactive agents. The goals of each laboratory audits are to:

- 1. Maintain laboratory facilities and equipment in a safe operating condition.
- 2. Provide a safe working environment for all employees and assess the level of emergency readiness.
- 3. Ensure that all laboratory procedures and experiments are conducted in a safe and prudent manner.
- 4. Ensure adherence to the content of the Laboratory Safety Manual.

IV. STANDARD LABORATORY CONTROL MEASURES

Laboratories on campus are designed to limit specific hazards in a controlled environment. Once new hazards are introduced into a laboratory environment, the laboratory may need to be modified in some respect to mitigate or avoid an undesirable or adverse condition arising from the new hazard. There are a variety of facility designs and engineering controls that can be utilized in a laboratory to control chemical or biological hazards. Engineering controls consist of various measures for reducing a hazard at its source or for separating personnel from the hazard. Engineering controls might consist of isolating a particular chemical operation, enclosing a potentially explosive reaction, or utilizing local exhaust such as a fume hood for an operation which produces airborne chemicals. Since engineering controls function to reduce or eliminate a hazard at its source or before it is created, they should be fully considered whenever possible as the first step in chemical or biological control measures within the laboratory.

It is the responsibility of the laboratory employees to become familiar with the specific functions and proper use of the control measures provided in the laboratory. However, the Laboratory Coordinator is responsible for ensuring that the facility engineering controls are functioning properly at all times.

A. Hygiene Practices

There are generalized precautions and personal hygiene practices that have been established to protect laboratory employees from hazards associated with working with hazardous materials. These basic precautions will minimize the possibility of such exposure:

- 1. Do not prepare, store, or consume food or beverages in the laboratory.
- 2. Do not smoke in the laboratory. Tobacco products in opened packages can absorb chemical vapors.

- 3. Do not apply cosmetics in a laboratory environment. (This includes lip balm or chapstick).
- 4. Wash hands and wrists thoroughly before leaving the laboratory, even if gloves were worn during the work day.
- 5. Wash lab coats, aprons, or jackets separately from personal laundry to prevent cross contamination.
- 6. Never wear or bring lab coats, jackets or aprons into areas that are designated for the consumption of food.
- 7. Never mouth pipette.
- 8. Always use the appropriate personal protective equipment to avoid direct contact with any hazardous chemical.
- 9. Employees should know the symptoms of potential exposure related to the hazardous material(s) they are working with.
- 10. Replace personal protective equipment as needed to maintain its integrity.
- 11. Avoid working alone whenever possible.

B. Safety Equipment

All laboratories should be provided with safety showers, eyewashes, and appropriate fire extinguishers. Adequate ventilation, wash sinks, and approved waste disposal receptacles are also necessary. All of these should be conveniently located, properly maintained, and frequently tested. Special consideration should be given to ensure accessibility to safety equipment as well as ease of evacuation of physically disabled individuals.

Hand Wash Stations

Principal Laboratory Coordinators or Laboratory Coordinator should designate an area in the laboratory for a hand wash station. These areas are usually located in one or two of the sinks in the laboratory. The hand wash stations should be properly labeled and equipped with soap and towels.

These stations should be utilized by individuals who come in contact with chemical or biological agents in the laboratory. Everyone who works with hazardous agents on a routine basis should wash their hands before and after using the agents. The stations should never be used to dispose of hazardous waste. (*Example*: do not pour chemical, biological, or radioactive material down the drains). It is the responsibility of the Laboratory Coordinator to ensure that the hand wash stations are available, accessible and properly equipped at all times.

First Aid Kits

Laboratory area should have a proper First Aid Kit with essential contents (Adhesive Bandage, Adhesive Tape, Antiseptic, Breathing Barrier, Medical Gloves, Roller Bandage, Scissors, and Sterile Pads).

Fire Extinguishers

Fire extinguishers are very important components of safe laboratory operation. Each laboratory must be equipped with the appropriate type for the expected fire emergency and be capable of immediate utilization. All staff and students must know the different types and location of Fire Extinguishers, and they have to be trained on how to use them. The location of Fire Extinguisher should be labeled with a red/white "fire extinguisher" sign. Currently, Inaya Medical College is utilizing multi-purpose dry chemical (Classes A, B, and C) extinguishers for the majority of laboratories on campus. There are several Class D (metal fires) extinguishers in laboratories which work with metals.

Laboratory Apparatuses

Review the manufacturer's recommendations for operation and maintenance.

Electrical Safety

All Cords should be checked for any damage. NEVER USE damaged ones. They must be replaced IMMEDIATELY.

Extension devices shall not be used on laboratory equipment that must remain plugged in at all times. They can be used for temporary job only.

C. Personal Protective Equipment

Clothing

Loose or torn clothing can fall into chemicals or become ensnared in equipment and moving machinery. Aprons, lab coats, and other protective clothing, preferably made of chemically inert material, should be readily available and utilized in a laboratory environment. Hair should also be restrained because loose hair can catch fire or dip into chemical solutions. A laboratory coat or an apron should be worn when working with hazardous materials. This is particularly important if personal clothing leaves skin exposed. Since many synthetic fabrics can adhere to the skin when burning, and thereby increase the severity of a burn, cotton is the preferred laboratory clothing fabric.

Eye and Face Protection

Laboratory work may require eye and face protection to reduce the possibility of chemical exposures due to splashes. Eye protection is required of everyone who enters a chemical work area. The type of eye protection needed depends on the circumstances. Typically, safety goggles that protect the top, bottom, front and sides of the eyes is mandatory. Safety goggles should not be worn in conjunction with contact lenses, except for therapeutic reasons. If contact lenses are worn the Laboratory Coordinator or Laboratory Coordinator and co-workers should all be aware of this, in case an accidental splash renders the wearer of such lenses incapable of washing or rinsing his or her eyes.

Face shields are necessary when working with severely corrosive liquids, with glassware under reduced or elevated pressure, with glass apparatus used in combustion or other high-temperature operations, and when there is a possibility of an explosion or implosion.

Hand Protection

The purpose of gloves is to protect against abrasions, cuts, punctures, snags, chemical burns, thermal burns, and temperature extremes in the work environment. There is a variety of gloves on the market to choose from depending on the chemical, the instrumentation, and the environment in which the hazardous material will be handled.

Respirators

In a laboratory environment, respirators may sometimes be relied on if the engineering controls and laboratory design do not adequately limit the potential exposure to hazardous air contaminants. Individuals planning to use respiratory protection should contact Laboratory Safety Personnel for consultation. The proper selection and type of respirator used should be based on a thorough analysis of the specific activity planned. The Laboratory Safety Personnel will assist the respirator user in evaluating their individual circumstances. In addition, all individuals who wear respirators, other than dust mask as a personal preference, must first be medically approved by an occupational health physician and then should be fit-tested by the Laboratory Safety Personnel

D. Activities Subject to Approval

Laboratory Coordinators must identify those activities which warrant prior approval before initiation by an employee or student. These include work with potentially biohazardous materials, x-ray machines, animal research, dangerous drugs and controlled substances and human subject research. In addition, certain chemicals are considered particularly hazardous and should be reviewed and approved by the Department Chair in conjunction with the Laboratory Safety Personnel.

Animal Research

It is the responsibility of each Laboratory Coordinator who wishes to use live animals to secure prior approval from the Scientific Research Unit.

Human Subjects

It is the responsibility of each Laboratory Coordinator to identify all research involving the use of human beings as subjects of research and register the research protocol with the Scientific Research Unit.

V. SAFE HANDLING REQUIREMENTS IN THE LABORATORY

Operational requirements for safe handling of hazardous materials in the laboratory when followed, reduce the chance of an accident due to human error. It is the responsibility of each laboratory employee to become familiar with the safe handling requirements in the laboratory described in this section. However, the Laboratory Coordinator is responsible for ensuring their employees have sufficient knowledge to avoid recognized hazards in their laboratory.

A. Compressed Gas Hazards

There are generalized practices that have been established to protect laboratory employees against physical hazards. These include compressed gas cylinder safety tips and Compressed Gas Cylinder Policy.

Compressed Gas Cylinder Safety

The following must be followed for the transporting, storing, and use of compressed gas cylinders.

Compressed Gas Cylinders Identification

- 1. The contents of any compressed gas cylinder should be identified clearly so as to be easily, quickly, and completely determined by any laboratory worker.
- 2. A durable label should be provided that cannot be removed from the compressed gas cylinder.
- 3. No compressed gas cylinder should be accepted for use that does not identify its contents legibly by name.
- Color-coding is not a reliable means of identification; cylinder colors vary from supplier to supplier, and labels on caps have no value because many caps are interchangeable.
- 5. Tags should be attached to the gas cylinders on which the names of the users and dates of use can be entered.

6. If the labeling on the gas cylinder becomes unclear or defaced so that the contents cannot be identified, the cylinder should be marked "contents unknown" and the manufacturer contacted regarding appropriate procedures.

Gas Cylinders Transportation

- Cylinders transported by truck must be fastened securely in an upright position so that they will not fall or strike each other.
- Cylinders should not be transported without safety caps. A cylinder's cap should be screwed all the way down on the cylinder's neck ring and should fit securely. Do not lift cylinders by the cap. The cap is for valve protection only.
- 3. Cylinders should not be transported with the regulator attached to the cylinder.

Compressed Gas Cylinders Storage

- 1. Cylinders should not be allowed to drop nor be struck violently.
- 2. Cylinders should be properly secured at all times whether attached to a wall, cylinder truck, cylinder rack, or post.
- 3. Liquefied flammable gas cylinders should be stored in an upright position or such that the pressure relief value is in direct line with the vapor space of the cylinder.
- 4. Caps used for valve protection should be kept on the cylinders at all times except when the cylinder is actually being used or charged.
- 5. Cylinders should not be used for rolling, supports, or any purpose other than the transportation and supply of gas.
- 6. Cylinders should be stored in a well-ventilated area away from flames, sparks or any source of heat or ignition. Keep cylinders away from electrical circuits.
- Cylinders should not be exposed to an open flame or to any temperature above 125
 ⁰F.
- 8. Oxygen cylinders (empty or full) in storage should be separated from fuel-gas cylinders and combustible materials by a minimum distance of 20 feet or by a barrier at least 5 feet high having a fire-resistance rating of at least one-half hour.

- 9. Flammable gas cylinders should not be stored with oxygen or nitrous oxide cylinders or adjacent to oxygen charging facilities.
- 10. Full and empty cylinders of all gases should be stored separately and identified by signs to prevent confusion.
- 11. Cylinders may be stored outdoors but should be protected from the ground to prevent bottom corrosion. Where extreme temperatures prevail, cylinders should be stored so they are protected from the direct rays of the sun.
- 12. Cylinders should not be exposed to continuous dampness, stored near salt or other corrosive chemicals or fumes. Corrosion may damage cylinders and cause their valve protection caps to stick.

Compressed Gas Cylinders Usage

- Always use the proper regulator for the gas in the cylinder. Always check the regulator before attaching it to a cylinder. If the connections do not fit together readily, the wrong regulator is being used.
- 2. Before attaching cylinders to a connection, be sure that the threads on the cylinder and the connection mate are of a type intended for the gas service.
- 3. Do not permit oil or grease to come in contact with cylinders or their valves.
- 4. Wipe the outlet with a clean, dry, lint-free cloth before attaching connections or regulators. The threads and mating surfaces of the regulator and hose connections should be cleaned before the regulator is attached.
- Attach the regulator securely before opening the valve wide. Always use a cylinder wrench or another tightly fitting wrench to tighten the regulator nut and hose connections.
- Open cylinder valves SLOWLY. Do not use a wrench to open or close a hand wheel type cylinder valve. If it cannot be operated by hand, the valve should be repaired.
- 7. Stand to the side of the regulator when opening the cylinder valve.
- Do not attempt to repair cylinder valves or their relief devices while a cylinder contains gas pressure. Tag leaking cylinders or cylinders with stuck valves and move to a safe, secure outdoor location.

Compressed Gas Cylinder Policy

Laboratory Coordinators and Department Chairs must not allow the purchase of non- returnable gas cylinders (*Example*: lecture bottles). In addition, corrosive and reactive gas cylinders must be returned to the manufacturer one year after their date of delivery. All other cylinders must be returned to the manufacturer three years after their date of delivery.

VI. **RESPIRATORY THERAPY LABORATORY STUDENT AGREEMENT**

All students participating in a Respiratory Therapy lab section are responsible for reading, reviewing, and signing the safety policies at the start of the Program, prior to the first lab. The rules are designed to give you and fellow students a safe and educational lab experience. Most accidents or injuries can be prevented by using common sense and following the policies listed below. Violation of the agreement could result in removal from the lab.

Laboratory Policies:

- 1. Food, drinks, candy, and gum must not enter the laboratory. Food and drink is to be left outside the lab or stored in a book bag. This includes capped bottled water and soft drinks.
- 2. Students must be in control of all faculties to participate in the laboratory. If a student is deemed by the instructor, to be impaired in some way the student will not be allowed to complete the lab and will be asked to leave.
- 3. Please report any accidents, injuries, and/or spills immediately to your instructor. The instructor will determine the best way to address the problem.
- 4. Students must familiarize themselves with the safety equipment in the laboratory. Fire extinguishers, first aid kit, and fire exits.
- 5. Broken glassware should be swept up with a broom and dust pan and placed in the sharps container. Never place broken glass in the regular garbage can.
- 6. All needles and syringes filled with artificial blood are to be placed in the sharps container.
- 7. Arterial punctures, on a lab partner, are allowed only in the presence of a lab instructor.
- 8. Cell phones should not be used in the laboratory. No talking or texting while engaged in lab activities.
- 9. Deliberate misuse of instruments or disturbing behavior may result in disciplinary action.
- 10. Students must wear closed toed shoes and pants on a lab day dealing with needles, chemical or biological substances. The lab instructor will be responsible for notifying students regarding these lab days.
- 11. Student's hands, must be washed or sanitized prior to administering therapy or performing a test with a lab partner.
- 12. An appropriate atmosphere should be maintained at all times, including proper dress and use of professional language.

Student Agreement:

I have read and understood all the content of Laboratory Safety Manual, and I agree to follow the Respiratory Therapy Lab Student Agreement (Lab Policies). In addition, I understand that any tests, measurements and/or therapeutic interventions are performed for the purposes of instruction and practice and that they are not intended to be diagnostic or therapeutic for me personally. I am aware that the instructor and /or laboratory staff has the right to report on or remove me from the laboratory if I fail to adhere to these policies. Furthermore, I understand that my instructor may deduct points for failure to obey these laboratory policies.

Print Name:

Signature: _____ Date: