

I.GENERAL REGULATIONS:

- 1.Hours of operation are Monday through Friday, 7:30 a.m. until 4:30 p.m.; weekends as needed.
- 2.Two breaks may be taken each day depending on workload. One 15-minute break in the morning and one 15-minute break in the afternoon. Breaks may not be accumulated to leave early. Please refer to divisional policy manual for complete information.
- 3.When it is necessary to be absent from your assigned work station, including work breaks, the employee is to notify the director.
- 4.Each employee is to wear a clean protective disposable gown, while in the laboratory. No disposable laboratory coats may be used in bathrooms, break rooms or public halls outside of the laboratory. Name tags are to be worn at all times while at UTMB.
- 5.No smoking, eating or drinking is permitted in the laboratory. Eating and drinking are permitted only in the break room.
- 6.No sitting on laboratory work benches is permitted. Personal articles are not to be placed on working surfaces; they should be stored in individual lockers.
- 7.All clinical materials submitted to the laboratory are to be processed with appropriate precautions. Gloves are to be worn whenever handling clinical materials. Gloves may not be used to pick up the telephone, open doors, or enter information on the computer terminal.
- 8.Each individual is expected to conduct themselves in a professional manner.
- 9.All accidents (major and minor) are to be immediately reported to the director.
- 10.No open toed shoes will be worn in the laboratory. Long hair is to be tied back in order to prevent contact with flames and infectious materials.
- 11.All gas cylinders are to be properly secured and labeled.

II.LABORATORY SAFETY RULES AND PROCEDURES:

- 1.Personnel and Visitors:
 - a.New employees and visitors will receive training in safety techniques and procedures.
 - b.Mouth pipetting will not be permitted for any material or reagent. Mechanical pipetting devices will be utilized.
 - c.Personal work habits will be continually evaluated by the supervisory staff and potential safety problems will be corrected.
 - d.While working with hazardous materials, each employee will wear a gown and surgical gloves. Do not wear watches and bracelets.
 - e.A protective face shield, splash proof goggles, and chemical resistant gloves and apron will be worn while working with concentrated acids or bases and other dangerous chemicals. These chemicals will be worked with only in the chemical fume hood.

LABORATORY REGULATIONS AND SAFETY RULES

II. LABORATORY SAFETY RULES AND PROCEDURES: (cont'd)

f. Each employee will know the location and operation of:

- (1) fire extinguisher (see part E.2)
- (2) fire blanket (see part E.3)
- (3) safety shower
- (4) eye wash station
- (5) exits
- (6) acid-base spill station
- (7) first-aid kit
- (8) each employee will notify the supervisor in the event of any injury or accident
- (9) evacuation plan in case of fire or accident

2. Laboratory, Isolation Rooms, Biohazard Management, Medical Waste Program, and Infection Control Monitoring:

a. All entrance doors to the laboratory will be locked when the technical staff is not present in the laboratory.

b. Cleaning, checking, or servicing of equipment by support personnel will not be permitted unless a trained technical or professional person is present, insuring that safety precautions are observed.

c. Employees will wear a protective gown, masks and gloves when:

- (1) Processing clinical specimens for culture or smear.
- (2) When working with open cultures of mycobacteria, or fungi like *Coccidioides immitis*.
- (3) Observers who are not handling infectious and potentially infectious material, but are present in a room in which such activity is in progress, will wear a protective gown and mask if necessary.

d. Immediately following use of protective clothing, gowns, gloves, and masks will be placed in a red bag. When full, red bags will be placed in a designated area. The housekeeping staff will arrange for them to be picked up every day for incineration. The mask is the last piece of protective clothing to be removed.

e. Transport cultures in a rack or canister.

f. Keep a container of 2% amphyll solution available where cultures are being handled or stored.

g. Autoclave all potentially contaminated materials for 30 minutes at 121- 125°C before re-using it again if necessary.

h. Before opening specimen containers contaminated on the outside, disinfect by wiping with gauze soaked in a 2% amphyll solution.

i. Aerosol-containment safety carriers must be used in the centrifuge for use with all infectious and potentially infectious materials.

j. Place all materials to be discarded in covered pans containing a small amount of 2% amphyll solution. Certain mycology materials such as slides and pipettes may be placed in discard buckets without covers, which contain a 2% amphyll solution.

k. Flammable volatile and corrosive fluids must be put into labeled, safe containers and sealed for collection and disposal.

l. Liquids which are not dangerous but are not miscible in water should not be flushed down the sink.

m. Solid wastes such as needles, syringes, scalpel blades, and broken glassware must be put into labeled, secure containers such as the biohazard waste Vacutainer® brand needle disposal container.

II. LABORATORY SAFETY RULES AND PROCEDURES: (cont'd)

n. When work is completed and before leaving the room:

- (1) Close all small red bags with autoclave tape.
- (2) Clean the work area with a 2% amphyll solution. Scrub the area periodically with cleaner and

LABORATORY REGULATIONS AND SAFETY RULES

water to remove disinfectant residue.

- (3) Place all disposable material in red bags and close before leaving room.
- (4) Remove protective clothing and place in large red bag. Remove mask last.

o. Upon leaving the room, scrub hands and arms well with Hibiclens.

p. The following safety rules should be followed in addition to the ones above and monitored by the supervisor or Infection Control regularly.

- (1) All procedures require use of gown or laboratory coat.
- (2) Processing cultures requires a gown to be disposed of daily.
- (3) Sorting specimens requires gloves.
- (4) Processing specimens requires gloves, mask, and opened specimens should be under hood.
- (5) Fungal serology: Open specimens behind shield; gloves should be used for all steps.
- (6) DNA probes: All steps until heat inactivation should be carried out under a hood with gloves.
- (7) Germ tubes: Set up test under hood. Results should be read wearing gloves.
- (8) KOH: Gloves should be used when reading direct mounts.
- (9) Cleaning incubators and refrigerators with disinfectant should be done wearing gloves.
- (10) Preparing media and reagents: Gloves and shield or goggles should be worn.

3. Laminar Flow Safety Cabinets:

a. Open all tubes, plates and containers having potentially infectious materials within the safety cabinet only.

b. All operations involving manipulation of specimens or cultures will be performed in the safety cabinet.

c. Perform all work over a towel soaked with a 2% amphyl solution. Be sure that the towel does not cover the grid or dries out. When work is completed, place the towel in the red laundry bag.

d. The following procedures will be done first thing in the morning:

(1) Observe the air pressure gauge for any large change in the pressure and record on proper QC sheet located in front of hood.

(2) Notify the supervisor of any pressure fluctuations.

(3) DO NOT ATTEMPT TO ADJUST THE AIR FLOW VELOCITY. All such adjustments should be determined by Environmental Health and Safety staff. Call 24190 and notify Environmental Health and Safety.

(4) Record and initial the Q.C. chart daily.

e. Cabinets will be inspected and certified by the Environmental Health and Safety Office every twelve months.

f. UV lights will be cleaned every other week with an alcohol soaked gauze to remove dirt and films; record on proper QC sheet.

LABORATORY REGULATIONS AND SAFETY RULES

II. LABORATORY SAFETY RULES AND PROCEDURES: (cont'd)

g. Following use of the cabinet, each cabinet will be cleaned with a 2% amphyl solution after which the UV lights will be turned on.

h. No work will be done within the cabinet or within the same room while the UV lights are on. Do not allow UV light to strike the eyes.

i. Do not place anything on the front grid as this will redirect or obstruct the proper air flow.

j. All materials present within the safety cabinet will, to some degree, affect the air flow. Therefore, ideally, only materials essential to the procedure should be within the cabinet.

k. No more than two procedures should be carried out at the same time within the hood. For example sonication and vortexing of specimens should not be done at the same time, since this may affect the efficiency of the safety cabinet.

4. Accidents:

a. Notify the director in the event of an accident or spill.

b. No one will be permitted to enter a work area in the event of gross contamination, i.e., breakage of culture tubes, etc., until the entire area has been decontaminated by the individual(s) within the area, unless injury to an individual within the area requires emergency care.

c. Take these steps immediately if a positive culture tube is broken:

(1) Promptly exit the room and close the door to the area as you leave.

(2) Call the supervisor and director.

(3) Put on a mask, gown, gloves, shoes and hair cover.

(4) Enter the room and cover the broken culture(s) with paper towels and soak thoroughly with 2% amphyl solution. Caution: Shoe covers may become extremely slippery if they come in contact with liquid.

(5) Exit the area, close the door, and do not re-enter for one hour.

(6) Place your contaminated clothing in an autoclave bag.

(7) Remove mask last. Wash your hands and arms thoroughly with Hibiclens.

(8) If the accident involves a dangerous organism, the Environmental Health and Safety Department personnel may be required to complete the disinfection process in the area.

d. Allow the amphyl soaked towels to stand at least one hour before cleaning up the spill. Keep the area wet with additional amphyl to prevent dried particles from becoming airborne.

e. Always wear gloves. Do not handle or touch contaminated materials with bare hands. If this should occur, rinse hands in a disinfectant solution and then wash them thoroughly.

f. Disinfect all contaminated equipment, i.e., specimen containers, syringes, culture tubes, pencils, pens, etc., and the contaminated area, i.e., floor, cabinets, bench, chair, etc., with 2% amphyl solution.

g. Place all materials to be sterilized into covered pans or autoclave bags. Seal with autoclave tape discard or sterilize for one hour at 121°C in the autoclave.

h. Prepare an incident report for the director.

LABORATORY REGULATIONS AND SAFETY RULES

II. LABORATORY SAFETY RULES AND PROCEDURES: (cont'd)

i. For accidents involving the eyes follow these steps:

- (1) Call for help and go to the eye wash station. Notify the director immediately.
- (2) Wash eyes carefully for at least 15 minutes to remove chemicals or particles.
- (3) Report to Employees Health Service during normal working hours (Emergency Room for after hours and weekends).
- (4) Complete an incident report form.

j. For chemical spills, especially strong acids and bases, follow the instructions at the spill station for the particular agent involved. Notify the supervisor immediately. Consult the Material Safety Data sheets available at the laboratory for particular information about the reagent or chemical.

k. For minor injuries, treat accordingly with the first aid kit supplies. Fill out an incident report and notify the director immediately.

5. Fires:

a. When a fire occurs in the laboratory, this procedure will be followed:

- (1) Warn other employees and have someone report the fire by dialing 21211.
- (2) If the fire is small, try to extinguish it. The first few minutes of a fire are vital -- **MOVE AS FAST AS POSSIBLE.**
- (3) When using the extinguisher, remember:
 - (a) Stay low to avoid heat and smoke.
 - (b) Stay between the door and the fire to provide an escape.
 - (c) Ventilate only after fire is out.

(4) If the fire cannot be extinguished or contained: Turn off all gas burners; turn off all electrical equipment at the circuit breaker box; shut off all gas cylinders and close doors and windows; evacuate the area according to the fire evacuation plan posted in the laboratory and await professional help.

b. All employees will be familiar with the location, description and operation of laboratory fire extinguisher.

- (1) Fire extinguisher are located just inside each main door to the laboratory.
- (2) Description of fire extinguishers:
 - (a) Both of the fire extinguisher in the Mycology Laboratory are the carbon dioxide (B-C) type. These are intended for flammable liquid and electrical fires but are suitable for any type of small fire that may occur.
 - (b) NEVER use a WATERY type of extinguisher on electrical or chemical fires. Water tends to splash which could spread burning chemicals, and being a good conductor of electricity, may result in serious shock on electrical fires.

LABORATORY REGULATIONS AND SAFETY RULES

II. LABORATORY SAFETY RULES AND PROCEDURES: (cont'd)

(3) Operation of extinguisher:

- (a) Read the instructions on the extinguisher before use.
- (b) To operate the extinguisher, pull the locking pin out and squeeze the handle (do not invert).
- (c) Avoid touching the discharge nozzle; it gets extremely cold.
- (d) CO₂ extinguisher have a limited range. **GET CLOSE TO THE FIRE AND STAY LOW.**
- (e) For flammable liquid fires, apply CO₂ near the edge and sweep slowly from side to side.
- (f) For electrical fires, apply directly at the source.
- (g) Continue to discharge CO₂ on the area after the fire is out to prevent reflash.

c. All employees will be familiar with the location and use of fire blankets.

- (1) Location: One located near window in main Mycology lab. area, one in processing room.
- (2) Use of fire blankets:

- (a) Open the bottom of the fire blanket canister and remove the blanket.
- (b) If a person's clothing is on fire, wrap the blanket around the area to extinguish the flames.
- (c) The blanket may also be used as a pillow for injured or to retain body heat in treating shock.

6. Hurricanes, Disasters, and Other Events (where there may be a utility failure):

a. The director will assign duties for coverage of the section. Please refer to Divisional policy manual for rules affecting coverage of the laboratory during hurricanes and other disasters.

b. In order to prepare the Mycology laboratory for disasters the following steps should be taken:

- (1) Cover all windows facing outside of building with wood. Wood panels for this are located behind the incubator.
- (2) Check that refrigerators and ultra low freezers are plugged to emergency electrical outlets. if necessary obtain extension cords from main laboratory or move supplies or frozen cultures elsewhere.
- (3) Incubators should be locked with keys before leaving area, to be sure that no strong wind or water may cause breakage of cultures with potentially pathogenic fungi.
- (4) Since the optimum growth temperature of all fungi is 30°C, cultures will not be affected if power failure occurs, so there is no need to plug incubators to emergency outlets.
- (5) Computers terminals and electronic equipment should be disconnected and moved to the main area or covered with plastic bags.
- (6) Work books, paper and other supplies that may be affected by water should be covered with plastic or moved to the main area.

7. Evacuation Plan:

A map of the floor or building should be posted at various locations on the laboratory showing where to exit in case of a fire or disaster.