

<b>Department:</b>	Laboratory and Blood Bank		
<b>Document:</b>	Multidisciplinary Policy and Procedure		
<b>Title:</b>	Monitoring The Safety And Infection Control		
<b>Applies To:</b>	All Laboratory, Blood Bank Staff and Infection Control Staff		
<b>Preparation Date:</b>	January 07, 2025	<b>Index No:</b>	LB-MPP-079
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## 1. PURPOSE:

- 1.1 To establish a standardized cooperation between Laboratory safety department and Infection Control department for the safety of the laboratory staff.

## 2. DEFINITONS:

N/A

## 3. POLICY:

- 3.1 All laboratory staff members are expected to perform their work safely to prevent injury and illness to other laboratory personnel and to protect other people with right to entry, e.g. clinicians, nurses, biomedical technicians and other paramedics. If any unsafe acts, incidents, accidents and injury occur it should be reported to their supervisor for the safety and prevention of spread of health care associated infection among the laboratory workers.

## 4. PROCEDURE:

### 4.1 Biological safety measures and precautions:

#### 4.1.1 Standard precautions:

- 4.1.1.1 Wear the lab coat at all times in the lab.
- 4.1.1.2 Wear close-fitting disposable plastic gloves or thin rubber gloves when handling clinical specimens.
- 4.1.1.3 Wear shoes that completely cover the feet.
- 4.1.1.4 Remove gloves when using the telephone or photocopier.
- 4.1.1.5 Never take food, drink or smoke inside the laboratory.
- 4.1.1.6 Personal Protective Equipment (PPE) should be provided to the lab staff.

#### 4.2 Hand Washing:

Hand washing is one of the most important safety practices. Hands must be washed with soap and water.

- 4.2.1 Wet hands and wrists thoroughly under running water.
- 4.2.2 Apply soap and rub hands vigorously for 10 – 15 seconds (follow standard hand wash procedure).
- 4.2.3 Rinse hands thoroughly under running water.
- 4.2.4 Dry hands with paper towels.
- 4.2.5 Use paper towel to turn off the faucet handles.
- 4.2.6 Hands must be washed :
  - 4.2.6.1 Whenever there is visible contamination with blood and body fluids.
  - 4.2.6.2 After completion of work.
  - 4.2.6.3 After gloves are removed and between glove change.
  - 4.2.6.4 Before leaving the laboratory.

**4.3 Hepatitis B Immunization among Laboratory Staff :**

- 4.3.1 All the laboratory staff must be screened for HBsAg and anti-HBsAg titre at the time of joining.
- 4.3.2 The lab staff who are HBsAg negative and anti HBs titre < 10 IU/L are having no history of immunization must be vaccinated with Hepa B vaccination at 0, 1 and 5 months.
- 4.3.3 The anti HBsAg titre must be checked after 3 months of completion of the vaccination, if titre is <10 IU/L, the staff is considered as non-responder and he or she must be revaccinated with the same schedule and tested for anti HBs titer after three months.

**4.4 Disinfections of Work Areas:**

- 4.4.1 This procedure provides instruction for disinfections of work areas and equipment's.
- 4.4.2 Disinfection of working areas and equipment's should be done before the start of each shift.
- 4.4.3 Disinfect or decontaminate all laboratory work surfaces with an appropriate chemical germicide when all activities are completed.
- 4.4.4 Decontamination of bench tops should be performed at the end of each shift or more often if required.
- 4.4.5 Clorox in 1:10 dilution is the most effective and economical disinfectant.

**4.5 Safe Handling and transportation of all infectious specimens:**

- 4.5.1 Consider that all clinical specimen received in the laboratory are infectious and maximum care should be given while handling these specimen.
- 4.5.2 All specimens from patients must be collected and delivered to the laboratory in a leak proof, screw capped containers to prevent the potential hazards of leakage, spilling and aerosol production.
- 4.5.3 Wash the hands thoroughly.
- 4.5.4 Wear gloves and then handle the blood, body fluids and other infectious specimens from patients.
- 4.5.5 The laboratory receptionist must receive the specimens and deliver them to the respective sections for processing.
- 4.5.6 Do not transport the patient's specimen in the hand. All specimens should be transported in a clean plastic trays.
- 4.5.7 All clinical specimens from patients must be handled carefully while processing by wearing appropriate PPE.
- 4.5.8 The gloves should be removed after completion of the work. If the gloves are soiled it should be immediately replaced with a new one.

**4.6 Dealing with Sharp Injury :**

- 4.6.1 make Sure that you received the HBV vaccine
- 4.6.2 Allow the puncture site to bleed (at least 2 minutes).
- 4.6.3 Rinse thoroughly under running water then cover the puncture wound with gauze or Band-Aid.
- 4.6.4 Write an incident report documenting the occurrence and the name and medical record number of the patient sample & place of exposure.
- 4.6.5 Immediately notify the Head of the Department, or Supervisor.
- 4.6.6 Report as soon as possible to Infection Control Nurse (with incident report) for routine screening and further management.
- 4.6.7 Act immediately and DO NOT delay in reporting any needle stick injury.
- 4.6.8 NOTE: all accidents of this nature (infected or non-infected) or (known or unknown sources) should be informed to the Infection Control Department
- 4.6.9 Treatment will depend on source when source identified HBV positive or negative treatment is recommended as in the hospital infection control manual.

**4.7 Clean up of Biological Spills:**

**4.7.1 Contents of Biological Spill kit :**

- 4.7.1.1 Infectious waste bag (yellow colour)
- 4.7.1.2 Face Mask
- 4.7.1.3 Gloves
- 4.7.1.4 Ribbon (tag)
- 4.7.1.5 Wooden saw dust
- 4.7.1.6 Cotton roll

- 4.7.1.7 Clorox
- 4.7.1.8 Plastic scoop and brush
- 4.7.2 Method or Procedure :
  - 4.7.2.1 Wear gloves and mask.
  - 4.7.2.2 Place red ribbon to avoid people from walking or passing by the area affected.
  - 4.7.2.3 Put Clorox in and around the area and leave for at least 15 min.
  - 4.7.2.4 Sprinkle saw dust on the biohazard spill until it covers the whole area, to absorb all spillage.
  - 4.7.2.5 With the cotton roll cover and use it to pick up the spillage, and dispose of in the yellow coloured infectious waste bag.
  - 4.7.2.6 Remove gloves and mask and discard it into the yellow coloured infectious waste bag.
  - 4.7.2.7 Tie the yellow bag and put a tag stating the name of the hospital, name of department or location, and the date & time.
  - 4.7.2.8 Place the yellow bag inside the utility room for pick up by the biohazard personnel for proper disposal.
  - 4.7.2.9 Wash hands with chlorhexidine.
  - 4.7.2.10 If broken glass pieces are found, remove these glass pieces with the help of forceps and discard in a special container for broken glass.
  - 4.7.2.11 Make OVR (Incident report).
  - 4.7.2.12 Refill the Biological spill kit with the consumables.

4.8 **Dealing with chemical spill:**

- 4.8.1 Chemical spillages can contaminate laboratory furniture and equipment.
- 4.8.2 People may be contaminated directly or indirectly by contact with contaminated surfaces.
- 4.8.3 Treatment of spillages should be considered during the risk evaluation process.
- 4.8.4 MSDS will often give advice on dealing with spillage of specific chemicals.
- 4.8.5 Chemical spill kit should be placed strategically in the laboratory and it should contain:
  - 4.8.5.1 Protective clothing, including, e.g. heavy-duty rubber gloves, overshoes or rubber boots, Aprons, Respirators.
  - 4.8.5.2 Eye and face protection (Goggles and Face shield),
  - 4.8.5.3 Buckets, mops and scoops or pans,
  - 4.8.5.4 Stiff card for collecting the spillage into a scoop or pan,
  - 4.8.5.5 Inert absorbent substances, e.g. sand, paper, heavy duty sponge or gelling material.
- 4.8.6 Non-volatile, non-flammable liquids.
  - 4.8.6.1 These may be confined by placing dry sand or absorbent paper at the edges of the spillage to prevent spread; and then adding further sand or absorbent paper to soak up the liquid.
  - 4.8.6.2 Spillage control powders are available, which, if sprinkled on a liquid, form a gel which is easier to deal with.
  - 4.8.6.3 The absorbed spillage may then be collected in a scoop or pan and disposed of.
  - 4.8.6.4 Thereafter, the area should be washed with several changes of water.
- 4.8.7 Volatile or highly flammable liquids.
  - 4.8.7.1 These are best removed by encouraging evaporation after extinguishing all fumes,
  - 4.8.7.2 Removing all ignition sources
  - 4.8.7.3 Opening all windows.
- 4.8.8 Acids and alkalis: These should not be neutralized in situ but collected as described for non-volatile liquids with a suitable absorbent and transferred to a leak-proof container for neutralization in a safe place.

4.9 **Disposal of medical waste :**

- 4.9.1 This procedure provides information on types of bags and containers which are appropriate for each type of biohazards.
- 4.9.2 To prevent contamination of the laboratory personnel by the samples or materials from patients this may be infectious.

4.9.3 The specimen must be covered in order to prevent the potential hazard of spilling and aerosol production.

4.9.4 Non infected waste :

- 4.9.4.1 Types of Bags: Black and Blue coloured bags.
- 4.9.4.2 Used For:
  - 4.9.4.2.1 Empty plastic medication bottles and bags.
  - 4.9.4.2.2 Intravenous tubing (with no blood).
  - 4.9.4.2.3 Packaging, food packaging, boxes, newspapers, magazines, tissues and paper towels.
  - 4.9.4.2.4 Plates, cups, utensils-disposable.
  - 4.9.4.2.5 Ventilator tubing with no blood/ body fluids.
  - 4.9.4.2.6 Gauze or dressings (no blood) or pussy discharge.

4.9.5 Infected Waste :

- 4.9.5.1 Types of Bags :
  - 4.9.5.1.1 Yellow coloured Bags : For all blood and body fluids contaminated materials which are not breakable and not considered as sharps

4.10 **Disposal of Sharps:** Yellow sharps containers are used.

- 4.10.1 All sharps that are contaminated with biological fluids.
- 4.10.2 Should be always closed.
- 4.10.3 No more than 75% (2 / 3 rd ) of container is allowed to fill.
- 4.10.4 Safety officer must inspect regularly.
- 4.10.5 Small container should be on the bench near working area.
- 4.10.6 Large container on the floor.

4.11 **Notification of all MDR organisms:** All isolates of MDR organisms are notified to Infection Control Department for taking necessary Isolation precautions.

## 5. MATERIAL AND EQUIPMENT:

- 5.1 Availability of PPE for lab staff.
- 5.2 Availability of different colour coded bags for medical waste.
- 5.3 Availability of adequate sharp containers.
- 5.4 Hand washing technique chart.
- 5.5 HBs Ag, anti HBs Ag screening and Hepatitis B vaccination report of all lab staff.

## 6. RESPONSIBILITIES:

- 6.1 Lab. Safety Officer
- 6.2 Lab. Quality Assurance officer
- 6.3 Infection Control Department staff

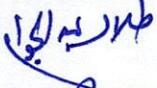
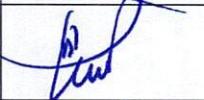
## 7. APPENDICES:

- 7.1 [Laboratory safety and Infection control audit checklist](#)

## 8. REFERENCES:

- 8.1 Infection Prevention and Control manual, GCC Centre for Infection Control, 1st Edition, 2009.

**9. APPROVALS:**

	Name	Title	Signature	Date
<b>Prepared by:</b>	Dr. Talal Abdelgawad	Clinical Pathologist		January 07, 2025
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<b>Reviewed by:</b>	Ms. Noora Melfi Alanizi	Laboratory & Blood Bank Director		January 09, 2025
<b>Reviewed by:</b>	Ms. Awatif Hamoud Alharbi	IPCD Director		January 09, 2025
<b>Reviewed by:</b>	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 12, 2025
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<b>Approved by:</b>	Mr. Fahad Hazam Alshammari	Hospital Director		January 21, 2025

**APPENDIX: 7.1**

Kingdom of Saudi Arabia  
Hafar Al Batin Health Cluster  
Maternity and Children Hospital



المملكة العربية السعودية  
الجمع الصحي بحفر الباطن  
مستشفى الولادة والأطفال

**SAFETY AND INFECTION CONTROL AUDIT**

Audited by:	Date:	YES	NO	N/A	Action
<b>1. ENVIRONMENTAL FACILITY EQUIPMENT</b>					
<b>PHYSICAL HAZARDS</b>					
Floors, halls and workstations are free of obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
No cartoon boxes are on the floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Place plastic or foam object underneath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>ELECTRICAL</b>					
Visual safety checks of electrical equipment i.e. frayed codes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Annual electric checks are done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>FIRE</b>					
Exit clearly marked & employees aware of location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Fire or emergency exit ways should be free from any obstacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Fire extinguishers are available and checked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>BIOLOGICAL SAFETY CABINETS</b>					
Annual check is performed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Current certificate posted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>GAS CYLINDERS</b>					
In upright position and secured to wall by a chain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Clear sign (full in service or empty)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>EYEWASH STATION</b>					
Checked weekly with logs updated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Checked annually for maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>SAFETY SHOWERS</b>					
Checked weekly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>PERSONAL PROTECTIVE EQUIPMENT (PPE)</b>					
Available, located in prominent location with a clear sign	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
kept in a smartly condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>2. WASTE DISPOSAL (Proper containers for all types of waste)</b>					
*Sharps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
*Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
*Biohazards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>3. WORKPLACE HAZARDOUS MATERIAL SYSTEM</b>					
All staff are trained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
MSDSs available for all chemicals used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Chemicals labelled and dated when prepared without abbreviations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>4. CHEMICALS</b>					
Chemical list posted in the laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chemicals stored compatibly and safely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Old and unused chemicals disposed regular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spill kits are available and adequately stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>5. BIOLOGICAL SAFETY PRECAUTIONS</b>					
Work Areas And Equipment Appropriately Cleaned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Employees are trained with biohazard precautions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Biohazard sign on the laboratory door	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>6. WORK PROCEDURES</b>					
SOPs and safety procedures are in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standard precautions according to the policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hand washing technique charts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Paper work done in clean area away from contaminated area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Food or drinks not found inside the laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7. REFRIGERATORS/FREEZERS/INCUBATORS</b>					
Temperature check sheets are completed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
List of contents placed on refrigerators/freezers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Refrigerators/freezers contents must be organized and checked regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Laboratory Director

Hospital Safety Officer

IPC Director