American University
EXPOSURE CONTROL PLAN

Office of Risk Management and Environmental Health and Safety

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CHAPTER 1: POLICY AND PROGRAM ADMINISTRATION

PURPOSE

American University is committed to providing a safe and healthful work environment for its entire staff. In pursuit of this endeavor, the following Bloodborne Pathogens Exposure Control Plan (BPECP) has been developed to eliminate or minimize occupational exposure to bloodborne pathogens (BBPs) in accordance with the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens standard found in the Code of Federal Regulations (CFR) 29 CFR 1910.1030 (Appendix A).

SCOPE

The BPECP is a key document to assist AU in implementing and ensuring compliance with the BBP standard. The BPECP pertains to AU employees identified in section 3.0 of this document. This BPECP is based upon OSHA's model plan and, as required by the standard, includes:

- Determination of employee exposure
- Implementation of various methods of exposure control, including:
    - Universal precautions
    - Engineering and Work practice controls
    - Personal protective equipment (PPE)
    - Housekeeping
- Hepatitis B vaccination
- Post-exposure evaluation and follow-up
- Communication of hazards to employees and training
- Recordkeeping
- Procedures for evaluating circumstances surrounding an exposure incident

ROLES AND RESPONSIBILITIES

Successful implementation of this Exposure Control Plan is dependent on clearly defined roles and responsibilities. The roles and responsibilities of AU personnel are described below.

RISK MANAGEMENT, ENVIRONMENTAL HEALTH & SAFETY (RMEHS)

- Develop and administer this program
- Identify and designate a BBP Program Administrator

BBP Program Administrator

- Maintain, review, and update this program annually and whenever necessary to include new or modified tasks or procedures
- Develop and implement bloodborne pathogen awareness training
- Foster implementation and adoption of the Exposure Control Plan
- Assist individual departments whose employees have recognized risk of occupational bloodborne pathogen exposure
- Recordkeeping and review of records as needed
- Manage the hepatitis B vaccination program for eligible employees
- Provide advice and recommend proper personal protective equipment to potentially exposed employees

Department Supervisors

Individual departments, including the Student Health Center, the Department of Athletics, Public Safety, the Child Development Center, and Facilities Management have the following responsibilities:

- Direct implementation of this program
- Aid in recordkeeping: maintaining an up-to-date Sharps Injury Log
- Aid in recordkeeping: filing a Sharps Inventory Form with RMEHS annually
- Oversee and encouraging safe employee work practices
- Schedule necessary training
- Provide final determination of necessary personal protective equipment for employees

CHAPTER 2: EMPLOYEE EXPOSURE DETERMINATION

JOB CLASSIFICATIONS WITH REASONABLY ANTICIPATED RISK FOR OCCUPATIONAL EXPOSURE

The following is a list of positions at AU where occupational exposure to blood or OPIM may reasonably be expected to occur. Individuals with job titles identified in this section are required by law to participate in all aspects of AU's Exposure Control Plan. These job titles were identified as being at reasonably anticipated risk of exposure based on responses to the Job Hazard Analysis form (Appendix B), which indicated that either the use of sharps or administration of first aid was a part of the employee's official job duties. Documentation of these individual's hepatitis B vaccination status will be maintained by the Office of Risk Management and/or a third-party medical provider regardless of whether an exposure event has occurred.

Job Title	Department	Tasks with Potential Exposure
Staff Physician	Student Health Center	Administering injections, collecting blood, initial first aid, gynecological examinations
Health/Nurse Practitioner		
Registered Nurse		
Patrol Officer	Public Safety	CPR, initial first aid
Athletic Trainer	Athletic Department	CPR, initial first aid
CDC Teacher	Child Development Center	Initial first aid, changing diapers and/or soiled clothing
Lead Teacher		
Administrator CDC		

JOB CLASSIFICATIONS WITH UNANTICIPATED RISK FOR OCCUPATIONAL EXPOSURE

The following is a list of job classifications at AU in which some employees have a small anticipated risk for occupational exposure, but are not defined by OSHA as having a reasonably anticipated risk for exposure. Although their anticipated risk for exposure to infectious materials is less than those identified in section 3.1 and are not required by OSHA to adhere to the University's Exposure Control Plan, AU requires that these employees be fully enrolled and held accountable for adhering to the requirements stated in this document.

Directors and supervisors are responsible for knowing their employee's potential risks regarding bloodborne pathogen exposure and are encouraged to attend training in support of these individuals.

Job Title	Department	Tasks with Potential Exposure
Plumber	Facilities Operations	Contact with raw sewage[1]
Facilities Maintenance Technician		Incident support
Equipment Manager	Athletics and Recreation	Handling soiled laundry[2]
Operations Manager		Incident support
Facility Manager		Incident support
Shift Supervisor		CPR, initial first aid
Lead Instructor		CPR, initial first aid
Groundskeeper	Grounds and Transport Operations	Picking up needles, used condoms, etc.
Shuttle Operator		Incident support
University Police Dispatcher	Public Safety	Incident support
Shift Supervisor		

[1]*Although contact with raw sewage (not originating from a health care facility) poses a number of health hazards, OSHA does not consider these hazards to be related to bloodborne pathogens, unless otherwise determined a hazard by the employer. AU has elected to include all of plumbing employees that may potentially be exposed to raw sewage in their BPECP to ensure the highest level of safety and training possible for its employees.*

[2]*OSHA considers contaminated laundry to be laundry that has been soiled with blood or other potentially infectious materials (OPIM) or may contain sharps. Therefore, any laundry workers with duties to launder athletic uniforms or towels contaminated with blood or OPIM will be considered an employee with potential occupational exposure. Contaminated laundry will be segregated from other laundry according to procedures identified in Section 4.6 (Laundry) and only handled by employees appropriately trained and vaccinated (unless declination is signed) according to the*

CHAPTER 3: IMPLEMENTATION

UNIVERSAL PRECAUTIONS

All AU employees trained to the bloodborne pathogen standard are taught to practice universal precautions. Universal Precautions is an approach to infection control that treats all human blood and certain human body fluids as if they are known to be infectious. All employees are required to practice universal precautions when working with blood or OPIM.

SANITIZING AND DISPOSAL PROTOCOL

Proper containment, clean-up, and disinfection must occur in all scenarios involving blood or OPIM. AU has adopted the following procedure for this event and all employees are expected to adhere to these standards when cleaning potentially infectious materials.

Do not attempt to clean larger spills that go beyond your ability to clean with the supplies on hand. Contact the Office of Risk Management for questions.

Step 1: Required Personal Protective Equipment

Prior to beginning the clean-up, don a pair of rubber, latex, PVC or similar type gloves.

For small blood spills no other PPE should be required. For larger spills where there is a possibility of contaminating your face or other parts of your body, do not attempt to perform the clean-up.

Step 2: Equipment

The following items may be needed in handling the spill:

- EPA-registered disinfectant (for use with HIV and HBV agents); a 10% bleach solution may be substituted if no other options are available
- gloves
- red biohazard bags
- biohazard labels (available from RMEHS)
- leak-proof sharps containers
- brush & dustpan, or tongs or forceps for picking up sharps
- disinfectant wipes

Step 3: Decontamination Procedures

Cover the spill area with a paper towel and then pour disinfectant. Allow solution to soak into the contaminated material. Work from the outside edges of the spill inward when applying the disinfectant.

Any glass, needles, or other sharp objects that may puncture the skin may not be picked up by hand. Only mechanical means such as a brush and dustpan, tongs, or forceps are allowed.

Wipe up bleached material with paper towels or absorbent pads. It may be necessary to use a scrub brush to remove the material if it impacted a hard porous surface such as concrete. If non-porous surfaces, such as a carpet have been contaminated, an approved and qualified outside vendor may be required to clean the area.

Step 4: Disposal

Place all clean-up materials, including gloves and any personal protective equipment worn into a labeled biohazard bag (red bag) and place into either another labeled biohazard bag or container. Ensure lids are firmly sealed on all waste containers when spill clean-up is complete and call the BBP Program Administrator for a pickup. Keep biohazard waste container in a secured area until received by Risk Management.

Step 5: Decontaminate Re-useable Equipment

Decontaminate with the bleach solution all potentially contaminated re-useable tools or protective equipment used in the cleanup. This includes dustpans, brooms, forceps, buckets, etc. Anything that cannot be effectively cleaned (bleach solution must be able to make contact with all surfaces) must be disposed as waste. After the contaminated area has been cleaned, use fresh water to remove bleach residue from all surfaces.

Step 6: Wash Your Hands

If hand-washing facilities are not available at the job site use disinfectant wipes and then wash your hands as soon as possible.

Biohazard Exposure

If you believe you were exposed (skin puncture or splash to eyes or mucous membranes) to biohazard material that had not been decontaminated with the bleach solution follow these recommended steps:

- Skin exposure: Vigorously wash affected skin with plenty of soap and water while removing contaminated clothing and shoes.
- Eye exposure: Wash eyes for at least 10 minutes with copious amounts of water, lifting the upper and lower eyelids occasionally.
- Seek follow-up medical attention by contacting your supervisor for referral to AU's post-exposure procedure.

DISINFECTANT REQUIREMENTS

Because pathogens that may be found in potentially infectious materials are often resistant to certain cleaners, the use of a cleaning product on a potentially infectious spill does not guarantee proper disinfection of the area. EPA-registered disinfectants that are designated for use with HIV and HBV agents are the only products to be used to clean contaminated surfaces. In addition to using an EPA-registered disinfectant for spill clean-up, directions provided by the manufacturer on how to decontaminate the surface must be followed. These directions include the following requirements:

- Personal protection devices for the worker performing the task;
- That all the blood must be cleaned thoroughly before applying the disinfectant;
- That the disposal of the infectious waste is in accordance with federal, state, or local regulations; and
- That the surface is left wet with the disinfectant for 30 seconds for HIV-1 and 10 minutes for HBV.

The directions should be observed in conjunction with the procedure outlined in section 4.1.1 of this document. Questions and guidance in selecting an appropriate disinfectant for the situation at-hand should be directed to the BBP Program Administrator.

EXPOSURE CONTROL PLAN

Bloodborne pathogens standard training includes details of and instruction for implementation of the BPECP. Review of the BPECP is included in annual refresher training. Each affected department identified in this document will maintain a copy of the BPECP along with the Post-Exposure Prophylaxis Packet (Appendix C) at a location deemed accessible and appropriate by that department's management team. The master copy of the BPECP for AU is maintained by Risk Management & Environmental Health & Safety. This plan is available to all AU employees. The ECP can be found on the Risk Management & Environmental Health & Safety website.

Department managers are responsible for ensuring that their employees with job titles identified in this document are properly trained. Department Managers should ensure that affected employee's direct supervisors are aware of the training requirements. Supervisors with transient student staff (e.g. Fitness Center and laboratory workers) should review the BPECP prior to each semester to ensure that it is accurate and up-to-date. All changes should be forwarded to Risk Management & Environmental Health & Safety to ensure the Master BPECP is appropriately revised.

ENGINEERING AND WORK PRACTICE CONTROLS

Engineering and work practices controls are part of the essential components to reducing the risk of occupational exposure to the bloodborne pathogens. Accordingly, AU will use both engineering and work practice controls to minimize the risk of occupational exposure incidents.

ENGINEERING CONTROLS

The "Needlestick Safety and Prevention Act" of November 6, 2000, mandates that employers annually identify, evaluate, and implement safer medical devices in the workplace. Therefore, syringes with engineered protective systems (such as sheathed or retractable needles) should be used by employees for injections unless there is no such system available for the procedure being performed. Additionally, an inventory of sharps currently in use on AU's campus is maintained by the Student Health Center. Part of this process necessitates the involvement of non-managerial healthcare workers in evaluating and choosing devices that provide the maximum available protection against needle sticks. The Sharps Inventory serves as part of American University's record that the sharps currently being used by university employees have been

annually reviewed and vetted against the latest advancements in healthcare safety. Current copies of the inventory are housed in the Environmental Health & Safety office.

The Student Health Center currently uses a Quest Laboratory Centrifuge, model 614B. This model features a lid safety switch, which prevents the machine from operating while the lid is open and prevents the lid from being opened while the machine is running. Additionally, a 4 Amp circuit breaker cuts power to the machine in the event of an electrical short circuit. The manufacturer, Drucker Company, has published an operator's manual that cites specific safety features and recommends proper care and maintenance of the machine to ensure safe operation. A copy of this manual can be found in Appendix E.

WORK PRACTICE CONTROLS

Contaminated or potentially contaminated needles shall not be bent, recapped, sheared, or removed. Potentially contaminated needles, glass or other sharps will be disposed of in sharps containers (that meet the requirements defined in Section 4.5 - Housekeeping) immediately after use. All sharps containers will be disposed before they reach the marked fill line and will not be emptied by hand. Sharps containers at the student health center will not be reused. Under no circumstance should an AU employee place their hand inside a container whose contents include sharps contaminated with blood or OPIM.

Contaminated, or potentially contaminated, broken glass or needles will not be picked up directly with the hands. The tool(s) used in the cleanup of broken glass (e.g. forceps) will be decontaminated or discarded. Vacuum cleaners are not appropriate to pick up contaminated glass and will not be used for this purpose.

No eating, smoking, drinking, or application of cosmetics or lip balm is allowed where blood or OPIM are present. For the purposes of this BPECP, hand cream is not considered a cosmetic. However, petroleum-based hand creams may adversely affect the integrity of protective gloves and should not be used.

All procedures involving blood or OPIM shall be performed in a manner to minimize splashing, spraying, spattering, and generation of droplets of these substances. Mouth pipetting/suctioning of blood or OPIM is prohibited. Equipment that may become contaminated with blood or OPIM will be examined prior to servicing or shipping and shall be decontaminated as necessary, unless it is documented that decontamination of such equipment (or portions of such equipment) is not feasible. An appropriate disinfectant is defined as an EPA-listed tuberculocidal germicide or bleach mixture diluted between 1:10 and 1:100 with water. Quaternary ammonium compounds that have not been listed by the EPA as a tuberculocidal germicide are not acceptable to OSHA. All the biomedical waste will be place in closable, leak-proof containers prior to transport. In case of contamination of the outside of the primary container is likely, then a second container such as plastic bag should be place over the primary container to prevent contamination and/or leakage during handling, storage or transport.

Employees working with the laboratory centrifuge in the Student Health Center are encouraged to become familiar with the Operator's Manual (Appendix E) and are expected to follow it's guidelines for proper operation, care, and preventative maintenance. At no time may the features of the machine be altered without prior written approval from the manufacturer.

Annual Review of Engineering and Work Practice Controls

The Risk Management & Environmental Health & Safety will review and update the exposure control plan at least annually (every 12 months) and whenever necessary to reflect new or modified tasks, procedures, or potentially exposed job titles. This review will reflect innovations in procedures and technological developments that will eliminate or reduce exposure to bloodborne pathogens.

Employee Involvement in Engineering and Work Practice Controls

As part of the annual review process, the BBP Program Administrator will reach out to departments and employees who are identified in this document as potentially exposed. Evidence of these meetings and summary notes can be found in the RMEHS share drive, L:\RMEHS\EHS_Programs\Bloodborne Pathogen-Infection Control\2012 Review. This is done with the aim of seeking input from non-managerial employees in the identification, selection, and evaluation of effective engineering and work practice controls. Although AU is not required to request input from each and every potentially exposed employee, the employees selected each year represent a variety of exposure situations encountered on campus. Employee names and job titles are recorded as part of the meeting summary notes documents. Additionally, employees are asked to fill out a Sharps Inventory Form (Appendix D) annually in order to aid in the assessment of equipment for safety.

Personal Protective Equipment

Personal protective equipment (PPE) to prevent or minimize exposure to BBPs is provided to AU employees at no cost to the employee. The types of PPE available to employees are recommended by the BBP Program Administrator and ultimately determined by the department supervisor with specific job tasks in mind. Therefore, PPE may differ between departments. The following is a generalized list of what PPE is normally recommended for employees with reasonably anticipated risk for occupational exposure to blood or OPIM:

- Disposable latex and Nitrile gloves
- Impermeable disposable lab aprons
- Face shields, goggles, and/or protective eyeglasses
- Mouth-to-mouth resuscitative face shields

Responsibility for ensuring that PPE is readily available and in good condition is shared between the affected employees and their supervisors.

Health practitioners in the Student Health Center maintain their own inventory of PPE in their respective examination rooms. These individuals are responsible for maintaining a well-stocked room that minimally includes: disposable examination gloves, eye protection, mouth-to-mouth resuscitation face protection, a surgical type facemask, and a disposable lab apron.

Athletic coaches and trainers with first aid/CPR responsibilities will maintain PPE with their respective first aid kits. These individuals are responsible for maintaining a complete kit of PPE that minimally includes: disposable gloves, eye protection, mouth-to-mouth resuscitation face protection and a disposable gown to cover clothing.

Employees that handle contaminated clothing are responsible for disposable examination gloves and eye protection for working with contaminated laundry.

All employees must observe the following precautions and work practices involving PPE:

- Hands must washed be immediately, or as soon as feasible, after removal of gloves or other PPE.
- PPE must be removed after it becomes contaminated with blood or OPIM and before leaving the work area.
- Used PPE may be disposed in common trash or laundry if it has not been contaminated with blood or OPIM. Otherwise, is will be managed and disposed of as regulated waste in accordance with procedures and practices specified in Section 4.5.
- Appropriate gloves must be worn where it is reasonably anticipated that there may be hand contact with blood or OPIM, or when handling or touching contaminated items or surfaces. Gloves must be replace if torn, punctured, contaminated, of if their ability to function as a barrier is compromised.
- Disposable gloves will not be washed or decontaminated for reuse. Utility gloves may be decontaminated for reuse if their integrity is not compromised. The utility gloves must be disposed of if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Any garment that is contaminated with blood or OPIM must be removed immediately (or as soon as feasible) in a manner to avoid contact with the outer surface.
- Appropriate face or eye protection will be worn whenever there is a reasonably anticipated hazard of a splash, spray, or spatter of droplets of blood or OPIM to the eyes, nose, or mouth.

The procedure for handling used PPE is as follows:

- Disposable gloves will be disposed of in red bags (described in Section 4.5) and handled as regulated waste.
- Contaminated laundry (e.g. reusable lab coats) will be stored in red bags and laundered as contaminated laundry.
- Reusable PPE (such as eye glasses, goggles, and face shields) should be promptly washed after use. If the PPE was contaminated, or potentially

contaminated, with blood or OPIM, it will be decontaminated with an appropriate disinfectant. An appropriate disinfectant is defined as an EPA-listed tuberculocidal germicide or bleach diluted between 1:10 with water. Quaternary ammonium compounds that have not been listed by the EPA as a tuberculocidal germicide are not acceptable to OSHA.

HOUSEKEEPING

Regulated waste will be place in containers that are closable, constructed to contain all contents, prevent leakage, appropriate labeled or color-coded (see Section 4.7 - Labels), and closed prior to removal to prevent spillage or protrusion of contents during handling.

Contaminated sharps will be discarded as soon as possible, in containers that are closable, puncture-resistant, leak-proof on the sides and bottoms, and appropriately labeled or color-coded. Sharps disposal containers must be easily accessible and as close as feasible to the immediate area where sharps are used. Sharps disposal containers are located in the following locations:

- Each examination room (five rooms) in the Student Health Center
- The Student Health Center lab
- Athletic Training Office; Bender room G17.1
- Athletic Training Office; portable container

Sharps disposal containers and other regulated wastes will be sealed and disposed of through a licensed biological waste disposal provider. AU currently uses SteriCycle/DCS to provide these services.

LAUNDRY

The Athletic Department routinely launders athletic uniforms, towels and related materials. Although these materials are not normally considered contaminated materials, blood or OPIM may be present. Small, dry, non-flaking blood stains on laundry is not considered by OSHA to be a contaminated material. Blood-soaked or significantly stained laundry (by blood or OPIM) should be neutralized, put in biohazard bag, and appropriately handled. This may include disposal as regulated waste or laundered by a subcontracted entity with appropriate controls for BBP-contaminated laundry. Similarly, contaminated laundry generated by the Student Health Center will be placed in a red, labeled biohazard bag and either discarded or laundered by an appropriate subcontracted entity with appropriate controls for BBP-contaminated laundry.

The following laundering requirements for contaminated laundry must be met:

- Contaminated laundry shall be handled as little as possible with a minimum of agitation.
- Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

- Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.
- Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.
- Employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.
- When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or appropriately color-coded.

LABELS

Warning labels will be affixed to containers of regulated waste; refrigerators and freezers containing blood or OPIM; and other containers used to store, transport or ship blood or OPIM. Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempt from these OSHA labeling requirements. Similarly, individual containers of blood or OPIM that are placed in a labeled container during storage, transport, shipment, and disposal are exempt from these labeling requirements.

The following labeling methods will be used at AU:

- All containers with regulated waste will have a background that is either fluorescent orange or orange-red in color and marked with lettering and symbols in contrasting color. The Biohazard symbol and the word "Biohazard" is required.
- If the label(s) cannot be directly affixed to the container, it must be affixed as close as feasible by a string, wire, adhesive, or other method to prevent its loss or unintentional removal.

CHAPTER 4: EMERGENCY FIRST AID

OSHA guidance regarding employees that are trained and designated as responsible for rendering first aid or medical assistance as part of their job duties are covered under the BBP standard. However, OSHA will consider it a "de minimis" violation (a technical violation carrying no penalties) if employees who administer first aid as a collateral duty to their routine workassignments, are not offered the pre-exposure hepatitis B vaccination, provided that certain conditions are met. The "de minimis" classification for failure to offer hepatitis B vaccination in advance of exposure does not apply to personnel who provide first aid at a clinic, first aid station, dispensary or to health care, emergency response or public safety personnel expected to render first aid in the course of their work. These conditions are:

1. Exceptions are limited to employees who render first aid solely as a collateral duty, responding solely to injuries resulting from workplace incidents, generally at the location where the incident occurred
2. Reporting procedures must be in place to ensure that all first aid incidents involving exposure are reported to the employer before the end of the work shift during which the incident occurs.
3. Reports of first aid incidents must include the names of all first aid providers and a description of the circumstances of the accident, including the date and time as well as a determination of whether the whether an exposure incident has occurred.
4. Exposure reports must be included on a list of first aid incidents that is readily available to all employees and provided to OSHA upon request.
5. First aid providers must receive training under the BBP standard that covers the specifics of the reporting procedures.
6. All first aid providers who render assistance in any situation involving the presence of blood or OPIM, regardless of whether or not a specific exposure incident occurs, must have the vaccine made available to them as soon as possible but in no event later than 24 hours after the exposure incident.

Accordingly, all of the above requirements will be met at AU. All such incidents must be reported to an employee's supervisor by the end of the work shift. The BBP Program Administrator must be notified immediately following the administration of first aid - regardless of whether first aid is part of the employee's job duties or not. An internal report of the accident will be completed and an exposure determination will be conducted. If applicable the employee will be provided with the Post-Exposure Prophylaxis Packet (Appendix C).

CHAPTER 5: HEPATITIS B VACCINATION

The BBP Program Administrator will provide training to employees enrolled in this program on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability to during each BBP training session conducted.

The hepatitis vaccination series is available at no cost after training and within 10 days of initial assignment to employees identified in the exposure determination for this plan. Although personal recommendation of vaccination can only be made by a professional physician, vaccination is generally encouraged unless:

- Documentation exists that the employee has previously received the series,
- Antibody testing reveals that the employee is immune, or
- Medical evaluation shows that vaccination is contraindicated.

If an eligible employee elects to receive the hepatitis B vaccination, a qualified medical provider will conduct a medical evaluation to determine the employee's need for vaccination. If deemed appropriate by the provider, vaccinations will then be provided to the employee at no cost to them. AU currently uses Washington Occupational Health Associates (WOHA) to provide such services to employees.

If an employee chooses to decline vaccination, the employee must sign a declination form (Appendix F) and return it to the BBP Program Administrator. Employees who initially decline may request and obtain vaccination at a later date at no cost to them. Original documentation of refusal of the vaccination is kept by the BBP Program Administrator.

CHAPTER 6: POST-EXPOSURE EVALUATION AND FOLLOW-UP

An exposure incident can be identified by answering "yes" to any of the following questions:

- Did you get blood or other potentially infectious materials in your eyes, nose, or mouth?
- Did blood or OPIMs come into contact with broken skin (less than 24 hours old), including cuts or open skin rashes, or breaking of your skin in a bite?
- Did penetration of your skin by blood of OPIM contaminated sharp (needle, lancet, glass, teeth, etc.) occur?

If unsure of whether certain events pose risk of disease transmission, the National Clinician's Post-Exposure Prophylaxis Hotline (PEPline) serves as a resource for bloodborne exposure-related information. The phone number is 888-448-4911.

If an exposure incident occurs, the employee must promptly contact both their immediate supervisor and BBP Program Administrator. When the supervisor is notified, the supervisor must supply the employee with the Post-Exposure Prophlylaxis packet (Appendix C) and ensure that the BBP Program Administrator has been notified. It is the duty of the supervisor to ensure that the post exposure evaluation requirements (as outlined in the PEP Packet) are properly fulfilled.

Unless a medical declination is signed, a confidential medical evaluation and follow-up will be conducted by a licensed health care professional with appropriate capabilities for dealing with exposure to bloodborne pathogens. Following the initial first aid (clean the wound, flush eyes or other mucous membrane, etc.), the following activities will be performed by the affected employee:

- Report the incident to direct supervisor and BBP Program Administrator
- Complete the Consent/Refusal for HIV, HBV, and HCV Infectivity Testing Form and the Incident Report for Employee form
- If applicable, request that the source individual complete the Consent/Refusal for HIV, HBV, and HCV Infectivity Testing Form
- Report to healthcare provider with source individual, inform them of AU's Worker's Compensation Insurance
- Provide physician with the Incident Report form and a copy of 29 CFR 1910.1030
- Work with the BBP Program Administrator to document the routes of exposure and how the exposure occurred via the RMEHS Exposure Incident Form.

Upon notification from the affected employee, it is the responsibility of the supervisor to:

- Give the employee the PEP packet
- Secure transportation to the hospital for the employee and source individual (if applicable)
- Ensure that the BBP Program Administrator has been notified of the incident

- Complete the Incident Report for Supervisor form and return it to the BBP Program Administrator within 24 hours of the incident

The BBP Program Administrator will ensure that healthcare professionals responsible for an employee's hepatitis B vaccination and/or post-exposure evaluation are provided a copy of OSHA's Bloodborne Pathogens standard. Additionally, the BBP Program Administrator will ensure that the health care professional evaluating an employee after an exposure receives the following:

- A description of the employee's job duties relevant to the exposure incident
- Route(s) of exposure
- Circumstances of exposure

PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

Risk Management & Environmental Health & Safety BBP Program Administrator will review the circumstances of all exposure incidents to determine:

- Engineering controls in use at the time
- Work practices followed
- A description of the device being used (including type and brand)
- Protective equipment or clothing that was used at the time of the exposure incident,
- Location of the incident
- Procedure being performed when the incident occurred
- The frequency and effectiveness of the employee's training

Due to the frequency of sharps use at both the Student Health Center and Athletic Training Office, a designated individual from each office will record all percutaneous injuries from contaminated sharps that occur within the department on the Sharps Injury Log (Appendix G) for the Student Health Center and Athletic Training Office, respectively. This information will be forwarded within 24 hours to Risk Management & Environmental Health & Safety where it will be recorded on the Master Sharps Injury Log for AU. A new Sharps Injury Log is created annually and will be forwarded by RMEHS to the Student Health Center during the annual review of the BPECP. If it is determined that revisions are necessary, the Director of the Student Health Center will work with the BBP Program Administrator to ensure that appropriate changes are made to this document.

All other percutaneous injuries to AU employees that occur from contaminated sharps will be immediately reported to the employee's supervisor and Risk Management & Safety Services. This information will be promptly (within 24 hours) forwarded to Risk Management & Environmental Health & Safety and recorded on the Master Sharps Injury Log for AU. If it is determined that revisions necessary, Risk Management & Environmental Health & Safety will ensure that appropriate changes are made to this BPECP.

CHAPTER 7: TRAINING

All employees who are determined to have occupational exposure to bloodborne pathogens will receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program will minimally cover the following elements as required by OSHA's BBP standard:

- An explanation of the standard and where to access a copy
- An explanation of AU's BPECP and where to access a copy
- An explanation of methods to recognize tasks and other activities that may involve exposure to blood and other potentially infectious materials (OPIM), including what constitutes an exposure incident
- An explanation of the use and limitations of engineering controls, work practices, and PPE
- An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
- An explanation of the basis of PPE selection
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
- An explanation of the signs and labels and/or color coding required by the standard and used at AU
- An opportunity for interactive questions and answers with the person conducting the training session

Training records, including the date(s) of training, qualifications of the person(s) providing the training, an attendee sign-in sheet, and class handouts will be maintained in the RMEHS office by the BBP Program Administrator.

CHAPTER 8: RECORDKEEPING

TRAINING RECORDS

Training records will be completed for each employee upon satisfactory completion of a training session. Training records will be managed by the BBP Program Administrator and stored in the RMEHS office. These records will be maintained for a minimum of three years. The training records will include:

- The dates of training sessions
- The contents or summary (e.g. a course syllabus) of the training sessions
- The names and qualifications of persons conducting the training
- The names and job titles of all persons attending the training sessions

MEDICAL RECORDS

Medical records will be maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1030(h) - Access to Employee Exposure and Medical Records.

The BBP Program Administrator will ensure that required medical records are confidentially maintained for the duration of employment plus 30 years. To ensure confidentiality, RMEHS has contracted Washington Occupational Health Associates (WOHA) to provide medical consultation and record storage for employees recognized by RMEHS as having an occupational need for such services. According to contract, these records will not be destroyed without prior approval from AU.

Employee medical records will be provided from WOHA to the employee or the employee's representative (with written authorization of the employee) within 15 working days upon initial request. Such requests should be submitted to the BBP Program Administrator for processing.

OSHA RECORDKEEPING

An exposure incident will be evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities will be completed by the BBP Program Administrator.

SHARPS INJURY LOG

In addition to the 29 CFR 1904 recordkeeping requirements, all percutaneous injuries from contaminated sharps will also be recorded on the Sharps Injury Log. A Sharps Injury Log is maintained as a record (in written and electronic form) of each exposure incident involving a sharp. All incidents must include the following information:

- The date of the injury
- The type and brand of the device involved
- The department or work area where the incident occurred
- An explanation of how the incident occurred

This log will be reviewed by the BBP Program Administrator at least annually as part of the annual evaluation of the program and will be maintained for at least five years following the end of the calendar year in which the incident occurred. Because both the Student Health Center maintains its own departmental Sharps Injury Logs, the BBP Program Administrator will forward the Health Center a new copy annually. Personal identifiers are to be excluded when entering information into the injury logs.

APPENDIX A: OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS STANDARD (29 CFR 1910.1030)

1910.1030(a)
Scope and Application. This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.
1910.1030(b)
Definitions. For purposes of this section, the following shall apply:
Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.
Blood means human blood, human blood components, and products made from human blood.
Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.
Contaminated means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.
Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.
Decontamination means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.
Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.
Engineering Controls means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.
Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.
Handwashing Facilities means a facility providing an adequate supply of running potable water, soap, and single-use towels or air-drying machines.
Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.
HBV means hepatitis B virus.
HIV means human immunodeficiency virus.
Needleless systems means a device that does not use needles for:
(1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) The administration of medication or fluids; or (3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.
Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.
Other Potentially Infectious Materials means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures,

and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.
Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.
Personal Protective Equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.
Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.
Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.
Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.
Sharps with engineered sharps injury protections means a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.
Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.
Sterilize means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.
Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.
Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

1910.1030(c)

Exposure Control --

1910.1030(c)(1)

Exposure Control Plan.

1910.1030(c)(1)(i)

Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

1910.1030(c)(1)(ii)

The Exposure Control Plan shall contain at least the following elements:

1910.1030(c)(1)(ii)(A)

The exposure determination required by paragraph (c)(2),

1910.1030(c)(1)(ii)(B)

The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

1910.1030(c)(1)(ii)(C)

The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

1910.1030(c)(1)(iii)

Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).

1910.1030(c)(1)(iv)

The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:

1910.1030(c)(1)(iv)(A)
Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and
1910.1030(c)(1)(iv)(B)
Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure
1910.1030(c)(1)(v)
An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.
1910.1030(c)(1)(vi)
The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.
1910.1030(c)(2)
Exposure Determination.
1910.1030(c)(2)(i)
Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:
1910.1030(c)(2)(i)(A)
A list of all job classifications in which all employees in those job classifications have occupational exposure;
1910.1030(c)(2)(i)(B)
A list of job classifications in which some employees have occupational exposure, and
1910.1030(c)(2)(i)(C)
A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.
1910.1030(c)(2)(ii)
This exposure determination shall be made without regard to the use of personal protective equipment.
1910.1030(d)
Methods of Compliance --
1910.1030(d)(1)
General. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.
1910.1030(d)(2)
Engineering and Work Practice Controls.
1910.1030(d)(2)(i)
Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.
1910.1030(d)(2)(ii)
Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.
1910.1030(d)(2)(iii)
Employers shall provide handwashing facilities which are readily accessible to employees.
1910.1030(d)(2)(iv)
When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.
1910.1030(d)(2)(v)
Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.
1910.1030(d)(2)(vi)
Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.
1910.1030(d)(2)(vii)

Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

1910.1030(d)(2)(vii)(A)

Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

1910.1030(d)(2)(vii)(B)

Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

1910.1030(d)(2)(viii)

Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

1910.1030(d)(2)(viii)(A)

Puncture resistant;

1910.1030(d)(2)(viii)(B)

Labeled or color-coded in accordance with this standard;

1910.1030(d)(2)(viii)(C)

Leakproof on the sides and bottom; and

1910.1030(d)(2)(viii)(D)

In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.

1910.1030(d)(2)(ix)

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

1910.1030(d)(2)(x)

Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

1910.1030(d)(2)(xi)

All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

1910.1030(d)(2)(xii)

Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

1910.1030(d)(2)(xiii)

Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

1910.1030(d)(2)(xiii)(A)

The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

1910.1030(d)(2)(xiii)(B)

If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

1910.1030(d)(2)(xiii)(C)

If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

1910.1030(d)(2)(xiv)

Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

1910.1030(d)(2)(xiv)(A)

A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

1910.1030(d)(2)(xiv)(B)

The employer shall ensure that this information is conveyed to all affected employees, the servicing

representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

1910.1030(d)(3)

Personal Protective Equipment --

1910.1030(d)(3)(i)

Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

1910.1030(d)(3)(ii)

Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

1910.1030(d)(3)(iii)

Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

1910.1030(d)(3)(iv)

Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

1910.1030(d)(3)(v)

Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

1910.1030(d)(3)(vi)

If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

1910.1030(d)(3)(vii)

All personal protective equipment shall be removed prior to leaving the work area.

1910.1030(d)(3)(viii)

When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

1910.1030(d)(3)(ix)

Gloves. Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

1910.1030(d)(3)(ix)(A)

Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

1910.1030(d)(3)(ix)(B)

Disposable (single use) gloves shall not be washed or decontaminated for re-use.

1910.1030(d)(3)(ix)(C)

Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

1910.1030(d)(3)(ix)(D)

If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

1910.1030(d)(3)(ix)(D)(1)

Periodically reevaluate this policy;

1910.1030(d)(3)(ix)(D)(2)

Make gloves available to all employees who wish to use them for phlebotomy;

1910.1030(d)(3)(ix)(D)(3)

Not discourage the use of gloves for phlebotomy; and

1910.1030(d)(3)(ix)(D)(4)

Require that gloves be used for phlebotomy in the following circumstances:

1910.1030(d)(3)(ix)(D)(4)(i)

When the employee has cuts, scratches, or other breaks in his or her skin;

1910.1030(d)(3)(ix)(D)(4)(ii)

When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

1910.1030(d)(3)(ix)(D)(4)(iii)

When the employee is receiving training in phlebotomy.

1910.1030(d)(3)(x)

Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

1910.1030(d)(3)(xi)

Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

1910.1030(d)(3)(xii)

Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).

1910.1030(d)(4)

Housekeeping --

1910.1030(d)(4)(i)

General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

1910.1030(d)(4)(ii)

All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

1910.1030(d)(4)(ii)(A)

Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

1910.1030(d)(4)(ii)(B)

Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

1910.1030(d)(4)(ii)(C)

All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

1910.1030(d)(4)(ii)(D)

Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.

1910.1030(d)(4)(ii)(E)

Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these

sharps have been placed.
1910.1030(d)(4)(iii)
Regulated Waste --
1910.1030(d)(4)(iii)(A)
Contaminated Sharps Discarding and Containment.
1910.1030(d)(4)(iii)(A)(1)
Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:
1910.1030(d)(4)(iii)(A)(1)(i)
Closable;
1910.1030(d)(4)(iii)(A)(1)(ii)
Puncture resistant;
1910.1030(d)(4)(iii)(A)(1)(iii)
Leakproof on sides and bottom; and
1910.1030(d)(4)(iii)(A)(1)(iv)
Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.
1910.1030(d)(4)(iii)(A)(2)
During use, containers for contaminated sharps shall be:
1910.1030(d)(4)(iii)(A)(2)(i)
Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);
1910.1030(d)(4)(iii)(A)(2)(ii)
Maintained upright throughout use; and
1910.1030(d)(4)(iii)(A)(2)(iii)
Replaced routinely and not be allowed to overfill.
1910.1030(d)(4)(iii)(A)(3)
When moving containers of contaminated sharps from the area of use, the containers shall be:
1910.1030(d)(4)(iii)(A)(3)(i)
Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;
1910.1030(d)(4)(iii)(A)(3)(ii)
Placed in a secondary container if leakage is possible. The second container shall be:
1910.1030(d)(4)(iii)(A)(3)(ii)(A)
Closable;
1910.1030(d)(4)(iii)(A)(3)(ii)(B)
Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and
1910.1030(d)(4)(iii)(A)(3)(ii)(C)
Labeled or color-coded according to paragraph (g)(1)(i) of this standard.
1910.1030(d)(4)(iii)(A)(4)
Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.
1910.1030(d)(4)(iii)(B)
Other Regulated Waste Containment --
1910.1030(d)(4)(iii)(B)(1)
Regulated waste shall be placed in containers which are:
1910.1030(d)(4)(iii)(B)(1)(i)
Closable;
1910.1030(d)(4)(iii)(B)(1)(ii)
Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
1910.1030(d)(4)(iii)(B)(1)(iii)
Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and
1910.1030(d)(4)(iii)(B)(1)(iv)
Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
1910.1030(d)(4)(iii)(B)(2)
If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

1910.1030(d)(4)(iii)(B)(2)(i)
Closable;
1910.1030(d)(4)(iii)(B)(2)(ii)
Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
1910.1030(d)(4)(iii)(B)(2)(iii)
Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and
1910.1030(d)(4)(iii)(B)(2)(iv)
Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
1910.1030(d)(4)(iii)(C)
Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.
1910.1030(d)(4)(iv)
Laundry.
1910.1030(d)(4)(iv)(A)
Contaminated laundry shall be handled as little as possible with a minimum of agitation.
1910.1030(d)(4)(iv)(A)(1)
Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.
1910.1030(d)(4)(iv)(A)(2)
Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.
1910.1030(d)(4)(iv)(A)(3)
Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.
1910.1030(d)(4)(iv)(B)
The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.
1910.1030(d)(4)(iv)(C)
When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).
1910.1030(e)
HIV and HBV Research Laboratories and Production Facilities.
1910.1030(e)(1)
This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.
1910.1030(e)(2)
Research laboratories and production facilities shall meet the following criteria:
1910.1030(e)(2)(i)
Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.
1910.1030(e)(2)(ii)
Special Practices.
1910.1030(e)(2)(ii)(A)
Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.
1910.1030(e)(2)(ii)(B)
Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.
1910.1030(e)(2)(ii)(C)

Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

1910.1030(e)(2)(ii)(D)

When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

1910.1030(e)(2)(ii)(E)

All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

1910.1030(e)(2)(ii)(F)

Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

1910.1030(e)(2)(ii)(G)

Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

1910.1030(e)(2)(ii)(H)

Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

1910.1030(e)(2)(ii)(I)

Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

1910.1030(e)(2)(ii)(J)

Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

1910.1030(e)(2)(ii)(K)

All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

1910.1030(e)(2)(ii)(L)

A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

1910.1030(e)(2)(ii)(M)

A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

1910.1030(e)(2)(iii)

Containment Equipment.

1910.1030(e)(2)(iii)(A)

Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

1910.1030(e)(2)(iii)(B)

Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

1910.1030(e)(3)

HIV and HBV research laboratories shall meet the following criteria:

1910.1030(e)(3)(i)
Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.
1910.1030(e)(3)(ii)
An autoclave for decontamination of regulated waste shall be available.
1910.1030(e)(4)
HIV and HBV production facilities shall meet the following criteria:
1910.1030(e)(4)(i)
The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.
1910.1030(e)(4)(ii)
The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.
1910.1030(e)(4)(iii)
Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.
1910.1030(e)(4)(iv)
Access doors to the work area or containment module shall be self-closing.
1910.1030(e)(4)(v)
An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.
1910.1030(e)(4)(vi)
A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).
1910.1030(e)(5)
Training Requirements. Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).
1910.1030(f)
Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up --
1910.1030(f)(1)
General.
1910.1030(f)(1)(i)
The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.
1910.1030(f)(1)(ii)
The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:
1910.1030(f)(1)(ii)(A)
Made available at no cost to the employee;
1910.1030(f)(1)(ii)(B)
Made available to the employee at a reasonable time and place;
1910.1030(f)(1)(ii)(C)
Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and
1910.1030(f)(1)(ii)(D)
Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).
1910.1030(f)(1)(iii)
The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

1910.1030(f)(2)
Hepatitis B Vaccination.
1910.1030(f)(2)(i)
Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.
1910.1030(f)(2)(ii)
The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.
1910.1030(f)(2)(iii)
If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.
1910.1030(f)(2)(iv)
The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in Appendix A.
1910.1030(f)(2)(v)
If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).
1910.1030(f)(3)
Post-exposure Evaluation and Follow-up. Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:
1910.1030(f)(3)(i)
Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;
1910.1030(f)(3)(ii)
Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;
1910.1030(f)(3)(ii)(A)
The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.
1910.1030(f)(3)(ii)(B)
When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.
1910.1030(f)(3)(ii)(C)
Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
1910.1030(f)(3)(iii)
Collection and testing of blood for HBV and HIV serological status;
1910.1030(f)(3)(iii)(A)
The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.
1910.1030(f)(3)(iii)(B)
If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.
1910.1030(f)(3)(iv)
Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

1910.1030(f)(3)(v)
Counseling; and
1910.1030(f)(3)(vi)

Evaluation of reported illnesses.

1910.1030(f)(4)

Information Provided to the Healthcare Professional.

1910.1030(f)(4)(i)

The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

1910.1030(f)(4)(ii)

The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

1910.1030(f)(4)(ii)(A)

A copy of this regulation;

1910.1030(f)(4)(ii)(B)

A description of the exposed employee's duties as they relate to the exposure incident;

1910.1030(f)(4)(ii)(C)

Documentation of the route(s) of exposure and circumstances under which exposure occurred;

1910.1030(f)(4)(ii)(D)

Results of the source individual's blood testing, if available; and

1910.1030(f)(4)(ii)(E)

All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

1910.1030(f)(5)

Healthcare Professional's Written Opinion. The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

1910.1030(f)(5)(i)

The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

1910.1030(f)(5)(ii)

The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

1910.1030(f)(5)(ii)(A)

That the employee has been informed of the results of the evaluation; and

1910.1030(f)(5)(ii)(B)

That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

1910.1030(f)(5)(iii)

All other findings or diagnoses shall remain confidential and shall not be included in the written report.

1910.1030(f)(6)

Medical Recordkeeping. Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

1910.1030(g)

Communication of Hazards to Employees --

1910.1030(g)(1)

Labels and Signs --

1910.1030(g)(1)(i)

Labels.

1910.1030(g)(1)(i)(A)

Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

1910.1030(g)(1)(i)(B)

Labels required by this section shall include the following legend:

1910.1030(g)(1)(i)(C)
These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.
1910.1030(g)(1)(i)(D)
Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.
1910.1030(g)(1)(i)(E)
Red bags or red containers may be substituted for labels.
1910.1030(g)(1)(i)(F)
Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).
1910.1030(g)(1)(i)(G)
Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.
1910.1030(g)(1)(i)(H)
Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.
1910.1030(g)(1)(i)(I)
Regulated waste that has been decontaminated need not be labeled or color-coded.
1910.1030(g)(1)(ii)
Signs.
1910.1030(g)(1)(ii)(A)
The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

(Name of the Infectious Agent)
(Special requirements for entering the area)
(Name, telephone number of the laboratory director or other responsible person.)
1910.1030(g)(1)(ii)(B)
These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting

color.

1910.1030(g)(2)

Information and Training.

1910.1030(g)(2)(i)

The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

1910.1030(g)(2)(ii)

Training shall be provided as follows:

1910.1030(g)(2)(ii)(A)

At the time of initial assignment to tasks where occupational exposure may take place;

1910.1030(g)(2)(ii)(B)

At least annually thereafter.

1910.1030(g)(2)(iii)

[Reserved]

1910.1030(g)(2)(iv)

Annual training for all employees shall be provided within one year of their previous training.

1910.1030(g)(2)(v)

Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

1910.1030(g)(2)(vi)

Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

1910.1030(g)(2)(vii)

The training program shall contain at a minimum the following elements:

1910.1030(g)(2)(vii)(A)

An accessible copy of the regulatory text of this standard and an explanation of its contents;

1910.1030(g)(2)(vii)(B)

A general explanation of the epidemiology and symptoms of bloodborne diseases;

1910.1030(g)(2)(vii)(C)

An explanation of the modes of transmission of bloodborne pathogens;

1910.1030(g)(2)(vii)(D)

An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;

1910.1030(g)(2)(vii)(E)

An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

1910.1030(g)(2)(vii)(F)

An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

1910.1030(g)(2)(vii)(G)

Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

1910.1030(g)(2)(vii)(H)

An explanation of the basis for selection of personal protective equipment;

1910.1030(g)(2)(vii)(I)

Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

1910.1030(g)(2)(vii)(J)

Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

1910.1030(g)(2)(vii)(K)

An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

1910.1030(g)(2)(vii)(L)

Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

1910.1030(g)(2)(vii)(M)

An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

1910.1030(g)(2)(vii)(N)

An opportunity for interactive questions and answers with the person conducting the training session.

1910.1030(g)(2)(viii)

The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

1910.1030(g)(2)(ix)

Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

1910.1030(g)(2)(ix)(A)

The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

1910.1030(g)(2)(ix)(B)

The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

1910.1030(g)(2)(ix)(C)

The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

1910.1030(h)

Recordkeeping --

1910.1030(h)(1)

Medical Records.

1910.1030(h)(1)(i)

The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

1910.1030(h)(1)(ii)

This record shall include:

1910.1030(h)(1)(ii)(A)

The name and social security number of the employee;

1910.1030(h)(1)(ii)(B)

A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

1910.1030(h)(1)(ii)(C)

A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

1910.1030(h)(1)(ii)(D)

The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

1910.1030(h)(1)(ii)(E)

A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

1910.1030(h)(1)(iii)

Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1)

are:
1910.1030(h)(1)(iii)(A)
Kept confidential; and
1910.1030(h)(1)(iii)(B)
Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.
1910.1030(h)(1)(iv)
The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.
1910.1030(h)(2)
Training Records.
1910.1030(h)(2)(i)
Training records shall include the following information:
1910.1030(h)(2)(i)(A)
The dates of the training sessions;
1910.1030(h)(2)(i)(B)
The contents or a summary of the training sessions;
1910.1030(h)(2)(i)(C)
The names and qualifications of persons conducting the training; and
1910.1030(h)(2)(i)(D)
The names and job titles of all persons attending the training sessions.
1910.1030(h)(2)(ii)
Training records shall be maintained for 3 years from the date on which the training occurred.
1910.1030(h)(3)
Availability.
1910.1030(h)(3)(i)
The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.
1910.1030(h)(3)(ii)
Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.
1910.1030(h)(3)(iii)
Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.
1910.1030(h)(4)
Transfer of Records. The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).
1910.1030(h)(5)
Sharps injury log.
1910.1030(h)(5)(i)
The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:
1910.1030(h)(5)(i)(A)
The type and brand of device involved in the incident,
1910.1030(h)(5)(i)(B)
The department or work area where the exposure incident occurred, and
1910.1030(h)(5)(i)(C)
An explanation of how the incident occurred.
1910.1030(h)(5)(ii)
The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.

1910.1030(h)(5)(iii)
The sharps injury log shall be maintained for the period required by 29 CFR 1904.33.
1910.1030(i)
Dates --
1910.1030(i)(1)
Effective Date. The standard shall become effective on March 6, 1992.
1910.1030(i)(2)
The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.
1910.1030(i)(3)
Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.
1910.1030(i)(4)
Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g)(1) Labels and Signs, shall take effect July 6, 1992.

APPENDIX B: JOB HAZARD ANALYSIS

Job Hazard Analysis: 2011

Name: _____ Zone: _____

Position: _____ Date: _____

Do you perform work above 6 feet from ground level?		Yes	No
	If yes, select all that apply:		
	Portable Ladders	☐	
	Stationary Ladders	☐	
	Caged Ladders	☐	
	Scaffolds	☐	
	Catwalks	☐	
	Powered Lifts	☐	
	Other, Specify: _____		
	Other, Specify: _____		
	Other, Specify: _____		
Do you work with powered equipment?		Yes	No
	If yes, select all that apply:		
	Forklifts	☐	
	Powered lifts	☐	
	Tractors	☐	
	Electric vehicles	☐	
	Lawn care equipment	☐	
	Trucks (other than light duty trucks)	☐	
	Other, Specify: _____		
	Other, Specify: _____		
	Other, Specify: _____		
Do you work with fuel dispensing equipment?		Yes	No
Do you work in a noisy environment or with noise generating equipment?		Yes	No
Do you work in a dusty environment?		Yes	No
Do work around installations labelled as "Permit Required Confined Space"		Yes	No
	If yes, do you:		
	Work with confined space entry teams?	☐	
	Enter confined spaces?	☐	
Do you work with the boilers?		Yes	No
Do you work in the mechanical rooms?		Yes	No
Do you work with the refrigerant systems?		Yes	No
Do you work with or around compressed gas or cryogenic fluid?		Yes	No

Job Hazard Analysis: 2011

Name: _____ Zone: _____

Position: _____ Date: _____

Do you order or work with/around chemicals or other hazardous materials:	Yes	No
If yes, select all that apply:		
Gasoline		
Oil		
Diesel		
Spray paint		
Degreasers		
Corrosive materials		
Cleaning products		
Paint thinner or remover		
Tar/Asphalt		
Bleach or Industrial Disinfectants		
Pesticides/Herbicides		
Herbicides		
Other, Specify: _____		
Other, Specify: _____		
Other, Specify: _____		
Are you engaged with hot work operations?	Yes	No
If yes, select all that apply:		
Welding:		
Cutting		
Grinding		
Soldering		
Do you issue hotworks permits?	Yes	No
Do you provide hotworks fire watch?	Yes	No
Do you work with electricity?	Yes	No
If yes, select all that apply:		
General usage		
Electrical Installation/Repair work		
Work with high voltage or other hazardous energy		
Do you provide control of hazardous energy services (LOTO)	Yes	No
Do you work on equipment that must be de-energized prior to maintenance?	Yes	No

Job Hazard Analysis: 2011

Name: _____ Zone: _____

Position: _____ Date: _____

Do you provide general fire watch services	Yes	No
Do you work with the Fire Suppression system?	Yes	No
Do you provide fire watch services?	Yes	No
Are you required to use a fire extinguisher?	Yes	No
Do you handle waste?	Yes	No
If yes, please select all that apply:		
Universal waste		
Chemical waste		
Waste paint		
Waste solvents		
Other, Specify: _____		
Other, Specify: _____		
Other, Specify: _____		
Do you handle laundry?	Yes	No
Are you exposed to human blood?	Yes	No
Are you exposed to human waste or other potentially infectious materials	Yes	No
Are you required to provide first aide or assistance to injuried/sick individuals?	Yes	No
Do you perform work on suspect or known asbestos containing products?	Yes	No
Are you involved with excavations?	Yes	No
Do you work with sub-contractors?	Yes	No
Do you work in hot and/or cold environments?	Yes	No
Do you work with machinery that has installed guards?	Yes	No
Do you work with concrete or cement?	Yes	No
Do you drive university passenger or light duty vehicles?	Yes	No
Do you use manual hand tools?	Yes	No
Do you perform work on suspect or known lead containing paint?	Yes	No
Do you use powered hand tools?	Yes	No
Do you work with fume hoods in Beeghly, Katzen or Hurst?	Yes	No
Do you lift heavy items (>50 lbs)	Yes	No
Do you lift moderately heavy items (25-50 lbs)	Yes	No

APPENDIX C: POST-EXPOSURE PROPHYLAXIS PACKET

POST-EXPOSURE PACKET
FOR EMPLOYEES

Risk Management and Environmental Health & Safety

Important Contact Information

BBP Program Administrator/
Environmental Health & Safety:
Leanne Wright
202-885-2007 (office)
202-440-4850 (mobile)
202-885-2330 (fax)

St. Paul Travelers Insurance
(Worker's Compensation):
1-800-238-6225

Post-Exposure Checklist
Affected Employee

☐ If contaminated needle stick: Clean exposed area with soap and water

If blood or other potentially infectious fluid splashed in face: flush eyes, nose, or mouth with copious amounts of tap water

☐ Report incident to supervisor (if available)

☐ Complete the Consent/Refusal for HIV, HBV, and HCV Infectivity Testing form **and** Incident Report for Employee form

☐ If applicable, request that the source individual complete the Consent/Refusal for HIV, HBV, and HCV Infectivity Testing form

If you consent to medical treatment, continue to items below. If you decline, stop here.

☐ Report to Sibley Memorial Hospital, 5255 Loughboro Rd, N.W., Washington, D.C. 20016, as quickly as possible with source individual, if applicable (within one hour is highly advised)

☐ Prior to receiving any treatment, tell the hospital staff that you experienced an occupational blood exposure, are an American University employee, and that insurance is provided by Traveler's Insurance Company. If the physician has any questions, please have them contact the risk management office.

☐ Provide physician with the Incident Report form and copy of 29 CFR 1910.1030, found in this packet

Post-Exposure Checklist
Supervisor

☐ Get Post-Exposure Packet from your office's designated location or the risk management website: http://www.american.edu/finance/rmehs/index.cfm

☐ If additional first aid is required, go with or send someone with the affected employee to Sibley Emergency Room

☐ Complete the Incident Report for Supervisor form and return to the Office of Risk Management within 24 hours of the incident. For questions, contact Risk Management at 202-885-2007

☐ Immediately report incident to St. Paul Travelers Insurance Workman's Compensation Hotline at 1-800-238-6225. More information on RMEHS Website: http://www.american.edu/finance/rmehs/workerscomp.cfm

Consent/Refusal for HIV, HBV, and HCV Infectivity Testing:
Affected Employee
To be completed by the affected employee and sent to the BBP Program Administrator within 24 hours of incident.

Employee Name:_____ Job Title:_____

Date of Incident:_____

I understand that I have been involved in a workplace encounter with blood or bodily fluids that may place me at risk for Hepatitis B (HBV), a virus that can cause liver disease, and/or HIV (Human Immunodeficiency Virus – the virus which causes AIDS).

I have been given the opportunity for a post-exposure follow up examination including testing of my blood for HBV and HIV.

I understand that I may have this examination at:

Sibley Memorial Hospital
5255 Loughboro Road, N.W.
Washington, D.C. 20016
Telephone: 202-537-4000

Medical services will be provided at no cost to me for work-related incidents involving exposure to blood or other potentially infectious material. I understand that I am eligible for this examination even if I have been previously vaccinated against HBV.

I have been offered the opportunity to have a sample of my blood drawn and preserved for 90 days in the event that I might choose to have that sample tested at some point within 90 days.

Understanding the written information above, I _____ a post-exposure
accept/decline
medical evaluation, blood sampling, blood testing, or follow-up examination at this time.

_____ _____
Employee signature Date

_____ _____
Witness signature Date

Consent/Refusal for HIV, HBV, and HCV Infectivity Testing:
Source Individual

To be completed by the source individual or incident witness (if source signature cannot be obtained) and returned to the BBP Program Administrator within 24 hours of incident.

A source individual is the person whose blood or bodily fluids provided the source of the exposure incident. Not all exposure incidents can be directly associated with a source individual.

Exposed Individual's Information:

Name:_____ Job Title (if applicable):_____

Date of Incident:_____

Source Individual's Statement of Understanding

I understand that employers are required by law to attempt to obtain consent for HIV, HBV, and HCV infectivity testing each time an employee is exposed to the blood or bodily fluids of any individual. I understand that an AU employee has been accidentally exposed to my blood or bodily fluids and that testing for HIV, HBV, and HCV infectivity is requested. I am not required to give my consent, but if I do, my blood will be tested for these viruses at no expense to me. I may seek testing at:

Sibley Memorial Hospital
5255 Loughboro Road, N.W.
Washington, D.C. 20016
Telephone: 202-537-4000

I have been informed that the test to detect whether or not I have HIV antibodies is not completely reliable. This test can produce a false positive result when an HIV antibody is not present and that follow-up tests may be required.

I understand that the results of these tests will be kept confidential and will only be released to medical personnel directly responsible for my care and treatment and to the exposed worker for his/her medical benefit only.

I hereby consent to:
___HIV Testing
___HBV Testing
___HCV Testing

I hereby *refuse* consent to:
___HIV Testing
___HBV Testing
___HCV Testing

_____ _____ _____
Source/Witness Printed Name Signature Date

Incident Report for Supervisor

To be completed by affected employee's supervisor and returned to the BBP Program Administrator within 24 hours of exposure incident.

I _____ have reviewed the Incident Report for Affected
Supervisor's Name

Employee form on behalf of _____ regarding potential exposure to blood
affected employee name

or OPIM on ____/____/____. I understand that I have a duty to engage the Office of Risk
mm dd yy

Management regarding this matter and may be asked to contribute information if an accident

investigation is necessary. I have reviewed the Post-Exposure Checklist for

Supervisor and have made full effort to complete each task listed.

_____ _____

Supervisor signature Date

Incident Report for Affected Employee

To be completed by employee and given to his/her physician upon arrival for treatment

Employee name:_____ Job title:_____

Date of incident: _____ Approximate time of incident:_____

Location of incident (building and room number):_____

Activity being performed:_____

Was a needle, lancet, glass, or sharp object involved?

□Yes □No

If yes, what kind (type and brand):_____

Type of body fluid involved:

□Blood □Other:_____

Part of employee's body involved:

□Eye(s) □Nose □Mouth □Broken skin/cut <24 hrs old

Was personal protective equipment being used at time of incident?

□Yes □No

If yes, what kind (include brand)?_____

Was the integrity of the personal protective equipment compromised?

□Yes □No

If clothing was contaminated, did appropriate disposal/laundering occur?

□Yes □No □N/A; clothing not contaminated

Did hand washing and/or flushing of mucous membranes occur as soon as possible?

□Yes □No

Employee was given Post-Exposure Prophylaxis Packet and referred to healthcare professional for medical evaluation and follow up.

□Yes □No

Continue to next page…

Incident Report for Affected Employee (*continued*)

To be completed by employee and given to his/her physician upon arrival for treatment

Fully describe the circumstances of accident. Be sure to include work practices the employee followed and engineering controls that were in place at time of incident (use additional space on back of this form if necessary).

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

_____ _____

Employee Signature Date

APPENDIX D: SHARPS INVENTORY FORM

Department:_____ **Reviewer Name(s):**_____

Sharps Inventory

Date: __/__/12

Type of Device (syringe, suture needle, etc.)	**Manufacturer**	**Model Number**	**Self-Sheathing?** If no, why?	
			☐Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	
			☐ Yes ☐ No	

How to use this form:

The Needlestick Safety and Prevention Act, a legally binding act as of July 17, 2001, requires employers to identify, evaluate, and implement safer medical devices into the workplace on an annual basis. Part of this process necessitates the involvement of non-managerial healthcare workers in evaluating and choosing devices that provide the maximum available protection against needlesticks. This document serves as part of American University's record that the sharps currently being used by university employees have been annually reviewed and vetted against the latest advancements in healthcare safety.

APPENDIX E: OPERATOR'S MANUAL, MODEL 614B LABORATORY CENTRIFUGE

THE DRUCKER CO.

Reliability in Laboratory Centrifuges Since 1932

Operator's Manual

Model **614B** • Laboratory Centrifuge

P/N 7711001 Rev. C

Table of Contents

WARNING: For the safety of both the operator and service personnel, care should be taken when using this centrifuge if handling substances that are known to be toxic, radioactive or contaminated with pathogenic microorganisms. When Risk Group II materials are used, (as identified in the World Health Organization "Laboratory Bio–Safety Manual"), a Bio–Seal should be employed. The Bio–Seal accessory for the model 614 tube holders is the non–aerosol shield cap, p/n 7713011. In the event that materials of a higher risk group are being used, more than one level of protection must be provided. The use of flammable or explosive materials as well as those materials which have a vigorous chemical reaction is prohibited. For your safety and the durability of your machine, never transport or store centrifuge with tube holders inside machine.

Model Description:

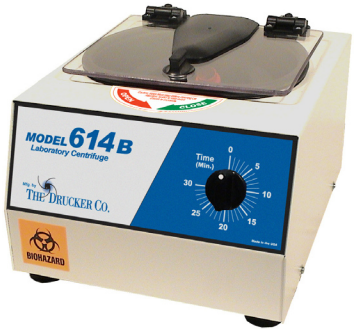
The Model 614B is a continuous duty centrifuge designed for the small lab or doctor's office for the purposes of separating laboratory fluids. The unit is controlled by a mechanical timer settable from 1 to 30 minutes. Samples can be safely viewed through the transparent lid. In the event that the lid is opened during a run, the power to the motor is disconnected.

For warranty information, turn to page 10.

Supplied Equipment*:

The following items come standard with each **Model 614B** centrifuge:

1.	One (1) six-place fixed-angle rotor	p/n	7786047
2.	Operator's manual		
3.	Six (6) 125mm tube holders	p/n	7713032
4.	Six (6) 100mm tube holders	p/n	7713031
5.	Six (6) 75mm tube holders	p/n	7713033



* The rotor and rotor accessories are rated for a rotation frequency of 3,500 RPM.

NOTES:

WARRANTY:

The Drucker Company warranties that this centrifuge is free from defects in workmanship and parts for 12 months.

Made in the USA by

THE DRUCKER CO.

200 Shadylane • Philipsburg, PA 16866

Phone: 814-692-7661 • Fax: 814-692-7662 • www.druckercompany.com

Features:

- Fixed-angle rotor for spinning 75mm, 100mm and 125mm test tubes in specially designed tube holders
- Cool–Flow air flow design that prevents overheating of samples
- Heavy gauge steel construction for safety and durability
- Lid safety switch that prevents the centrifuge from operating unless the lid is closed and latched
- Removable rotor for easy cleaning
- Brushless A/C motor
- Clear lid for safe observation of samples and optical calibration of speed

Specifications:

General Specifications for the Model 614B Centrifuge

Nominal Speed (125mm holders):	3,150 (± 100) RPM
Nominal RCF (125mm holders):	1,200 (± 80) xg
Nominal Speed (100mm holders):	3,250 (± 100) RPM
Nominal RCF (100mm holders):	1,080 (± 80) xg
Nominal Speed (75mm holders):	3,300 (± 100) RPM
Nominal RCF (75mm holders):	950 (± 80) xg
Maximum capacity:	90 mL (6 x 15 mL)*
Overall Dimensions (H x W x D):	8.5 in. x 11 in. x 12.5 in.
Centrifuge Motor:	1/30 HP, AC
Nominal Acceleration Time:	45 seconds
Protection Breaker:	4 Amp. re–settable
Timer:	mechanical, 1 to 30 minutes accuracy ± 10%
Current Requirement:	1.0 Amps
Voltage Requirement:	115 (±10) Volts
Frequency:	60 Hz
Weight:	18.5 lbs.

Before using any cleaning or decontamination methods except those recommended by the manufacturer, users should check with the manufacturer that the proposed method will not damage the equipment. See page 7, (bottom), for the recommended cleaning solutions.

Any use other than those specified by the Manufacturer is explicitly prohibited.

* Maximum sample density is 1.15 grams / mL, (water density = 1.0 grams / mL)

Setup Location:

1. Unpack the centrifuge and verify that all of the supplied equipment is present.
2. Choose a setup location which meets the following criteria:
   a) A bench top clearance height of 20” is required in order to open the lid.
   b) The clearance envelope is the space around the centrifuge which is required for safety. Choose a setup location which will allow for a clearance envelope of at least 24” x 24”, (with the centrifuge at the center). No person or hazardous material shall be permitted in the clearance envelope during operation. The operator time within the envelope shall be limited to the time necessary for loading, unloading and centrifuge operation only.
   c) Proper ventilation is necessary to prevent the overheating of samples as well as premature failure of the centrifuge. Choose an area which will allow unencumbered air flow.
   d) The centrifuge is designed to secure to the operating surface by four suction feet. No adjustment is necessary for leveling the centrifuge, however, the surface should be flat and level.
   e) **Be sure the outlet is always within reach as the line cord is the means of emergency disconnection!**

Initial Setup Procedure:

If any problems are found during the initial setup procedure, refer to the troubleshooting section on page 8. For further assistance, contact The Drucker Company at 814-692-7661.

1. Plug the centrifuge in to an approved electrical outlet. For electrical safety, the unit must always be properly grounded.
2. Turn the latch counter–clockwise and open the lid.
3. Spin the rotor by hand; check for free and level rotation.
4. Close the lid. Rotate the lid knob clockwise to its complete stop position.
5. Turn the centrifuge on by turning the timer to 10 minutes.
6. Listen to the centrifuge. A smooth whirring sound should be heard.

After the centrifuge has passed this procedure it is ready for operation.

BALANCED LOADS

Your centrifuge must contain a balanced load in order to work properly. Use the following rules when loading the rotor. Spinning balanced loads will extend the life of the machine and produce better results.

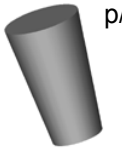
1. *Opposing tube holders must be identical and must contain the same cushion, or none at all.*
2. *Opposing tube holders must be empty or loaded with equally weighted samples.*
3. *If an odd number of samples is to be spun, fill a tube with water to match the weight of the unpaired sample and place it across from this sample.*

Replacement Parts:

Part No.	Description
7724037	Foot, rubber
7751068	Switch, lid safety
7786047	Rotor, six–place fixed-angle
7735050	Motor, 1/30 H.P.
7722027	Timer, mechanical
7751043	Circuit Breaker
7724022	Front Panel Label
7760002	Power cord
7714101	Pawl, latch, lid
7714103	Knob, latch, lid
7712260	Lid
7724071	Hinge, friction
7732018	Seal, lid gasket
7732019	Seal, rotor chamber gasket
7713033	Tube holder, green, for 75mm tubes
7713031	Tube holder, red, for 100mm tubes
7713032	Tube holder, black, for 125mm tubes

Available Accessories:

1” Tube cushion



p/n 1525

Shield caps

p/n 7713011

THE DRUCKER CO.
200 Shadylane • Philipsburg, PA 16866
Phone: 814-692-7661 • Fax: 814-692-7662 • www.druckercompany.com

(Continued)

6. **Tube Holder Replacement:** It is recommended that the tube holders be replaced after 24 months of use.

7. **Remove Accessories Before Moving:** All tube holders, samples, and caps must be removed from the rotor chamber before transporting or storing the centrifuge to prevent damage and injury.

Safety:

The Model 614B complies with all requirements of UL standard 61010A-1, 61010A-2-20; Can/CSA C22.2 No's 1010.1; 1010.2.20.

Lid Safety Switch: The lid is secured to the top of the cabinet by a latching knob and pawl system. When the knob is rotated clockwise, the pawl grips the underside of the cabinet opening and prevents the lid from opening. A mechanical stop positions the pawl and prevents it from rotating completely. When rotated to the stop position, the pawl makes contact with a micro–switch mounted underneath the cabinet top. The lid safety switch prevents the centrifuge from operating while the lid is open.

Circuit Breaker: The Model 614B is protected with a 4 Amp circuit breaker located at the rear of the machine mounted to the base. Any electrical short circuit will cause the breaker to cut power to the machine.

Calibration and Earth Ground Testing:

It is recommended that the top speed, ground continuity and line leakage be tested every two years for continued safe operation. Contact The Drucker Company for further information or testing availability.

Troubleshooting:

NOTE:
The latch must be turned completely clockwise to its stop position in order for the centrifuge to operate.

1.	**Problem:**	**The rotor does not spin freely.**
	Solutions:	– Make sure nothing has fallen into the rotor chamber. – If there is nothing obstructing the rotor, contact The Drucker Company for further assistance.
2.	**Problem:**	**Excessive noise when the machine is running.**
	Solutions:	– Check to see that the load is balanced. – Make sure that nothing has fallen into the rotor chamber. – Make sure that the nut in the center of the rotor is tight. – Have a technician test the motor and replace it if necessary.
3.	**Problem:**	**The centrifuge does not run.**
	Solutions:	– Check the electrical outlet. – Make sure the lid latch is turned completely clockwise to its stop position. – Check the circuit breaker switch at the bottom left of the machine. If the switch is white, the breaker has tripped. Contact The Drucker Company for further assistance.

Operation:

NOTE: Follow the initial setup procedure on page 4 before initial operation.

1. Plug the centrifuge into an approved 115 Volt A.C., 60 Hz. outlet.
2. Turn the latch counter-clockwise and open the lid.
3. Insert cushions (if needed) into the tube holders for the tube size you are using. Refer to 'Tube Holder Configurations' (page 6) for assistance.
4. Place the test tube samples into the tube holders. Be sure to follow the rules for balanced loads.
5. Close the lid and turn the lid knob clockwise to its complete stop position.
6. Turn on the machine by turning the timer to the desired run time.
7. The centrifuge should begin to spin.
8. Once the timer reaches zero (0), power will be cut to the motor and the rotor will coast to a stop. Do not open the lid until the rotor has come to a complete stop.
9. Turn the lid knob counter–clockwise and open the lid.
10. Remove the samples.
11. The centrifuge is immediately ready for operation.

Rotor Removal and Installation:

To remove the rotor:

CAUTION: Unplug the centrifuge from the electrical outlet at this time to eliminate the possibility of electrical shock or other injury.

1. Open the lid.
2. Remove the test tube holders.
3. Remove the knob or nut in the center of the rotor by turning it counter-clockwise. A nut driver may be required.
4. The rotor is sitting on a cone-shaped adapter. Pull the rotor up and off of this adapter.

To install the rotor:

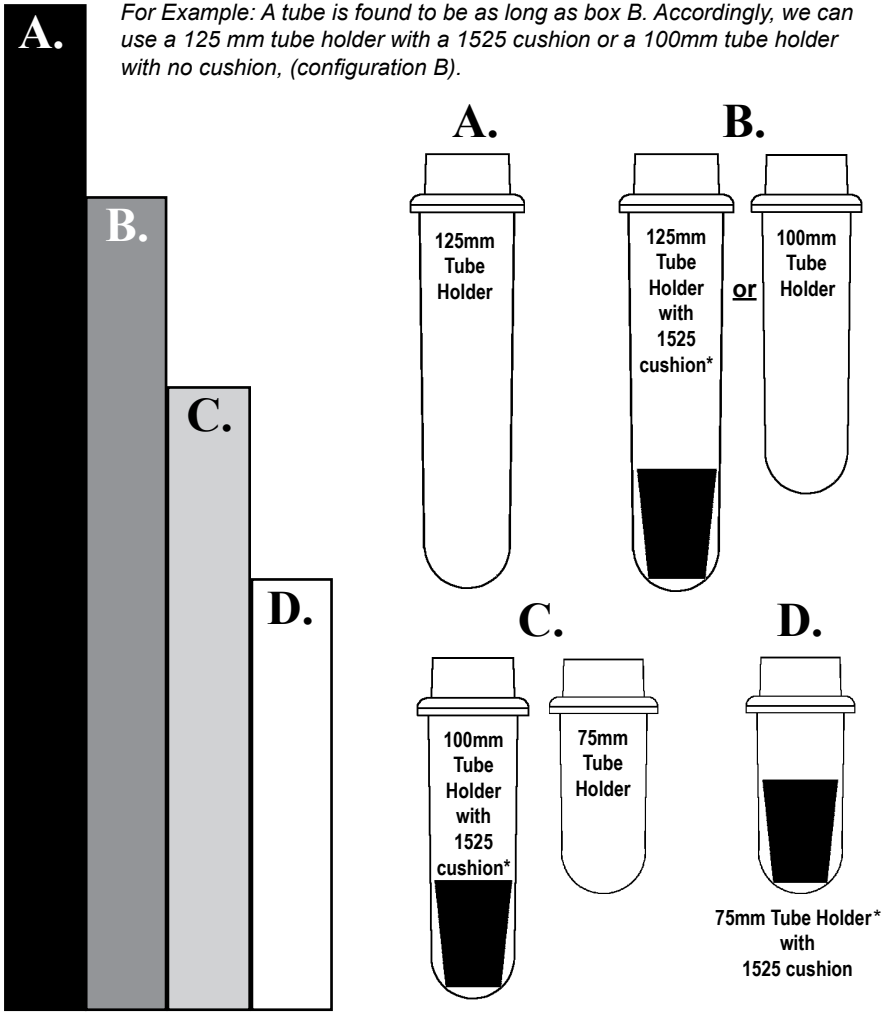
1. Place the rotor back onto the cone-shaped adapter. You may need to turn the rotor slightly to line it up properly.
2. The rotor should slide onto the rotor cone freely.
3. Once a proper fit has been achieved, replace the rotor knob or nut and turn it until it is hand-tight.
4. Replace the tube holders and verify that they are seated properly.
5. It is recommended that the initial setup procedures be performed to ensure that the rotor has been installed correctly and that no damage has been done to the centrifuge during either the rotor installation or possible rotor chamber cleaning. See page 4 for this procedure.

Tube Holder Configurations:

The fixed-angle rotor that came with your **Model 614B** is capable of spinning test tubes up to 17mm x 125mm. Use the following chart and drawing to determine which tube holder and cushion combination should be used with your application.

DIRECTIONS:

1. Compare the tube to be spun with the four boxes shown below.
2. Find the box that most closely matches the tube's length. **NOTE:** The tube length with its stopper or cap must be shorter then the chosen box or the tube will not fit properly in the tube holder.
3. Match the letter from the chosen box with one of the configurations shown.



For Example: A tube is found to be as long as box B. Accordingly, we can use a 125 mm tube holder with a 1525 cushion or a 100mm tube holder with no cushion, (configuration B).

** This part is available as an accessory. Contact The Drucker Company for assistance.*

Care and Preventative Maintenance:

With proper care and maintenance your centrifuge will provide years of laboratory service.
For proper care, the following steps should be taken:

1. **Provide Adequate Ventilation:** For cooling purposes, the centrifuge draws in ambient air through the air intake cover on the top of the lid and exhausts this air in the rear of the base. The centrifuge should be placed on a hard smooth surface for good air circulation.

2. **Always Spin Balanced Loads:** Make certain that you are always spinning a balanced load. The Model 614B has a unique counter balanced motor mounting design which, along with its rubber suction feet, produces excellent vibration dampening. However, out–of–balance loads may break glass test tubes and may produce unsatisfactory separation results. Proper load balancing will improve sample separation and extend the life of the centrifuge. Refer to page 4 on balanced loads for additional information on balancing the load.

3. **Keep the Tube Holders Clean: NOTE:** Always follow the safety guidelines of your laboratory to properly clean up and/or dispose of materials in the event that a substance known to be potentially toxic, radioactive or contaminated with a pathogenic microorganism is spilt in or on the centrifuge. Small glass fragments left in the tube holder after a tube breakage may adhere to the next test tube inserted in that holder. When this tube is handled, these fragments may puncture protective gloves and lacerate the operator's fingers or hand. Remaining fragments may provide stress points on subsequent tubes and result in additional breakage. If a tube breakage occurs, carefully remove the tube holder. Properly dispose of the sample and tube fragments and thoroughly clean both the inside and outside of the tube holder. Insert a new tube cushion (if necessary) and replace the tube holder in the rotor.

4. **Motor and Electrical Maintenance:** The Model 614B uses a brushless A/C motor. It should not need servicig for the life of the centrifuge. The electrical components are selected for high reliability and should not need service.

5. **Keep the Rotor Chamber Clean**: Every six months, or whenever there is a tube breakage, (refer to the note in #3), it may be necessary to remove the rotor and clean the rotor chamber. Follow the instructions on page 5 to remove and re–install the rotor.

   CAUTION: Before cleaning, always unplug the line cord from the electrical outlet to eliminate the risk of electric shock.

   The rotor chamber, rotor and accessories should be thoroughly cleaned using either isopropyl alcohol, soap and water, or bleach. The use of Fully/Partially Halogenated Hydrocarbons, Ketones, Esters and all other chemicals not prescribed by the manufacturer may cause damage to the rotor and tube holders and should not be used. Apply cleaning solutions with a towel or cloth.
   Do not submerge the centrifuge in water or other cleaning solutions as this will cause damage and void your warranty!

(Cont.)

APPENDIX F: HEPATITIS B VACCINATION DECLINATION FORM

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring hepatitis B Virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine at no charge to myself. However, I decline the hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee signature:_____

Employee printed name:_____

Date:_____

APPENDIX G: SHARPS INJURY LOG

Department: Student Health Center

Sharps Injury Log

Year 2014

Date	**Type of Device** (syringe, suture needle, etc.)	**Brand Name of Device**	**Work Area Where Injury Occurred** (lab, patient room, etc.)	**Brief description of how the incident occurred** [i.e. procedure being done, action being performed (disposal, injection, etc.), body part injured]

How to use this form:

Note: this form is to be filled out <u>after</u> completing the steps recommended by AU's Post-Exposure Prophylaxis (PEP) packet

Following a percutaneous injury from a **contaminated** sharp, the employee or employee's supervisor must record the necessary information in the table above. OSHA's Bloodborne Pathogens Standard 29 CFR 1910.1030(h)(5) requires AU as an employer to establish and maintain a sharps injury log by recording all percutaneous injuries occurring from contaminated sharps. The purpose of this log is to aid in the evaluation of devices and procedures being used in healthcare and other facilities that may require additional attention or review. This log must be kept in addition to the injury and illness log required by 29 CFR 1904. The sharps injury log should include all sharps injuries occurring in a calendar year and must be kept for five years following the end of the year to which it relates. The log must be kept in a manner the preserves the confidentiality of the affected individual.

APPENDIX H: GLOSSARY

The following definitions, taken directly from OSHA's Bloodborne Pathogens Standard found at 29 CFR 1910.1030(b), apply to this BPECP.

Blood – Human blood, human blood components, and products made from human blood.

Bloodborne Pathogen – Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to hepatitis B virus (HBV), human immunodeficiency virus (HIV) and hepatitis C (HCV).

Clinical Laboratory – A workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated – The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry – Laundry that has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps – Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination – The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Employee Representative – A person having written consent of the employee to access the employee's medical and/or records.

Engineering Controls – Controls (e.g. sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident – A specific eye, mouth, or other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Licensed Healthcare Professional – A person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) [of the Bloodborne pathogens standard] "hepatitis B Vaccination and Post-exposure Evaluation and Follow-up."

Hand washing Facilities – A facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

HBV – Hepatitis B virus.

HIV – Human immunodeficiency virus.

HCV – Hepatitis C virus

Needleless Systems – A device that does not use needles for (1) the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) the administration of medication or fluids; or (3) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure – Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance on an employee's duties.

OPIM - Other Potentially Infectious Materials– Means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluid in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral – Piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment – Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. uniforms, pants, shirts, and blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste – Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Sharps Injury (also, **Needlestick Injury**) – A percutaneous (through the skin) piercing wound set by a needle or other sharp instrument or object containing another person's blood or body fluid.

Source Individual – Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individual who donate or sell blood or blood components.

Sterilize – The use of physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions – An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Control – Are controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).