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## **HEMATOLOGY/ COAGULATION SAFETY GUIDELINES**

RC.HM.PR.078.r01

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### **HEMATOLOGY REQUIREMENTS FOR SPECIFIC EXPOSURE CONTROL**

#### **Requirements**

##### **Universal precautions:**

**All** specimens are handled according to the Universal Precautions and Infection Control policies stated in the Clinical Pathology Safety Manual. Specifically, that means:

1. Disposable gloves and splash resistant gowns are to be worn for all specimen-related procedures (e.g. venipuncture, specimen analysis).
2. Technologists who have allergies to gloves are directed to Occupational Health Services who will determine if the employee needs an alternate glove.
3. Gloves and splash resistant gowns must be worn when working with any reagent (including pipetting of reagent), control material, blood or body fluid specimen whether capped or uncapped. This includes the processing of specimens on all instruments.
4. Gloves, splash resistant gowns, and goggles or a face shield must be worn when working on instrument parts which may be contaminated with blood or body fluids.
5. A face shield, goggles or work station protective shields shall be used whenever splashes or aerosols may occur and when working with uncapped specimens. Work station shields are provided in various areas around/in the department.
6. All areas of the Hematology/ Coagulation lab are considered "contaminated" – e.g., keyboards, phones, counter tops, etc. It is the responsibility of individuals not wearing gloves who may use these items to wash their hands before leaving the lab.
7. Gloves are not appropriate when using the photocopier and textbooks. They are not to be worn outside of the laboratory.
8. Hands are to be washed after handling specimens or removing gloves.

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9. Laboratory personnel are to wear fully enclosed, leak-proof and slip resistant shoes. Shoes with mesh, canvas, or open toes or backs are unacceptable. Shoes need to be easy to wipe off as to not absorb chemicals or other infectious fluids.
10. Decontaminate laboratory bench work surfaces with hospital/ laboratory approved disinfectant before beginning work, after a spill of blood or body fluid, and when work activities are completed. Ensure that manufacturer's instructions for contact time {10 minutes for *EnCompass* or 1:10 bleach solution, 2 minutes for Sani-Cloth wipes or as indicated on container} are followed. Cleaning is documented on the designated Hematology/{Coagulation} log.
11. Specimen bags must be disposed of with biohazard materials. Specimen bags must be placed in designated red biohazard bagged containers with "Biohazard Bags" green label.
12. Specimens are to be discarded into designated double-thickness red biohazard bagged containers with "Biohazard" yellow label for autoclaving prior to disposal.
13. *Grossly* contaminated paper, gauze and disposable plastic transfer pipets are to be discarded into red biohazard bagged containers with "Biohazard" yellow label. Slightly contaminated items may be disposed of in the regular trash.
14. Specimen contaminated glass, needles, wood sticks and items with sharp or pointed edges are to be discarded into red Sharpsafe Biohazard Waste containers.
15. Serological pipettes (plastic) are to be discarded into red bins with snap-close lids with "Serological Pipette" pink label, due to the ability of the pipettes to puncture red biohazard and trash bags. Serological pipettes will be discarded with regular biohazard materials.
16. A specimen visibly contaminated with blood or other body fluid should be cleaned with appropriate disinfectant before sending it for further testing.

**Potential Creutzfeldt-Jakob Disease (CJD):** Follow guidelines as stated in Clinical Pathology Specimen Handling and Precautions for Potential CJD Specimens. Note that masks and protective eyewear **MUST** be worn. Specimens must be handled in a laminar flow class II or higher biological safety cabinet or behind a protective splash shield when specimen containers are opened. Because CSF specimens from CJD patients are considered low risk for transmission of CJD, instruments should be cleaned and disinfected by conventional protocols. Clean environmental surfaces with a hospital/ laboratory approved disinfectant. Specimens may be discarded by conventional methods.

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### HEMATOLOGY ENVIRONMENTAL CONTROL

**All specimen-contaminated, broken or discarded glass** is placed/emptied into red **Biohazard Waste Sharps** containers. All other biohazard waste is discarded into the large red biohazard bins which are taken to the building dock area when full. This waste is picked up by a disposal waste company for incineration/disposal.

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#### Handling of Hazardous Substances

All chemicals should be handled as indicated on their respective SDS sheets as well as under a hood whenever possible. In addition, hazardous substances: Propar clearant, Xylene, and large amounts of methanol (e.g. slide maker cassette cleaning) should always be handled under a hood. All stain powders and fixatives should be handled using protective gloves, splash resistant lab coat and eye protection. The following caution applies to stain powders and fixatives:

**CAUTION:** Do Not Ingest. Avoid skin and eyes contact. In the case of skin contact, wash immediately with plenty of soap and water. In case of contact with the eyes, rinse immediately with water or normal saline. Seek medical attention in case of ingestion and/or eyes contact. Wear gloves, lab coat, and safety glasses for protection.

If exposure occurs, notify management and fill out electronic Employee's Injury/ Illness Form (found on Inside Beaumont *OnLine*). Contact Occupational Health Services (x37300) for an appointment.

1. All bench areas: Dispose of applicator sticks and slides in a red Biohazard Waste Sharps container.
2. Body Fluid Bench:
  - a. Clean counting chambers and non-disposable cover slips with 10% bleach or hospital-approved disinfectant. Allow to dry. Wipe with alcohol prep or clean with methanol.
  - b. Cytocentrifuge cassettes must be placed in Cidex™ or similar hospital-approved disinfectant agent for forty-five (45) minutes, then placed in soapy water.
3. Bone Marrow Bench:

Clean bone marrow cart with fresh 10% bleach or hospital-approved disinfectant after each use.
4. General:

Any instrument waste that must be emptied by hand should be poured down the sink drain with copious amounts of water, avoiding splashing.
5. Stainer area:

Wear plastic apron, gloves and safety goggles when preparing Wright-Giemsa stain.

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### 6. Disposal of Hazardous Substances:

Appropriate PPE (gloves, protective labcoat, safety goggles) must be utilized when disposing chemicals into drum:

- a. **Propar Clearant:** Spent Propar clearant is to be discarded into red flammable liquids waste container in the chemical hood. DO NOT POUR DOWN DRAIN. Deliver full containers to the South dock for disposal.
- b. **Xylene:** Spent Xylene is to be discarded into red flammable liquids waste container in the chemical hood. DO NOT POUR DOWN DRAIN. Deliver full containers to the South dock for disposal.
- c. **Methanol:** Spent Methanol from slide maker cassette cleaning is to be discarded into red flammable liquids waste can in the chemical hood. DO NOT POUR DOWN DRAIN. Deliver full containers to the South dock for disposal.
- d. **B-plus fixative:** Deliver to the South dock for disposal.

7. **Spill Kits:** Spill kits are available in the appropriately-labeled cupboard located below the hematology table-top centrifuge used for urine eosinophils. Per manufacturer, these kits have an indefinite expiration date if unopened and in the original container. Testing the reactivity of these kits periodically would compromise the expiration date and therefore, is not performed.

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### Attachments

Attachment A – HEMATOLOGY/ COAGULATION CHEMICAL INVENTORY

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### Authorized Reviewers

Chair, Pathology and Laboratory Medicine  
Medical Director, Hematology

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## HEMATOLOGY/ COAGULATION ENVIRONMENTAL CONTROL

### ATTACHMENT A – HEMATOLOGY/ COAGULATION CHEMICAL INVENTORY

Quantity	Chemical Name	Manufacturer's Name	Location of Chemicals	*Hazard Class	SDS on Inside Beaumont?	
					Yes	No
4 bottles	Albumin (22%)	Sigma	Refrig	K	√	
3 jars	Basic Blue 24	Sigma	Hematology Lab	H	√	
1 gallon	B-Plus Fixative	BBC	Hematology Lab	H,J	√	
2 gallons	Cidex	Advanced Sterilization Products	Hematology Lab	H,J	√	
3 bottles	Cytoseal 60	Richard Allan	Hematology Lab	C,H	√	
1 bottle	Eosin Y	ThermoFisher	Hematology Lab	J	√	
1 liter	Ethanol	Pharmco-aaper	Hematology Lab	C	√	
1 liter	Formaldehyde (40%,formalin)	Lab-Chem	Hematology Lab	C,I	√	
1 bottle	Giemsa Solution	Richard Allan	Hematology Lab	C,H	√	
3 jars	Giemsa Stain	ThermoFisher	Hematology Lab	H	√	

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Quantity	Chemical Name	Manufacturer's Name	Location of Chemicals	*Hazard Class	SDS on Inside Beaumont?	
					Yes	No
1 liter	10% HCl	Chempure	Hematology Lab	C,H	√	
5 jars	Hyaluronidase	Sigma	Freezer	H	√	
5 Liters	Isopropyl Alcohol	Owens Minor	Hematology Lab	C	√	
10 gal	Methanol	ThermoFisher	Hematology Lab	C	√	
1 bottle	Nuclear Fast Red	Sigma	Hematology Lab	H	√	
1 bottle	Phosphoric Acid	Mallinkrodt	Hematology Lab	H	√	
1 jar	Potassium oxalate	MCB	Hematology Lab	H		√
3 jars	Potassium Ferrocyanide	Sigma	Hematology Lab	H,I	√	
2 jars	Potassium phosphate, monobasic	ThermoFisher	Hematology lab	H	√	
1 jar	Sodium phosphate, dibasic	ThermoFisher	Hematology Lab	H	√	
1 jar	Urea	Sigma	Hematology Lab	H	√	
1 bottle	Wrights Stain	Richard Allan	Hematology Lab	H	√	

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Quantity	Chemical Name	Manufacturer's Name	Location of Chemicals	*Hazard Class	SDS on Inside Beaumont?	
					Yes	No
1 bottle	Xylene	ThermoFisher	Hematology Lab	H,C	√	
1 bottle	Propar	Anatech	Hematology Lab	H,C		√

A. Non-Flammable B. Flammable Gas C. Flammable Liquid		D. Flammable Solid E. Oxidizer F. Combustible Liquid		*Hazard Class G. Corrosive Material Liquid H. Irritant I. Carcinogen		J. Poison K. Non-Hazardous L. Other	
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## HEMATOLOGY/ COAGULATION SAFETY GUIDELINES

### Document Control

**Location of Master:** Hematology Procedure Manual

**Master electronic file stored on the Beaumont Laboratory server under:**

S:\HEMACOAG\Document Control\Hematology\Procedure\Master Documents\Hematology Safety.doc

**Number of Controlled Copies posted for educational purposes: 0**

**Number of circulating Controlled Copies: 0**

**Location of circulating Controlled Copies: NA**

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### Document History

Signature	Date	Revision #		Related Documents Reviewed/ Updated
Prepared by: Noelle Procopio, MT(ASCP)SH	02/05/2016			
Approved by: Ann Marie Blenc, MD Marc D. Kolins, MD	02/20/2016 02/22/2016			
Reviewed by: (Signature)	Date	Revision #	Modification	Related Documents Reviewed/ Updated
Ann Marie Blenc, MD	02/20/2016	00	New procedure: Pulled individual procedures from Safety manual and combined into Hematology Safety procedure; updated chemical inventory list; updated MSDS to SDS; added statement regarding shoe requirement.	OK
Elizabeth Sykes, MD	02/02/2018			
Ann Marie Blenc, MD	03/09/2018	01	Added large amounts of methanol to be handled under the hood. Updated b-plus fixative disposal. Logo update.	OK

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