

Rodak: Hematology, 4th Edition

Chapter 02: Safety in the Hematology Laboratory

Test Bank

MULTIPLE CHOICE

1. Which laboratory specimens must be treated with standard (universal) precautions?
 - a. Only those labeled with a biohazard sticker
 - b. Only those from patients known to have human immunodeficiency virus (HIV) or hepatitis
 - c. All human blood and body fluids
 - d. All specimens submitted for bacterial culture

ANS: C

All human specimens, whether they are blood, urine, any body fluid, or a specimen submitted for culture, should be treated identically using universal standard precautions. Even a patient who professes to feel well can harbor an infectious agent that has the potential for transmission.

DIF: Cognitive Level: 1 REF: page 8

2. Which of the following procedures is safe from the production of an aerosol mist?
 - a. Removing caps from specimen tubes
 - b. Manual differentials on blood films
 - c. Filling hemocytometers
 - d. Centrifuging uncapped specimens

ANS: B

Manual differentials are performed on a dried film of blood that is fixed and then stained, thus rendering any infectious agents nonviable. All other procedures mentioned have the risk of creating an aerosol that may contain viable infectious agents.

DIF: Cognitive Level: 2 REF: page 10

3. Safety training must be provided and documented at the time of initial assignment and how often thereafter?
 - a. Monthly
 - b. Every 6 months
 - c. Yearly
 - d. Every 5 years

ANS: C

Safety training and education must be documented and should occur yearly once an employee has undergone initial training at the time of employment. It should also be done whenever new methods, equipment, or procedures are introduced to the laboratory.

DIF: Cognitive Level: 2 REF: page 11

4. Which of following requires wearing a face shield or eye goggles?
- Drawing blood
 - Transporting specimens
 - Loading samples on a cap-piercing cell counter
 - Cleaning up an acetic acid spill

ANS: D

Protective eyewear should be worn whenever danger exists of an aerosol mist or splash occurring. Cleaning up an acetic acid spill carries this risk; none of the others do if performed safely.

DIF: Cognitive Level: 1 REF: page 10

5. What is the first and most important thing to do before repairing electrical laboratory equipment?
- Unplug it.
 - Have the repair manual available.
 - Call customer service.
 - Consult with the supervisor.

ANS: A

Before any repair work is attempted on an electrical piece of equipment, it must be unplugged. This does not include things such as routine maintenance and calibration.

DIF: Cognitive Level: 2 REF: page 14

6. What is the best substance to use for cleaning oil from microscope objectives?
- Acetone
 - Alcohol-based products
 - Water
 - Xylene

ANS: B

Microscope lenses should be cleaned using alcohol-based products rather than hazardous solvents such as acetone or xylene. Water will not remove oil from lenses and will only cause it to become smudged.

DIF: Cognitive Level: 1 REF: page 13

7. Who is responsible for laboratory employee safety?
- Occupational Safety and Health Administration (OSHA)
 - Employer
 - Employee
 - All of the above

ANS: D

OSHA has published safety standards that are required for all clinical laboratories, but it is also both the employer's and employees' responsibilities to be sure that all safety regulations (biological, chemical, electrical, and physical space) standards are followed.

DIF: Cognitive Level: 2 REF: page 8

8. Where must fluid-resistant laboratory coats be worn?
- Walking to a patient room to collect a sample
 - Cafeteria
 - Restroom
 - Home

ANS: A

Fluid-resistant laboratory coats must be worn whenever a risk exists of splashing or spilling on clothing any hazardous fluid (biologic or chemical). This includes obtaining blood specimens. They should not be worn in the cafeteria, home, or restroom.

DIF: Cognitive Level: 1 REF: page 9

9. What is the best source of information regarding the nature of a chemical and its hazards?
- Coworker
 - Label on bottle
 - Material safety data sheet (MSDS)
 - Supervisor

ANS: C

MSDSs are written by the manufacturers of chemicals and provide information on the chemical that cannot be put onto a label. They must be easily accessible to all employees in the laboratory.

DIF: Cognitive Level: 1 REF: page 13-14

10. Which of the following is *true* regarding acceptable fire safety?
- Verbal safety instructions must be provided to new employees within 6 months of employment.
 - A written fire protection and response plan must be in place and tested quarterly.
 - Tests of fire detection equipment should be conducted yearly.
 - A fire extinguisher must be located near the laboratory.

ANS: B

A test of fire detection equipment (e.g., alarms, sprinklers) must be done quarterly. A written fire protection plan and response plan must be in place and tested quarterly. Fire extinguishers must be placed every 75 feet. Verbal safety instructions must be given to every new employee at orientation.

DIF: Cognitive Level: 2 REF: page 12-13

11. Universal standard precautions written by OSHA are designed to:
- Prevent acid spills.
 - Identify the appropriate fire extinguisher to use in a fire.
 - Protect employees from possible infectious contamination.
 - Describe equipment decontamination procedure.

ANS: C

Universal standard precautions are written to protect employees from possible infectious contamination. Other standards address how to prevent acid spills, how to decontaminate equipment, and what fire extinguisher to use in different types of fire.

DIF: Cognitive Level: 1 REF: page 8

12. Which of the following is acceptable safe practice?
- Making 1:10 dilution of bleach weekly
 - Conducting a yearly test of fire detection equipment
 - Resheathing used venipuncture needle before disposal
 - Disposing of used glass slides in sharps container

ANS: D

Glass slides should be disposed of in a sharps container. A 1:10 dilution of bleach should be made fresh daily because it is unstable. Fire drills should be conducted quarterly. Used venipuncture needles should never be resheathed.

DIF: Cognitive Level: 1 REF: page 8

13. Personal protective clothing, which *must* be provided by the employer, includes:
- Contact eye lenses when needed
 - Clean laboratory coat to wear when in public areas
 - Gloves
 - Closed-toe shoes

ANS: C

The employer must provide gloves for all employees. These should be latex, and alternatives should be available for those employees with latex sensitivity or allergy. None of the other items mentioned are the responsibility of the employer, although protective shoe coverings may be provided when the employee wears open-toe shoes (which should not be worn in the clinical laboratory).

DIF: Cognitive Level: 1 REF: page 9

14. A 10% solution of household bleach is used to clean contaminated surfaces in the clinical laboratory. This 10% solution should be prepared:

- a. Daily
- b. Weekly
- c. Every 2 weeks
- d. Monthly

ANS: A

Because 10% bleach is unstable, it must be prepared fresh every day.

DIF: Cognitive Level: 1 REF: page 11