

All researchers intending to use BIOHAZARDOUS materials must take this test.  
Please read the training manual before taking the test.

# BIOSAFETY TRAINING

## TEST

TENNESSEE STATE UNIVERSITY

BIOSAFETY OFFICE

Name

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Title

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Building and Room  
Number

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Department

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Telephone Number

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Email

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## SECTION 1: QUIZ QUESTIONS

1. Which of the following is currently the most common chronic bloodborne infection in the United States?
  - a. Hepatitis B virus
  - b. Hepatitis C virus
  - c. Human immunodeficiency virus (HIV)
2. True or False: The Hepatitis B vaccine is a series of three injections and is available at a reduced cost to TSU employees potentially exposed to blood or OPIM.  
 True                       False
3. True or False: Human cell lines are treated as Bloodborne Pathogens by OSHA/TOSHA.  
 True                       False

## SECTION 2: QUIZ QUESTIONS

4. Which of the following statements is FALSE:
  - a. Pipetting of BSL-2 materials should be done in a biosafety cabinet.
  - b. In a BSL-2 lab, the biohazard symbol must be posted on the door and on potentially contaminated equipment.
  - c. A biological safety cabinet must be present in the lab when using BSL-2 materials.
  - d. All items potentially contaminated with BSL-2 materials must be autoclaved or chemically disinfected before they are disposed of
  - e. Safety cups or sealed rotors must be used when centrifuging BSL-2 materials; otherwise, the centrifuge must be used inside a biosafety cabinet.
5. [Material Safety Data Sheets for Infectious Substances](#) are available from Canada's Health Protection Branch - Laboratory Centre for Disease Control. They can be accessed via the EOHSS website. Please review the [MSDS for Vaccinia](#) to determine which of the following statements is FALSE.
  - a. The primary laboratory hazards are ingestion, parenteral inoculation, droplet or aerosol exposure of mucous membranes or broken skin with infectious fluids or tissues
  - b. For spills it is best to use a 1% sodium hypochlorite solution, allowing a 30-minute contact time for decontamination, before cleanup.
  - c. Vaccination is not recommended.
  - d. The containment requirements for activities with cultures or potentially infectious clinical materials are Biosafety Level 2 practices, containment equipment and facilities.

### SECTION 3: QUIZ QUESTIONS

6. TSU's Bloodborne Pathogens Exposure Control Plan and Recombinant DNA requirements can be accessed through which of the following methods?
- a. Visiting the Biosafety website.
  - b. Calling the Biosafety office.
  - c. In the TSU Laboratory Safety Plan binder which should be in each laboratory.
  - d. All of the above.
7. Human cell lines ordered from ATCC:
- a. Are considered other potentially infectious material ([OPIM](#)) by CDC and OSHA/TOSHA.
  - b. May only be used in a BSL-2 laboratory that has registered with the campus IBC by completing a pathogens registration form.
  - c. May be used with no restrictions.
  - d. Are only to be handled by personnel who have proven immunity to Hepatitis B virus or who signed a Hepatitis B Vaccination declination form.
  - e. a, b and d
8. A researcher at TSU is working with a retroviral vector purchased from Invitrogen to transfect human cell lines. Choose the best answer that describes the necessary steps before conducting this work.
- a. This work must be carried out at BSL-2, but registration is not required with the IBC.
  - b. This experiment is exempt from the NIH rDNA guidelines and registration with your campus IBC is not required.
  - c. An rDNA and Pathogen Registry Form must be submitted to your IBC.

### SECTION 4: QUIZ QUESTIONS

9. What type of gloves offer superior protection from blood and OPIM with good tactile sensation?
- a. Nitrile gloves.
  - b. Powdered latex gloves.
  - c. Vinyl gloves.
  - d. Unpowdered latex.
10. Match the cause with the each of the three incidents below:
- a. No use of sealed rotors or safety cups
  - b. No safety needles
  - c. Improper eye protection
  - d. Work practices (PPE, decontamination, use of BSC)

10A. A Thomas Jefferson University researcher developed vaccinia infection in her left eye.

- a       b       c       d

10B. Yale researcher developed Sabia Virus.

- a       b       c       d

10C. A post-doc was viewing a gel on a UV-transilluminator and suffered serious burns to face and eyes.

- a       b       c       d

11. Which of the following is FALSE when working in a Class II biological safety cabinet?

- a. The person working at the hood is protected because materials used within the cabinet are contained by room air that is drawn into the cabinet.
- b. Cultures in the cabinet are kept sterile because the air in the cabinet has passed through a high-efficiency particulate air (HEPA) filter.
- c. Using a Bunsen burner within the cabinet will help keep cultures sterile.
- d. Air exhausted from the cabinet is filtered by high-efficiency particulate air filters, so contaminants do not enter the lab.

## SECTION 5: QUIZ QUESTIONS

12. The materials listed below are going to be disposed. Next to each item, indicate the proper trash container for disposal.

A. Normal Trash      B. Regulated Medical Waste Container

a. unused petrie dishes

- A.       B.

b. used petrie dishes

- A.       B.

c. gloves used for chemicals (not overtly contaminated)

- A.       B.

d. gloves used for biological materials

- A.       B.

e. paper towels used for general lab clean-up

- A.       B.

f. agarose gels

- A.       B.

g. acrylamide gels

- A.       B.

13. True or False: Laboratory supplies that were in contact with human cell lines obtained from ATCC must be decontaminated before being disposed of in the regulated medical waste container.
- True       False
14. True or False: Pound for pound, it costs approximately four times as much to dispose of Regulated Medical Waste as normal trash.
- True       False

## SECTION 6: QUIZ QUESTIONS

15. If you are unable to clean a biological spill on your own, you can call EOHSS for assistance. What is the best way to reach them?
- a. Call EOHSS directly at their office phone number.
- b. Call Public Safety Dispatch and the dispatcher will call EOHSS.
- c. Send an email to EOHSS requesting assistance.
- d. None of the above.
16. What is meant by the term "exposure incident?"
- a. An exposure to mucous membranes such as the eyes and nose.
- b. An exposure to non-intact skin such as skin that has a rash or is chapped.
- c. A stick from a contaminated needle or sharp.
- d. Any skin exposure to BSL-2 materials, independent of whether the skin is intact or non-intact.
- e. a, b and c.

## SECTION 7: QUIZ QUESTIONS

17. If you are unable to clean a biological spill on your own, you can call EOHSS for assistance. What is the best way to reach them?
- a. Call EOHSS directly at their office phone number.
- b. Call Public Safety Dispatch and the dispatcher will call EOHSS.
- c. Send an email to EOHSS requesting assistance.
- d. None of the above.
18. What is meant by the term "exposure incident?"
- a. An exposure to mucous membranes such as the eyes and nose.
- b. An exposure to non-intact skin such as skin that has a rash or is chapped.
- c. A stick from a contaminated needle or sharp.
- d. Any skin exposure to BSL-2 materials, independent of whether the skin is intact or non-intact.
- e. a, b and c.

## SECTION 8: QUIZ QUESTIONS

19. Indicate whether each of the following people need to attend an IATA Training Seminar every two years:

- a. John Wang, a secretary who makes an appointment with FedEx to pick up packages of biological materials.

Yes             No

- b. Casey McCarthy, an office secretary who prepares the required hazardous materials description on a shipping paper at the direction of another, item by item.

Yes             No

- c. The Christo labs send out a similar package containing a category A biological substances every month. Laura Chen prints out a Dangerous Goods Declaration form and signs it.

Yes             No

20. True or False: Transformed human cells meeting the definition of a Biological Substance Category B are being shipped. This package would need a UN3373 diamond shaped label and must be triple packed.

Yes             No