

## **Safety Guidance for Carcinogen Use**

*Laboratory activities requiring the use and storage of carcinogens should follow the strict Safety Guidelines below.*

### **1. Use appropriate control and containment.**

- ✓ Carcinogen processes which may produce airborne contamination should be performed in a laboratory fume hood. Biosafety cabinets should not be used for chemical carcinogen works without a prior approval from the Laboratory Safety.
- ✓ Local exhaust ventilation systems, trap, filter or condenser are also required to capture potentially airborne carcinogen produced by process such as analytical instrument use.
- ✓ Building vacuum systems should not be used for chemical carcinogen work. Dedicated vacuum pumps for chemical carcinogens should be used.
- ✓ Laboratory work surface should be impermeable and protected from contamination with absorbent pads.
- ✓ Mechanical pipetting aids should be used for all pipetting procedures.
- ✓ Engineered protective sharps should be used for injecting carcinogens to test subjects.
- ✓ Laboratory fume hood should be tested by the Safety Department at least annually, or immediately after ventilation modification or maintenance operations.

### **2. Wear personal protective equipment and clothings.**

- ✓ Wear a minimum of a lab coat, safety glasses, and gloves.
- ✓ Gloves should be selected based on the properties of chemicals handled. Multiple layers may be necessary to prevent permeation from working with a mixture.
- ✓ Disposable gloves should be discarded after each use and immediately after contaminated with chemical carcinogen. Gloves must be removed before touching clean items, such as doorknobs, telephones, elevator controls, and copier.

- ✓ **Splash goggles are appropriate for most carcinogen processes when splashing or splattering may occur. Face shield may be required for some operations.**
- ✓ **Respiratory protection may be required if exposure monitoring indicates that exposure levels (PEL) are exceeded even with an engineering control measures. Contact the Safety Department for evaluation and further information about the proper use of respirators.**

**3. Apply proper work procedures to minimize exposure/spill.**

- ✓ **When carcinogen works are completed, wash hands after taking off gloves near the exit and before engaging in other activities.**
- ✓ **Keep container sizes and quantities in the work area as small as possible.**
- ✓ **Contain chemical bottles and equipment containing suspect carcinogen with trays or pans.**
- ✓ **A current chemical inventory of carcinogens shall be maintained.**
- ✓ **Restrict access to carcinogen work areas.**
- ✓ **All primary and secondary containers and storage cabinets containing chemical carcinogens should be labeled with label “Cancer Suspect Agent” or “Carcinogen”.**

**4. Provide Information and Training.**

- ✓ **Laboratory Safety Training is required prior to the employees’ initial work with carcinogen.**
- ✓ **Hazard information and safety procedures should be reviewed annually with anyone handling chemical carcinogens. Annual refresher training should be completed and documented at least annually.**
- ✓ **Annual refresher training should include the following:**
  - **Description of the procedure that may expose workers**
  - **Nature of physical and health hazards of carcinogens including fire, carcinogenic, and corrosive.**
  - **Review of the Material Safety Data Sheet for carcinogens**
  - **Control measures to limit exposure**
  - **Proper storage and waste disposal procedures**
  - **Employee responsibilities to follow prudent laboratory practices to reduce risks to an exposure.**

**5. Prepare for Emergency Situations.**

- ✓ If a spill involving carcinogen is too large to handle, evacuate the area and contact the Safety Department (442-2200 for HSC or 740-6448 for UPC) or Department of Public Safety for non office hours (442-1000 or 740-4321).
- ✓ Restrict access to the spill area until help arrives.
- ✓ If a spill is small enough to handle, ensure that you have proper PPE and knowledge to clean-up.
- ✓ Upon cleaning up the spill, report it to the Safety Department.

**6. Dispose of Carcinogen wastes properly.**

- ✓ Before beginning activities involving chemical carcinogens, plans should be developed for the contaminated chemical waste disposal, surplus carcinogens, and waste pick-up schedules with the Safety Department 442-2200.
- ✓ Arrange a waste pick-up schedule with the Safety Department and send hazardous waste pick-up request by calling the hazardous waste line 442-2225.
- ✓ A waste form should be filled and labeled with “CAUTION: CANCER SUSPECT AGENT” or “KNOWN HUMAN CARCINOGEN”.
- ✓ Animal bedding contaminated with chemical carcinogen must be disposed as hazardous waste.
- ✓ Animal injected with chemical carcinogens should be picked up by the Safety Department to be disposed of properly.