Status **Active** PolicyStat ID **13940581**

Origination	10/10/2019
Last Approved	7/21/2023
Effective	7/21/2023
Last Revised	7/21/2023
Next Review	7/20/2025

Document Contact	Deborah Poloch: Medical Technologist Lead
Area	Laboratory-Safety
Applicability	Dearborn, Taylor, Trenton, Wayne

Laboratory Hoods

Document Type: Guideline

I. PURPOSE AND OBJECTIVE:

The Laboratory personnel are responsible to work in fume hoods and/or in biological safety cabinets or laminar flow hoods according to departmental procedures and regulatory guidelines. Hoods will be inspected for proper function and (if applicable) certified on a regular basis, according to regulatory and accreditation guidelines.

Laboratory hoods are provided for several purposes:

A. Chemical fume hoods are designated areas for working with particularly hazardous substances.

B. Chemical fume hoods are also used when working with a chemical that has a high evaporation rate and/or vapor pressure, and when working with chemicals that cause adverse effects upon exposure through inhalation.

C. Biological safety cabinets are used for working with potentially infectious materials with potential for airborne disease transmission.

D. Biological safety cabinets or laminar flow hoods are used for working with cultures or reagents that must be manipulated in sterile conditions.

II. POLICY GUIDELINES:

A. Chemical fume hood face velocities should be sufficient to assure a capture velocity into the hood for the conditions in the area. Face velocities are measured in linear feet per minute (lfpm). Chemical fume hoods should perform at the following levels:

1. 75 lfpm: nuisance odors, dust, heat, or materials of slight hazard
2. 100 lfpm: materials of higher toxicity, including particularly hazardous substances, and corrosives

B. Face velocities should be measured using a velometer or other acceptable device annually. Measurements should be documented, and corrective actions taken when conditions of insufficient or compromised ventilation are discovered.

C. Hoods should be used according to the guidelines of the chemical hygiene plan, and departmental policy and procedure. Malfunctions should be reported to the manager as soon as possible. Work with hazardous substances should stop until the problem is resolved.

D. Conditions that may disturb the proper functioning of a fume hood should be avoided, such as turbulence created by placing a centrifuge in or close to a hood. This is especially important for biological safety cabinets due to potential interference with the protective air curtain.

E. Hoods should only be used with the sash in the down position, or as close to being closed as possible.

F. Flammable materials should not be stored in hoods.

G. Personal protective equipment should be worn by personnel working with materials in a fume hood. The requirements for this equipment do not change, with the exception of face protection if manipulation is in the hood and the sash offers adequate protection.

H. When installing a new hood or changing existing equipment, Plant Operations should be notified of the work to be done inside the hood, (i.e. what substances will be used including hazardous chemicals or infectious agents).

I. Equipment which contains volatile solvents (e.g. tissue processors) should be located in a fume hood designed for high and low level exhaust.

J. Personnel should avoid exposure to ultraviolet (UV) light radiation from artificial sources. This may be accomplished as follows:
    1. Do not look directly at a UV light while it is in operation.
    2. Do not work in the Biological Safety Cabinet while the UV light is on.
    3. UV bulbs should only be changed when the power is off.
    4. Service personnel working near UV lights should cover exposed areas of skin.

Approval Signatures

Step Description	Approver	Date
Medical Directors	Jeremy Powers: Chief, Pathology	7/21/2023

Medical Directors	Muhammad Arshad: Chief, Pathology	7/19/2023
Policy and Forms Steering Committee Approval (if needed)	Deborah Poloch: Medical Technologist Lead	7/6/2023
Site Laboratory Leaders	Kimberly Geck: Dir, Lab Operations B	7/6/2023
	Deborah Poloch: Medical Technologist Lead	7/6/2023