

PROCEDURE: BIOLOGICAL SAFETY CABINET GUIDELINES

I. PURPOSE

- A. The Biological Safety Cabinet (BSC) serves as a means to protect workers and the surrounding environment from potential pathogens contained in clinical specimens. The use of a Class II BSC, Type A or A2 within the Microbiology laboratory protects both workers and the surrounding environment, as well as the integrity of the clinical specimen. This is accomplished by maintaining inflow velocity of 100 LFPM, use of HEPA filters, filtered exhausted airflows either back into the laboratory or outside atmosphere, and having all biologically contaminated ducts and plenums under, or surrounded by, negative pressure.

II. EQUIPMENT

- A. The Microbiology laboratory uses the following Biological Safety Cabinets (BSCs):
 1. NuAire, LabGard, Class II, Type A2 BSC
 2. The Baker Company, SterilGARD III Advance, Class II, Type A/B3 BSC
 3. Germfree Laboratories, Bioflow Hood, Class II, Type A BSC
 4. Thermo Scientific, 1300 Series Class II, Type A2 BSC

III. USE

- A. The depressed area (work tray) is known as the "Safe Working Area". All work should be performed on or above this designated area. The area on or above the front grill is a non-safe working area.
- B. The view screen should be opened to the appropriate height. It should not pass the designated sash line when in use.
- C. The fluorescent light should be on for adequate visibility of specimen and specimen processing.
- D. The hood working area should be free of clutter and only contain material needed for immediate specimen processing.
- E. Hood grates should never have anything on or covering them which could impede airflow.
- F. Appropriate safety attire such as gloves and lab coats should be worn when working inside of the safety hood.
- G. Avoid outside sources of air currents such as the following:
 1. Doors being opened
 2. Excessive and/or rapid movements in and out of the hood.
- H. If needed, use of an electric incinerator inside of the hood is acceptable, do not use open flames.

IV. MAINTENANCE

- A. Airflow must be monitored and recorded each day of use.
- B. Hood surfaces should be cleaned using appropriate disinfectant at the beginning and end of each shift, and any time needed in between.
 1. If a disinfectant containing chloride is used, re-wipe all surfaces with 70% alcohol or similar non-corrosive anti-microbial agent to prevent damage to stainless steel surfaces.
- C. Areas of the hood inaccessible for daily cleaning (i.e. under the grates) will be cleaned on a quarterly basis.
- D. Biological safety cabinets are certified every 6 months to ensure filters are functioning properly and that airflow rates meet specifications.

V. REVISIONS

- A. 5/15/2024 New equipment update