Unit Procedure

Biological Safety Cabinet Operation and Maintenance

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Department: Processing Laboratory

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Date	28 Dec 2016	28 Dec 2016	Dec 29. 2016

1. OBJECTIVE

This procedure describes the process as to how biological safety cabinets are maintained and operated in a manner which complies with all appropriate regulatory and protocol specific requirements; as well as to ensure that all personnel are consistently using biological safety cabinets.

2. SCOPE

This Standard Operating Procedure (SOP) applies to all Clinical and Translational Support Laboratory (CTSL) staff providing laboratory processing activities requiring the use of biological safety cabinet for processing clinical specimens. This procedure is intended to provide the basic procedure for operating and maintaining biological safety cabinets.

3. RESPONSIBILITIES

The laboratory staff is responsible for appropriately operating and maintaining biological safety cabinets in a safe and compliant manner.

4. DEFINITIONS

BSC: Biological Safety Cabinet	CTSI: Clinical and Translational Sciences Institute
CTSL: Clinical and Translational Support Laboratory	EtOH: Ethanol
HEPA: High-Efficiency Particulate Air	PL: Processing Laboratory
PM: Preventive Maintenance	SOP: Standard Operating Procedure

5. ASSOCIATED DOCUMENTS

5.1. CTSI-CRC-QA-003 "Document Control and Management"
5.2. CTSI-CRC-CLN-030 "Handling of SOP Deviations"
5.3. CTSI-CRC-PL-121 "General Safety"

6. PROCEDURE

6.1. Operation

6.1.1. Gloves and laboratory coats should be used when working in any cabinet.
6.1.2. Sterile processing:
6.1.2.1. Start up the cabinet by turning on the cabinet lights and blower at least 15 minutes prior to beginning work in the hood.
6.1.2.2. Ensure that the air intake and exhaust portals are not obstructed.
6.1.2.3. Record the pressure of the intake. Level should be between 0.3 and 0.5.
6.1.2.4. Wipe down the interior surfaces with 70% alcohol or a disinfectant such as dispatch or 10% bleach solution.
6.1.2.5. Place any necessary materials for processing into the cabinet after wiping each surface of the material with 70% alcohol. Placement of materials should ensure that work can proceed from clean to contaminated area to avoid the movement of dirty items over clean ones.
6.1.2.6. Materials should be placed as far back into the cabinet as practical.
6.1.2.7. Ensure that front intake grill is not obstructed by any materials.
6.1.2.8. After placing materials in cabinet, allow 2-3 minutes before beginning work for air flow to stabilize.
6.1.2.9. Minimize the amount of turbulence within the BSC by using deliberate and slow movements during processing.
6.1.2.10. The middle third of the interior work surface is the ideal area to perform processing.
6.1.2.11. Either don sterile gloves prior to start of processing or spray 70% alcohol on gloves so that all surfaces are covered.
6.1.3. Non-sterile processing:
6.1.3.1. Start up the cabinet by turning on the cabinet lights and blower. Processing may commence immediately after start up.
6.1.3.2. Ensure that the air intake and exhaust portals are not obstructed.
6.1.3.3. Verify air flow is present by observing gauge. Any value above 0 indicates airflow is present.
6.1.4. When processing is completed or at the end of the workday, remove all materials that should not remain in the cabinet and decontaminate the surfaces with a disinfectant such as dispatch or 10% bleach solution.
6.1.5. Shut down the cabinet by turning the lights and blower off and closing the sash (if applicable).

6.2. Maintenance
6.2.1. Cleaning of the internal and external surfaces with a warm mild soap solution should be done as needed followed by 70% alcohol or a disinfectant such as dispatch or 10% bleach solution.
6.2.2. Cabinet certification and preventative maintenance will be done annually at minimum by a qualified and approved service vendor.
6.2.3. PM and recertification documentation will be filed in the CTSL.

6.2.4. For sterile hoods, record cleaning, PM, recertification and usage on CTSI-CRC-PL-LG608 Biological Safety Cabinet Maintenance Log.
6.2.5. Non-sterile hoods (Class I) and non-sterile processing in hoods capable of sterile processing (Class II) do not require a CTSI-CRC-PL-LG608 Biological Safety Cabinet Maintenance Log to be completed and/or filed.
6.2.6. Consult the operations manual or contract an approved, qualified service vendor to perform non-routine maintenance such as HEPA filter replacement.
6.2.7. CTSI-CRC-PL-LG608 Biological Safety Cabinet Maintenance Logs (as applicable) are reviewed monthly.

7. REFERENCES

7.1. BSC Operation Manual

8. APPENDICES

None

9. AMENDMENT HISTORY

Date of Amendment:	23 Dec 2016
Amendment Request by:	Robert Orr
Change Control No, if applicable:	CTSI-CRC-PL-DC-2016-011
Details of Amendment:	Updated to footer file location; updated the SOPs in 5.2; sections 6.1 Operations and 6.2 Maintenance modified for clarity and to define separate processes and procedures for sterile hood (Class II) vs non-sterile hood (Class I) operation and documentation, including non-sterile processing in Class II hoods.