FAQ
Frequently Asked Questions
Biological Safety Cabinet/ Laminar Flow

What is a Biological Safety Cabinet?
A biological safety cabinet (BSC) is a ventilated cabinet which uses a combination of HEPA filtration, laminar air flow and containment to provide personnel, product or environmental protection from biohazardous agents. This is accomplished by air intake and recirculation that is filtered prior to exhausting to the cabinet exterior.

It is distinguished from a chemical fume hood by the presence of HEPA filtration and the laminar nature of the air flow.

What is a Laminar Flow Cabinet?
A laminar flow cabinet or laminar flow hood or tissue culture hood is a carefully enclosed bench designed to prevent contamination of semiconductor wafers, biological samples, or any particle sensitive device. Air is drawn through a High Efficiency Particulate Air (HEPA) filter and blown in a very smooth, laminar flow towards the user or towards the work surface. The cabinet is usually made of stainless steel with no gaps or joints where spores might collect.

*Laminar flow cabinets do not protect the user or the environment and cannot be used with infectious material.

What is a HEPA filter?
HEPA stands for High Efficiency Particulate Air filter and is capable of removing microscopic organisms with an efficiency of at least 99.97%. These filters help protect the user, the product in the workspace and the environment, but must be checked annually to ensure that they are functioning properly.

What do I need to do to get a new BSC?
New cabinets are purchased with departmental funds. Please contact RMS for vendor information or when a cabinet is purchased.

New cabinets or cabinets which have been moved must be recertified after they are installed in the new location.

What if I need to move a BSC/LFC?

Risk Management and Safety must be informed before a biological safety cabinet is relocated. This will involve decontamination before the cabinet is moved and recertification after relocation as required in NSF Standard 49. BSCs must also be recertified if moved to a different spot within the same room.

If a cabinet is to be relocated to a laboratory at AU from a laboratory at another institution, documentation will be required by the Biosafety Officer to prove decontamination at the previous location before the cabinet can be moved to a laboratory at AU. Recertification will then be required at AU after the cabinet is installed.

Laminar Flow Hoods do not usually require decontamination prior to relocation. However, please inform RMS when a cabinet is moved so that we can maintain proper records.

How often should my BSC/LFC be certified?

All BSCs and LFCs are certified on an annual basis. Certification costs are the responsibility of the department and are managed thru RMS.

Whom do I call for certification?

Risk Management and Safety at 844-4870.

What does the orange (Do Not Use) tag mean?

The orange tag means that the cabinet has not been certified and may not be used until it is certified

What do I do if my BSC/LFC is making a strange noise or quits working?

Stop work, use an appropriate decontamination method to clean the cabinet, and call RMS for assistance (844-4870)

How do I properly clean/disinfect my BSC/LFC?

Appropriate decontamination methods are based on the materials being used in the cabinet. If you are not sure how to decontaminate your cabinet, please contact your lab supervisor or RMS (844-4870) for assistance.

What if I need to dispose of a BSC/LFC?

Please remove the filters from Laminar Flow Cabinets prior to sending to Surplus Property. RMS requires that BSCs must be decontaminated and filters removed prior to sending to surplus. Decontamination is conducted by an outside provider and is the fiscal

responsibility of the department. Contact RMS (844-4870) to schedule a cabinet decontamination.

Should I run my BSC / LF continuously?

The BSC/LFC should be running at all times when someone is working in it. Usually it may be powered down after work is finished and the workspace is decontaminated but please check with the lab supervisor regarding proper operation. Some cabinets that are hard ducted may not be turned off by the user as they are integral to the lab exhaust system.

Can I use gas in my BSC?

Gas burners (natural or propane) are **NOT PERMITTED** for use inside a Class II biological safety cabinet because gas may build up inside the cabinet resulting in an explosive atmosphere. The heat from the flame will also disrupt the laminar air flow pattern and may result in escape of microbial agents from the work space into the laboratory and also allow contaminants to enter the sterile work space.

Alcohol burners may be used with caution inside the cabinet but the volume of alcohol used must be kept to a minimum. The alcohol should be in a metal (not glass) container. Alternative techniques for sterile work include using sterile Pasteur pipettes as an aspirator and using electronic bacterial loop incinerators. Sufficient equipment should be available so that a fresh supply of sterile equipment replaces the need to flame items. For more information: http://www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm

My BSC is small; can I use the front grill for extra space?

NO. Placing items on the grill will disrupt airflow and could lead to contamination of the workspace, user and/or the environment. In fact, items should be kept at least 4 inches behind the grill to ensure containment.

Does turning on the UV light sterilize the interior of the BSC?

The UV light does inhibit the growth of some microorganisms, but the BSC should be cleaned with disinfectant both before and after work is performed.

Is the BSC ready as soon as I turn it on?

No, allow at least 5 minutes after powering up before beginning work in the BSC to ensure that the recirculated air has been filtered properly.

Where can I learn more about Biosafety Cabinet Operation?

RMS has placed a training video online from NuAire Corporation. It contains some very good information and may be viewed at:
http://www.auburn.edu/administration/rms/training.html