

Biosafety Cabinet (BSC) Annual Certification

By Kimberly Parker

The Biosafety Cabinet (BSC) is a key piece of equipment used frequently in labs working with infectious agents. The primary function of a BSC is to contain infectious aerosols generated by certain procedures such as vortexing, pipetting, opening containers after centrifuging, sonication, and aspiration. A High Efficiency Particulate Filter (HEPA) located within the cabinet removes all airborne particles allowing for clean air to be exhausted back into the lab and into the cabinet's work space. When used correctly, the BSC performs three primary functions:

1. Personnel protection.
2. Product protection.
3. Environmental protection.

The Biosafety Cabinet must be tested and certified on an annual basis to ensure it is functioning properly. Covino Inc. is Tufts

University service provider for the Boston and Medford campuses, and B&V Testing provides service on the Grafton campus. A monthly schedule is provided below indicating what month each building is due for annual testing and certification. Each building will be posted with a more detailed schedule approximately 2 weeks in advance.

October: Arnold and M&V

November: 200 Boston Ave, Anderson, Dana/Barnum, Michael/Pearson

January: Jaharis

March:

Boston - Animal Care Facility, Dental, South Cove, HNRC ,
Medford - Bray/Lane Hall, Jackson/Talbot, 4 Colby Street, 200, 490, 530 Boston Ave,
Grafton - All

April: Stearns

In preparation for this testing, TEHS would like to remind everyone of some key points regarding the use of a Biosafety Cabinet. More detailed information on the safe use of a Biosafety Cabinet can be found on the TEHS website at: <http://publicsafety.tufts.edu/ehs>

- Storage of material within the BSC should be kept to a minimum.
- All surfaces of the BSC must be disinfected at the end of each experiment or in the event of a spill. We also recommend disinfection prior to beginning your work.
- The Biosafety Cabinet is designed to be running 24 hours per day. If your work practice includes turning the BSC off when not in use, be sure to run the cabinet for 5-10 minutes before beginning your experiments and after completion of the work. Any particulates within the BSC will be filtered during this time.
- The sash must be kept at the predetermined height to ensure protection. If the sash is raised too high, an audible alarm will go off indicating to the user the sash must be lowered. Never override this alarm.
- Do not obstruct the grill at the front or back of the BSC. Material should be at least 4 inches from the grill at the back of the BSC.
- Hazardous chemicals and radioactive material should never be used within a BSC.
- The use of open flames (Bunsen Burner) is not only a fire risk but the heat from the burner will disrupt the air flow which is key to providing protection. We recommend using electric incinerators or disposable inoculating loops.

New England Regional Biosafety Laboratory

By Julien M. Farland

The New England Regional Biosafety Laboratory (NE-RBL) is a 41,000 square foot facility dedicated to the study of existing and emerging infectious diseases. Scientists within the NE-RBL will conduct research to develop therapeutics, vaccines, and diagnostic tools in a safe, secure, regulatory-compliant environment. The NE-RBL was inspected by the Centers for Disease Control in January of 2010 and the NE-RBL was added to the Cummings School's Select Agent Registration. The Town of Grafton's Board of Health Agent and Biomedical By-law Consultant inspected the NE-RBL and provided the Cummings School with a permit to operate the NE-RBL. The Tufts Cummings Institutional Biosafety Committee

has approved a request from a researcher to do tuberculosis research at the NE-RBL. Future infectious disease work at the RBL will also be reviewed by that committee.

The NE-RBL is available to regional investigators—including scientists from academia, not-for-profit organizations, industry and government—requiring biosafety level 3 (BSL3) laboratories and/or animal accommodations. All work must be in compliance with applicable federal and university regulations. The laboratory is located in [Grafton Science Park](#), adjacent to the campus of the Cummings School of Veterinary Medicine at Tufts University, in North Grafton, MA.

The NE-RBL is able to serve investigators that require:

- BSL3 aerobiology and insectary capabilities;
- small animal models, including rodents, rabbits, birds and piglets;
- a high- security facility to perform work on Select Agents;
- veterinary skills and support services;
- Good Laboratory Practice (GLP) compliant studies; and

NE-RBL investigators at the Cummings School, members of the Division of Infectious Diseases, have expertise in the biology, pathogenesis, immunopathology, pathophysiology, transmission, prevention,

treatment and diagnosis of enteric infections and toxin-mediated diseases associated with food and water-borne diseases. Consultation and collaboration with Division scientists is available to support the work of outside investigators.

The [New England Regional Biosafety Information Summary](#)

includes this and other information about the mission and capabilities of the facility. Information is also available at <http://www.tufts.edu/vet/ne-rbl/>

For more information about the New England RBL and how it can assist in your research, contact:
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