AUTOCLAVE PROGRAM
AUTOCLAVE CHEMICAL AND BIOLOGICAL MONITORING

SOP Bio-006

PURPOSE
The EEM-EHS Department will be offering in-house biological monitoring in order to validate autoclaving processes. This will ensure consistency and compliance with regulations governing biohazardous waste sterilization.

METHODS
The chemical monitoring will be done using a special chemical indicator with any run load. The biological monitoring will be done once a month by the EHS-Biosafety Officer.

CHEMICAL TESTING
The Center for Disease Control (CDC) requires that a chemical indicator be placed on the inside of each waste package to verify steam penetration.
Every run/load will carry a Class 5 Vapor Line Steam Integrator; in order to corroborate the correct time, steam and temperature of each autoclave run.
The Class 5 Vapor Line Steam Integrator strips clearly indicate Pass/Fail for the run by changing color. The sterilization cycle has achieved spore death when the indicator reaches the “Pass” area.
If the indicator only reaches the “Fail” zone, the batch needs to be autoclaved again using a fresh indicator.

IMPORTANT If Fail results continue, report the condition to the Autoclave Room Manager in charge.
All runs results should be noted in the Daily Autoclave Use log.
The Class 5 Vapor-line Steam Integrators will be provided by EEM-EHS Department and can be requested from the Stock room by calling extension 2543.
**BIOLOGICAL TESTING**
Monthly, the Biosafety Officer will perform biological monitoring using a Bio test indicator from Autoclave Testing Service, Inc.

**Materials**
The Bio-Test indicator contains spores from *Geobacillus stearothermophilus* and will be used in each autoclave at standard conditions described in the EEM-EHS-SOP for the use of the autoclave. After the regular run, the Bio Test indicators will be incubated for 24 hours at 60° Centigrade together with a control Bio-Test indicator that has been maintained at room temperature.

**Results**
The results of the biological test are reading as **Pass** or **Fail**. The positive control indicator **NO AUTOCLAVED** contains the live spores and should show growths as change in color and increase in turbidity. The Bio-Test indicator that has been autoclaved should not show any changes after incubation indicating that spores have been destroyed by the autoclaved process.

**Records**
All biological indicator tests results must be documented on the “**Daily use autoclave Log**”. All records should be kept for a minimum of three (3) years. EHS maintains a database of users and monthly test.

For additional information on autoclaving, biological waste disposal and/or any biosafety issues, contact the Biosafety Officer [ruth_medina@uml.edu](mailto:ruth_medina@uml.edu) or call EEM-EHS at 2618.