Office of Biosafety

Guidance on the Monitoring of Autoclaves Used for Biohazardous Waste Decontamination

The management of biological waste is regulated by multiple federal and state authorities. Regulations and best practices are put in place to ensure the safety of laboratory personnel, healthcare workers, support staff and the public in general.

With biological and medical waste going into the general waste stream, after appropriate decontamination by autoclaving, it is imperative that this process be appropriately documented. The decontamination processes should be regularly monitored using a combination of mechanical (print-outs) along with chemical and biological indicators to evaluate each decontamination cycle. By documenting the conditions of the decontamination cycle, you indirectly monitor the microbiological status of the processed items.

The mechanical print-out of the autoclave cycle is the first mechanism in place to ensure an autoclave cycle was completed at the required parameters for the decontamination cycle. Personnel operating the autoclave must be able to review the operational parameters of a cycle prior to the opening of an autoclave and prior to placing the trash into the general waste stream. Use of biological and chemical indicators is an additional requirement used to validate a decontamination cycle. Chemical indicators are inexpensive devices that confirm the items in the autoclave have been adequately exposed to steam and pressure. These indicators should be retained as documentation for each load of waste autoclaved. Biological indicators, recognized as the gold standard for decontamination validations, are the only indicators that measure the efficacy of the decontamination cycle. Biological indicators should be utilized to validate autoclaves after any significant modification to the unit or, at a minimum, on an annual basis to ensure that the autoclave is functioning properly.

The Office of Biosafety is requesting that each department implement the following standards for each autoclave used for decontamination of biological or medical waste:

1. Establishment of an autoclave log. Data for the log should include, at a minimum the sterilizer run data tape or recorder charts information (includes time, temperature and pressure) and the results of the biological or chemical indicator. The chemical indicator can be taped to the autoclave log for documentation. UGA's "Autoclave Log" can be found on the Biosafety web page at http://ovpr.uga.edu/biosafety/.
2. Ensure that all autoclave users are trained on the proper use of autoclaves and the use of the Autoclave Log for documentation of decontamination cycles involving biological or medical waste.
3. Maintain all autoclave logs (along with the autoclave sterilizer run data sheet or tape) for a minimum of three years.

To ensure autoclaves are operating properly, a representative from each Department should contact the Office of Biosafety to set up a time for Biosafety to validate each autoclave the department uses to decontaminate biological or medical waste. The Office of Biosafety will supply the biological indicators needed for this testing and will complete the incubations required for this validation process.

If you have any questions or need any assistance with your autoclave please contact the Office of Biosafety at biosfty@uga.edu . For issues requiring immediate assistance call 706.542.5300.