

## PI Autoclave Waste Decontamination Cycle Testing and Verification

1. *Geobacillus stearothermophilus* biological indicators must be used **monthly** with waste using average spore populations of  $10^4$ ; to  $10^6$ ; organisms. There are many commercially available biological indicators with a choice of [spore ampoules or spore strips with growth media](#).
2. Follow the instructions provided by the manufacturer of the biological indicators. Most require refrigeration when kept in storage.
3. Place the indicator in the middle of the waste bag or material to be autoclaved. It is best to put the indicator in the waste bag before it is filled completely. To aid recovery of the indicator after sterilization, tape it to a brightly colored sheet of paper or to a long string allowed to protrude from the bag. Indicators can also be placed in test waste bags filled with materials that simulate full loading for the test.
4. Autoclave the waste following normal procedures. Once the cycle is complete and contents have cooled, remove the indicator from the waste bags wearing appropriate protective equipment. Prepare and incubate the indicator and a control indicator that was not autoclaved as recommended by the manufacturer.
5. Check for signs of growth at regular intervals during the incubation period (8, 12, 24 and 48 hours). There should be signs of growth on the control indicator that was not autoclaved or the test is invalid. If there are signs of growth on the indicator placed in the waste, the waste was not sterilized properly. The time, temperature and autoclave procedures should be re-evaluated. If an autoclave problem is suspected, Facilities Services must be contacted immediately for repair.
6. A log of each test must be maintained for 3 years (Texas Administrative Code Title 30 Chapter 326), which includes the type of indicator used, date, time, and result of the test. An autoclave testing log is available for download at the RMS website.

Submit the log annually to RMS/BSO at biosafety@unt.edu.

7. The waste does not have to be held until the results of the testing confirm effectiveness. If test results indicate that the autoclave is not sterilizing properly, the autoclave should not be used for waste until it has been repaired. The first load run in the autoclave should be tested with a biological indicator to insure proper functioning of the autoclave.