

Autoclave Cycle Verification Procedure

The following testing is conducted on a weekly basis and results will be recorded in an autoclave log. Log records to be kept for a minimum of three years.

Initial Process

1. Retrieve a self-contained biological indicator (SCBI) ampoule (*Bacillus Stearothermophilus*).
2. Identify the indicator (spore ampoules) by labeling it with the proper information (date, autoclave number, control, test, etc.).
3. Place the spore ampoule in a horizontal position with representative materials to be sterilized. The ampoule should be in the part of the load that would be considered most difficult to sterilize. Remember to attach a piece of autoclave tape onto the load.
4. Select an appropriate cycle to process the load.
5. Once the cycle has come to an end, allow the autoclave to depressurize and cool down.
6. Remove the load from the autoclave and allow it to further cool down (10 - 15min).
7. Retrieve the spore test ampoule from the load.
8. It is common to see a color change from the spore ampoules from purple to black; usually this distinguishes indicators that have been exposed to steam to those that have not.

Incubation Process

1. Remove the SCBI from the load and use the Verify activator to gently crush the interior glass ampoule to have the spores meet the growth media. Place the indicator in the preheated incubator.
2. Take a second spore ampoule (label control ampoule) that was not run in the load and proceed to break the glass ampoule as above and incubate in the same incubator.
3. Incubate both spore ampoules for 24 hours.

Interpretation Process

1. Examine indicator ampoules for any color change after 24 hours. The presence of yellow indicates a failed test and positive bacterial growth. Cloudy media within the ampoule also indicates growth. No color change and clear liquid indicate a passing test and proper sterilization of sample. The control ampoule should have a yellow color change.
2. If the test fails, run the test again and discontinue normal use of the autoclave. If the second test round fails, contact Facilities Management and Planning for repair as well as Environmental Health & Safety (Biosafety Officer ext. 3809). Discontinue use of autoclave until approved.
3. If a passing test is confirmed, you can proceed with regular use of the autoclave.
4. Record all results in your Autoclave Cycle Verification log.
5. Ensure to autoclave all Bacillus ampoules before disposal.