

Sterilization

What is it?

- Sterilization is a process of destroying all microorganisms including viruses, bacteria, fungi and bacterial spores.
- Thorough cleaning and sterilization reduces the risk of spreading diseases.
- All critical items must be sterilized. Critical items are those that pierce or penetrate the skin, and in some cases, those that hold sterile items. All sterile items must remain sterile until point of use.
- Must be monitored (refer to *Chemical & Physical Monitoring of Sterilizer, Biological Monitoring of Sterilizer, Sterilization Log Sheet*).

Approved sterilizers are:

- Autoclaves* – must meet CSA specifications for use in health care or allied health facilities
- Chemical autoclaves* – must meet CSA specifications for use in health care or allied health facilities

*All autoclaves must include:

- manufacturer's directions on proper use of the sterilizer (e.g. maintenance, proper use of sterilizer, packaging, loading)
- a specified drying cycle for packaged goods
- gauge(s) to measure temperature and pressure
- a timer

The autoclave should be equipped with a print-out that provides details of the mechanical parameters reached during each cycle.

- Dry Heat sterilizers

All dry heat sterilizers must include:

- manufacturer's directions on proper use of the sterilizer (e.g. maintenance, proper use of packaging, loading)
- a specified cycle for packaged goods
- gauge to measure temperature
- a timer

Unapproved sterilizers

glass bead, UV, ultrasonic, pressure cookers, microwaves, boiling water, ovens

Continued ↗



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Steps for proper sterilization

1. Clean instruments thoroughly (see *Cleaning Instruments Information Sheet*).
2. Package items.
3. Load sterilizer. Do not overload. Follow manufacturer's instructions.
4. Monitor each cycle to verify that the sterilizer is in proper working order.
5. Follow manufacturer's instructions on the drying cycle. Contamination can occur if packages are handled when wet.
6. Store sterilized items (in their packages) in clean containers with lids.

Monitoring your sterilizer properly:

1. Biological Monitoring: Spore tests must be conducted every other week

- Spore tests use heat resistant bacterial spores to determine if the sterilizer is in proper working order.
- *Geobacillus stearothermophilus* spores are used to test autoclaves (steam under pressure).
- *Bacillus atrophaeus* spores are used to test dry heat sterilizers.
- Refer to the manufacturer's directions for proper biological challenge used to test chemiclaves.
- Spore tests must be sent to a laboratory for testing. Test results must be negative indicating spores were destroyed, hence that the sterilization process was satisfactory.

2. Chemical Monitoring: Must be used with each load

- Temperature sensitive tape/package must be placed in the sterilizer with each load.
- Chemical monitoring is a thermal indicator that changes colour if an adequate temperature has been reached. *This colour change is not indicative that sterilization has occurred.*

3. Physical Monitoring: Keep daily records for at least one year on site, five years on file

- Where appropriate, record the date, temperature, pressure and cycle length of each load.
- Refer to *Sterilization Log Sheet*

Back-up plans

All owners / operators must have a written back-up plan in the event of a spore test failure. The back-up plan must be reviewed annually and located on-site for inspection.



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