

## Autoclave Safety

**Summary/Purpose:** The Autoclave Safety Policy details the minimum requirements and procedures for the safe operation of Autoclaves.

Autoclaves use superheated steam to sterilize materials and supplies for laboratory use and to prepare contaminated items for disposal. Because there are several brands and types of machines, it is the responsibility of the laboratory supervisor to properly train all of the personnel in the safe operation of the specific type of autoclave they are using. As a general rule the following table can be used as a guide for preparation and disposal. For specific techniques, more or less time, temperature, and pressure may be used as designated by the Principal Investigator (PI).

Program	Temperature	Time	Drying Time	Items To be Sterilized
Liquids	121° C (250° F)	15 minutes	None	Distilled water, media solutions, other liquid prepared in closed bottles or flasks (not greater than 2 liters). Not for clinical applications
Unwrapped	135° C (275 °F)	3 minutes	Default: 15 minutes, can be set from 1 to 99 minutes	Unwrapped instruments: metal glass and plastic objects. Heat resistant rubber tubing which will not be used in surgical applications. Any other items for which 135° C for 3 minutes is appropriate
Wrapped	135° C (275 °F)	10 minutes	Default: 15 minutes, can be set from 1 to 99 minutes	Wrapped cloths, bandages, pads, fabrics, loosely wrapped individual instruments separated by fabric, wrapped trays of loose instruments, instruments in bags, heat-resistant rubber tubing. Any other items for which 135° C for 10 minutes is appropriate.
Packs	121° C (250 °F)	30 minutes	Default: 15 minutes, can be set from 1 to 99 minutes	Packs of towels. Groups of instruments in commercially prepared packs. Instruments subject to prolonged storage. Surgical gloves wrapped for sterilization. Any other items for which 121° C for 30 minutes is appropriate, except liquids
Optional	User defined From 100 °C to 136 °C (212 °F to 277 °F)	User defined	User defined 1 to 99 minutes	Items appropriate to the user defined parameters. Dental handpieces should be run in this cycle at 132° C for 10 minutes.

**When using any type of autoclave, a few general rules must always be followed to insure its safe operation.**

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- Never attempt to open the door while the machine is operating.
- Always check the jacket pressure gauge to make sure that it is reading 0 PSI before opening the door.
- Do not overfill containers when autoclaving liquids.
- Use a catch basin to capture overflow when autoclaving any materials.
- Periodically check chamber trap and clean as necessary.
- When preparing materials for disposal, do not autoclave more than can easily be placed in an appropriate disposal container.
- If the machine is not operating properly, notify the laboratory supervisor. Do Not Attempt To Make Repairs. This should be done **only** by a trained technician.

Laboratory Services (5433) tests all operational autoclaves biannually, and as needed after major repairs, to ensure proper operation.