

The parameters required by the California Department of Public Health for the disinfection of medical waste are **30 minutes at 121-124°C (250-255°F) and 15 psi.**

Verify that materials to be autoclaved are compatible with steam sterilization parameters.

Autoclave compatible	Incompatible			
Tissue culture flasks	Heat labile materials			
Surgical Instruments	Acids, bases, organic solvents			
Glassware	Chlorides, sulfates			
Pipette tips	Seawater			
Media solutions	Chlorine, hypo-chlorites, bleach			
Animal food and bedding	Non-stainless steel			
Waste	Polystyrene			
Polypropylene	Some types of polyethylene, high density polyethylene			
Stainless steel				

Autoclave Cycle Types

- Fast exhaust or gravity cycle use for bagged tools (scalpels and scissors)
- Slow exhaust or liquid cycle use for liquids and slow steam evacuation
- Dry cycle– use for dry goods such as glassware or plastics, e.g., pipet tips. This cycle is used for waste as well as items that must end up dry with minimal condensation. Twenty (20) minutes is the typical drying time.

Packaging Autoclave Loads

- (1) Use heat sensitive indicator tape to provide immediate identification of processed items
- (2) Always use a secondary container

- (3) Add 100 ml of water to waste bags and to secondary containers to ensure adequate steam generation
- (4) Wear dry, heat resistant gloves and closed-toe shoes to load and unload the autoclave
- (5) Check the sediment screen before starting an autoclave run and contact your department representative if you notice any debris or clogging
- (6) Load/stack items in the autoclave to allow efficient steam circulation
- (7) Autoclave clean items and waste separately
- (8) Do not overcrowd or allow anything being autoclaved to touch the sides or top of the chamber
- (9) Dispose of waste in the red-lidded totes labeled for lab waste

Autoclaving Liquids

Liquids take longer to heat up and cool down than most solid materials. Larger liquid volumes will take longer to achieve temperature.

<500 ml	500 ml - 1 L	2 L – 4L	4L
30 minutes	45 minutes	55 minutes	1 hour

- > Use the "slow exhaust" or "liquid cycle" for liquids
- > Allow liquids to stand for 10 minutes before transfer
- > The lids on bottles, whether they are empty or full, must be loose to prevent explosion.
- > Prevent bottle bottoms from breaking by filling the secondary container with 1-2 inches of water.

Autoclave Cycle Verification and Logging

- Log all autoclave runs on the sheet next to the autoclave
- Start the log at the beginning of the run, and enter the end time after the cycle has been verified and you have removed all items
- Check that the autoclave reaches the right temperature; the chamber should reach 90% of full temperature in minutes

Autoclave ID Autoclave Use Log								
Complete BEFORE Autoclaving				Cycle Type				
Date and User name	Time In	Time Out	Lab Name	Liq/Dry/Waste				
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Unloading the Autoclave

- Open an autoclave only after the pressure gauge for the chamber is at zero
- Stand behind the door and allow steam to evacuate before reaching in
- Use a cart and secondary container to transport items