



# Dentalytec™

## The Autoclave: Basic Operational Procedures & Guidelines in Sterilisation



Of the main types of sterilizers available in the health industry, most dental practices opt to use autoclaves, as opposed to machines like chemiclaves or those that use dry heat. Autoclaves, by design, are more efficient and do not require chemicals to be effective.

Unfortunately, many dental staff lack comprehensive training on how to use the autoclave within their practice. Because each manufacturer designs their models in different ways, it's important to become familiar with the exact settings and protocols that should be followed to ensure proper sterilization.

Here are some other key points to keep in mind:

## **Take Appropriate Safety Precautions**

It's not just microorganisms that you need to guard yourself against; autoclaves can cause severe burns or scarring if not used properly. Here are a few things to keep in mind:

- Do not stand immediately in front of the autoclave door at the end of a cycle.
- Use appropriate eyewear or face shield, splash apron, and closed toed shoes.
- Use heat-insulating gloves that cover the entire hand and forearm.
- Do not sterilize liquids or sealed containers.
- If water is running out of the autoclave door, do not open it.

Practice good infection control procedures, which includes using a designated "clean" and "dirty" area.

## Load the Autoclave Properly

One of the most common mistakes that dental staff make is overfilling the autoclave, so that instruments are not properly sterilized.

This is particularly of a concern when pouches or wraps are used to package the instruments, as when stuffed together they can restrict steam flow. As such, the vapors cannot reach all of the instrument surfaces adequately; or when they do, heavy condensation builds up and can cause the instruments to rust (leading to excessive dulling or wear.)

Lay the packages paper side up, without stacking them on top of one another. Otherwise, use cassettes which can be stacked without restricting the steam.



## **Run the Sterilization Cycle on the Correct Setting**

In order for proper sterilization to occur, the machine must be set at the proper heat and pressure for the correct amount of time. The autoclave should prompt you to select whether or not the instruments are sealed. Failing to have it on the proper setting can damage equipment or allow microorganisms to thrive. Follow the manufacturer's directions, as machines vary from one to the next.

Do not remove the instruments until the drying cycle is complete. This can accelerate how quickly an instrument dulls or rusts, but it also allows instruments to become re-contaminated. Allow them to fully dry. Check any tape indicators or pouches to ensure proper sterilization temperatures were reached.



## **Perform Monthly Biomonitoring**

Biological indicators are an appropriate way to ensure that spores and microorganisms are being destroyed during the sterilization process. Use the kit strip or envelope at least once per month and submit it to a monitoring lab for evaluation. As with good instrument loading practices, sit the strip on top of a cassette, or away from any other packages that could block air flow.

## **Practice Proper Machine Maintenance**

Keep a log book in your sterilization area to record how often the autoclave is maintained, and by whom. Include the employee's name, the type of maintenance or test performed, and any repairs. Depending on your governing dental board, you may also be required to document each time the autoclave is run.

Check door gaskets for cracks or the chamber for leaks each time the machine is used.

Use only distilled water to fill the reservoir, and drain it at the end of each business day. If water flow appears to be restricted, check the drain screen.