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西交利物浦大学

Standard Operating Procedure for: Yamato SN310C Autoclave

**Department of Health and Environmental
Sciences**

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1. Purpose

The purpose of this SOP is to regulate the operation, usage and maintenance of SN310C.

2. Scope

This SOP applies to all personnel using and managing SN310C.

3. Part names

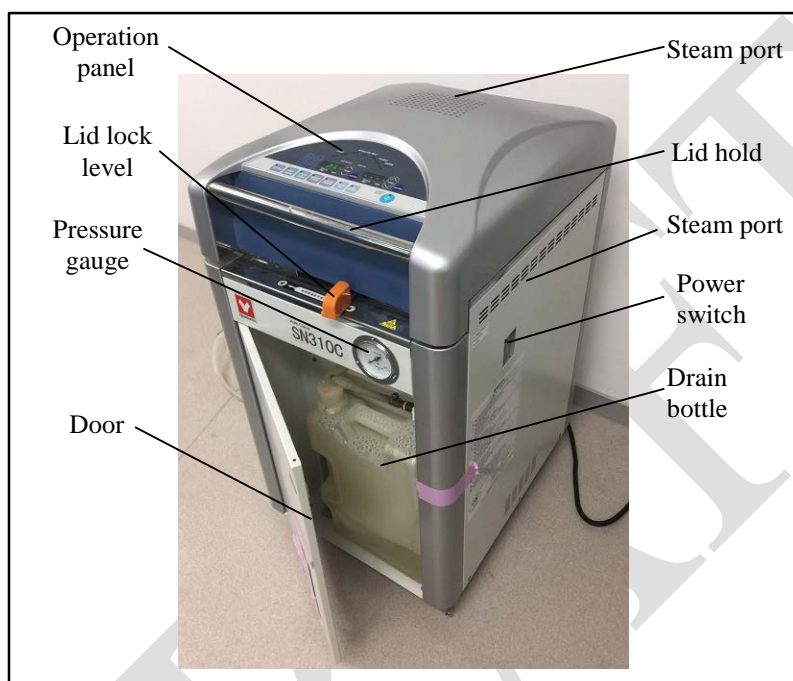


Fig.1 Part names

4. Procedure

4.1 Before operation

- 4.1.1 Check water level of drain bottle, it should be right between the yellow tape (1500 mL) and drainage level on the door (fig.2). Drain or add water to the 1500 mL water level if out of acceptable range (drain it when approaches the drainage level).
- 4.1.2 Install the drain bottle (fig.3, skip this step if it is well installed).
- 4.1.3 Make sure the door is closed.
- 4.1.4 Check if pressure gauge (fig. 4) indicates “0 MPa”, contact LFST if not.



Fig.2 Proper water level of drain bottle



Fig.3 Well installed drain bottle



Fig.4 Pressure gauge

4.1.5 Connect power cable to power output and turn on power switch (fig.5).

4.1.6 Open lid (fig.6).

Caution: Don't open lid until chamber pressure goes down to "0MPa".



Fig.5 Turning on power



Fig.6 Open or lock the lid

4.1.7 Check drain valve (on left side of this unit) is closed (fig.7).

4.1.8 Put the base plate into the bottom of the chamber and check the water level of the tub. Adjust the water level to proper level (fig.8).

Caution:

- **The water inside the tub must be clean, report to Yili Cheng if not. Yili will ask the last user to clean the tub. You can clean the tub and replace with fresh DI water by yourself if you are in a hurry.**
- **The water level inside the tub must be above the lowest level.**
- **Only pour DI water into chamber.**
- **Change water for sterilizing frequently.**

4.1.9 Make sure the steam cup is empty and properly installed (fig.7).

4.1.10 Make sure the water collecting plate is empty and properly installed (fig.9).



Fig.7 Drain valve and steam cup

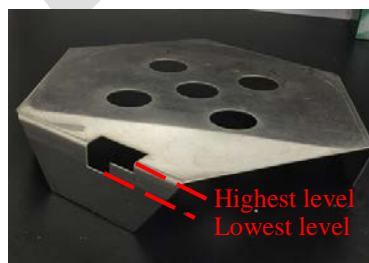


Fig.8 Proper water level

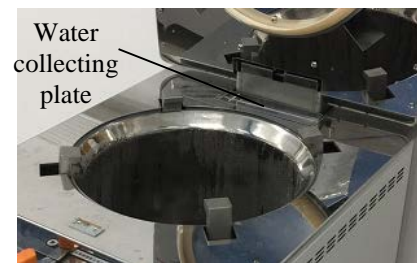


Fig.9 Water collecting plate

4.2 Load object

4.2.1 Be sure to put objects in stainless wire basket. The recommended method is as follow (fig.10).

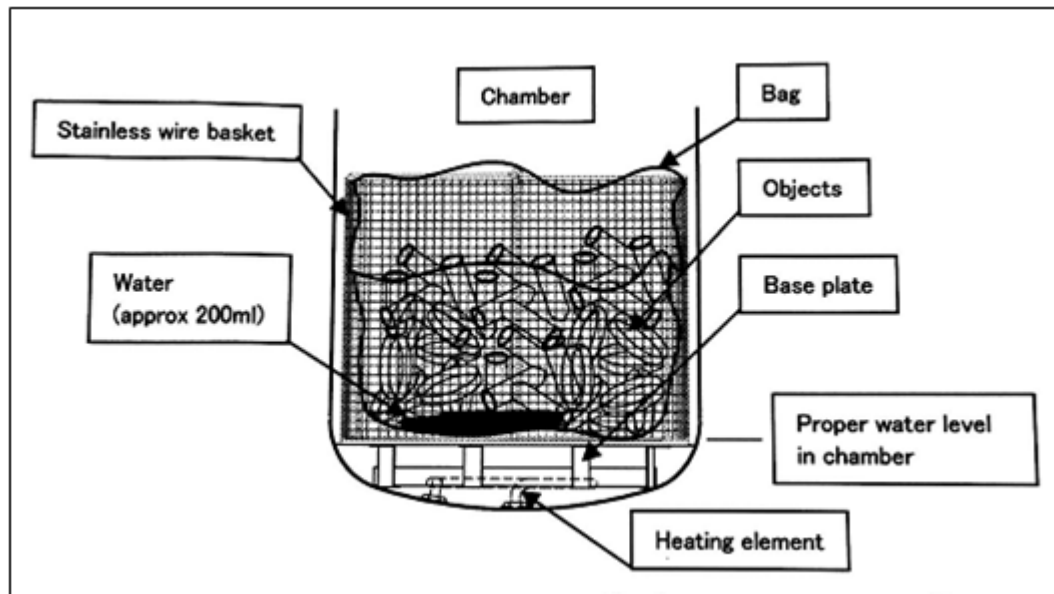


Fig.10 Recommended

Caution:

- Never put a disposable film bag directly into chamber. Put single pack of bag in stainless wire basket. (fig.11)
- Be sure to fold back the mouth of the bag inside of stainless wire basket (fig.12).
- If you need to close the mouth of the bag, don't tie too much to have open mouth (fig.13).

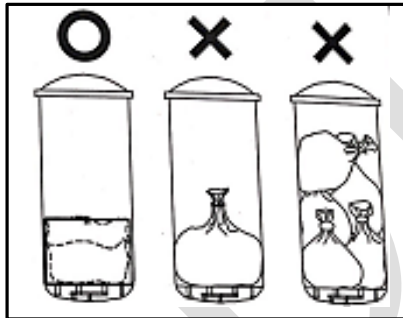


Fig.11

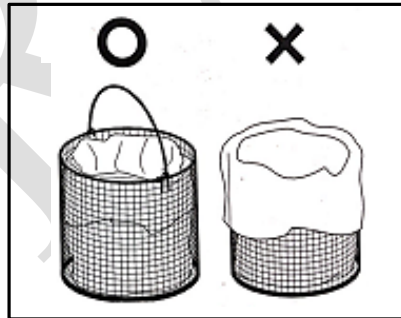


Fig.12

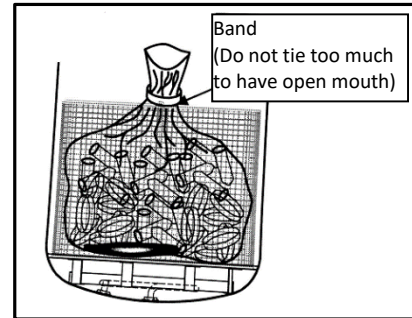


Fig.13

- Don't contain objects too much in chamber. (Up to about 60% of chamber volume. For liquid object, quantity of object to be put inside container shall be less than 60% of capacity of container.)
- Don't put objects with sharp edge in the bag directly.
- Never block up sensor, air outlet and pressure gauge connector inside tub.
- Do not operate this unit with following materials in chamber.
 - Explosive materials

- Flammable materials
- Corrosive materials
- Non heat-resistance materials
- Non moisture-resistance materials

4.2.2 Close and lock the lid. Watch out not to pinched fingers when closing lid.

4.3 Set sterilization parameters



Fig.14 Operation panel

4.3.1 Press corresponding pattern key to choose the pattern.

4.3.2 Press  to set temp of flushing stage and press  to fix setting.

4.3.3 Press  to set time of flushing stage and press  to fix setting.

4.4 Start operation

Press  to start operation.

Caution:

- Do not place items on it while it is running.
- Do not close with the port of steam port.
- Turn off the power and disconnect the power cord when it thunders.

4.5 Shutting down

4.5.1 When the running is completed, [END] shows on the operation panel and completion alarm sounds.



Press  to release the lid lock.

4.5.2 Wait till pressure gauge indicates 0MPa and temperature display indicates below 60°C. Open lid, wait till all steam goes out then unload object.

Caution:

- **Do not open lid until pressure gauge indicates 0MPa and temperature display indicates below 60°C.**
- **Use a heat-resistance glove to unload objects.**
- **If you spill something when unloading objects, be sure to wipe it off.**

3.5.3 Empty the steam cup and put it back.

3.5.4 Empty the water collecting plate and put it back.

3.5.5 Drain the water in drain bottle if it approaches the drainage level.

3.5.6 Drain water in chamber by laying down the lever of drain valve if you will not use it within a week.

Caution: Do not open drain valve until the pressure gauge is pointing to 0 MPa.

3.5.7 Turn off the power and disconnect the power cord.

3.5.8 For continuous run, open the lid for 15min for cooling before each run;

Caution:

- **Check the water level in tub and drain bottle before each run.**
- **Empty the steam cup before each run.**

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