



Xi'an Jiaotong-Liverpool University  
**西交利物浦大学**

# **Standard Operating Procedure for: ALP Autoclave**

## **Department of Health and Environmental Sciences**

**By Yili Cheng**

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### 1. Purpose

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

### 2. Scope

This SOP applies to all personnel using and managing ALP autoclave.

### 3. Part names

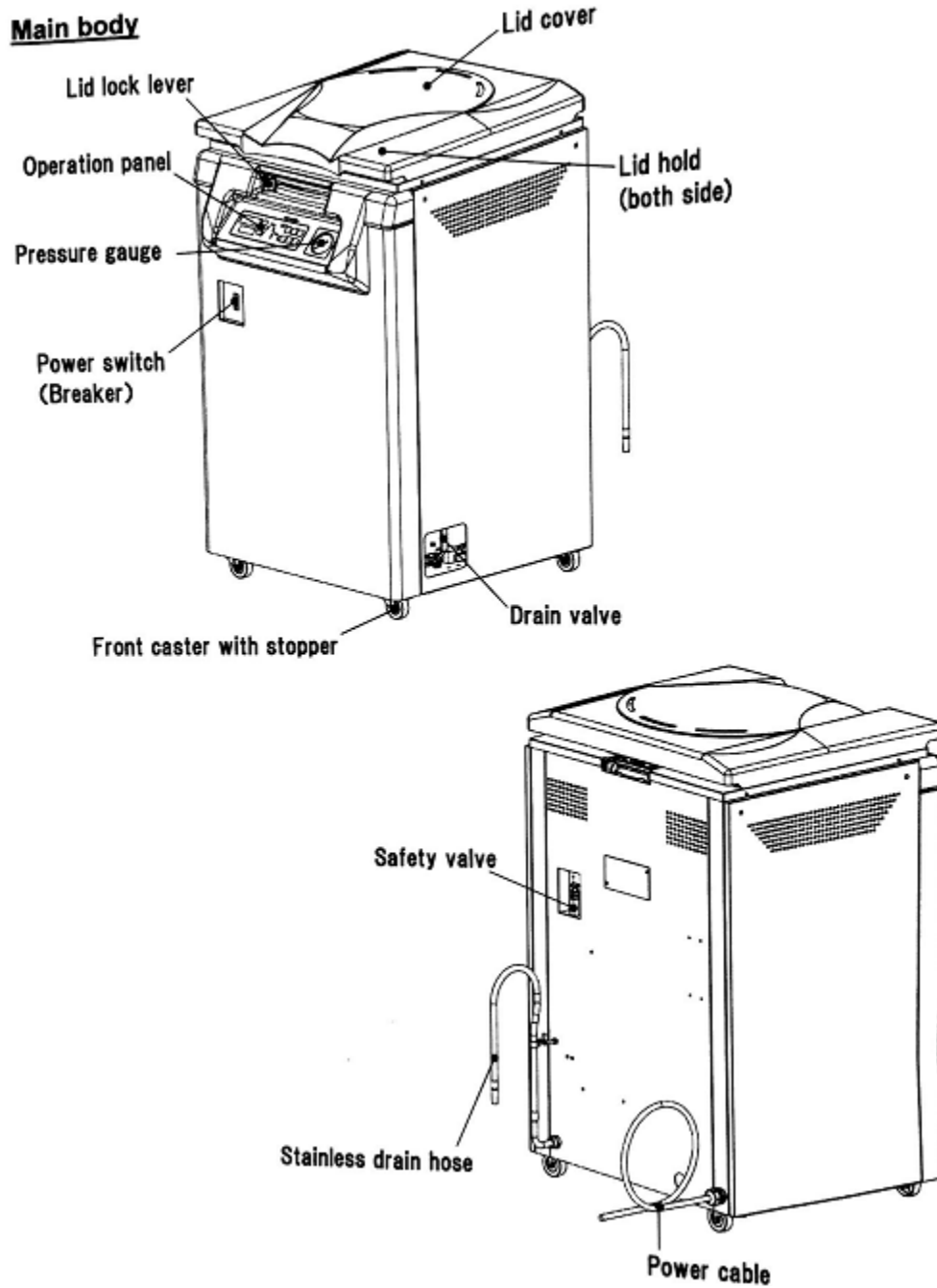


Fig.1 Part names

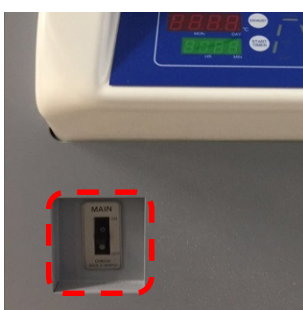
## 4. Procedure

### 4.1 Before operation

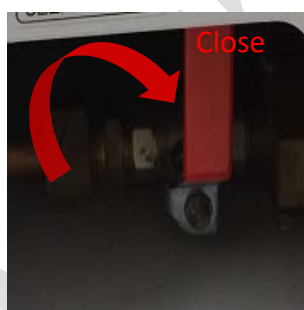
- 4.1.1 Check the water level of exhaust bottle. Add water if it is under the line marked in blue (fig.2). Then lead end of stainless drain hose to the exhaust bottle.
- 4.1.2 Connect power cable to power output and turn on power switch (fig.3).
- 4.1.3 Check drain valve is closed (fig. 4).
- 4.1.4 Check if pressure gauge (fig. 5) indicates “0 MPa”, contact LFST if not.
- 4.1.5 Open lid (fig. 6), check water level is the same as the height of base plate in chamber (fig. 7).  
Pour water to the same level if not.



**Fig.2 Water level of exhaust bottle**



**Fig.3 Turn on power switch**



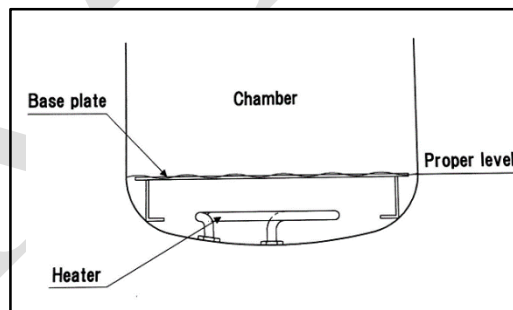
**Fig.4 Close drain valve**



**Fig.5 Pressure gauge**



**Fig.6 Open lid**



**Fig.7 Proper water level**

### Caution:

- Don't open lid until chamber pressure goes down to “0MPa”.
- 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.
- Only pour DI water into chamber.
- Change water for sterilizing frequently.

## 4.2 Load object

Be sure to put objects in stainless wire basket. The recommend method is as follow (fig. 8).

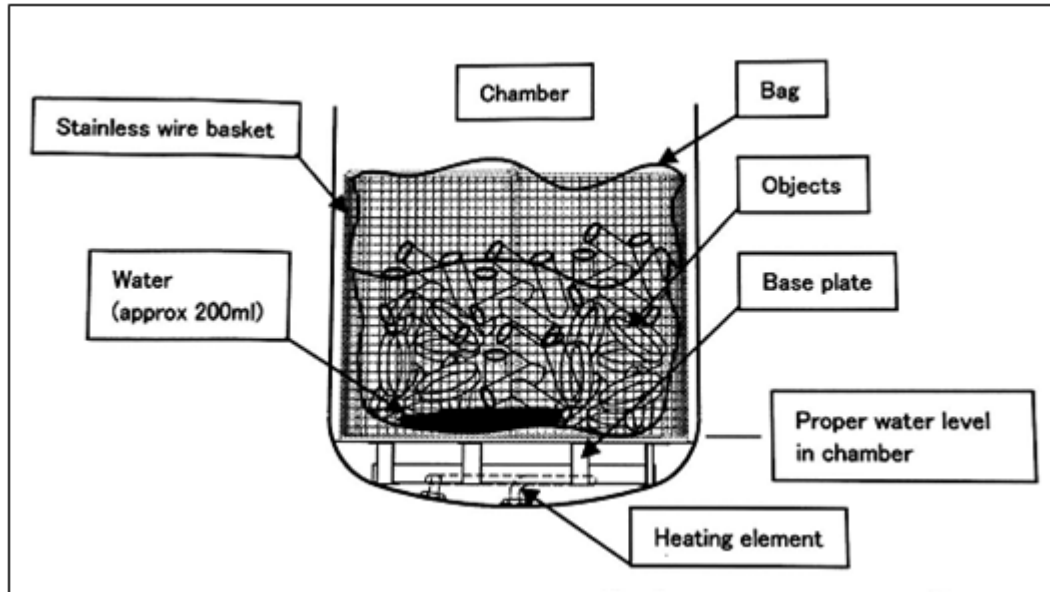


Fig.8 Recommended method

### Caution:

- Never put a disposable film bag directly into chamber. Put single pack of bag in stainless wire basket. (fig.9)
- Be sure to fold back the mouth of the bag inside of stainless wire basket (fig.10).
- If you need to close the mouth of the bag, don't tie too much to have open mouth (fig.11).

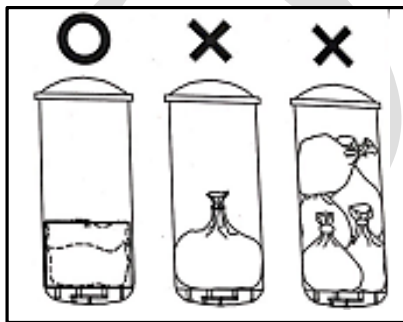


Fig.9

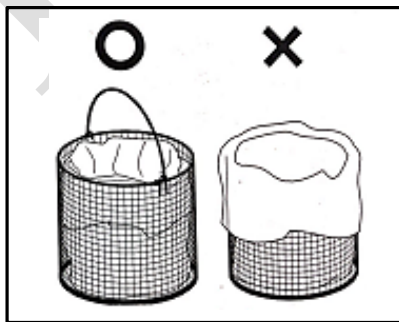


Fig.10

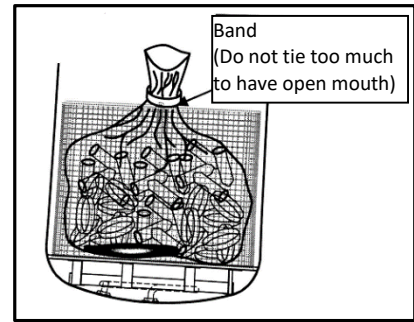


Fig.11

- 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 80% of capacity of container.)
- Don't put objects with sharp edge in the bag directly.

➤ Do not operate this unit with following materials in chamber.

- Explosive materials
- Flammable materials
- Corrosive materials
- Acid or alkaline materials
- Non heat-resistance materials
- Non moisture-resistance materials

#### 4.3 Set sterilization parameters

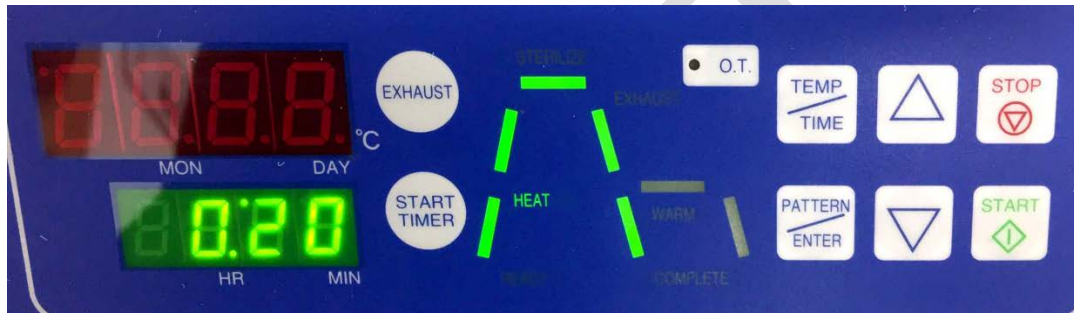


Fig.12 Operation panel

##### 4.3.1 Operation pattern setting

- Press **PATTERN/ENTER**, then press **▲** or **▼** to change pattern.
- Press **PATTERN/ENTER** to fix the setting.

##### 4.3.2 Temperature / time setting

The temp/ time of heat can't be set. In case of other patterns, operate in the same way.

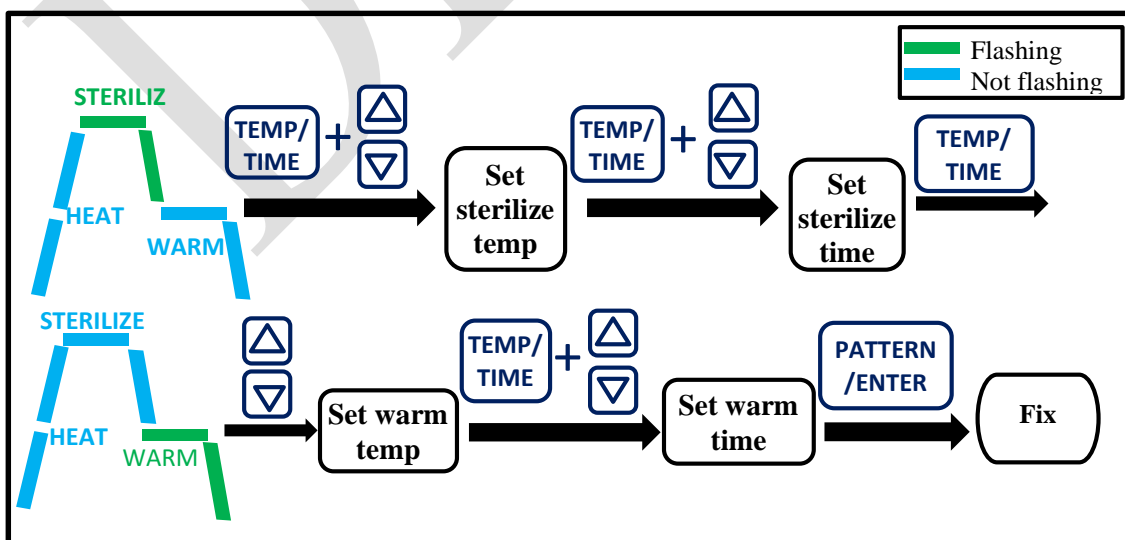









Fig.13 Temperature /time setting

### 4.3.3 Exhaust setting

For appliance (except glassware) ON

**For glassware, liquid or agar medium, other high viscosity substance OFF**


- Press  to enter the mode of exhaust setting, change automatic exhaust on/ off by change  or .
- Press  to fix the setting.
- Press  or  to change automatic exhaust starting temperature.
- Press  to fix the setting.

## 4.4 Start operation

4.4.1 Close and lock the lid.

4.4.2 Press  (on the operation panel) to start operation.

## 4.5 Turn off autoclave

4.5.1 When temperature display indicates **80 °C**, complete alarm sounds. Press  to release the lid lock.

4.5.2 Open lid and upload object (**below 80 °C** in chamber)

### Caution:

- **Do not open lid until pressure gauge indicates 0MPa and temperature display indicates below 80°C.**
- **Use a heat-resistance glove to unload objects.**
- **If you spill something when unloading objects, be sure to wipe it off.**

4.5.3 Close and lock the lid.

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

4.5.5 Turn off power switch.

**Document information:**

Document No:	SOP-autoclave-01	Version No:	0.1
Drafted/ modified by:	Yili Cheng	Effective date:	
Comments:			

DRAFT