



**Toploading
Autoclave**

Toploaders are common in food laboratories. They are a useful size, and easily loaded with baskets of glassware and agar growing media.

The Compact Toploader models don't need to be plumbed in, making them easy to deploy.

Bigger toploaders need plumbing, but can be fitted with more options.

**Benchtop
Autoclave**

Benchtops are used frequently in food labs too. They are useful in smaller labs with less available floor space and more room on the benchtop.

Like Compact Toploaders Benchtops don't need to be plumbed in.

Growing Media Plates (or Agar Plates)

Plates full of agar growing media are usually used in food laboratories. The laboratory staff will take swabs from food and beverages, add them to the media plates, and see what bacteria grow. It is essential that no bacteria are in the agar at the start of the experiment, so the growing media and plates are sterilized in the autoclave. **Agar growing media is treated as a liquid load type.**

Glassware

Pipettes, burettes, flasks, and test tubes are all commonly used tools in the food and beverage quality control laboratory. They need to be sterile to ensure that bacteria only come from the food and drink being tested.

Discard

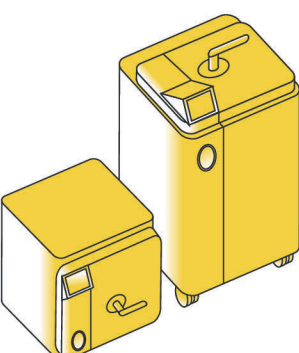
Used agar plates, gloves, tissue, and general laboratory waste are often placed in a biological waste bin lined with an autoclave bag. This waste is then sterilized to help keep the laboratory clean.

Astell Recommends:

Smaller food labs are usually OK with a Compact Top Loader (an AMA240 or an AMA440), or a benchtop autoclave like the AMB range.

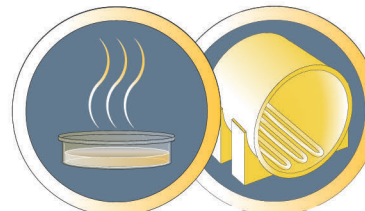
Bigger food labs will want a Large Top Loading autoclave (AMA250, AMA260, or AMA270,), or a Swiftlock Front Loading autoclave (ASB range) because these can have advanced heating and cooling options, air ballast, and load sensed process timing, which allow lots of agar to be prepared quickly.

Recommended for Small Food Labs:



An AMB Benchtop Autoclave
OR a AMA240 Ecofill Compact Toploader
OR a AMA440 Classic Compact Toploader

Recommended options for Agar Growing Media



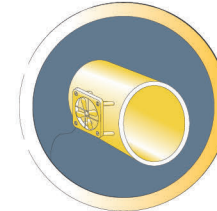
Media Holdwarm
(Requires Heaters In Chamber)

Media holdwarm keeps sterilized agar at a warm temperature until it is needed. This allows the agar to be easily poured.



Load Sensed Process Timing

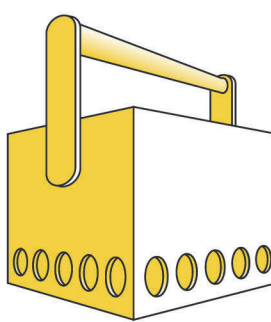
The LSPT probe measures the temperature from within the agar, allowing for more accurate and efficient heating and cooling.



Assisted Air Cooling

An External Cooling Fan allows the agar to be cooled quicker, reducing the time it needs to be autoclaved.

Recommended options for Discard



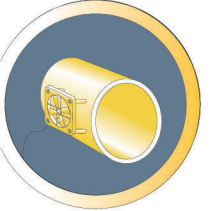
Pulsar FreeSteaming

Discard loads often have pockets of air trapped inside them. Pulsar FreeSteaming uses steam to increase and decrease the pressure in the autoclave chamber, which helps dislodge the pockets of trapped air.



Load Sensed Process Timing

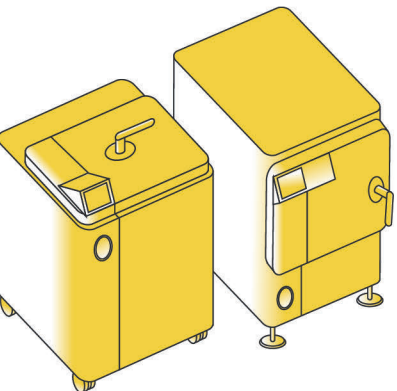
When the discard contains a lot of fluid, a LSPT probe can be useful. The LSPT probe measures the temperature from within the discard, allowing for more accurate and efficient heating and cooling.



Assisted Air Cooling

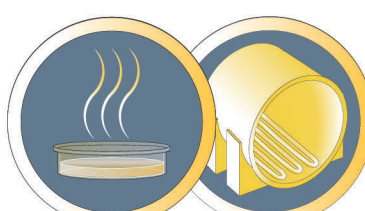
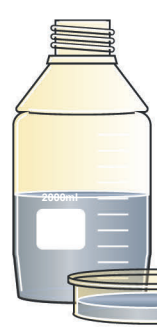
An External Cooling Fan allows the discard to be cooled quicker, reducing the time it needs to be autoclaved.

Recommended for Large Food Labs:



An AMA250, AMA260, or AMA270 Large Toploading Autoclave
OR an ASB Swiftlock Autoclave

Recommended options for Agar Growing Media



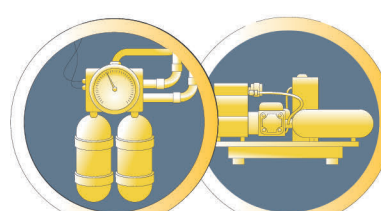
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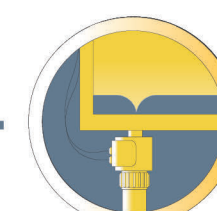
Air Ballast
(Requires Air Compressor)

Air Ballast actively adjusts the pressure in the autoclave chamber, stopping the agar overflowing from its container when cooling.



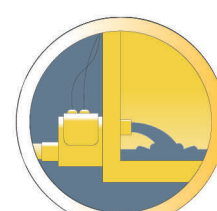
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Autodrain

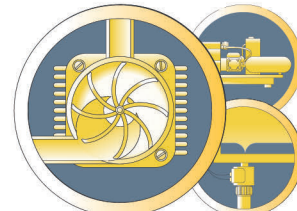
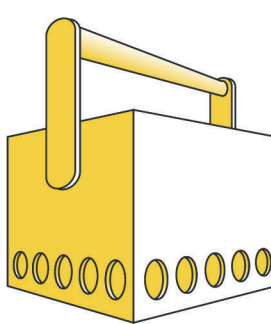
Autodrain empties the hot, dirty water from the autoclave after sterilization has occurred. This allows the agar to cool faster, speeding up the autoclaving process.



Autofill

Autofill refills the water in the autoclave chamber, which is especially useful when autodrain has emptied it. The new water will be both clean and cool.

Recommended options for Discard



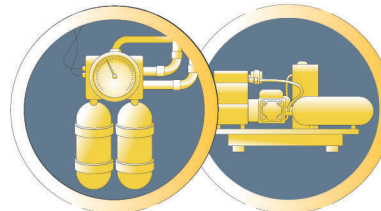
Simple Vacuum
(Requires Autodrain and Air Compressor)

Discard loads often have pockets of air trapped inside them. The simple vacuum works in combination with the water heating element to generate waves of positive and negative pressure in the autoclave chamber, which helps dislodge the pockets of trapped air.



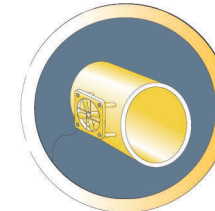
Load Sensed Process Timing

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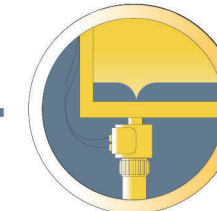
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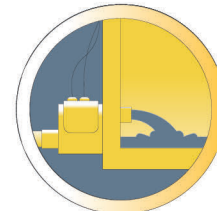
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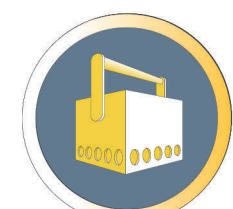
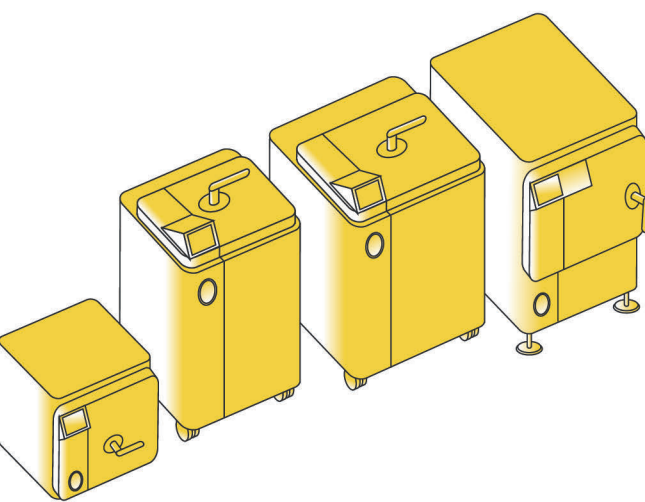


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Other Options Worth Considering:

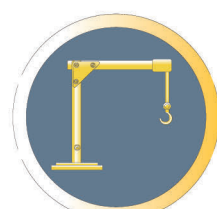
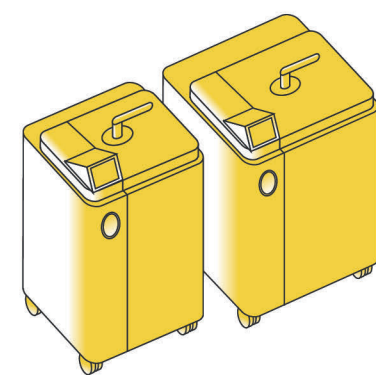
Options worth considering for all food lab autoclaves



Morrison Discard Containers

Morrison containers are designed for sterilizing waste. They allow steam to get to their contents, while catching any material that leaks out of the autoclave bag. They also make it easier to move waste in and out of the autoclave.

Options worth considering for top loading autoclaves



Electronic Hoist

The hoist allows baskets and other containers to be lifted in and out of the autoclave with ease. It is excellent for heavy baskets full of bottles of agar.



Mesh Baskets

These baskets allow lots of smaller items to be loaded into an autoclave easily. With lots of glassware and bottles of liquid agar to sterilize, they are very useful in the food lab.

Need more help with your client's autoclave setup? Contact us on info@astell.com for expert advice.