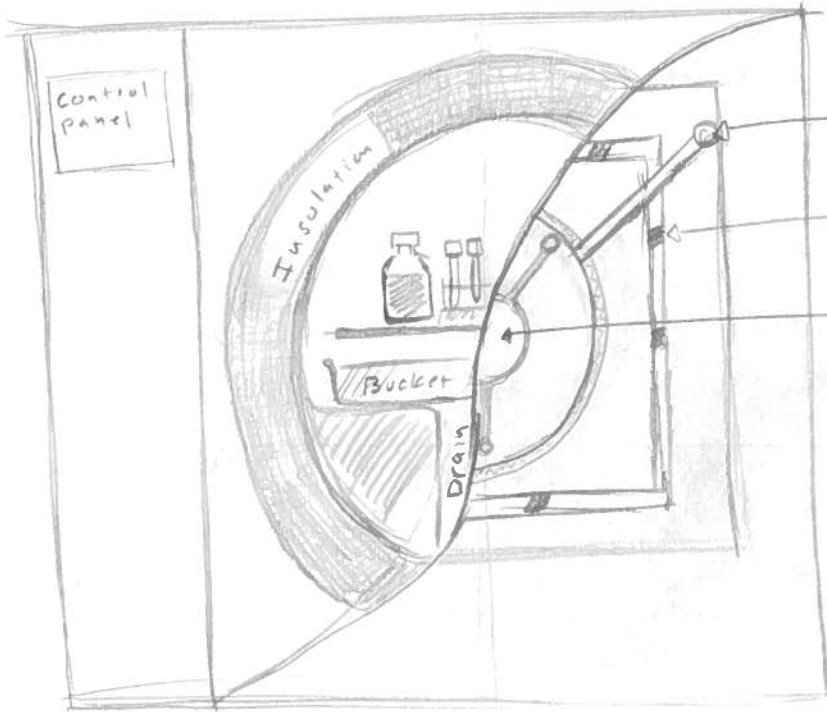


A is for Autoclave. The autoclave is used to sterilize media, glassware, and instruments. It does this by subjecting its contents to extremely high pressure and temperature. Steam. It is essentially a giant pressure sterilizer which is a device used to sterilize canned meats.



Pressure sterilizer & Burner



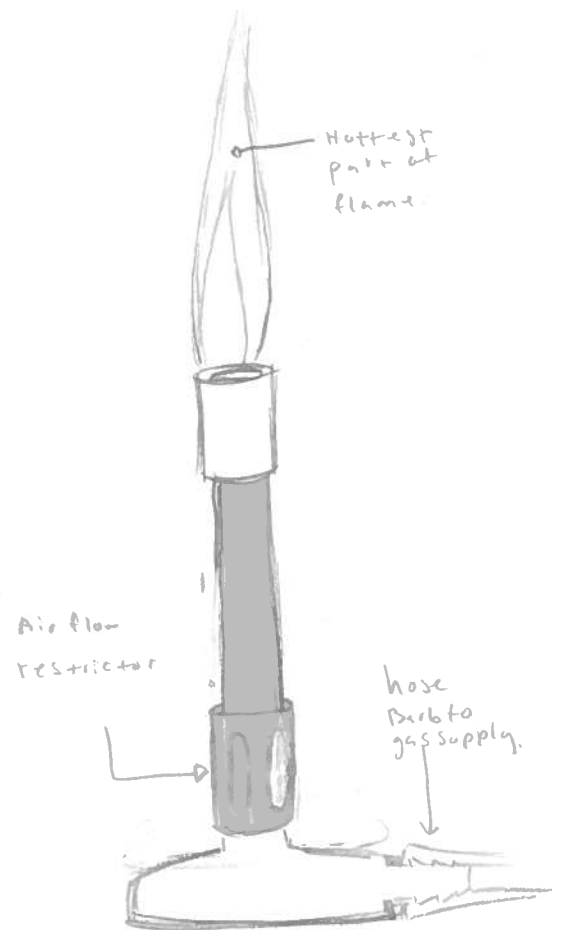
Lever for locking lugs

Locking lugs

Wheel to seal door

Bunsen burners are used to create an upward convection current at the bench. This prevents spores and bacteria from falling on your bench. They

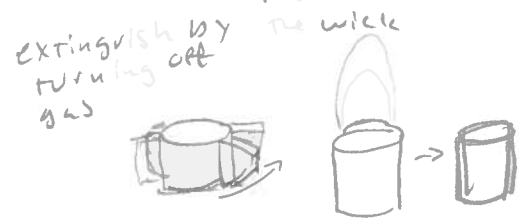
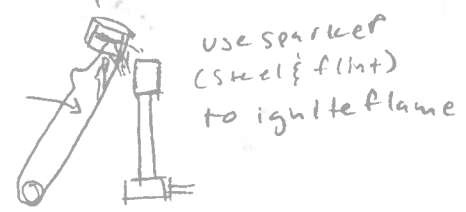
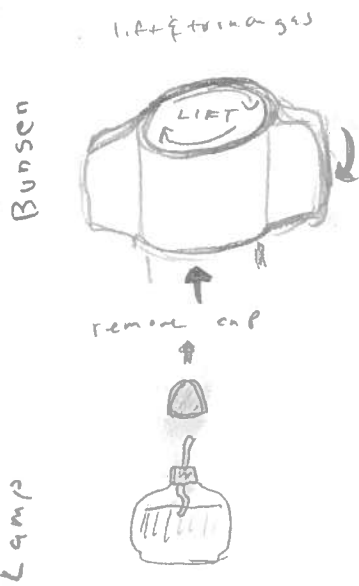
can also be used to sterilize an inoculation loop by heating it to orange-hot, and they can (and should) be used to sterilize the mouth of bottles that have things poured into or out of them.



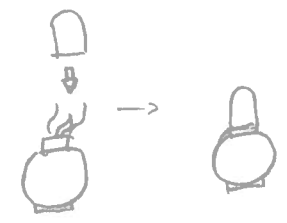
An alcohol lamp can also be used if there is no gas source.



Using a flame



Cover flame with cap!

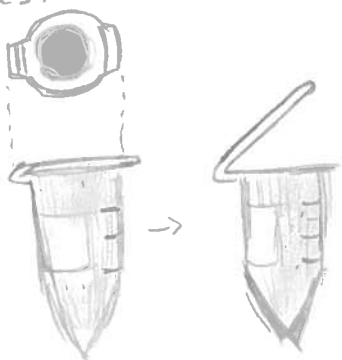


Plastic containers are often used to hold samples, buffers, cultures and even powders in the lab. From time to time, it is good to know what they are called, how big they are, and what they are for. Some plastics can be sterilized in the autoclave.

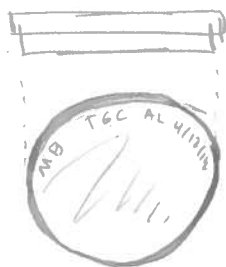


50 ml conical tube, screw cap. water-tight. often comes pre-sterilized.

"Eppendorf" microcentrifuge tube, 1.5 ml. Often comes pre-sterilized. Used for small volumes. Often used in microcentrifuges.



Petri Dish



Thin-wall PCR reaction tube. Used for better thermal conductivity in thermocyclers.



usually smaller and more clear than an "Eppendorf" tube.



15 ml "falcon" culture tube. Often comes pre-sterilized, lid is not air or water tight, and snaps on



15 ml conical. Screw-on water-tight cap. often comes pre-sterilized.

Cryo vial - used for very low temperature storage. Sometimes has gaskets or over seals.



*

*

Used for storing solid media. Often polypropylene, shipped sterile. Should have type of media, strain of microbe, date streaked, and owner's initials written on the bottom. Often wrapped in parafilm to prevent drying, and to prevent condensation from dripping on to plate.



"The Hood" is not a bad part of town, but a special cabinet, like a fume hood, only for biological materials. They are also known as biological safety cabinets or BSCs.

Some are designed to protect the sterility of items in the hood, and others are designed to protect people who are doing work in the hood. Often times, items entering BSCs are washed with ethanol to sterilize them. BSCs also tend to have UV lamps that sterilize their surfaces.

Class

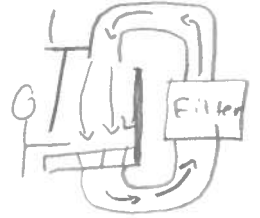
I

inflowing air protects user



II

user & sample protection

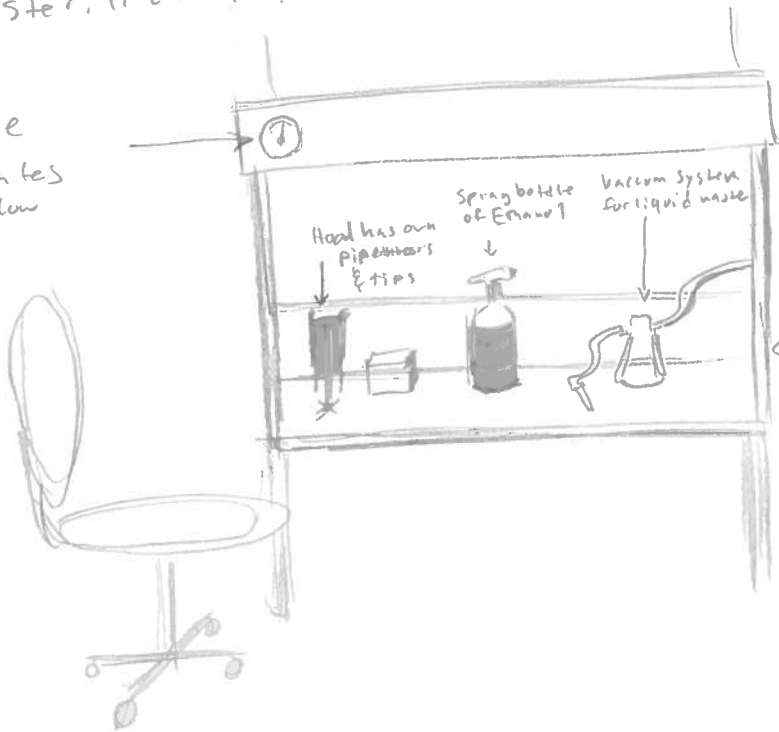


III

Maximum containment

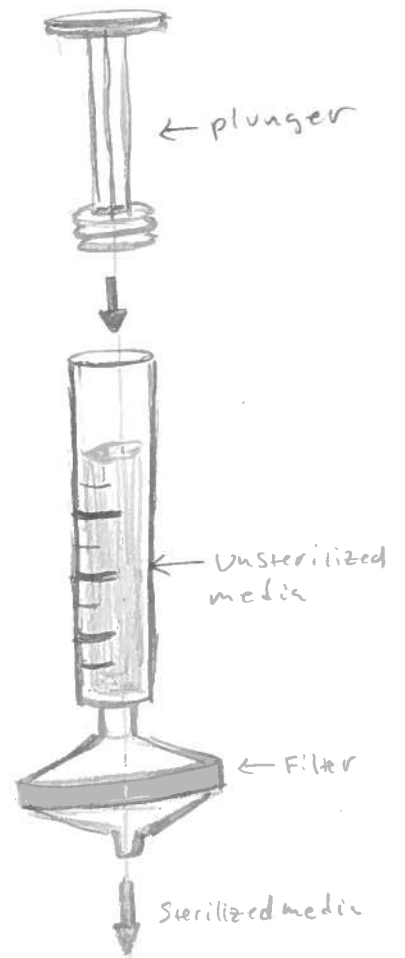


gauge indicates airflow



Set low, to protect sterility

Filter Sterilization has the advantage of taking very little time to do. It is also sometimes necessary if heating & pressurizing a reagent will destroy it, e.g. antibiotics or vitamin solutions. * Filter sterilization units come in two main flavors — Syringe/mechanical formats, and Vacuum formats. Syringe filters are simple — add media, depress plunger, and sterile media comes out the other side. Vacuum sterilization units require a vacuum to pull the media through the filter.



* If sterilizing a solvent/acid, be sure it will not dissolve your filter!