

Study Guide Test: Lab Safety & Equipment

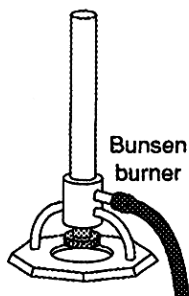
What you need to know:

- 1) Know ALL Lab Safety rules.
 - 2) Be able to identify the most commonly used lab equipment.
 - 3) Be able to correctly describe the use for the most common pieces of lab equipment.
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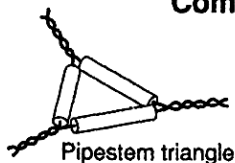
Lab Safety Rules:

- 1) Report all accidents regardless of how minor to your teacher.
- 2) Learn the location and proper usage of the eyewash fountain, fire extinguisher, safety shower, fire alarm box, office intercom button, evacuation routes, clean-up brush and dust pan, glass/chemical disposal can.
- 3) Report ALL spills and accidents to your teacher immediately.
- 4) Know ALL lab procedures and instructions before entering the lab.
- 5) Only bring your lab notebook into the lab. Leave backpacks and other items outside.
- 6) If you must wear contact lenses in the lab notify your teacher before entering the lab.
- 7) Never clean up broken glass with bare hands.
- 8) Work in the lab only when the teacher is present or when you have permission to do so.
- 9) Never indulge in horseplay or behavior that could lead to injury of others.
- 10) Before beginning work in lab, clean the lab bench top and your glassware.
- 11) Use goggles, gloves, and lab aprons when instructed to do so.
- 12) Open sandals or bare feet are not permitted in the lab.
- 13) For minor skin burns, immediately plunge the burned area into cold water and notify the teacher.
- 14) If you get any chemical in your eye, immediately wash the eye with the eye-wash fountain and notify the teacher.
- 15) Never look directly into a test tube. View the contents from the side.
- 16) Never smell a material in a test tube or flask directly. Instead, with your hand, "fan" some of the fumes to your nose carefully.
- 17) Immediately notify the teacher of any chemical spill and clean up the spill as directed.
- 18) Never take chemical stock bottles to the lab benches.
- 19) Use equipment only as directed.
- 20) Never place chemicals directly on the pan balances.
- 21) Point test tubes that are being heated away from you and others.
- 22) Never heat a stopper/sealed container such as a test tube or Erlenmeyer flask.
- 23) Never taste any material in the lab
- 24) Food, drink and gum are prohibited in lab.
- 25) Never add water to concentrated acid solutions. The heat generated may cause spattering. Instead, as you stir, add the acid slowly to water.
- 26) Read the label on chemical bottles at least twice before using the chemical. Many chemicals have names that are easily confused.
- 27) Return all lab materials and equipment to their proper places after use.
- 28) Upon completion of work, wash and dry all equipment, your lab bench and your clean-up area.
- 29) Before leaving the lab always wash your hands with soap and water.

Common Laboratory Equipment



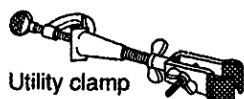
Bunsen burner



Pipet stem triangle



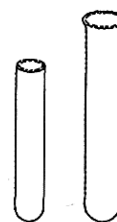
Evaporating dish



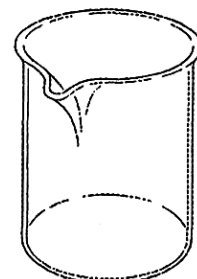
Utility clamp



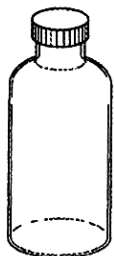
Mortar and pestle



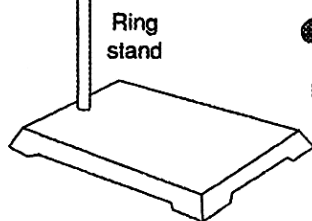
Test tubes



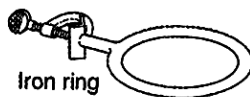
Beaker



Gas bottle



Ring stand



Iron ring



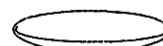
Safety goggles



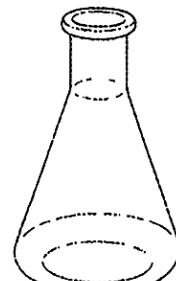
Corks



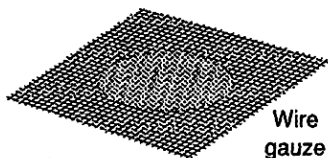
Crucible and cover



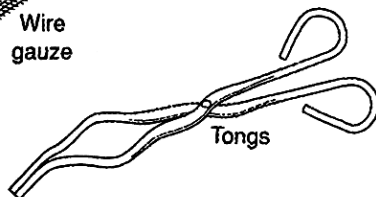
Watch glass



Erlenmeyer flask



Wire gauze



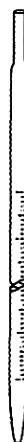
Tongs



Assorted rubber stoppers



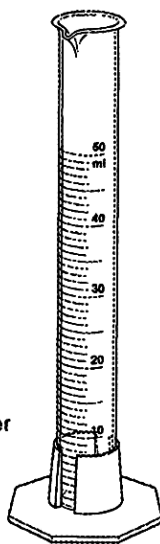
Buret



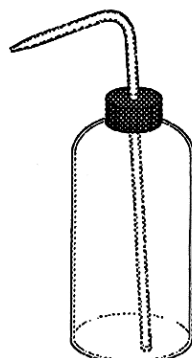
Pipet



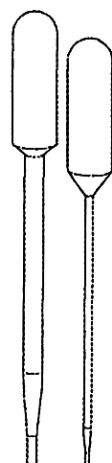
Thermometer



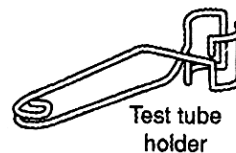
Graduated cylinder



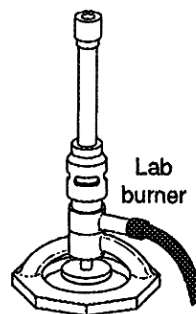
Wash bottle



Micropipets (standard and narrow stem)



Test tube holder



Lab burner



Dropper



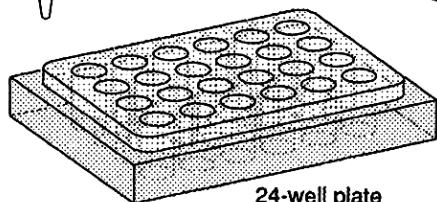
Forceps



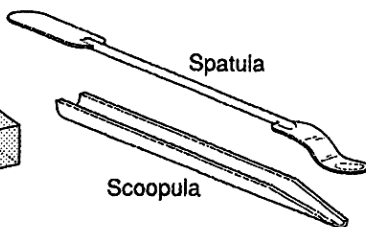
File



Wire brush

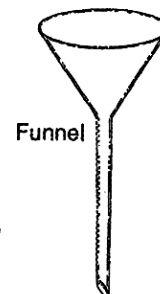


24-well plate

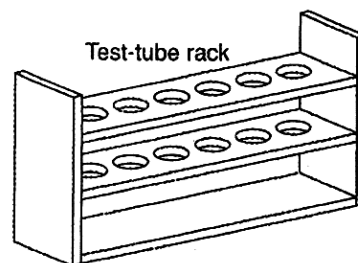


Spatula

Scoopula



Funnel



Test-tube rack

Be able to identify and describe the function of the following items:

- 1) **Beaker** – Used to hold and heat liquids. Multipurpose and essential in the lab.
- 2) **Bunsen burner** – Used for heating and exposing items to flame. They have more uses than a hot plate but do not replace a hot plate.
- 3) **Crucible** – Used to heat small quantities to a very high temperature.
- 4) **Erlenmeyer flask** – Used to heat and store liquids. The bottom is wider than the top so it will heat quicker because of the greater surface area.
- 5) **Evaporating Dish** – Used to heat and evaporate liquids.
- 6) **Funnel** – Used to transfer liquids into any container so they will not be lost or spilled.
- 7) **Micro Spatula** – Used for moving small amounts of solid from place to place.
- 8) **Mortar and Pestle** – Used to crush solids into powder for experiments.
- 9) **Pipet** – Used for moving small amounts of liquids from place to place.
- 10) **Ring Stand** - Used to hold items being heated. Clamps or rings can be used so that items may be placed above the lab table for heating by Bunsen burners or other items.
- 11) **Stirring Rod** – Used to stir things. Made of glass they will break easily. They are very useful in the lab.
- 12) **Stopper** – These come in many different sizes and are used to seal containers. They can also have holes in them for thermometers and other probes.
- 13) **Test Tube Holder** – Used to hold test tubes when they are hot and untouchable.
- 14) **Test Tube Rack** – Used to hold test tubes while reactions happen in them or when they are not needed.
- 15) **Tongs** – Used to hold many different things such as flasks, crucibles, and evaporating dishes when they are hot.
- 16) **Pipestem Triangle** – Used to hold crucibles when they are being heated. They usually sit on a ring stand.
- 17) **Watch Glass** – Used to cover beakers so a reaction can be observed safely.
- 18) **Wire Gauze** – Used to place items on for heating. They usually sit on a ring stand.