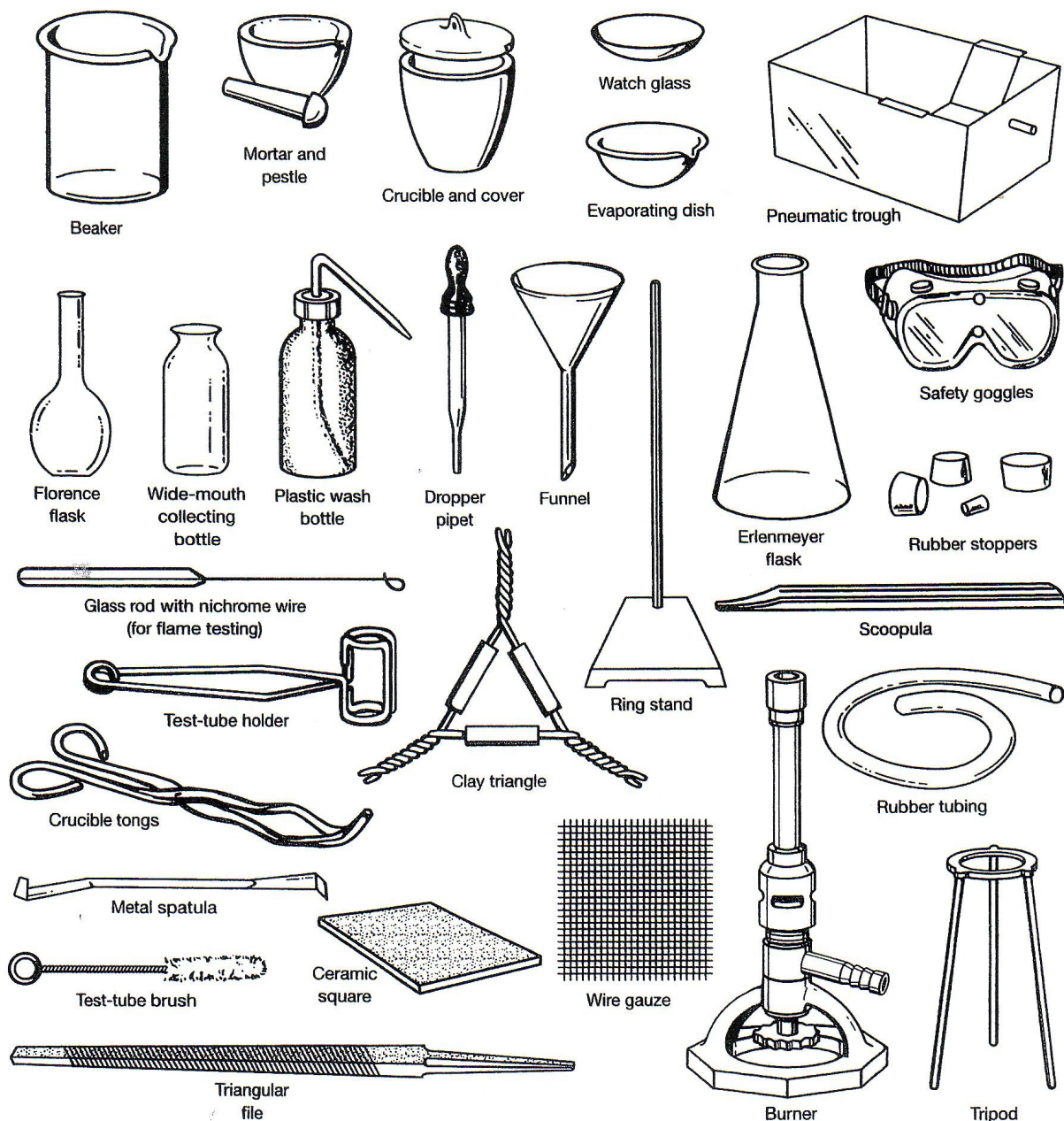


# Laboratory Equipment



**Beaker:** glass or plastic; common sizes are 50 mL, 100 mL, 250 mL, 400 mL; glass beakers may be heated.

**Buret:** glass; common sizes are 25 mL and 50 mL; used to measure volumes of solutions in titrations.

**Ceramic square:** used under hot apparatus or glassware.

**Clamps:** the following types of clamps may be fastened to support apparatus: buret/test-tube clamp, clamp holder, double buret clamp, ring clamp, 3-pronged jaw clamp.

**Clay triangle:** wire frame with porcelain supports; used to support a crucible.

**Condenser:** glass; used in distillation procedures.

**Crucible and cover:** porcelain; used to heat small amounts of solid substances at high temperatures.

**Crucible tongs:** iron or nickel; used to pick up and hold small items.

**Dropper pipet:** glass tip with rubber bulb; used to transfer small volumes of liquid.

**Erlenmeyer flask:** glass; common sizes are 100 mL, 250 mL; may be heated; used in titrations.

**Evaporating dish:** porcelain; used to contain small volumes of liquid being evaporated.

**Florence flask:** glass; common sizes are 125 mL, 250 mL, 500 mL; may be heated; used in making and for storing solutions.

**Forceps:** metal; used to hold or pick up small objects.

**Funnel:** glass or plastic; common size holds 12.5-cm diameter filter paper.

**Gas burner:** constructed of metal; connected to a gas supply with rubber tubing; used to heat chemicals (dry or in solution) in beakers, test tubes, and crucibles.

**Gas collecting tube:** glass; marked in mL intervals; used to measure gas volumes.

**Glass rod with nichrome wire:** used in flame tests.

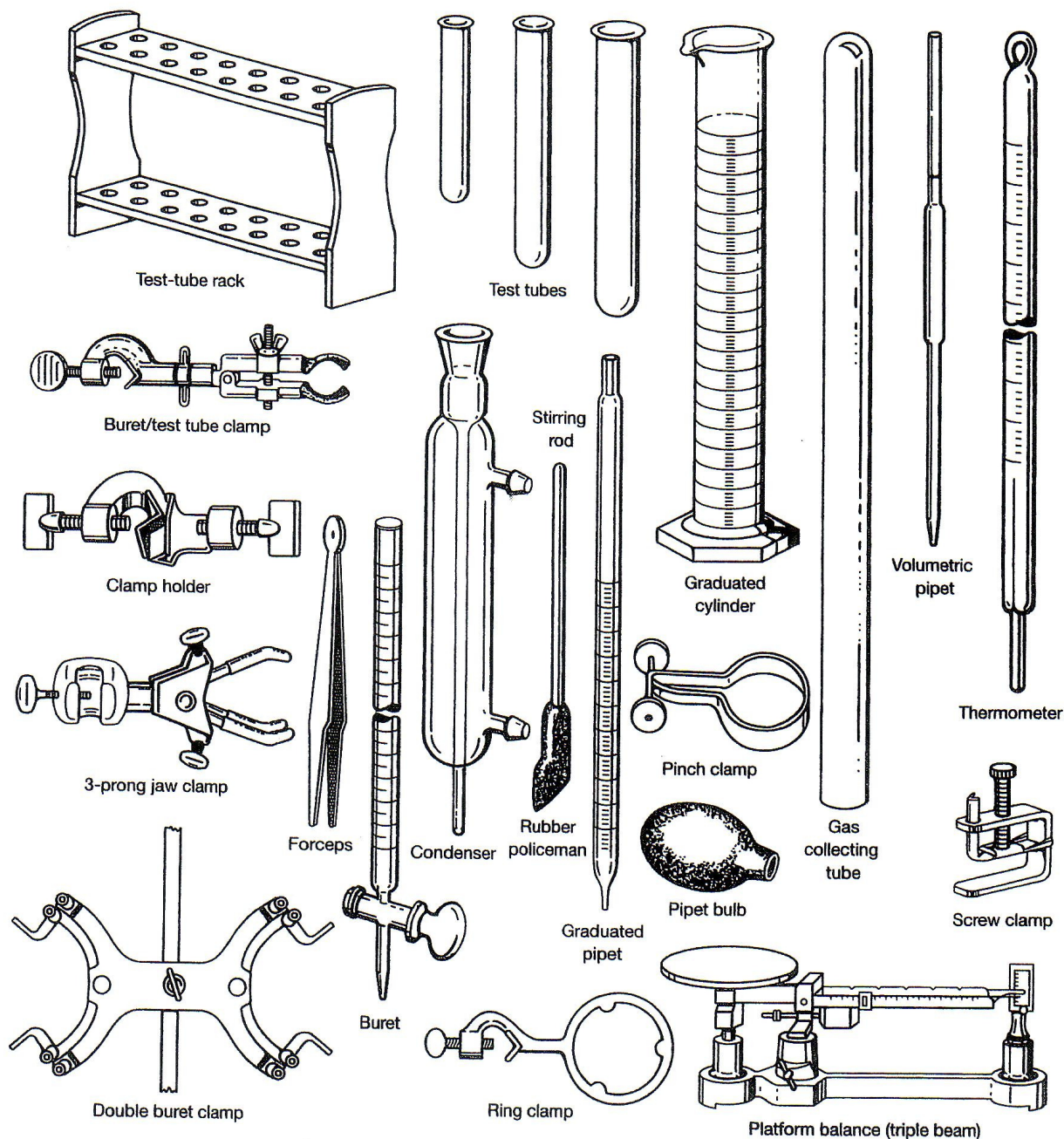
**Graduated cylinder:** glass or plastic; common sizes are 10 mL, 50 mL, 100 mL; used to measure approximate volumes; must not be heated.

**Graduated pipet:** glass; common sizes are 10 mL, 25 mL; used to measure solution volumes; less accurate than a volumetric pipet.

**Mortar and pestle:** porcelain; may be used to grind crystals and lumpy chemicals to a powder.

**Pipet bulb:** rubber; used in filling a pipet with a solution; a pipet must never be filled by mouth.





**Plastic wash bottle:** flexible plastic; squeeze sides to dispense water.

**Platform balance:** also known as a triple-beam balance.

**Pneumatic trough:** galvanized container with shelf; used in experiments where a gas is collected.

**Ring stand:** metal rod fixed upright in a heavy metal base; has many uses as a support.

**Rubber stoppers:** several sizes.

**Rubber tubing:** used to connect apparatus to transfer liquids or gases.

**Safety goggles:** plastic; must be worn at all times while working in the laboratory.

**Screw clamp, pinch clamp:** metal; used to block off rubber tubing.

**Spatula, scoopula:** metal or porcelain; used to transfer solid chemicals; the scoopula has a larger capacity.

**Stirring rod and rubber policeman:** glass with rubber sleeve; used to stir, assist in pouring liquids, and for removing precipitates from a container.

**Test-tube brush:** bristles with wire handle; used to scrub small-diameter glassware.

**Test-tube holder:** spring metal; used to hold test tubes or glass tubing.

**Test-tube rack:** wood or plastic; holds test tubes in a vertical position.

**Test tubes:** glass; common sizes small (13 mm × 100 mm), medium (20 mm × 150 mm), large (25 × 200 mm); may be heated.

**Thermometer:** mercury in glass; common range  $-10\text{ }^{\circ}\text{C}$  to  $110\text{ }^{\circ}\text{C}$ .

**Triangular file:** metal; used to scratch glass tubing prior to breaking to desired length.

**Tripod:** iron; used to support containers of chemicals above the flame of a burner.

**Volumetric pipet:** glass; common sizes are 10 mL, 25 mL; used to measure solution volumes accurately; must not be heated.

**Watch glass:** glass; used to cover an evaporating dish or beaker.

**Wide-mouth bottle:** glass; used with pneumatic trough.

**Wire gauze:** used to spread the heat of a burner flame.