

Handling hot liquids in beakers

For using Bunsen burners and especially use of different flames, see *CLEAPSS Student Safety Sheet 92*.

For heating non-flammable liquids and solids, see *CLEAPSS Student Safety Sheet 93*.

For heating flammable liquids and solids in test tubes, see *CLEAPSS Student Safety Sheet 94*.

Heating liquids in beakers

- Wear eye protection.
- Place the Bunsen burner well back from the edge of the bench.
- Do not fill the beaker more than *half* full.
- If available, add an anti-bumping granule ('boiling chip') to the liquid before heating. Do **not** add an anti-bumping granule once the liquid is boiling.
- Place a tripod and gauze on a heat resistant mat.
- Place the Bunsen burner underneath and attach it to the gas.
- Place the beaker of water on the gauze.
- Light the Bunsen burner and open the air hole.
- Once the liquid begins to boil close the air hole to half open and turn the gas tap down.
- At the end it is always better to allow the apparatus to cool down naturally, but this can take a long time. If time is short use one of the procedures described below.
- The tripod will be very hot. Take care.



Removing hot beakers

- To remove very hot beakers of liquid from a tripod the teacher (or a technician) should wear thermal protection gloves and go around the laboratory moving the beakers for each group of students.
- If this is not possible, beakers are best left where they are until cooler.



For less hot beakers, *skilled* students can use the procedure illustrated below

- Switch off the gas.
- Place a commercial 'J-cloth' loosely around the hot beaker.
- Carefully tighten the cloth.
- Lift the beaker onto the heat resistant mat.

