Thermometers

Thermometer cases should be held in a horizontal position when carrying or opening.

The cardboard cases in particular should be held in a horizontal position. The ends of the case often come loose and allow the thermometer to drop out. The plastic cases often have tight caps. Take care when you remove them.

The thermometer contains a liquid, either mercury or dyed oil. When holding a thermometer, grasp it near the top, not near the reservoir of liquid in the bulb.

If a thermometer is in a container, care must be taken so that the container does not tip over due to the length and weight of the thermometer.

Lightweight containers (like styrofoam cups) can be placed in beakers to give support. Containers with liquid in them are often heavy enough not to tip. Always check before you fully let go of the thermometer in the container.

If a container sits on a wire gauze on a ring support setup, you will generally need to suspend the thermometer into the container with a wire. Alternately, slip a cork, rubber stopper, or even some thicknesses of paper towel on the top of the thermometer and then tighten the clamp onto that portion of the thermometer. If you are using a paper towel to get a firm grip of the clamp on the thermometer, make sure that the thermometer is firmly held. Three fingered clamps, especially the vinyl coated ones, are ideal for clamping thermometers. Be judicious in the amount of tightening you apply to the clamp.

Laboratory thermometers differ from clinical thermometers. A laboratory thermometer reads temperatures continuously. The liquid level does not stay in place at the high reading as it does in clinical thermometers. Laboratory thermometers are never shaken down before using. While reading the temperature of a liquid, at least 5 cm of the thermometer should be immersed for an accurate reading. The time delay to get "to temperature" is generally 30 seconds from initial contact. Note in the diagram how temperatures can be read to a tenth of a division between lines. This amounts to reading the temperature to the nearest 0.1°C for general purpose laboratory thermometers. This takes care. The small space between lines is mentally broken down into halves, then quarters, then tenths.