Royal Pharmaceutical Society of Great Britain

How to use your thermometer

Mercury Thermometers:

- Maximum and minimum temperature readings are taken by observing the position of the base of the markers, which are located above the level of the mercury.

- The left-hand scale provides the minimum temperature achieved by the fridge and the right hand scale indicates the maximum temperature. Both these temperatures must be recorded.

- As temperature increases, the mercury on the right- hand side rises, pushing up the marker. Conversely, the mercury on the left-hand side falls, leaving behind the marker and a gap emerges. This is reversed when the temperature falls. The scales, therefore, are numbered in opposite directions.

- After the temperature is noted on both sides, (by reading the scale at the point of the base of the markers) the thermometer **must** be reset to obtain a new base line. This is achieved by pressing the central button between the two scales until both markers rest above the level of the mercury. The thermometer must be returned to the fridge, placing it on a shelf in the middle of the fridge. Ensure the thermometer does not rest against the wall of the fridge or near an ice compartment.

Digital Thermometers:

Digital thermometers are simple to use and avoid some of the difficulties experienced with mercury thermometers. There are some basic points to remember:

- They were originally designed for use in greenhouses etc, where the outside temperature could be monitored at the same time. A probe is dangled outside a window, attached by a cable to the unit itself. The unit measures the inside temperature of the greenhouse and the probe, the external temperature. Both readings can be obtained from the display on the front of the unit. In the case of a pharmacy refrigerator, the probe is used to monitor the interior fridge temperature, with the unit placed near the fridge so that readings can be made without the need to open and close the fridge door. Thus, the unit displays the "inside" or "interior" temperature, which is the ambient room temperature and the "outside" or "external" temperature, which is that of the interior of the fridge.

- The probe is inserted into the fridge, passing the cable through the seal of the hinged side of the door. The unit remains outside the fridge, located at a convenient point for ease of use. The probe must not touch the walls of the interior or close to an ice compartment or touch any stock stored in the fridge.

- Press the max/min button until the "outside" or "external" maximum and minimum temperatures are shown. These readings are what you need to record, on a daily basis, as it relates to the inside of the fridge.

- The reset button is found on the front of the unit. This must be pressed after the recording of the temperatures each day, to obtain a new base line.

Trouble Shooting:

- A minus reading indicates the fridge is or has been below freezing point. Check the readings again and remember for a mercury thermometer, the scales on the right and left side run in opposite directions. Either the temperature has been read incorrectly or immediate action must be taken to remedy the adverse conditions within the fridge. If stock has been allowed to freeze, advice should be sought from the manufacturers of all the products concerning their integrity.

- The minimum temperature recorded is higher than the maximum temperature indicates that the thermometer has probably been read incorrectly. Remember :
  (a) the temperature is read on a mercury thermometer at the level of the base of the blue markers and
  (b) the scales on both sides of the thermometer are numbered in opposite directions.

- The temperatures recorded are the same every day. This is unlikely as variations in temperature occur when the fridge door is opened and closed and with changes in ambient room temperature. Often this is an indication that the thermometer has not been reset after each reading. Check that the individual responsible for the task understands how to use the thermometer and the importance of making accurate readings.

  - Regular readings below +2 ° C and above +8 ° C. Review the training and competence of the member of staff reading the temperatures.

  Is your fridge working correctly?

Tips:

- To keep your thermometer upright, stand it in a cut off insulin box or place it in blue tac (when warm) and place the blue tac in a suitable location in the fridge