

## Measuring the Vapour Pressure of a Liquid

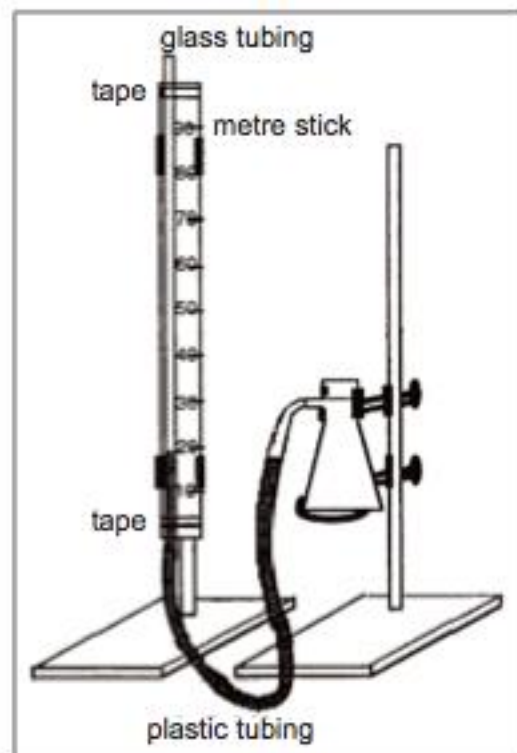
Problem: To measure the vapour pressure of a liquid

Materials:

- Various liquids
- About 1 m of flexible tubing to fit glass tubing
- About 1 m of glass tubing
- Suction flask (250ml)
- Rubber stopper for suction flask
- 2 ring stands
- 1 ring clamp
- 3 clamps
- Metre stick
- Transparent tape
- Graduated cylinder
- Thermometer

Procedure

1. Setup the apparatus as shown in the diagram to the right.  
Note: Fill the plastic tubing with water before attaching it to the suction flask and glass tubing.
2. Adjust the apparatus so the level of water in the two arms is equal, and the level can be read on the metre stick. Read and record all water levels.
3. Measure and record the temperature of the room
4. Select one liquid. Add \_\_\_\_\_ ml of your liquid. Pour the liquid into the suction flask and quickly stopper the flask with the rubber stopper.
5. Describe what happens to the water in the tubing. Wait until no further change is apparent.
6. Adjust the apparatus so that the level of water in the two arms can be read. Read and record the water level in BOTH arms of the tubing.
7. Either cool the outside of the suction flask with cold water or ice or warm the flask with your hands. Record your observations.



Questions:

1. Is the vapour pressure of the liquid the same at all temperatures? How do you know How could you find out? Can you devise a method to measure the vapour pressure of your liquid at 0C?
2. Why do you have to stopper your flask after adding the liquid?