Name: _____ CLASS:_____ DATE:_____

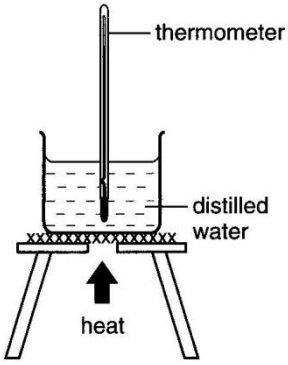
Title: the effect of impurities on the boiling point of pure water

Aim: To study the effect of impurities on the boiling point of pure liquids.

Materials: Distilled water, table salt.

Apparatus: 100ml beaker, wire gauze, tripod stand, Bunsen burner, thermometer, spatula.

Procedure:



1. Apparatus is set up as shown in the diagram above.
2. $25cm^2$ of distilled water is boiled in a beaker.
3. The temperature of distilled water is recorded when it boiled.
4. A spatula of table salt is added to the distilled water.
5. The temperature of mixture of distilled water and common salt is recorded when boiling took place.

Result:

substance	Boiling point (^oc)
Distilled water	100
Distilled water and table salt	105

Analysis:

1. What is the effect of impurities on the boiling point of distilled water?
   Impurities increase the boiling point of distilled water.
2. Why distilled water is considered pure water?
   It contains no impurities.
3. Predict what will happen to the boiling point of distilled water if more salt is added to it.
   The distilled water will boil at temperature higher than 100^oC
4. Predict the freezing point of water if a little table salt is added to it
   Less than 0^oC
5. Define distilled water operationally.
   Distilled water is a liquid that boils at temperature 100^oC and freeze at 0^oC

Conclusion:

<u>Impurities increase the boiling point of pure water.</u>