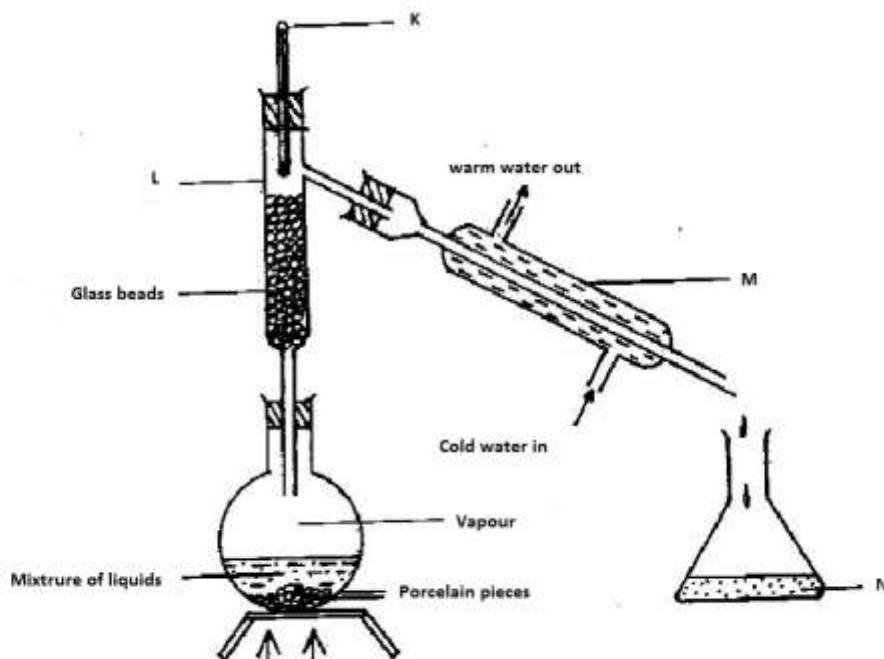


S.1 HOLIDAY WORK TERM 2, 2015

1. Define the following terms that are used in the separation of mixtures.
 - a) Mixture
 - b) Homogenous mixtures
 - c) Heterogeneous mixtures
 - d) Miscible liquids
 - e) Immiscible liquids
 - f) Filtrate
 - g) Suspension
 - h) Saturated solution
 - i) Super saturated solution
 - j) Chromatography
 - k) Distillation
 - l) Sublimation
 - m) Element.
2. (a) Give four differences between a mixture of iron and sulphur, and a compound of iron and sulphur
(b) Mention what is observed when a mixture of iron and sulphur is heated.
3. Give four reasons why you think water is a compound and not a mixture.
4. With the aid of a fully labeled diagram, describe how you would separate a mixture of petrol and water.
- 5.(a) What is an alloy.
(b) Mention five examples of alloys and give two uses of each.
- 6.(a) Mention five examples of metals and five examples of non-metals and give their symbols.
(b) Give five differences between metals and non-metals.
(c) Explain how different mercury is from other metals.
7. With the help of a fully labeled diagram, describe how you would obtain iodine from a mixture of iodine and sand.
8. A sample of black ink is made up of three pure dyes, A,B and C. Given that A is the least soluble in ethanol and B is the most soluble. Show a chromatogram that can be used to prove that the sample of black ink actually contains the mentioned dyes.

9. The diagram below shows the apparatus that was arranged for the separation of a mixture of two liquids with close boiling points.



- (a) Name the method employed in this case
- (b) Name the parts marked K, L and M.
- (c) If the mixture contains components A and B whereby A is more volatile, which one will distil off first?
- (d) What is the use of part K?
- (e) What is the use part L?
- (f) What is the use of part M?
- (g) What is the use of the porcelain pieces?
- (h) Explain why the cold water let into part M of the apparatus through the lower end and not the upper end.
- (i) Explain the importance of filling part L with the glass beads.
- (j) What special name is given the product labelled N?
- (k) Give one example of a mixture which can be separated by this method.
- (l) What modifications would be made in the set up if a mixture to be separated consisted of copper (II) sulphate and water.