

Separating Mixtures: Objectives and Vocabulary

By referring to the various handouts, notes, lab activities and homework covered during this unit, then at the end of this unit of study, each student should be able to:

- a**-know that in order for separating techniques to be successful, there must be a significant difference in at least one characteristic property among the fractions present in a mixture.

b-select which characteristic property should be the one considered, given a variety of different properties and the values for those properties.
- a**-compare a mixture to a pure substance.

b-predict what the outcome of certain separating techniques will have on mixtures and pure substances.

c-analyze the results of an experiment and determine if something is a mixture or a pure substance.
- Know how to do the following for filtration, paper chromatography and fractional distillation:

a-know what type of a mixture each method is typically used to separate, and what must be different about each fraction.

b-determine which substances could be successfully separated using this method given a list of various substances.

c-describe how to separate a mixture of substances using this technique or a variation of it and which substance(s) would be on the filter paper and which substance(s) would be in the filtrate .
- a**-know what type of a mixture flotation is typically used to separate, and what must be different about each fraction.

b-determine which substances could be successfully separated using this method given a list of various substances..

c-describe how to separate a mixture of substances using this technique or a variation of it and the results.
- a**-know which separating techniques to use on a mixture that requires more than one separating technique.

b-determine the best order the various separating techniques need to be done in, for a particular mixture.

c-describe the end results of this multi step separating technique and where and how each fraction is collected.
- a**-use their knowledge about separating techniques to solve a simple problem.

b-use their knowledge about separating techniques to explain how some mixtures in today's world are separated a certain way and why.

c-use their knowledge about separating techniques to predict what may happen in a certain situation.

Vocabulary:

mixture

Residue

adsorption

pure substance

Filtrate

Flotation

filtration

Paper chromatography

skimming

fractional distillation