

Name: _____

Date: _____

Separation of a Mixture

Background:

It is often necessary to separate mixtures of two or more substances. There are different ways of accomplishing this process. It might be a purely physical procedure, such as distillation where substances of different boiling points are involved, or by the differences in the solubilities of the components of the mixture. In this experiment a mixture of sand, salt, and iron filings will be separated in order to determine the percent composition of a mixture.

Objective:

To separate the components of a mixture based upon physical characteristics of each component within the mixture. Secondly, to determine the mass of each component, and determine the percentage of the mixture comprised of each component.

Equipment:

Erlenmeyer flask

balance

wash bottle

Beakers

drying oven

scoopula

bar magnet

funnel

hot plate

filter paper

plastic baggie

Prelab:

Devise a method for separating a mixture of salt, sand, and iron filings. This should be done in paragraph or list form. This will be checked for a grade before starting the actual experiment. The above list of equipment is at your disposal for usage during this exercise.

Data:

You will need to think about the measurements that are necessary to record. Read the objective and ask yourself what things might be important to quantify to attain this objective.

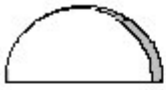
Analysis/Calculations:

You will need to show the appropriate work for how you determined:

- The mass of each component in the mixture
- The total mass of the mixture that was retrieved
- The percent composition (relative to the **original mass**) of each component

Techniques:

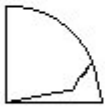
Filtration:



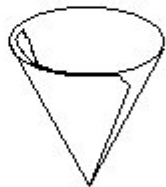
FOLD FILTER PAPER IN HALF



FOLD INTO QUARTERS WITH TOP SECTION SMALLER THAN BOTTOM



TEAR OFF CORNER OF SMALLER SECTION



OPEN CONE

Decanting:

