

Separation of a Solid Mixture by Filtration

Name _____ Date _____ Period ____ Group ____

Background: In order for filtration to be successful in separating a mixture of two solids, there must be something different about the two solid substances being filtered. (It's a characteristic property you have recently learned about)

Objective: Identify the characteristic property that is different between the two solids and support your discovery with evidence collected from this lab activity.

Procedures:

(Day 1)

1-Examine your solid mixture. Record color, odor, and shape of particles (use hand lens).

2-Now place your sample of the mixture of solids in a test tube and add 7 ml of room temperature water.

3-Stopper and swirl or shake the test tube vigorously for several minutes.

4-Filter the mixture carefully through pre-moistened filter paper and collect the liquid (filtrate) in a test tube.

5-Rinse the material on the filter paper with another 5 ml of water and allow it to go through the funnel into the test tube as well.

6-Place about 5 ml of this filtered liquid (**filtrate**) into a labeled watch glass, and allow it to slowly evaporate. (This will take overnight)

(Day 2)

1-Carefully examine the substance in the filter paper (**residue**) and compare it to the evaporated filtrate in the watch glass. Record color, odor, and shape of particles.

Materials: Mixture, funnel, filter paper, test tubes, watch glass, water, graduated cylinder, hand lens

Safety: General

1. (Day 1 Question) After examining your dry mixture, what evidence indicates that your sample is made up of more than one substance?

2. (Day 2 Question) Did filtering separate your mixture into different fractions or not? Describe and compare your observations of the residue **and** the evaporated filtrate in determining your answer.



