

PROP 375—Separating the Components of a Ternary Mixture

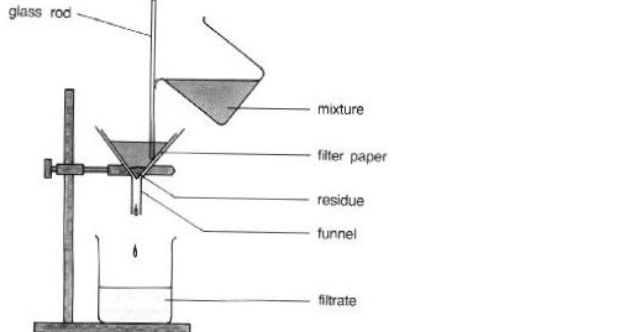
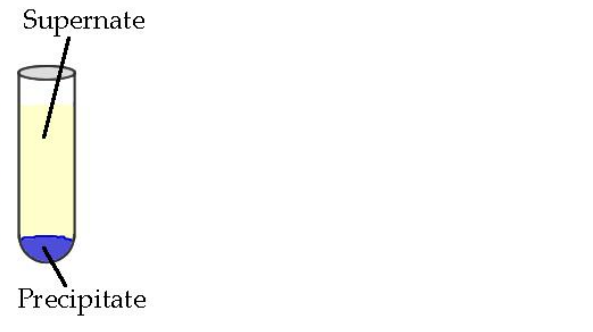
Lab Notes

Goal

Separate a ternary(3-component) mixture containing CaCO_3 (chalk), SiO_2 (sand), and NaCl (salt).

Procedural Notes

- Step 1: Mass to 0.001 g
Step 2: **Record unknown #. (Grade will be based on the accuracy of your data.)**
Step 3: Mass to 0.001 g
Step 4 – 5: We will be using GRAVITY filtration!
Step 6: Make sure your filter paper is FAST or MEDIUM-FAST
Step 7: Do not tear off the corner of the filter paper
Step 13: If the solid *pops*, then lift the beaker off of the hot plate using hot gloves. Place the beaker back on the hot-plate when *popping* stops.
Step 14: Mass to 0.001 g
Start your water bath (see step 21. Use about 6 boiling chips.)
Step 15: NaCl \longrightarrow discard down the drain with water
Step 17: Mass to 0.001 g
Step 22: Mass to 0.001 g (Note: we will need the water bath in step 32 as well.)
Step 23: Waste SiO_2 \longrightarrow place in chemical solid waste containers on top of bench
Step 24: Use hot gloves to remove beaker from hot plate
Step 25: Mass to 0.001 g
Step 26: We are NOT using vacuum filtration! We are going to gravity filter like we did in steps 5 – 12.
Step 31: Waste filtrate \longrightarrow discard down the drain with water
Step 33: Mass to 0.001 g
Step 34: Waste CaCO_3 \longrightarrow place in chemical solid waste containers on top of bench
Step 35 – 36: Do not do!

 <p>Labels: glass rod, mixture, filter paper, residue, funnel, filtrate</p>	 <p>Labels: Supernate, Precipitate</p>
<p>Filtering: Used to separate small solid particles from liquid</p>	<p>Decanting: Used to separate large solid particles from liquid</p>