

**Lab: Distillation**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Lab #: \_\_\_\_\_

Period: \_\_\_\_\_

Mr. Hodder

Problem: Can we convert a solution back into its original solute and solvent?

Materials: Distillation equipment, heat source, liquid solution, coolant, 2 buckets & safety glasses.

Procedures

1. Review fire safety procedures with Mr. Hodder.
2. Review the various parts of the distillation equipment that will be used for the experiment.
3. Turn on the hot plate to "high".
4. Add your solution to the flask.
5. Begin heating the flask that has your liquid solution.
6. Set up the distillation equipment.
7. When the solution begins to boil and water vapor begins to rise start the cooling procedures.
8. Cool the vapor by siphoning cool water from the elevated bucket to the lower bucket.
9. After a considerable amount of solvent has accumulated in the second beaker move it aside and allow Mr. Hodder to taste it.

Data

Test	Solution	Solute	Solvent
1			
2			
3			

Draw the lab set up in the space provided and label the parts.

Write 10 observations about the lab set up and experiment.

Analysis & Conclusions:

1. Define Variables \_\_\_\_\_
  2. Define Soluble \_\_\_\_\_
  3. Define Insoluble \_\_\_\_\_
  4. Define Solution \_\_\_\_\_
  5. Define Solute \_\_\_\_\_
  6. Define Solvent \_\_\_\_\_
  7. Define Distillation \_\_\_\_\_
  8. Define Desalination \_\_\_\_\_
  9. What process might Christopher Columbus have used to make drinking water during his big trip in 1492? \_\_\_\_\_
  10. If we were to distill all of the water from the Pepsi One what would we have left in the flask? \_\_\_\_\_
  11. Trace the path H<sub>2</sub>O takes through the distillation processes (i.e. what phase is it - solid, liquid, and gas). \_\_\_\_\_
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