

# Phase Changes of Mixed Substances

**Abstract:** This is an exploratory experiment for the purpose of understanding how changes in temperature effect the phase of a mixed substance.

## **Procedure:**

**Note: It is very important that all directions be followed completely for this experiment to work properly.**

- 1.) Your group will need to get one large and one small zip lock bag.
- 2.) With both people helping, carefully add to the small bag:
  - 2 tablespoons of sucrose
  - 8 ounces of the bovine by-product
  - 1 teaspoon of the distillate of the seeds from a South American tree.

Extension: it may be necessary and is at your discretion whether you wish to add small amounts of other substances to extend the study.
- 3.) Seal the small zip lock bag and shake for three minutes until thoroughly mixed.
- 4.) Place the small zip lock bag inside the larger zip lock bag and add some ice and sodium chloride. The mix should be approximately 5 parts ice to one part sodium chloride. It is not necessary or desirable to fill the bag.
- 5.) Seal the outside bag and shake vigorously for fifteen minutes. You may want to switch between partners repeatedly.

Be very careful, if you should spill any, you are responsible for cleaning up. You may need to empty water from the large bag in order to prevent this.
- 6.) Carefully divide the contents of the small bag into too equal portions. Consume.

## **Analysis:**

**On a separate sheet of paper answer the following:**

- 1.) Put both names of members of your group.
- 2.) Describe and/or identify the substance that was produced by the lab.
- 3.) Explain fully how this experiment could be improved. Give a minimum of three examples.