

## Guidelines for Density Experiment

**Question to Explore:** Does dissolving a substance in a fluid affect its density?

**Materials:**

500 ml of cranberry juice, orange juice, soda water, or plain tap water

½ cup of salt or sugar

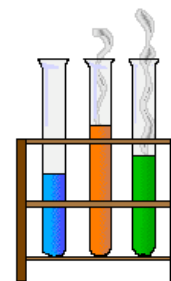
Graduated cylinder

Beaker

Balance

Spoon or stirring rod

Calculator



**Predict:** Write a hypothesis about what will happen to the density when the salt or sugar is dissolved in your fluid.

**Instructions:**

1. Record the density of your fluid, using the class data.
2. Find the mass of the empty beaker, and then add 400 ml of your chosen fluid, using the graduated cylinder to measure it.
3. Add salt or sugar, very slowly, stirring as you go. Stop when the fluid becomes saturated – when the substance starts to sink to the bottom instead of staying in solution.
4. Add 100 ml of juice or water to the beaker so that you have exactly 500 ml of your new salty or sugary fluid.
5. Stir the fluid well to dissolve any extra material, and find the mass.

Record the following data in your science notebook:

Name of fluid used:

Density of fluid:

Mass of empty beaker:

Mass of beaker with 500 ml of salty or sugary fluid:

Mass of fluid:

Density of fluid:

**Analyze and Conclude:**

How did your results compare with your hypothesis?