

# Kool-Aid Concentrations Mini-Lab

## How much Solute in the Solvent?

**Vocabulary**    **Solute:**    The substance dissolved in another substance. Usually the solute is the lesser of the two substances (for example: a cup of Kool-Aid is the solute in a gallon of water).

**Solvent:**    The substance in which the solute is dissolved. Usually the solvent is the greater of the two substances (for example: the gallon of water is the solvent in which the cup of Kool-Aid is dissolved).

**Solution:**    A mixture of two or more substances.

**Translucent:**



Can see through, but not clearly.

**Transparent:**



Can see through clearly.

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### Preparation

1. Wash your hands, and use a disinfectant wipe to clean your lab surfaces.
2. Pour and dispose of 3 tablespoons of water from EACH of the bottles. Dry the measuring spoons with the paper towel provided.
3. Use coffee filter to make a funnel.
4. Measure 45 mL (3 tablespoons) of Kool-aid solute into bottle 'A'.
5. Measure 15 mL (3 teaspoons) of Kool-aid solute into bottle 'B'.
6. Measure 1.25 mL (1/4 teaspoon) of Kool-aid solute into bottle 'C'.
7. Secure the lids on all bottles and shake until the solute is completely dissolved into the solvent. You now have a solution!

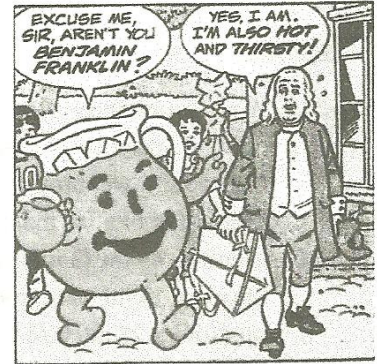
### Data Collection Procedure

8. Examine color, translucency, and any other observations you have of solutions A, B, and C. Record your observations on the data table.
9. Pour a small sample of each solution to taste (yes, you have permission to taste this lab!). Be sure to use a separate cup for each solution. Record your observations on the data table.
10. Assign a concentration level to each solution by marking the scale.
11. Clean up lab station & supplies, using a disinfectant wipe on all surfaces.
12. Now, answer the question.

Data Collection Table

	Color & Intensity (light, med, dark)	Translucent, Transparent, or not at all	Taste (strong, med, or weak)	Concentration Level of solution (mark it with an 'x')
<b>Solution A</b>				High ←————→ Low
<b>Solution B</b>				High ←————→ Low
<b>Solution C</b>				High ←————→ Low

Additional observations:



QUESTION

What is the relationship between **CONCENTRATION** and the **AMOUNT OF SOLUTE IN A SOLUTION**?