

Soluble or insoluble?

Student: Class:

Substances that dissolve are said to be soluble. Those that do not are **insoluble**. This experiment investigates the solubility of some common substances in water.

You will need:

safety glasses and laboratory coat

heatproof mat

7 test tubes

test-tube rack

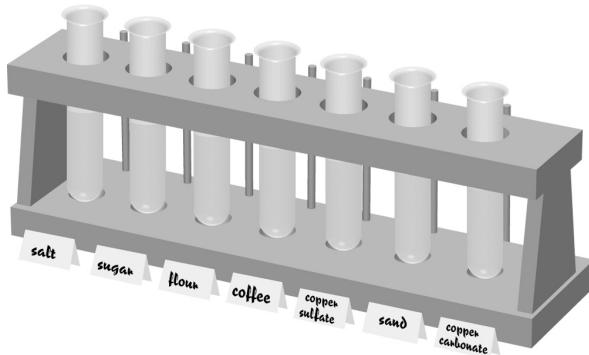
spatula

samples of:

salt sugar flour coffee sand

copper sulfate copper carbonate.

- Half-fill each of the test tubes with cold water.
- Label the test tubes: salt, sugar, flour, coffee, and so on.



- Use a spatula to add a very small amount of each substance to its labelled test tube. Do not use more than a quarter of a spatula.
- Hold each test tube up to the light. Decide whether the mixture is clear or cloudy. Record your results in the table below.
- Decide whether each mixture is a solution or a suspension. Record this in the table.

Substance mixed with water	Clear or cloudy?	Solution? (yes/no)
Salt		
Sugar		
Flour		
Coffee		

1. Which of the substances dissolved in water?

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2. How can you tell if a substance has dissolved?

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3. Which of the mixtures could be separated by filtration?

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4. Using one of your solutions from the experiments as an example, suggest a method that could be used to separate and collect the substance from the water.

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