



# Coffee and Tea: Solutions

Picture a young couple at a coffeehouse being served beverages—coffee for the woman, tea for the man. The woman stirs sugar into her coffee. The man squeezes lemon juice into his cup and stirs.



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These people have just created a pair of **solutions**. A solution is a uniform mixture of substances. The woman's drink is a solution of sugar dissolved in coffee. Her partner's drink is a solution of lemon juice mixed with tea.

But, in fact, their beverages were solutions before anything was added to them. They consisted of water mixed with extracts from tea leaves and coffee beans.

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tea leaves

coffee beans

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## DO YOU KNOW?

The ocean is the biggest solution on Earth. It consists of salts and other substances dissolved in a vast quantity of water.



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A solution stays the same, no matter how long it sits. A cup of tea left on a table will be unchanged the next day. The only difference is that it will be cooler.



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A substance that is mixed into a larger amount of another substance is called a **solute**. The other substance is called the **solvent**. Flavorings in a soft drink are solutes. The liquid is the solvent.

Solutions can take several forms. As we've seen, a solution can consist of liquid or solid solutes in liquid solvents. But solutions can also be gaseous or even solid.

## Brain Check

- What are the two parts of a solution?
- What makes the ocean a solution?
- What other substances can form solutions?