

Changing the density of a liquid—Adding salt

Can the density of a liquid be changed?

Procedure

1. Half-fill a tall clear plastic cup with room-temperature water.
2. Place a slice of carrot in the cup.

Does the carrot slice float or sink? _____

What does this say about the density of the carrot slice compared to the density of water?

3. Add about 1 teaspoon of salt and stir with a spoon until as much salt dissolves as possible.
4. Continue adding salt and stirring until the carrot floats to the top.



Does the carrot slice float or sink at this point? _____

What does this say about the density of the carrot slice compared to the density of this salt water?

5. Very carefully add fresh water to the top of the salt water until the carrot begins to sink.
6. If the carrot sinks to the bottom, add small amounts of salt and fresh water as needed to cause it to hover.



Activity 7.4

Changing the density of a liquid—Adding salt *(continued)*

1. Once your carrot slice is hovering, what do you know about the density of the carrot slice compared to the density of this salt water?

2. Let's say that you tried the same activity with a piece of potato. If potato is more dense than carrot, would you need to dissolve more or less salt in the water to make the potato float?

Explain your answer.
