

Name:

Date:

Class:

Imagine Ideal Scenarios **Answer Key**

Scenario 1: You receive a shipment of 20 grams of salt and 30 grams of pepper in 100 mL of water.

What is the simplest way to extract the pepper?

You must use the coffee filter to separate the pepper from the water.

You must write the method like a recipe (ex: Step 1: _____, Step 2: _____, etc.).

Example answer:

According to the solubility rules and graph, 35 grams of salt (or less) in 100 mL of water will dissolve. 20 grams of salt should dissolve in 100 mL of water with agitation.

1. Using a spoon, stir the solution for 60 seconds (or until all salt is visibly dissolved).
2. Strain the solution using the coffee filter.
3. Allow the pepper flakes to dry overnight.

Scenario 2: You receive a shipment of 300 grams of sugar and 30 grams of pepper in 100 mL of water.

What is the simplest way to extract the pepper?

You must use the coffee filter to separate the pepper from the water.

You must write the method like a recipe (ex: Step 1: _____, Step 2: _____, etc.).

Example answer:

According to the solubility rules and graph, 200 grams of sugar in 100 mL of water will not dissolve. Heat must be added to the solution.

1. Heat the solution until water is warm/hot.
2. While the water is hot, stir the solution for 60 seconds (or until all sugar is dissolved).
3. Allow the solution to cool down.
4. Strain the solution using the coffee filter.
5. Allow the pepper flakes to dry overnight.

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Scenario 3: You receive a shipment of 50 grams of salt and 30 grams of pepper in 100 mL of water.

What is the simplest way to extract the pepper?

You must use the coffee filter to separate the pepper from the water.

You must write the method like a recipe (ex: Step 1: _____, Step 2: _____, etc.).

Example answer:

According to the solubility rules and graph, 50 grams of salt in 100 mL of water will not dissolve.
More water must be added to the solution.

1. Add 100 mL more water to the solution.
2. Stir the solution for 60 seconds (or until all salt is dissolved).
3. Strain the solution using the coffee filter.
4. Allow the pepper flakes to dry overnight.