Surprising Reactants
Investigation #7

Description
Create a cool chemical reaction and find out what happens to mass.

Materials
• 2 glass containers
• Potassium iodide
• Lead nitrate
• Triple beam balance
• A friend
• Safety goggles
• Paper
• Pencil

Procedure
1) Put on safety goggles and pour a small amount of potassium iodide into a clear glass container.
2) Pour a similar amount of lead nitrate in the second container.
3) Place both containers on the balance and record the mass measurement.
4) Ask a friend to predict what might happen if the liquids were combined.
5) Combine the liquids. What do you notice?
6) Measure both containers at the same time again. What do you notice?
Explanation
Both liquids begin as fully clear. However, when the reactants potassium iodide and lead nitrate combine, a chemical reaction takes place. This chemical reaction is indicated by a color change, resulting in a cloudy yellow liquid resembling orange juice. During the reaction, the atoms rearrange to make the products lead iodide, which is a yellow solid, and potassium nitrate, which is a white solid. The mass, however, does not change. So, the measurement on the balance will be the same after the reaction as before the reaction started. This is a good example to demonstrate the Law of Conservation of Mass.

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