Exploring Hidden Sugar

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Whether a diabetic or dieting, it's convenient to know how much sugar is actually in a food. Yes, the amount of sucrose is on the nutrition label, but what about the hidden sugar glucose that our body needs? This project explores how the enzymes in our bodies affect the sugar levels of glucose in foods. The enzyme invertase was tested to see its imitation to the enzyme sucrase in our bodies and if it increases the amount of glucose from sucrose. The foods apple sauce, orange juice, and maple syrup were also used to test this question by being mixed with the enzyme invertase. My hypothesis was that if the enzyme invertase is being tested on its ability and efficiency to convert sucrose into glucose, then I think that the amount of glucose in foods will increase because we are recreating how this enzyme works in our bodies. If the samples of foods: applesauce, orange juice, and syrup are being tested, then I think that the syrup will have the most amount of glucose and the apple sauce will have the least. The enzyme invertase was first mixed into a cup of water and sucrose to test its working ability before being mixed into the food products. It was shown to take 70 minutes to create the sucrose into glucose. The glucose levels were then measured before and after 70 minutes of the enzyme being added into the foods. The experimental results supported my hypothesis by showing that the glucose levels did increase. It also showed that the maple syrup had the most glucose and the apple sauce had the least.

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