

Experiment 1.2: Very Similar but Very Different

Data:

When I mixed the water and yeast in a large Ziplock bag and dropped it on the ground, nothing happened.

When I mixed the hydrogen peroxide and yeast in a large Ziplock bag and dropped it on the ground, the large Ziplock bag inflated and then popped open.

Summary:

In this experiment, I put a cup of water in a small Ziploc bag and zipped it shut. I put that bag into a larger Ziploc bag and added a tablespoon of yeast as well. I then zipped the larger Ziploc bag.

I put a cup of hydrogen peroxide in another small Ziploc bag and zipped it shut. I put that bag into a larger Ziploc bag and added a tablespoon of yeast as well. I then zipped the larger Ziploc bag.

I went outside and first opened the small Ziploc bag containing water without unzipping the larger Ziploc bag it was in. That allowed the water and yeast to mix. I stepped back to see what happened.

Next, I opened the small Ziploc bag containing hydrogen peroxide without unzipping the larger Ziploc bag it was in. That allowed the hydrogen peroxide and yeast to mix. I stepped back to see what happened.

Conclusion:

The only difference between the two trials was that the first used water, while the second used hydrogen peroxide. The results were very different, however, which means that water (H_2O) is very different than hydrogen peroxide (H_2O_2), despite the fact that their chemical formulas look so similar.