



Devil's Toothpaste

By Marcus Law

5th Grade

Ms. Davis



What is Devil's Toothpaste?

Devil's toothpaste is like elephant toothpaste, but on a way larger scale. It creates a huge blob of foam that explodes out of the container you put it into. It will burn your skin, so be sure to do this with an adult if you attempt this. It can reach over 50 ° Fahrenheit. If done correctly, it can make the foam burst out and spray. So, my big question is, what solution will make the foam rise more?

Hypothesis

The potassium iodide will work better than the yeast for making the devil's toothpaste explode into foam because the yeast makes things rise, but not make it hold shape, unlike potassium iodide. The potassium iodide will make the foam firmer than it would be using yeast, therefore making the foam rise and hold shape more.



How to make it

- Pour $\frac{1}{2}$ cup 15 - 30% Hydrogen Peroxide (H_2O_2), food coloring of choice, and $\frac{1}{4}$ cup of dish soap into a petri dish. (You can adjust this recipe for more or less)
 - In separate container put water and either 2 tsp fast action yeast or 8 grams potassium iodide into $\frac{1}{2}$ cup warm water. Mix well.
 - Pour the yeast or potassium iodide solution into the H_2O_2
 - Step back.
- *foam can go down drain easily
- *Put first container onto tarp before adding yeast/potassium iodide
- *wear long sleeves, goggles, close-toed shoes, and fireproof gloves

Independent Variable: Yeast/Potassium Iodide

Dependent Variable: Amount of foam Controls: type of H_2O_2 , food coloring, amount of soap

Results

- The results are the max heights of the foam, once activated, in inches.

	Trial 1	Trial 2	Average
Potassium Iodide	5.9 in	5.9 in	5.9 in
Yeast	6 in	5.5 in	5.75 in

Bonus! 6.2 in. Both yeast and P.I

Conclusion

- Potassium Iodide worked better for the toothpaste, but the foam turned orange even when I put blue food coloring into the cup. Yeast came close, but the foam didn't come out that massively. Using a test tube does better, but I used a paper cup. To conclude, my hypothesis was right, and that Potassium Iodide made the foam rise higher than yeast.

[1st experiment](#)

[2nd experiment](#)

[3rd experiment](#)

[4th experiment](#)

[Bonus](#)

[Final Results](#)

Hope you enjoyed!

Special thanks to:

- BBC Good Foods
- Neeness
- Sonalsart
- Family



You can try this at home too!

Tropical Soul by Luke Bergs | <https://soundcloud.com/bergscloud/>