

Liquid Glow

Science Fair Project

Background information and Rationale

My Hypothesis is if i put glow in the dark liquid in soda water then i think it will last longer than the other liquids.

I did research on different types of glow stick liquids and what makes them last the longest. When I was doing my research I found that temperature had an effect on the the glow stick liquids. I also wanted to see what clear liquids keep the glow stick liquid lasting the longest. Research showed that tonic water glowed the brightest but I used soda water instead which showed similar results. Research also showed that water would let glow stick liquid glow bright as well. There was not a lot of information that I could find that showed how glow stick liquid reacts with sugar type liquids.

Research Question

How will the glow in the dark liquid react with different types of liquids?

I wanted to put glow in the dark liquid in water, Sprite and soda water to see how the glow in the dark liquid reduces its color over a period of time.

Investigative Methods or Procedure

1. Label each cup with each kind of liquid
2. Measure each liquid to be equal in each cup
3. Measure each glow stick liquid to be equal
4. Glow stick liquids in each cup of liquids
5. Check temperature of each cup
6. Let sit for 60 minutes
7. Check how bright glow stick liquid is until light reduces
8. Repeat step 5 and 6

Materials

- Goggles
- Gloves
- Thermostat
- 9 of the same colored glow sticks
- Scissors
- 9 empty glass cups
- 1 cup of Sprite
- 1 cup of Perrier soda water
- 1 cup of purified water

Results and Data Visualization

- 11am - What i saw was the Sprite dimmed really fast in all 3 samples and one cup of the water in sample 2 was lighter than the other two cups of water. The soda water were all the same when the project started.
- 12pm - Everything is the same but water in sample 2 and all Sprites kind of dimmed more
- 1pm - All cups dimmed a little but the Sprite light was almost gone
- 2pm - No changes
- 3pm - No changes
- 4pm - The soda water is the brightest right now for all 3 cups. The Sprite and one cup of water in sample 2 dimmed more
- 5pm - There is barely any light in the Sprite cups and one cup of water in sample 2
- 6pm - No changes
- 7pm - No changes
- 8pm - Sprite has no light
- 9pm - No changes
- 10 pm - Sample 2 of water has no light. Others dimmed more
- 11pm - All liquid light is gone

Results and Data Visualization

11am



12pm



1:00pm



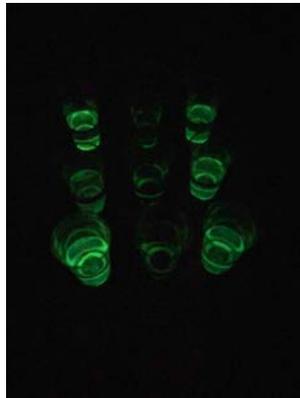
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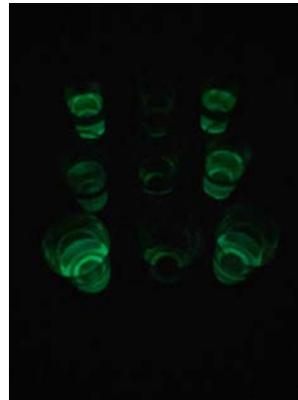
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4:00pm



5:00pm



6:00pm



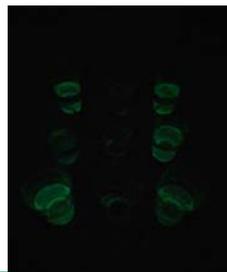
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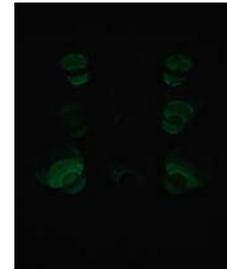
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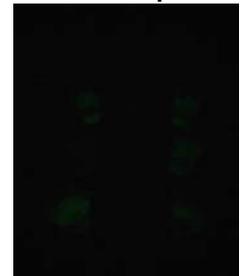
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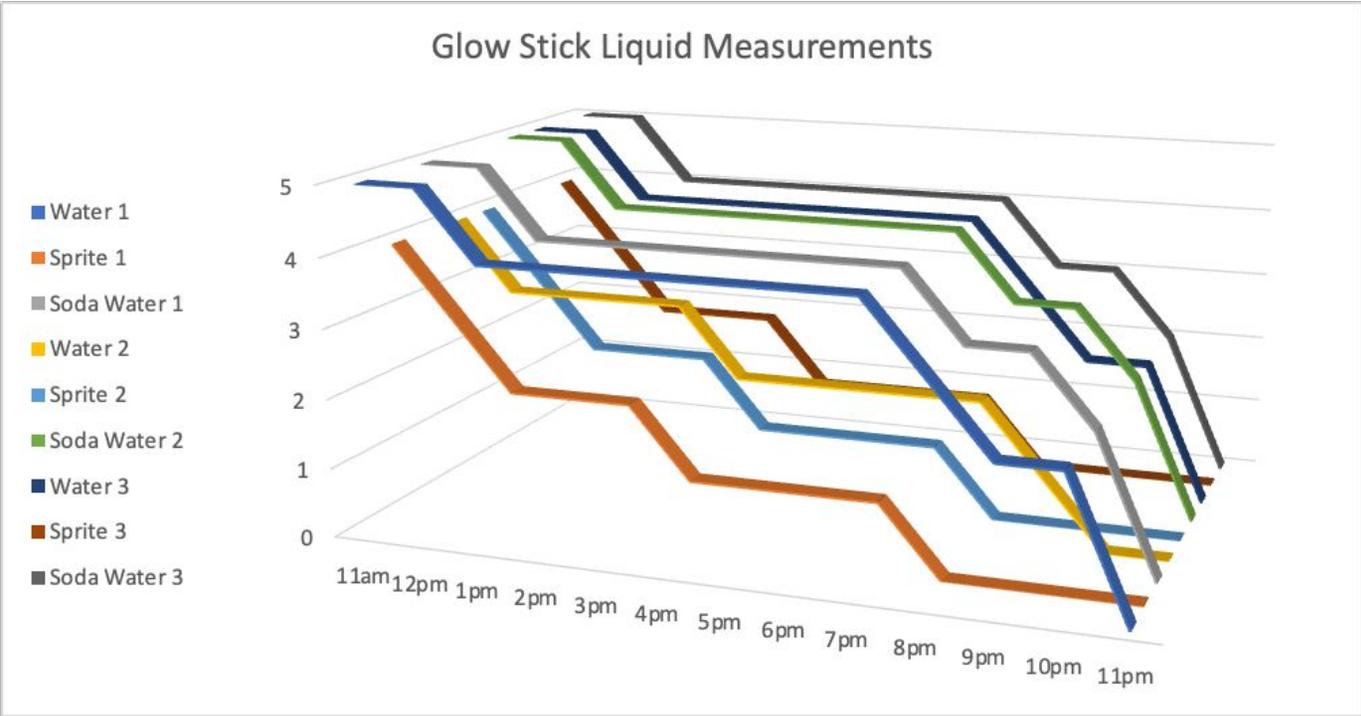
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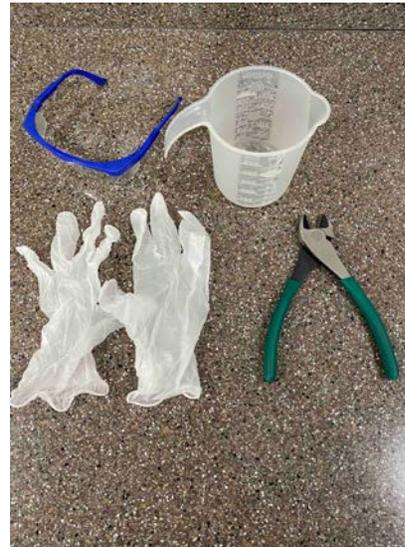
11:00pm



CREATE PROCEDURES, GRAPHS, DATA, CONCLUSIONS, ETC...



PICTURES



Conclusions and Ideas for Future Research

Through my research I found that my hypothesis was correct and the glow in the dark liquid lasted the longest in soda water. In the future I would try my experiment on different types of liquids to see how the glow in the dark will react.

References

- <https://www.ncpoisoncontrol.org/types-of-poisons/common-poisons-at-home-and-work/glow-sticks#:~:text=The%20substance%20inside%20these%20glowing,glow%20for%20a%20few%20minutes.>
- <https://glowproducts.com/us/info/faq#:~:text=Glow%20Sticks%20glow%20from%204,used%20inside%20the%20glow%:20stick.>
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- <https://www.glowtopia.co.uk/news/do-glow-sticks-last-longer-in-the-cold/>
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