

# **GUMMY BEAR DEFUSION EXPERIMENT!**

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# OUR QUESTION

## **Question #1:**

Does the rate of diffusion effect the gummy bear if it is in room temperature water or room temperature carbonated water.



# MATERIALS YOU WILL NEED

2 beakers

200ml room temperature flat water

200ml room temperature carbonated water

2 gummy bears

For the extra experiment:

2 beakers

Warm water

2 gummy bears

Salt

Vinegar

Baking soda



# HYPOTHESES:

We think the carbonated water will defuse the gummy bear faster because the carbonation is stronger than the flat water so it will be more powerful.

For an extra experiment we decided to try one with warm water and one with warm water, baking soda vinegar!

We think that the water with hot water, baking soda, salt, and vinegar will defuse faster.



# OBSERVATIONS

## **The first day:**

### Carbonated water:

- It has bubbles on it.
- Bubbles are coming off the gummy bear and the` bubbles are coming to the surface.  
After around 25 minuets, the gummy bear got squishier but it stayed the same size.

### Flat water:

- It has no bubbles on it.
- The water is staying the same.
- After around 25 minutes, the gummy bear pretty much stayed the same size from the naked eye but you could see in the water that there where gummy bear pieces floating around in the water.

## **Extra experiment:**

We notice that in the cup of warm water the gummy bear is kind of peeling and defusing and loosing its colour more than the cold water did.

In our second one not much seems to be happing other than the bubbles surrounding it.the warm water one is also getting smaller.







# OBSERVATIONS

## **The second day:**

### Carbonated water:

-when we took out the gummy bear we noticed they looked very similar expect the carbonated one had gotten a tiny bit bigger.

### Flat water:

-the flat water gummy had all grown in size and both of the gummy bears had changed color, to a pink instead of a bright red.

## **Extra experiment:**

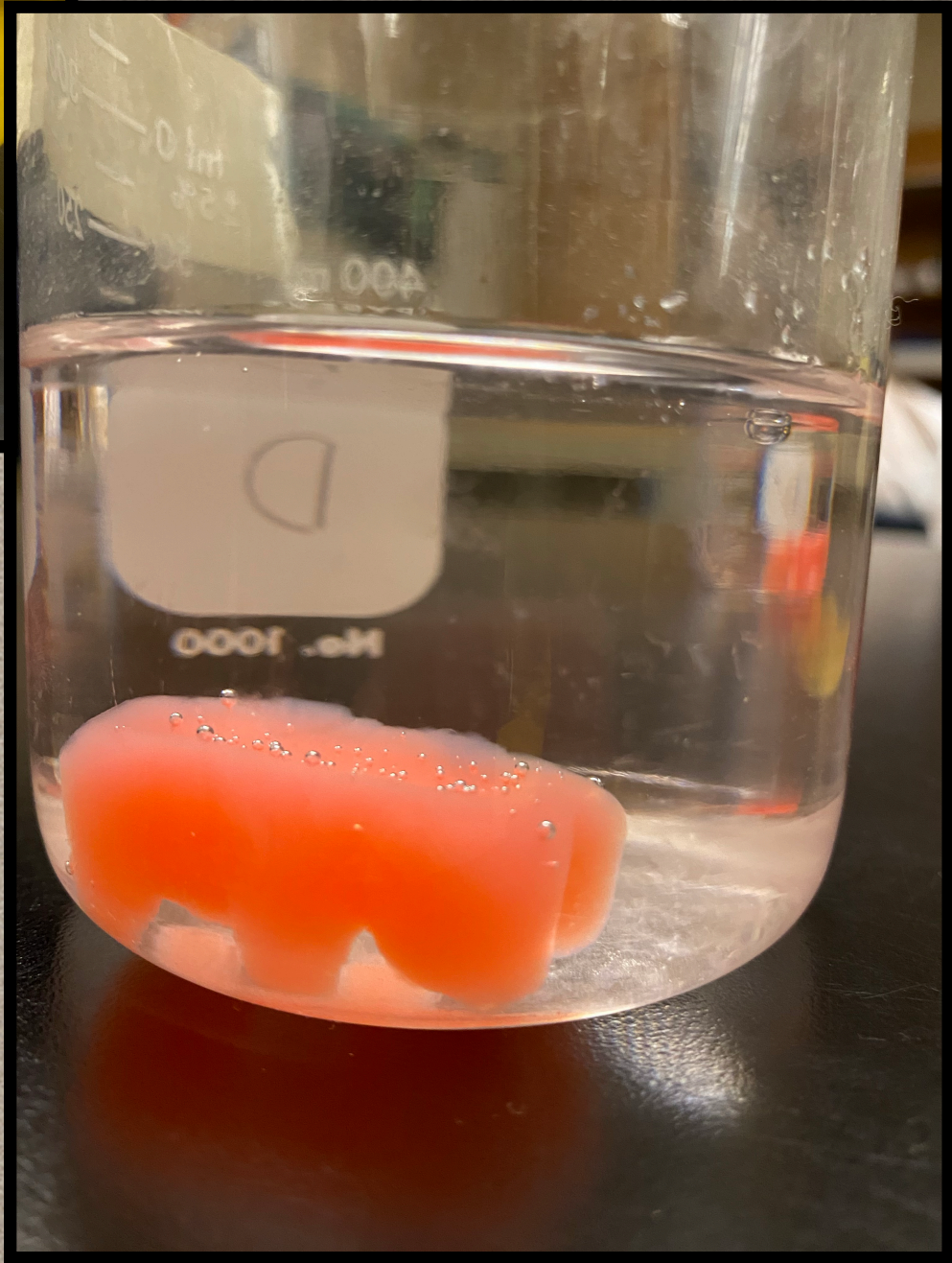
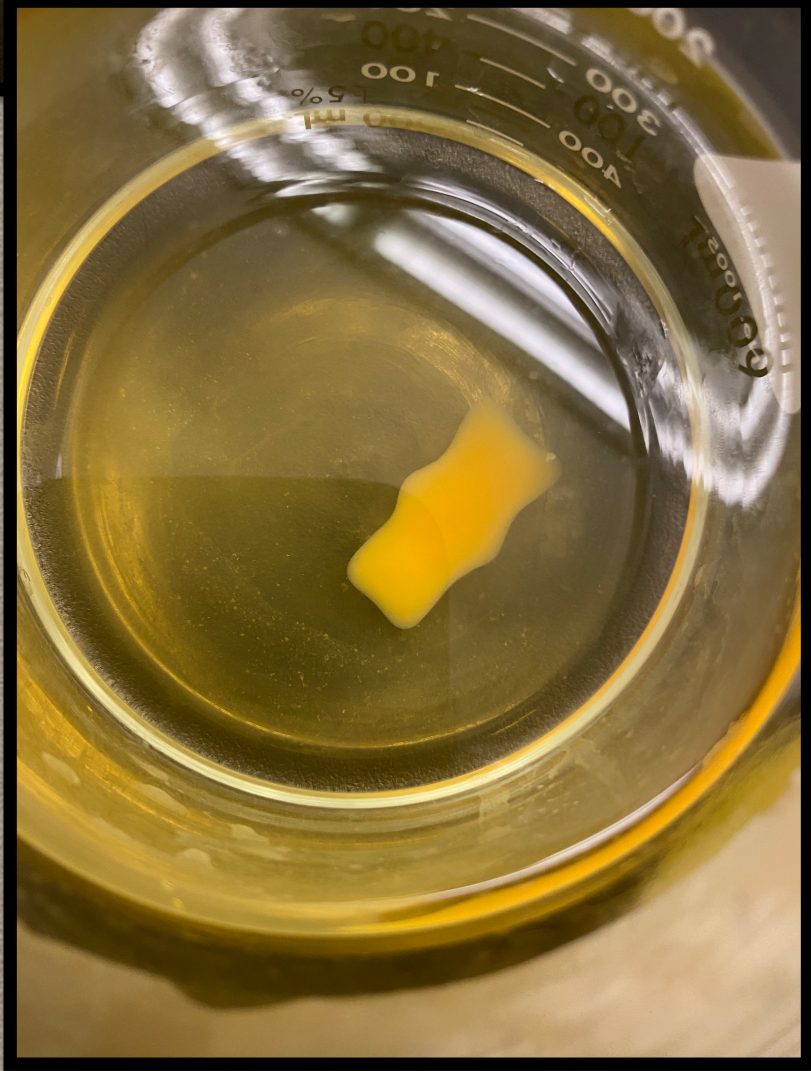
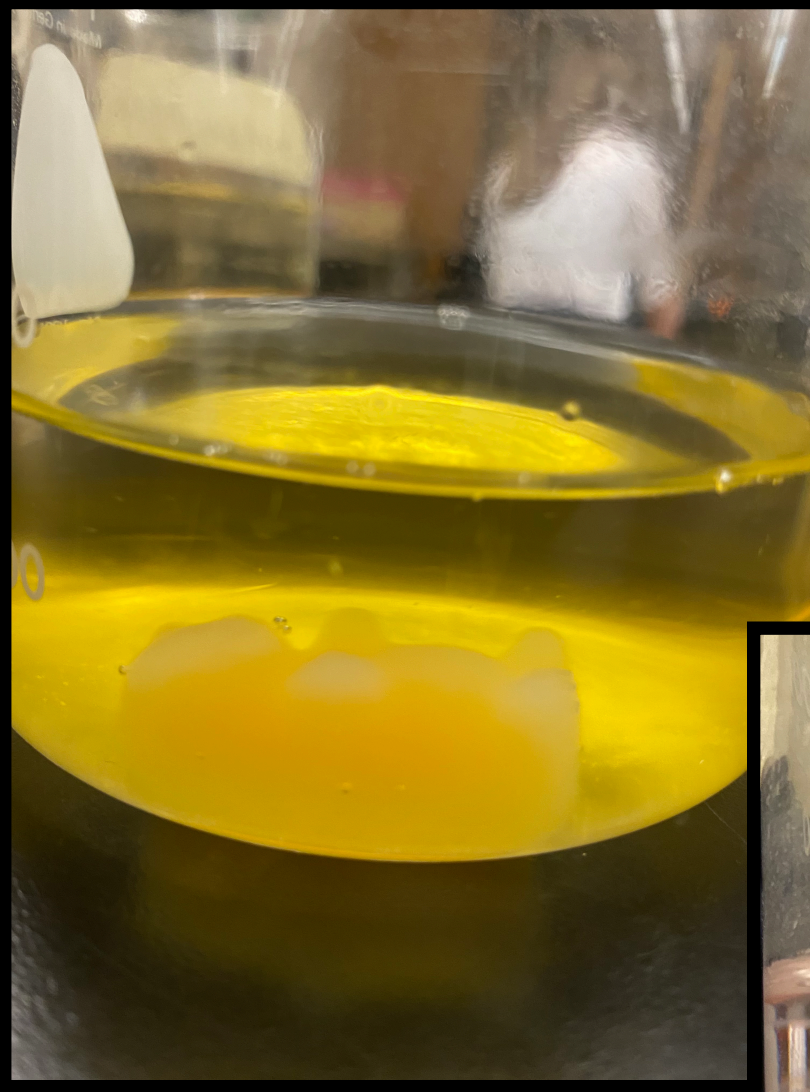
### Water with warm water baking soda and vinegar.

- we noticed that the gummy bear in the weird water had gotten bigger and lost its colour to a pale yellow

### Warm water

The warm water gummy also got smaller but it had lost its details and it did dint dissolve like we thought. It had also lost its couler but not as much as our other one.1











# CONCLUSION

- In conclusion our hypothesis was incorrect as you may tell from the pictures. We thought that the gummy bears would defuse and get smaller but instead, they did the exact opposite. They got bigger, and they almost doubled in size! They also felt really weird and squishy. They almost felt like jello!
- Now we know for next time, when you put gummy's in water they will increase in size.
- We think if we left the gummy bears in the various different waters for longer, they would have gotten bigger or fallen apart because of the increase of size.



**THANK YOU!**

WE HOPE YOU ENJOYED!