



Rise
& *Slime*

Question

Who wouldn't want to know what the best slime recipe is and which stretches the longest?

Hypothesis

- I chose 4 different slime recipes, I think the best recipe for stretchy slime will be slime Recipe 1 and recipe 4 since all the ingredients are measured out. I do not think recipe 3 will work well because the borax powder.

Background

Slime was created by a toy company in February 1976 but didn't become as popular as it is today till 2016. Mattel toys, the same company who made barbies and hot wheels created what we know as slime, but its original name was "Flubber" or "Gak". The first slime only came in a light green and was made to feel very slimy, oozy, and "gross" feeling. It was created to be more or a stress toy but later became popular in movies and and shows. Movies like "Ghostbusters" and TV shows like "Nickelodeon Choice awards".

Slime is considered a Non-Newtonian Fluid because it doesn't follow Newtons law of Viscosity. Meaning if you apply too much pressure it can act like a solid and break apart, but if place it in a container it will act like a liquid and will adapt to it. When the two main chemical mix together they form bonds. The Polyvinyl alcohol(glue) and the Borate Ion (baking soda or contact lens solution) form polymer hydrogen bonds which can kind of looks like a string of pearls . Without this bond you cannot make slime, and too much of one or the other and your slime will be too hard or too mushy. Slime can be a bit tricky to make, but its such a fun toy, a fun learning experience, and a great way to express your creativity by using colors and fun items to change your slime to be whatever you want.

Materials



- Glue(Elmer's)
- Warm Water
- Baking Soda
- Food Coloring
- Borax powder
- Contact lens solution
- Shaving Cream
- Mixing Bowls
- Measuring Cups
- Measuring spoons

- **Don't forget an adult for some added help and fun**

- Variables
- Borax Powder
- Shaving Cream

- Constants
- Glue
- Food Coloring

Recipes & Procedures

• Slime 1

- ❖ 1 cup Elmer's Glue(8 oz)
- ❖ 1 TBS Baking Soda
- ❖ Food coloring
- ❖ Contact lens solution

Step 1 add glue to mixing bowl

Step 2 add baking soda to glue

Step 3 add food coloring

Step 4 add contact lens solution

Step 5 mix all ingredients together till slime starts to form.

• Slime 2

- ❖ Shaving Cream
- ❖ Contact lens solution
- ❖ Glue
- ❖ Food coloring
- ❖ Baking soda

Step 1 add desired amount of shaving cream to bowl.

Step 2 add food coloring.

Step 3 sprinkle some baking soda over surface of shaving cream and stir gently.

Step 4 add contact lens solution.

Step 5 stir mixture quickly until slime forms and unsticks from the side of the bowl.

Recipes & Procedures

• Slime 3

- ❖ ¼ tsp Borax powder
- ❖ 1 cup Warm water
- ❖ ½ cup Elmer's glue

Step 1 dissolve ¼ tsp borax powder into ½ cup warm water in one bowl.

Step 2 in a second bowl mix ½ cup glue with ½ cup of warm water and mix well.

Step 3 pour borax/water mixture into glue/water mixture and stir.

Step 4 take a few minutes to mix knead mixture till its becomes slime.

• Slime 4

- ❖ 4 oz Elmer's glue
- ❖ 2 oz water
- ❖ ½ Tbs. Baking Soda
- ❖ Food coloring
- ❖ 1 Tbs contact lens solution

Step 1 mix glue, water and baking soda into a bowl.

Step 2 add food coloring.

Step 3 mix again.

Step 4 add contact lens solution and mix.

Step 5 enjoy your slime!

Experiment Results

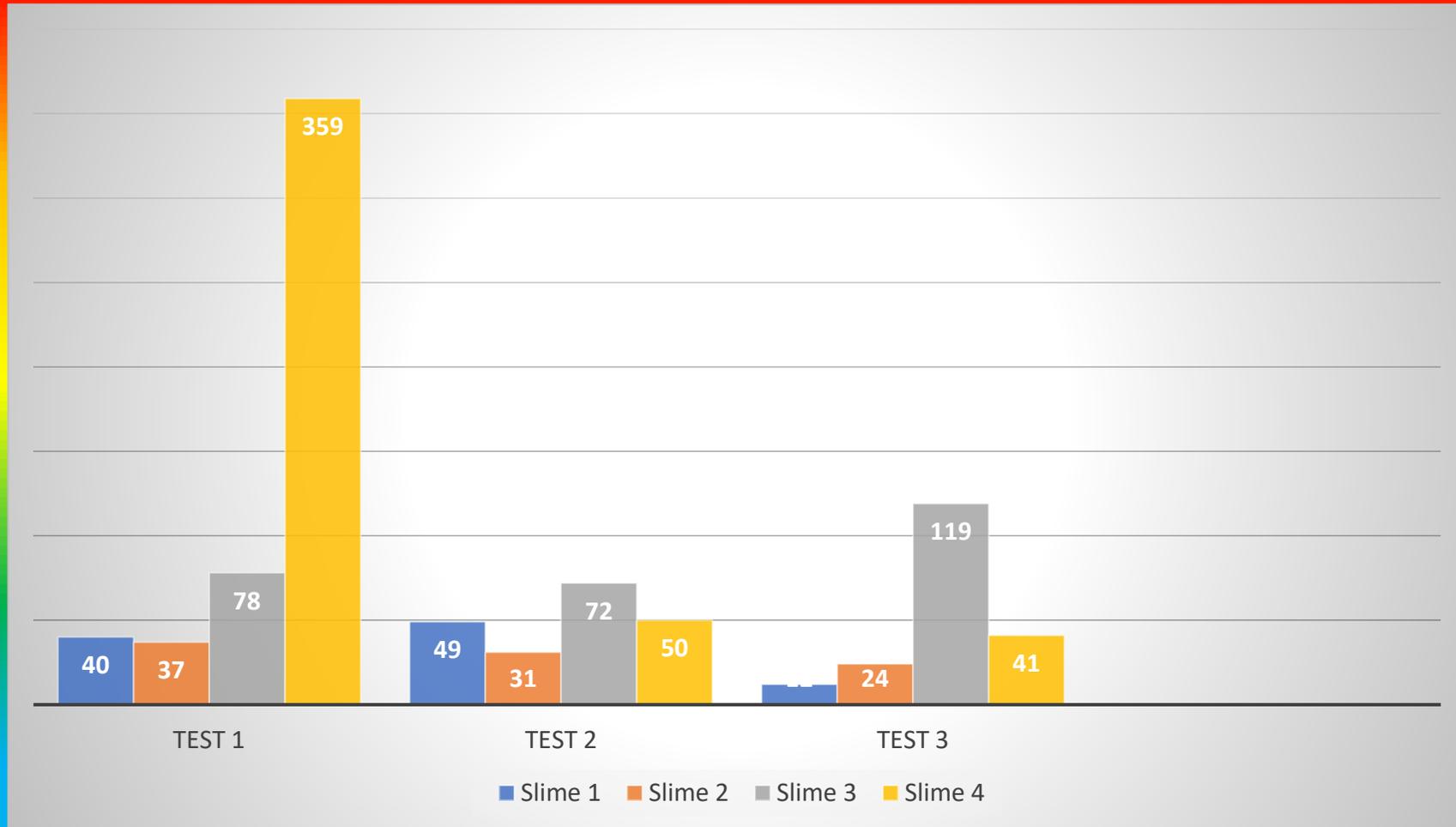
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	Slime 1	Slime 2	Slime 3	Slime 4
Test 1 *Regular stretch*	40 inches	37 inches	78 inches	27 feet and 35 inches
Test 2 *Dropped from up high *	49 inches	31 inches	72 inches	50 inches
Test 3 *Stretched after sitting for a few days*	12 inches	24 inches	119 inches	41 inches

Inches/Feet

Graph/Data

Inches



Abstract

In my experiment I will find what slime recipe stretches the best . There are so many slime recipes out there its hard to know which one is the best. During my experiment I tried 4 types of slimes, I even had to redo one recipe as I figured out what happens if you add too much of one or the other ingredients. All the slimes worked, but I found that one worked way better than all the rest! Even though slime can feel gross to some people, It's a toy that can bring hours of fun and has for the past 46 years.

Conclusion

My hypothesis was partially right since I said slime 1 and slime 4 would work the best and slime 3 would not work. All the slimes worked but the ones that stretch the best were slime 3 and slime 4. During the process of making the slime I did mess up the recipe and I added too much glue and contact lens solution and the slime turned out hard and lumpy. I tried to keep adding ingredients but that only made it worse so I started over and slime 3 turned out to be one of my favorite slimes the second time I made it. Slime 1 and slime 2 after a few days of sitting became a little dry and they didn't work as well anymore for test 3. The recipes for slime 3 and 4 turned out the best and stretched the furthest. Overall I learned a lot from this experiment and I enjoyed learning what works and what doesn't work when making slime. The best part is I have slime to continue playing now that my project is done!

Resources

- www.google.com
- www.Wikipedia.com
- www.youtube/sciencemom.com