

Slime

Materials:

- 4% polyvinyl alcohol (PVA) solution - 50 mL per group
- 4% sodium borate solution (borax)
- 5 oz. paper cup
- wooden craft stick
- food coloring
- plastic baggy

Safety:

- Lab aprons and safety glasses/goggles should be worn.
- The borax and the PVA will burn the eyes. Hands should be washed at the end of the lab.

Procedure:

Divide into 5 groups. Assign each group one of the following "recipes":

<u>Team</u>	<u>PVA</u>	<u>Sodium borate solution</u>
1	50 mL	1 mL
2	50 mL	2 mL
3	50 mL	4 mL
4	50 mL	6 mL
5	50 mL	10 mL

1. Add PVA to paper cup.
2. Stir in food coloring if desired. (just a few drops)
3. Add sodium borate solution - stirring quickly and making sure to scrape the sides and bottom using the wooden craft stick.
4. Pour entire contents of the cup into a plastic baggy and knead.
5. Take slime out of baggy and "investigate" properties.
6. Compare properties of the different slimes:
 - bouncing
 - stretching slowly
 - stretching quickly
 - letting it "pour" from one hand to another
 - flow rate through a wide mouth funnel

Characteristic	Solution 1 1 mL borax	Solution 2 2 mL borax	Solution 2 4 mL borax	Solution 3 6 mL borax	Solution 4 10 mL borax
Bounce					
Slow Stretch					
Quick Stretch					
"Pour"					
Funnel Flow					
Other					

7. Determine the mass of each group's slime. Leave on the lab counter overnight to dry.

8. Determine the mass of the dry slime. Calculate the percentage of water lost in overnight drying. Compare the percentage of water for each group's slime.

	Solution 1 1 mL borax	Solution 2 2 mL borax	Solution 2 4 mL borax	Solution 3 6 mL borax	Solution 4 10 mL borax
Mass of Slime (Day 1)					
Mass of Dry Slime (Day 2)					
Mass of Water Lost					
% of Water					

Additional Observations: