

Glowing Slime Experiment



Material Needed:

- Clear Washable PVA School Glue
- Saline Solution (must contain sodium borate and boric acid as ingredients)
- Water
- Glow Powder
- Baking Soda
- Bowl

Instruction:

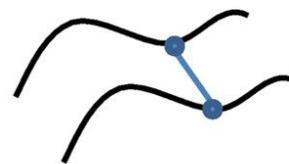
1. Add $\frac{1}{2}$ cup of clear washable PVA school glue to a bowl.
2. Mix glue with $\frac{1}{2}$ cup of water
3. Stir in $\frac{1}{2}$ tsp of baking soda (adds firmness to the slime)
4. Add $\frac{1}{2}$ tablespoon of glow powder and mix well
5. Add 1 tablespoon of saline solution
6. Stir slime well until it pulls away easily from sides and bottom of bowl.

TIP: Once you have thoroughly mixed slime with a spoon, sprinkle a few drops of saline solution on your hands. Now you can easily knead your glowing slime either in the bowl or out of the bowl for a few minutes. It will be very stretchy!

The science behind it

The borate ions in the slime activators (sodium borate, borax powder, or boric acid) mix with the PVA (polyvinyl-acetate) glue and form this cool stretchy substance. This is called cross linking! The glue is a polymer and is made up of long, repeating, and identical strands or molecules. These molecules will flow

past one another keeping the glue in a liquid state. Until... When you add the borate ions to the mixture, it starts to connect these long strands together. They begin to tangle and mix until the substance is less like the liquid you started with, and thick and stretchy like slime! That makes slime a polymer. Picture the difference between wet spaghetti and leftover spaghetti the next day. As the slime forms the tangled molecule strands are much like the clump of spaghetti! Is slime a liquid or solid? We call it a Non-newtonian fluid because it's a little bit of both! Picture the difference between wet spaghetti and leftover spaghetti the next day. As the slime forms the tangled molecule strands are much like the clump of spaghetti! Is slime a liquid or solid? We call it a Non-newtonian fluid because it's a little bit of both!



cross-link

inter/intraprotein link
interpeptide link
type 2 cross-link

two connected peptides

Shopping list:

Material list	Price (+shipping)	Where is it sold
Glow Powder	\$6.5	Amazon
Clear Washable PVA School Glue	\$10.99	Amazon
Saline Solution	\$11.29	Amazon
Baking Soda	\$4.99	Walmart
Plastic squeeze bottle for the glue and saline solution (50 pcs)	\$8.99	Amazon
Plastic jar to contain the slime (50 jars)	\$8.99	Amazon
Sealing plastic bag for glow power and baking soda (100 bags)	\$5.83	Amazon