

## AGPA Poly Putty

### Ingredients:

White multi-purpose glue (do not use washable glue)

Water

Food color (to make the polymer other colors besides white)

Borax (laundry aid)

3 – 16 ounce plastic cups for glue solution and borax solution

4 – 3 ounce plastic cups for measuring

Craft sticks for stirring

Plastic teaspoons for measuring

This activity does not require exact measurements. However, for older students, varying the amounts of glue and water to observe the final material's properties can be educational.

### Basic Directions (Detailed Directions Below)

In two 16 ounce cups:

Mix 3:1 glue to water; add food coloring, if desired

Mix 2 teaspoons of borax in 1 cup of water

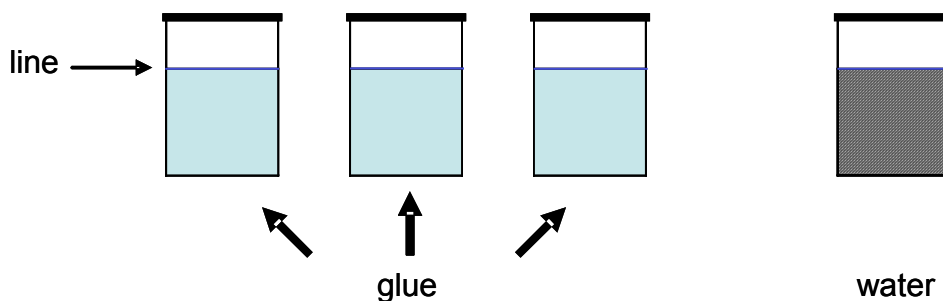
In another 16 ounce cup:

Mix 3:1 glue solution to borax solution

Stir with craft stick. Remove from the cup, knead, bounce, stretch, etc.

### Detailed Directions

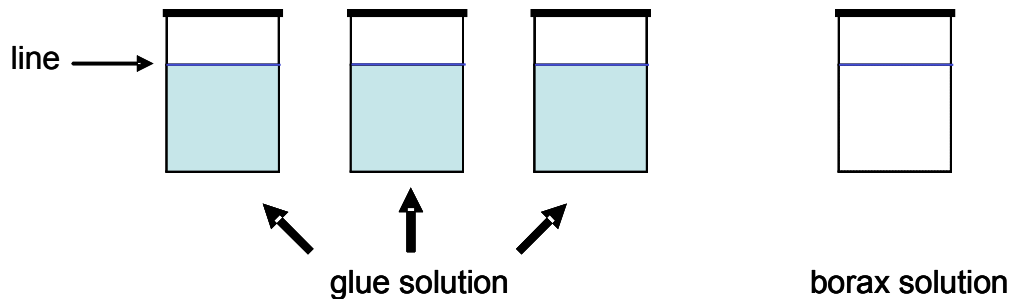
Mix the glue solution in a 16 ounce cup by mixing 3:1 glue to water. For an easy way to do this, mark a 3 ounce cup with a line and use this mark to measure the 3 parts of glue and the 1 part of water.



Add the food color(s) to the glue solution, if desired.

Mix the borax solution in another 16 ounce cup by mixing 2 teaspoons of borax and 1 cup of water. At slightly under a 4% solution, the solution becomes saturated. Therefore, some borax will settle out of solution, but this is fine.

Mix the polymer in another 16 ounce cup by mixing 3:1 glue to borax solution. As previously suggested, an easy way to measure these amounts is by marking a line at the same point on 2 different 3 ounce cups and use these cups to measure the glue solution and borax solution.



Stir with a craft stick.

If the polymer has excess, slimy liquid, add additional glue solution. If the polymer is very sticky, add a small amount of additional borax solution.

Remove from the cup, knead, bounce, stretch, etc.

Try different ratios of glue and water and observe the effects. For example, 1:1 glue to water will yield a polymer that flows easier. See if you can make a stiffer polymer. If the glue is too diluted (less glue than water), the final material will be too runny.

Additional Notes:

AGPA Poly Putty can be stored in a plastic bag. If mold begins to grow, throw away and make a new batch.

Borax can cause skin irritations for some people. If skin irritation occurs, wash hands with soap and water.

Both the white glue and borax are non-hazardous, grocery store items. However, since this project involves glue, be careful around carpets.

In addition, this material should NOT be given to very small children.