



# MOO Glue Lab



White glue is often made from the protein in milk called casein. The casein is separated from the milk by processes called coagulation and precipitation. At the factory, the casein is dried and ground up before it is made into glue. Casein is also used in some paints and to make a type of plastic-like button. You will make glue using milk.

## WHAT YOU NEED

2% milk  
acetic acid (vinegar)  
sodium bicarbonate (baking soda)  
coffee filter

## WHAT TO DO

1. Pour ~50 mL of 2% milk into a small container.
2. Add ~15 mL of vinegar to the milk.
3. Stir for ~ 1 minute.
4. Filter the goo from the liquid using a paper towel or coffee filter.
5. Squeeze **gently and carefully** to get most of the liquid out. (don't dry it out too much)
6. With a clean spoon, scrape the goo into a clean container.
7. Add one level spoonful (small spoon) of baking soda to the goo and mix well.
8. Voila! You have made moo glue.
9. Create a piece of art in which you will use your moo glue to stick things together.

## QUESTIONS

1. What is the purpose of the vinegar in making glue from milk?
2. What is the purpose of adding the sodium bicarbonate to the goo at the end?
3. Were the changes taking place in this lab physical or chemical? Explain.