

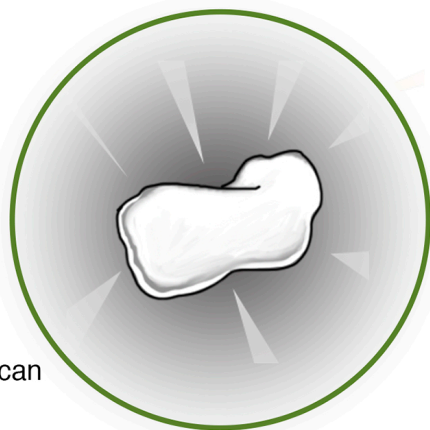
# MAKE PLASTIC MILK!

## YOU WILL NEED:

- One cup of milk
- 4 teaspoons of white vinegar
- A bowl
- A strainer
- Adult help

## WHAT TO DO

1. Ask your friendly adult to heat up the milk until it is hot, but not boiling
2. Now ask the adult to carefully pour the milk into the bowl
3. Add the vinegar to the milk and stir it up with a spoon for about a minute
4. Now the fun part, pour the milk through the strainer into the sink – careful it may be hot!  
Left behind in the strainer is a mass of lumpy blobs.
5. When it is cool enough, you can rinse the blobs off in water while you press them together .  
Now just mold it into a shape and it will harden in a few days. – Cool!



## HOW DOES IT WORK?

Plastic? In milk? Well, sort of. You made a substance called CASEIN. It's from the latin word meaning "cheese." CasEin occurs when the protien in the milk meets the acid in the vinegar. The casein in milk does not mix with the acid and so it forms blobs. True plastics, called poymers, are a little different. If you want to make a true plastic and learn more about polymers, try the Homemade Slime experiment. Have fun!

## MAKE IT AN EXPERIMENT:

The project above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. Will more vinegar make more casein?
2. Will you get the same results with low-fat milk, soy milk?
3. Do all types of vinegar work?
4. Will other acids, such as lemon juice and orange juice work?