**Plastic Milk**

**WHAT YOU NEED**:

* 1 cup whole milk
* Small saucepan
* Measuring spoons
* White vinegar
* Clean, empty glass jar
* Wax paper

**WHAT TO DO**:

* Pour the milk into the saucepan, add 2 teaspoons vinegar, and heat, stirring frequently. The milk will boil, then form tiny lumps (curds) in a clear liquid (whey). Slowly pour off the liquid from the pot into the sink. Then spoon the curds into the jar.
* Add 1 teaspoon vinegar to the curds, and let the mixture stand for one to two hours.
* The curds will form a yellowish glob at the bottom of a clear liquid. The glob is actually fat, minerals, and the protein casein. Pour out the liquid, remove the rubbery yellow glob from the jar, wash the glob with water, and knead it until it attains the consistency of dough.
* Mold the plastic into any shape you wish, then place it on the wax paper. Let dry overnight.

**WHAT HAPPENS**

The casein from the milk hardens into plastic that can be painted with acrylic paints.

**WHY IT WORKS**

The combination of heat and acetic acid precipitates the casein, an ingredient used to make plastic, from the milk.

**BIZARRE FACTS**

* The Japanese have developed a low-cost, biodegradable plastic made from shrimp shells by combining chitin - an extract from the shells that is also found in human fingernails - with silicon. The resulting "chitisand" is stronger than petroleum-based plastics, decomposes in soil, and acts as a fertilizer.
* In 1929, the Borden Company purchased the Casein Company of America, the leading manufacturer of glues made from casein, a milk by-product. Borden introduced its first nonfood consumer product, Casco Glue, in 1932.
* You can make glue from milk by simply adding 1/3 cup of vinegar to one cup of milk in a widemouthed jar. When the milk separates into curds and whey, pour off the liquid and wash it away. Add one-quarter cup of water and a tablespoon of baking soda. When the bubbling stops, you've got glue.
* Cheese is made from curds. White glue is made from the casein of the curds.
* While promoted by a spokesbull and made by a milk company, Elmer's Glue-All is a synthetic resin glue that does not contain casein.
* Before scientists discovered how to synthesize plastics from petroleum products, plants and animal fats were used to make natural plastics, which eventually decompose.
* Biodegradable plastic is made by adding starch to the plastic. Bacteria then feed on the buried plastic.
* In surgery, stitches are now made using plastics that slowly dissolve in body fluids.
* The American Dairy Council's ad campaign featuring celebrities with milk mustaches and the headline "Got Milk?" is translated in Mexico as "Are You Lactatin?"
* Twelve or more cows are called a *flink*.
* The Sanskrit word for *war* means "desire for more cows."
* There are more plastic flamingos in America than real ones.
* In 1975, a Holstein cow in Indiana produced 195.5 pounds of milk in one day. That's enough to provide a hundred people with nearly a quart of milk each.
* Cow's milk is 87 percent water.
* In Arctic regions, people get milk from reindeer.
* Twenty-four percent of all Americans drink milk with dinner.
* The glue on Israeli postage stamps is certified kosher.
* Ben and Jerry's sends the waste from making ice cream to local pig farmers to use as feed. Pigs love it, except for one flavor: Mint Oreo.
* On May 23, 1992, Ashrita Furman of Jamaica, New York, walked sixty-one miles with a full pint bottle of milk balanced on his head.