

# NANOGIRLS

## GREAT SCIENCE ADVENTURES

Here's Nanogirl's trick for making natural plastic

### INGREDIENTS

1 cup of milk  
1 tablespoon of vinegar  
Paper towels  
A couple of heatproof bowls or a pot  
Cookie cutters

### METHOD

Heat the milk up. It doesn't need to be boiling, just warm.

Carefully add the vinegar and give it a really good stir. You should be able to see that the milk is separating into a solid and a very runny liquid. This is what Little Miss Muffet had when she sat on a tuffet eating her curds and whey.

Now you want to filter the liquid (or whey) out. So, line the sieve with paper towels and put it on top of another bowl. Pour the curdled milk into the sieve to drain. This might take about 20 minutes.

You will be left with a soft substance. It's a protein from the milk called casein.

Pat the mixture dry with some more paper towels until there is no moisture left. Squash the soft solid mixture into a rough ball then press it out flat with the palm of your hand. Cut into whatever shape you like then let it dry. This can take up to 24 hours.

Scientists call plastic polymers – and you have just made your own natural polymer.

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