

## Science Activity

### Fantastic Plastic

#### What you need:

- 150ml hot milk
- 1 or 2 teaspoons of vinegar
- bowl or cup -sieve or coffee filter



**Only try this with help from your grown up.**

#### Instructions:

1. Heat the milk so that it is hot).
2. Put the teaspoons of vinegar into the warm milk.
3. Stir the warm milk and vinegar together. You will see the milk curdle and form a new material.
4. Strain the mixture. This is casein plastic which you can mould into different shapes.

#### What's happening?

Milk contains many molecules of a protein called casein. When milk is heated and combined with an acid, such as vinegar, the casein molecules unfold and reorganise into a long chain. This is why plastic made from milk is called casein plastic. From the early 1900s until about 1945, casein plastic was quite common. Casein plastic has been used to make buttons, beads and other jewellery.

**We'd love to see your experiments and hear about what you have enjoyed learning about.**