

FANTASTIC PLASTIC: MAKING A RUBBER BALL

Rubber is a natural polymer – it is the sap of the rubber tree and it bleeds out of the tree as a white liquid when the bark of the tree is cut. This activity shows you how this simply natural polymer can be cross-linked to make it solid.



Some people have allergic reactions to liquid rubber latex. Wear protective gloves to avoid touching the liquid rubber, and wear eye protection. Do not inhale the fumes, which contain ammonia.

1. Pour 5 cm³ rubber latex solution into small container such as a plastic cup or a small beaker.
2. Add a squirt of lemon juice or vinegar.
3. Stir to mix.
4. Rubber will solidify and begin to stick to the stirrer. Add more lemon juice or vinegar if some liquid rubber remains in the container.
5. Keep stirring until the rubber has completely solidified and is completely stuck to the stirrer.
6. Drop the solid rubber into the water and squeeze with your gloved hand to make it into a round ball shape. This isn't easy and you have to do this quickly if you want a round ball.
7. Dry the ball using a fabric cloth (not a paper towel).
8. Check that the ball bounces. Keep the ball safe – you will need it for a later activity.
9. Why do you think that the liquid becomes solid when you add the weak acid?

