

# Mini Lab Slime

## SAFETY RULES

- Read these instructions before use, follow them and keep them for reference.
- Keep young children and animals away from the experimental area.
- Store this experimental set out of reach of children under 8 years of age.
- Clean all equipment after use.
- Make sure that all containers are fully closed and properly stored after use.
- Ensure that all empty containers are disposed of properly.
- Wash hands after carrying out experiments.
- Do not use any equipment which has not been supplied with the set or recommended in the instructions for use.
- Do not eat or drink in the experimental area.
- Do not allow chemicals to come into contact with the eyes or mouth.
- Do not replace foodstuffs in original container. Dispose of immediately.
- Do not apply any substances or solutions to the body.

## GENERAL FIRST AID INFORMATION

- In case of contact with eyes: wash out eye with plenty of water, holding eye open if necessary. Seek immediate medical advice.
- If swallowed: wash out mouth with water, drink some fresh water. Do not induce vomiting. Seek immediate medical advice.
- In case of inhalation: remove person to fresh air.
- In case of doubt, seek medical advice without delay. Take the chemical and its container with you.
- In case of injury always seek medical advice.

## ADVICE FOR SUPERVISING ADULTS

Read and follow these instructions, the safety rules and the first aid information, and keep them for reference. The incorrect use of chemicals can cause injury and damage to health. Only carry out those experiments which are listed in the instructions.

This experimental set is for use only by children over 8 years. Because children's abilities vary so much, even within age groups, supervising adults should exercise discretion as to which experiments are suitable and safe for them. The instructions should enable supervisors to assess any experiment to establish its suitability for a particular child.

The supervising adult should discuss the warnings and safety information with the child or children before commencing the experiments.

The area surrounding the experiment should be kept clear of any obstructions and away from the storage of food. It should be well lit and ventilated and close to a water supply. A solid table with a heat resistant top should be provided.



## Experiment 1

### Silly play dough

#### What you will need:

- Water
- Cornflour ★
- Red food colouring ★
- Bowl or basin
- Tablespoon
- Small measuring cup ★



#### Steps:

1. Put 5 full tablespoons of cornflour in a bowl or basin.



2. In the small measuring cup, measure 25 ml of water and add it to the cornflour.



3. With the pipette add some drops of red food colouring. Stir well!



Your silly play dough is ready!

### Observe how your silly play dough behaves!

- If you shake it slowly, the dough will behave as a liquid.
- However, if you punch down the dough, it will turn into a solid!
- If you apply a significant force, you will almost be able to make a little ball.
- If you let go of it, the dough transforms into a liquid again!

#### Explanation:

This silly play dough can be classified as a non-Newtonian fluid, this is to say, it is a liquid whose viscosity is variable, depending on the force applied to it. This way, if we apply significant force it becomes a solid, however, if we stop doing it, it becomes a liquid again!

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### Experiment 2

#### Crazy play dough

The guar gum is a polysaccharide, extracted out of the plant species *Cyamoposis tetragonolobusendosperm* (seed), which is often used as a thickener or dietary fibre. When in contact with water the guar gum forms a highly viscous gel.

**ATTENTION:** ask an adult for help.

#### What you will need:

- Small measuring cup ★
- Guar gum ★
- Wooden spatula ★
- Food colouring ★
- Large measuring cup ★

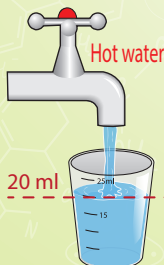


#### Steps:

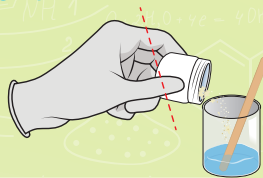
1. Pour 20 ml of hot tap water into the small measuring cup.

#### Suggestion:

Put the water running before you place the cup under the tap.

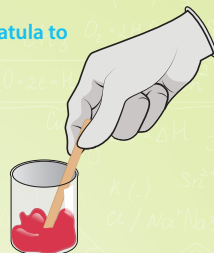


2. Add half of the amount of guar gum to the large measuring cup.



3. Transfer the water from the small cup to the large cup, where the guar gum is.

4. Use the wooden spatula to mix it all well.



5. When the crazy play dough stops sticking to the cup walls you can remove it. To do so, wet your hands before removing it.

#### Suggestion:

If you notice that the dough has too much gum grains, add a little bit more of hot water and mix well.

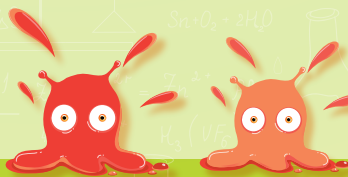
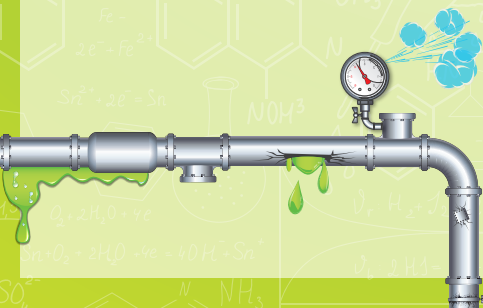
6. Knead and roll the crazy play dough between your hands until it stops sticking.

#### Have fun with your crazy play dough!

**Attention:** If you feel some sort of skin irritation immediately stop touching the crazy play dough and wash your hands with plenty of water.

Did you have fun with this mini kit and want to learn more about the Slimy Factory? Become a real scientist and discover the following web page:

[www.science4youtoys.co.uk/minilab-slime](http://www.science4youtoys.co.uk/minilab-slime)



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