

What makes the colours in fireworks?

Name

Fireworks often make beautiful colour displays. In this experiment you can find out what chemicals make the colours in fireworks.

Equipment

- Periodic table
- Flame test wires
- Small beaker or test-tube
- Heatproof mat
- Samples of firework chemicals
- Distilled water
- Bunsen burner
- Eye protection.

What you do

1. Place the Bunsen burner on the heatproof mat.
2. Light the yellow safety flame.
3. Put about 20 cm³ water in the beaker or test tube.
4. Open the air hole on the Bunsen to get a strong blue flame.
5. Dip the wire in the water, then into the first firework chemical. Only a small amount is needed.
6. Hold the wire at the edge of the flame just above the cone.
7. Look at the flame colour. There may also be sparks and the chemical may melt.
8. When the colour has gone, put the wire back with the chemical dish.
9. Test all the firework chemicals in the same way.
10. Write down the colours you get in the results table.
11. Answer the questions.

Firework chemical	Colour in flame	Other observations

Questions

1. Why do the chemicals make different colours?

2. Why is heat needed to make the colours visible?