

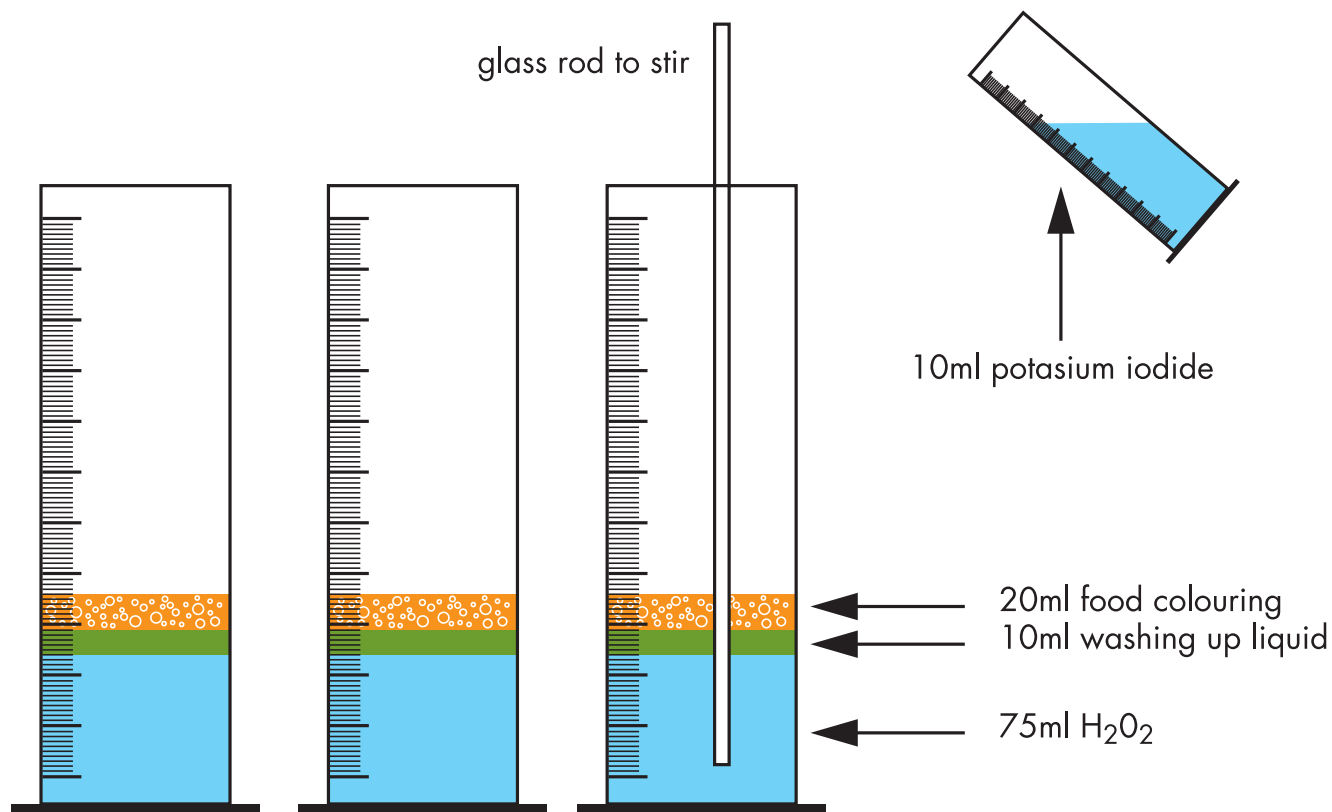
Top 10 Flash Bang Demos

Number 5 Frothy foam

An adaptation of the **classic** 'elephant's toothpaste' this demonstration produces **masses of coloured foam**

Equipment

- 3 x 500ml measuring cylinders
- 3 x 75ml hydrogen peroxide 100vol*
- 3 x 10ml potassium iodide solution
- 3 x 10ml washing up liquid
- 3 x 20ml red, blue and green food colouring
- Large bin bags



Safety precautions

Hydrogen peroxide is corrosive (see hazard 50).
Iodine can stain so wearing gloves is advisable.

See CLEAPSS supplementary risk assessment SRA11
Demonstrator should wear safety goggles.

Always carry out your own risk assessment for this demonstration.



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Method

- Cover the bench and nearby floor with bin bags...it's going to be messy!
- Place the three cylinders side by side
- Put 75ml of hydrogen peroxide; 10ml washing up liquid and 20ml food colouring in each cylinder
- Stir
- Quickly add the potassium iodide to each cylinder
- Stand back!
- Masses of foam will be produced
- Test the foam for oxygen using a glowing spill.
Placing the spill inside an oxygen bubble will give the best effect

The science bit

The potassium iodide catalyses the decomposition of the hydrogen peroxide to water and oxygen. This is an exothermic reaction and the water is produced as steam. The oxygen is trapped in the bubbles by the washing up liquid.

Demonstration tips and interesting facts

Setting off multiple tubes at once in different colours is very visually effective. You can choose your colour to be the school/house colours or those of a country's flag.

The foam can look a little like toothpaste coming out of a tube which is why this reaction is also known as elephant's toothpaste. Interestingly, some treatments for teeth whitening contain a small amount of hydrogen peroxide.

Set tubes to go at the same time to 'race' them.

N.B. Hydrogen peroxide does deteriorate very quickly. It should be kept in the fridge and used within one year.

Instructions are in accordance with CLEAPSS guidelines and safety information.