

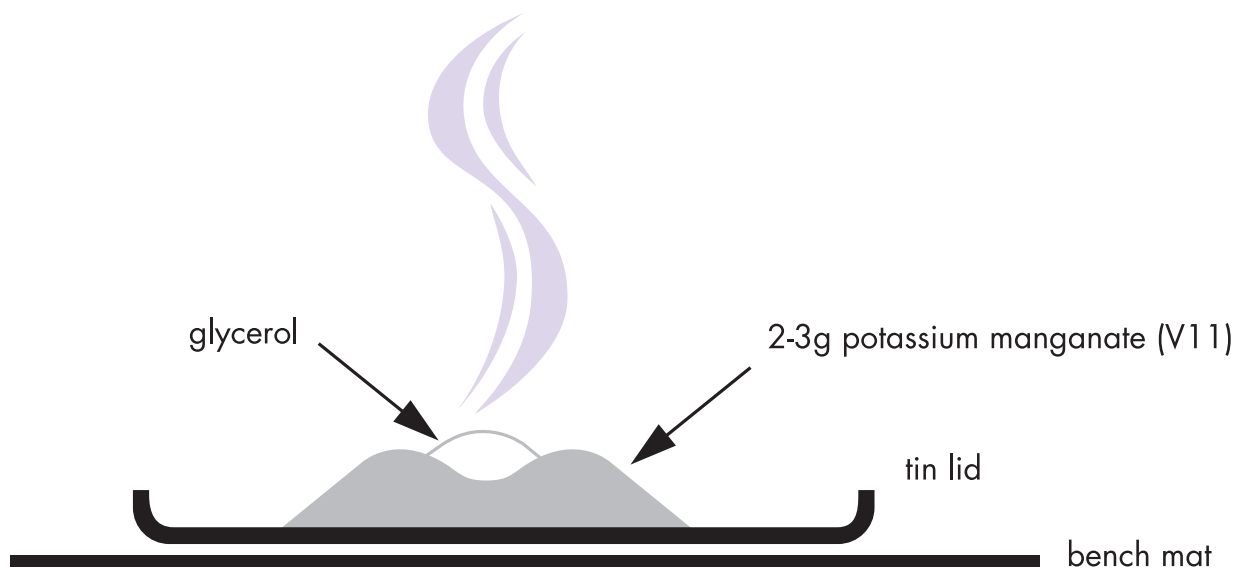
Top 10 Flash Bang Demos

Number 8 Lilac fire

A redox **reaction** with a flame delay that will **surprise** your students

Equipment

- 2-3g potassium manganate (V11)
- 1ml glycerol
- Pestle and mortar
- Tin lid
- Bench mat
- Syringe



Safety precautions

Always carry out on a tin lid and bench mat.
Potassium manganate (V11) is an oxidising agent (see hazard no. 81).
Demonstrator should wear safety goggles.

Always carry out your own risk assessment for this demonstration.



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Method

- Grind up the potassium manganate (V11) crystals using a pestle and mortar (this demonstration will not work if the crystals are too large, or if powdered potassium manganate (V11) is used)
- Pour the crushed potassium manganate (V11) into a small pile on a tin lid standing on a heat-proof mat
- Make a well in the middle of the pile and add the glycerol
- After approximately 20 seconds, steam is given off and a lilac flame produced, the colour characteristic of potassium salts

N.B The glycerol should be less than a year old otherwise this demonstration may not work

The science bit

Mixing the glycerol with the potassium manganate (V11) causes an exothermic reaction which oxidises the glycerol to form carbon dioxide and water (hence the steam) and is then itself reduced.

Demonstration tips and interesting facts

For a science 'trick' you could try placing the potassium manganate (V11) in the well formed in the top of a large, used candle. When adding the glycerol, it will look as though you're lighting the candle by pouring water on it!

This demo looks great against a white background or in a darkened room.

Instructions are in accordance with CLEAPSS guidelines and safety information.