

Cobalt Chloride Thermometer - Technicians Notes



Advance Preparation

Chemicals

Cobalt(II) chloride ($\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$)

Ethanol

Hot water

Cold water

Equipment

Test tube (a Quickfit test tube with a stopper is best)

Pipette

Spatula

2 x 250 ml beakers

Parafilm

Preparation Instructions

Steps one and two can be done in advance – it's a reversible reaction!

1. Put a spatula of cobalt chloride into the test tube
2. Put in a pipette full of ethanol
3. Place the test tube into a beaker of cold water

The solution in the test tube should be pink

4. Place the test tube into a beaker of hot water

The solution in the test tube should turn blue

5. Put the stopper in the test tube and seal it with Parafilm. A test tube prepared like this can be stored and re-used at a later date!



Preparation for Demo

The Teacher Will Need...

Test tube prepared as above

2 x 250 ml beakers

Hot water

Cold water

Preparation...

1. Make sure the test tube is prepared and works and the other items are available.