

# Magic Dye Experiment

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## Introduction

When making dyes to be used in dye-sensitised solar cells it is important to design them so that they bond to the semiconductor well. This means thinking about the chemistry of bonding.

## Equipment per person/pair/group

Magic dye mixture	Tongs/tweezers
Small scraps of white materials	Tissue
250 ml beaker	Spatula
Hotplate/kettle	Water

## Method

1. Heat around 100 ml water in a beaker on a hotplate, or boil water from a kettle and transfer to a beaker.
2. Put a spatula of the magic dye mixture into the water.
3. Put in a scrap of each different material.
4. Leave for a few minutes. Keep the water boiling if using a hotplate.
5. Use tweezers or tongs to take out the scraps and place on some tissue to absorb the excess liquid.
6. The scraps should all come out different colours depending on the type of material they are made of.

## Disposal

The magic dye solution can be washed down the sink with plenty of water and the material can be disposed of in the bin.