# Disappearing Solution – Teacher's Instructions

## For demonstration/class activity

### *Make sure you have…*

Large jar prepared as in technicians notes

300 W lamp

### *What to do…*

1. Shine the light on the solution (you may need to shake the solution).

   **The solution should turn from purple/blue to clear**

2. Take the jar away from the light.

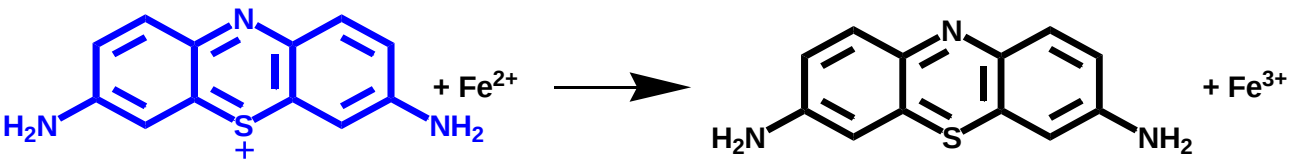
   **The solution should turn blue again**

3. Shine the light on the solution again – you can keep doing the experiment from long enough!

4. Wrap the jar in foil to keep it dark. The solution will keep for a few days.

### *What's Happening?*

This experiment is a great example of a reversible Redox Reaction. The solution contains Fe(II) sulfate. Light causes the oxidation of Fe(II) to Fe(III) and the resulting electron reduces the thionine (blue) to semithionine (colourless). The reaction is reversed when the powerful light is turned off.




**Thionine - Blue** **Semithionine - Colourless**

The nice thing about this reaction is that it is reversible. If you bring the solution back into the powerful light, the solution will go transparent again and then back to blue once the light is removed.