Adapted from <http://www.rsc.org/learn-chemistry/resource/res00000001/the-equilibrium-between-two-coloured-cobalt-species?cmpid=CMP00005957>

**Lab Preparation:**

1. Dissolve approximately 4 g of cobalt(II) chloride-6-water in 40 mL of water in a beaker. A reddish-pink, approximately 0.4 mol L-1 solution will be formed.
2. Make the pink cobalt chloride solution up to 100 mL with 60 mL of concentrated hydrochloric acid.
3. **If the solution is still reddish-pink:** Add more hydrochloric acid until an ‘in-between’ violet colour is obtained

**If the solution blue:** Add more water until an ‘in-between’ violet colour is obtained

**Testing the mixture:**

* Pour a small amount into a test tube and then heat with a Bunsen burner or hot water from a kettle. The violet colour solution should change to blue upon heating, and return to a violet colour upon cooling.