





THE DISAPPEARING INK

➤ **AIM:** to observe a base-acid reaction and how indicators work.

➤ **MATERIALS**

Safety goggles	10 cm ³ Measuring cylinder	Small paint brush	Beaker
			

➤ **CHEMICALS:** Ethanol, Sodium hydroxide 0.4 mol·dm⁻³, Thymolphthalein solution.

➤ **THEORY:**

Thymolphthalein is an indicator that shows a blue colour when pH is above 10.5 and is colourless below pH 9.3.

Sodium hydroxide is a strong basic chemical. If a reaction takes place so that the pH decreases, the colour will change.

➤ **PROCEDURE**

1. Place 10 cm³ of ethanol in a small beaker.
2. Add a few drops of thymolphthalein indicator solution.
3. Add just enough NaOH solution, dropwise, to produce a deep blue colour in the solution.

4. Using a small paint brush test the 'disappearing ink' on a white page.

➤ QUESTIONS:

The colour change occurs because sodium hydroxide reacts with a gas in the air.

1. Which gas in the air causes this colour change?
2. Write a word equation for the reaction.
3. Write a formula equation for the reaction.

➤ FEED-BACK:

Evaluate the difficulty of this practical. Circle the number that suits the level of difficulty you found while going through this practical:

Very Easy 1 2 3 4 5 *Very Difficult*

Did you enjoy going through this practical? Circle the number that suits your choice

Not at all 1 2 3 4 5 *Very much*