

☆ = Include in your Lab write up!

M&E SECTION 2.3 LAB INVESTIGATION



Paper Chromatography

MAKE UP LAB

In the last chapter, you separated a mixture of soluble and insoluble solids by dissolving in water and filtering. In this investigation you will use paper chromatography to

- determine if black ink is a mixture
- determine the number of solids in black ink.

☆ **Problem:** How many different substances can you find in black ink?

☆ **Hypothesis:** (Write a prediction. Do NOT use any personal pronouns!)

Procedure:

- 1) Cut a 20 cm strip of filter paper and cut a point into one end as shown in fig.1 below.
- 2) Draw an ink dot 3 cm from the tip of the point.
- 3) Place the strip in a graduate containing 5 cm³ of water. Do not let the ink line touch the water.
- 4) Bend the top of the strip over the edge of the graduate.

MATERIALS

- 50 cm³ graduated cylinder
- filter paper strip
- black ink
- water

Observe and Analyze:



DATA:

- Make two drawings of the strip as shown in fig.1. The first drawing shows the strip with the ink dot before it is placed in the graduate with water.
- The second drawing shows its appearance after the water rises up the strip.
- Observe what happens to the black ink dot as water is drawn up into the filter paper.
- Can you see any evidence of more than one substance in the ink?
- When the water level nears the top of the graduate, remove the strip and draw its appearance.
- Label all colored areas on both strip drawings.



Conclude: (Write a conclusion following your lab write up format.)

- A **claim** is an answer to the question.
- **Evidence** is factual information upon which you base your claim.
- **Reasoning** is an explanation of why your evidence supports your claim.

Before

After

