

# Paper Chromatography

Inks are often a mixture of different colors. Paper Chromatography is a method of separating substances, such as inks, based on the attraction that different colors in the ink have for the paper.

In this lab, you'll discover what colors are hiding in the inks of some colored markers.

## Procedure:

1. Obtain a strip of filter paper from the teacher. Or, cut a coffee filter into strips about 2.5 cm wide and 15 cm (or so) long. The paper shouldn't quite reach the bottom of the glass, when suspended (see next step).
2. Push a pencil through the top of the paper so you can suspend it in a drinking glass. (The pencil rests across the top of the glass.)
3. Prepare several strips the same way, one strip for each color you will test. Test at least 4 inks.
4. Using water-soluble markers, draw a different color line across the bottom of each strip. The line should be about 2 cm up from the bottom of the paper. If possible, include a brown or black marker.
5. Suspend a paper strip in the glass.
6. Put enough water in the glass to reach the bottom of the strip, but it must be below the ink line.
7. If you are careful, you can suspend several strips in one glass, but they must not touch. Also, the water must be below the ink line on each strip.
8. Remove the strips when the water level has risen to just below the pencil. Lay the strips on a paper towel to dry.
9. Repeat with the other strips, unless you did them all at once.

Data: Tape your strips to another sheet of paper. Label each with the color ink you used. Make a simple data table, to list the pigments that made up each ink.

Analysis: Answer these questions on another sheet of paper. Use complete, stand-alone sentences.

1. What role did capillary action play in this lab?
2. Were all of the inks composed of more than one pigment?
3. What color(s) contained the greatest number of pigments?
4. Explain how this lab relates to Chapter 3.