

11.5 Capillary Action/Chromatography

Subjects: Properties of liquids, capillary action, intermolecular forces, chromatography

Description: A paper towel or filter paper is dipped into water and the water travels up the paper.

Materials:

Paper towel (filter paper or coffee filter)

500 mL Beaker with water

Optional: place a small dot on the paper with a felt tip pen and allow the colors from the pen to separate as the water travels up the paper

Procedure:

1. Dip the end of a paper towel into water and allow the water to travel up the paper.

If doing the chromatography option, be sure the ink dot is above the water line.

Discussion:

Polar water molecules are attracted to polar alcohol bonds in the paper fibers, causing the water to climb up the paper. If ink is used, the different colors of the ink travel up the paper. The distance of travel is dependent on their degree of solubility in water and their attractions to the paper.

Safety: None

Disposal: None

Reference:

1. C. Borgford, L. Summerlin; *Chemical Activities: Teacher Edition*; 1988; p. 257