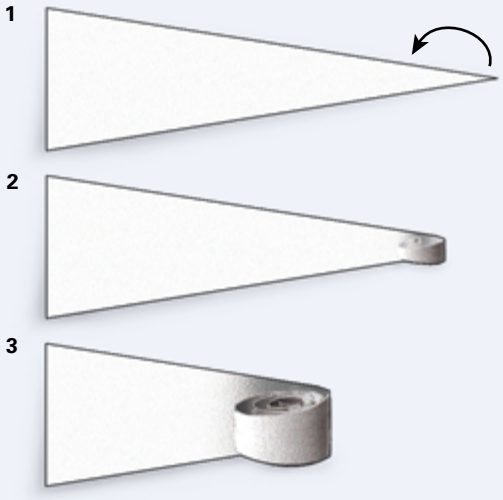

FIGURE B Cut the triangle from filter paper. Roll the paper into a cylinder, starting at the narrow end.

at the point of the triangle, and roll toward its base. See Figure B.

5. Fill a Petri dish or lid two-thirds full of solvent (usually water or alcohol).
6. Set the bottom of the wick in the solvent so that the filter paper rests on the top of the Petri dish. See Figure C.

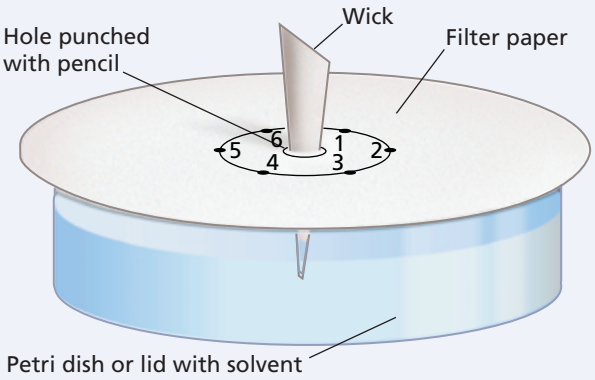

FIGURE C The wick is inserted through the hole of the spotted filter paper. The filter paper with the wick is then placed on top of a Petri dish or lid filled two-thirds full of water or another solvent.

7. When the solvent is 1 cm from the outside edge of the paper, remove the paper from the Petri dish and allow the chromatogram to dry. Sample chromatograms are shown in Figures D and E.

Most writing or drawing inks are mixtures of various components that give them specific properties. Therefore, paper chromatography can be used to study the composition of an ink. Experiment 12 investigates the composition of ball-point-pen ink.

FIGURE D Each of the original spots has migrated along with the solvent toward the outer edge of the filter paper. For each substance that was a mixture, you should see more than one distinct spot of color in its trace.

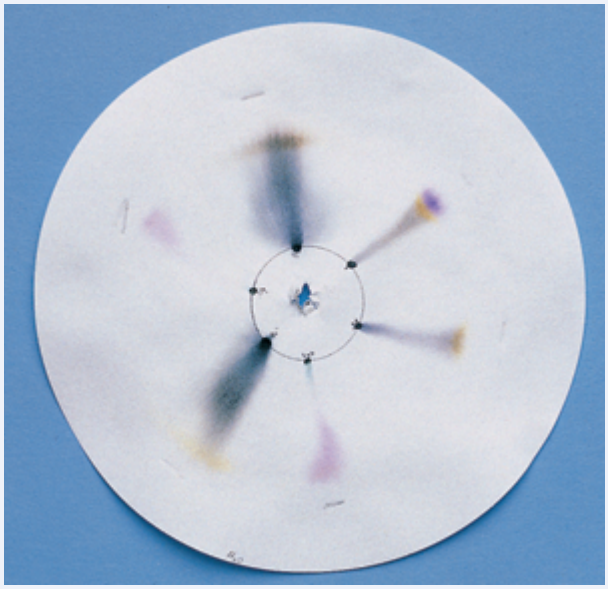

FIGURE E This chromatogram is unacceptable due to bleeding, or spread of the pigment front. Too much ink was used in the spot, or the ink was too soluble in the solvent.