

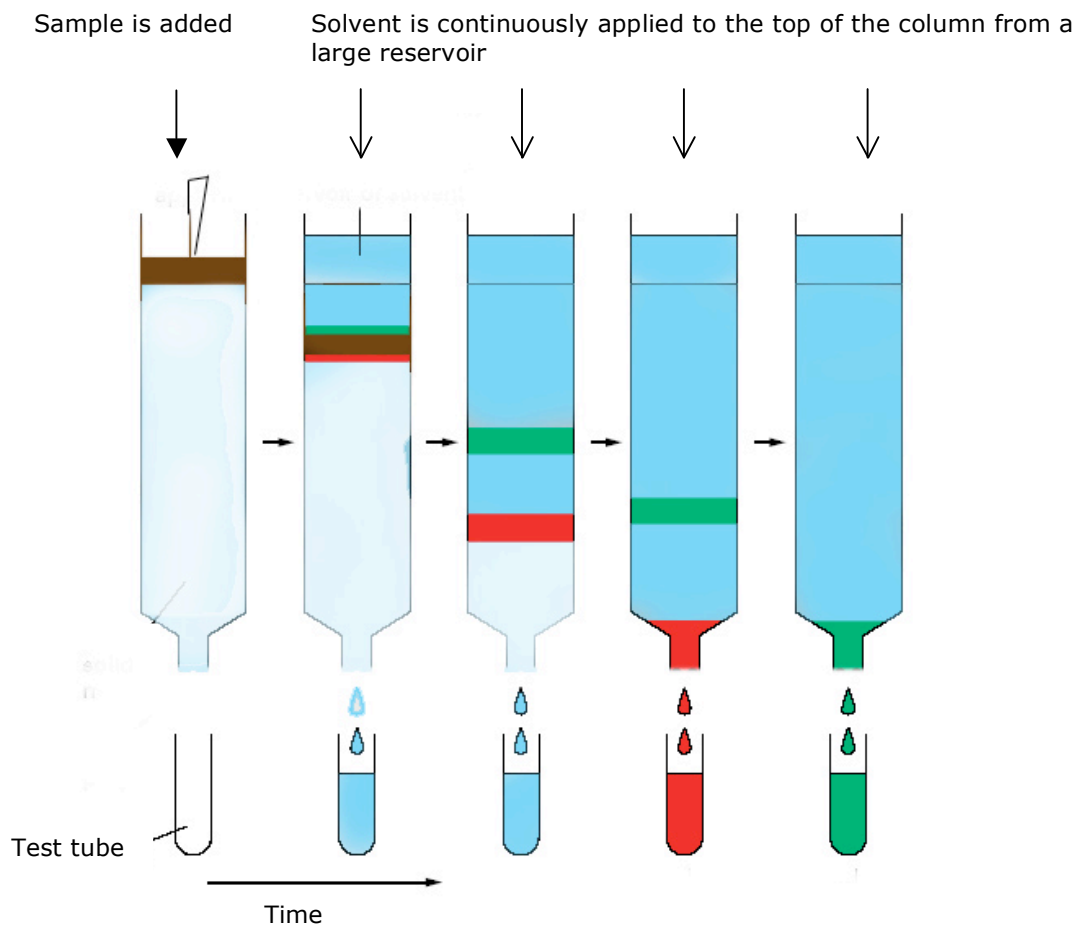
Test for **Chromatography** activity

Name _____ Teacher _____
Date _____ Class _____)

Check one:

- Pretest
 Posttest

1. A lab technician added a sample containing different molecules to the top of the chromatography column. The sample was brown in color (the dark band at the top of the test tube). She continuously added solvent to the top of the column from a large reservoir (not shown).



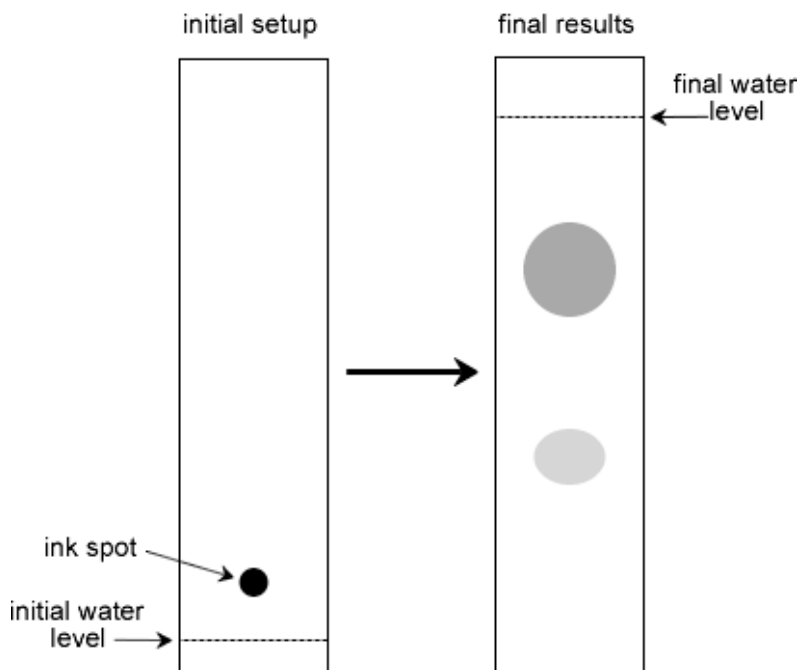
Explain:

1a. Why do two bands (of different color) eventually appear?

1b. Why are the two bands moving down the column at different speeds?

2. The picture below shows the results of a paper chromatography experiment. In this experiment a lab technician has placed an ink spot on the paper and used water (a hydrophilic substance) as the solvent. Look at the results and answer the questions that follow.

Chromatography Results



2a. Many inks are mixtures of several pigments. These pigments can be separated using paper chromatography by using variations in:

- the solubility of the pigments in the solvent
- the depth of the paper in the solvent cup
- the adsorption of the pigments to the paper
- both A and B
- both A and C
- both B and C

2b. Is the ink that moved the furthest up the paper hydrophilic or hydrophobic? Explain your answer.

2c. What results might the technician have expected if he used a solvent such as benzene, a hydrophobic substance?