

Separating ink colors

Chemists use a process called chromatography to separate materials. You can use this same method to separate the different color inks in markers. Try different types along with different colored markers.

Experimental Steps:

1. Choose a marker you want to test. Make sure marker is washable and not a permanent
2. Draw a small line with any marker one inch (about the width of your thumb) from the outside of a coffee filter.
3. Pour a small amount of water into a clear plastic cup. Just enough to cover the bottom of the cup.
4. Roll or fold the coffee filter up and place it into the cup making sure the ink line remains just above the level of the water.



that the marker.

plastic cup.



5. The water will move up the coffee filter carrying the ink with it.
6. When the water has reached the top, remove it from the cup. Set the coffee filter aside to dry. Cut designs out of the filter or hang your creation in a window to get the best effect!

Separating ink colors: Scientific Explanations

Chromatography is a scientific technique used to separate out different components in a mixture. It was first used to separate out plant pigments of different colors, giving the technique its name.

There are several important parts of a chromatography experiment.

Stationary phase: A hydrophobic, (water hating) substance that does not move during the analysis, the paper.

Analyte: The sample or chemical to be analyzed by chromatography, the ink.

Mobile phase: A hydrophilic (water loving) substance that moves in a specific direction, water.

