

Kitchen Science

Chromotography

Chromatography is the science of separating mixtures. In this simple experiment, reveal the hidden colors that make up your favorite markers.

What you need:

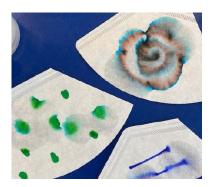
- Water-based markers, especially black
- Thick coffee filters
- Small cup/bowl of water
- Eye dropper
- Shallow tray, placemat, or similar

What you do:

- 1. Place the coffee filter(s) on a shallow tray, or similar, to contain any water/marker.
- 2. Use markers to make small patterns: circles of dots, lines, etc. not too close together and not too many colors at once.
- 3. Fill the eyedropper with water. Slowly drop a little water in the middle of the design (it helps to leave the very center of your design clear for this purpose) until water/marker starts to 'creep' through the filter. What do you notice as the water spreads through your filter?
- Observe the colors—what colors do you see? Which color travels farthest? What patterns do you get with different arrangements of dots and lines.







Things to try:

- Experiment with a solid medium other than coffee filters. Explore materials such as: white fabric (assorted types—felt, cotton, knit), paper towel, white construction or computer paper, cardstock.
- Compare different types of markers. Do permanent markers, highlighters, or different brands behave the same way?