

HIDDEN CANDY COLORS

Did you know that some food colors (and inks) are made up of more than one color? The colors can be separated using a technique called chromatography.

Chromatography is a technique used to separate mixtures. The mixture is passed through another substance, in this case filter paper, to separate the components. The different color particles travel at different speeds through the filter paper, allowing you to see the different colors each mixture is made from.

INGREDIENTS

M&M's®, Skittles or other colored candy

SUPPLIES

Plate or tray

Pipettes

Water

Filter paper, cut into strips

Place the M&M's on a plate.

Carefully use a pipette to drip a few drops of water onto each candy piece and let the candy soak until the water has turned the same color as the candy. Color from each candy piece will dissolve into the water.

Use a pipette to suck up the colored water from each candy piece one by one and carefully drip the water onto the bottom of a strip of filter paper. Use a separate strip of filter paper and a clean pipette for each color.

Leave the filter paper strips on a plate for about 10 minutes and observe what happens.

You should find that different color bands appear on the filter paper strips. This is because the coloring on the candy shells is a mixture of colors that have separated out.

MORE FUN

- Try the same technique with a different type of candy. Do all green candies give the same color pattern?
- You can also try this with felt-tip pens. Instead of dropping color from a candy onto the filter paper, draw a circle on the filter paper using a colored pen and use a pipette to drip a few drops of water over the circle.

LEARNING POINTS

- The candy colors separate because, as the water moves up the filter paper, it carries the color mixture with it.
- Different components of the color mixture move at different rates, meaning the colors can be seen separately on the filter paper.

