

Where Does My Color Come From?

Melanin is a molecule that your body can make that gives skin and hair its natural colors. People from different parts of the world have different amounts of melanin in their skin. Different places on your body can also have different amounts of melanin. Your arm is a good place to see this.

Look at the inside of your forearm. This is the part of your arm that is close to your wrist and touches your side if you stand with your hands down at your sides. Now turn your arm over and look at the outside of your forearm. Are they exactly the same color?

The outside of your arm might be darker or have more freckles because it gets more sunlight when you're outside. The inside of your arm is usually in the shadow of your body so it doesn't get as much sun.

Melanin is a shield that protects skin cells from sunlight. Too much sun can damage skin cells, so special cells called melanocytes make packets full of melanin and deliver them to their neighbor cells.

Different skin colors are made up of different amounts of two types of melanin. One appears more yellow and one appears more brown. When cells have both types, they can become any color from light peach to very dark brown and anything in between.

When we look at skin or hair, it might look like one color, but it's made up of at least two types of melanin. Do you think other types of color are made of different molecules? We can find out.

Color Chromatography

1. Find a few of your favorite pens or markers from around your home. Black and brown pens work well and you can try whatever colors you are interested in.
2. Make a row of dots on the coffee filter that came with this kit.
3. Add some water to a small container like a Tupperware or bowl.
4. Put the filter into the water so that only the edge of the filter below the dots is in the water. The water should be able to soak into the filter and reach the dots. Then it will spread the dots out and you can look for the colors that make up the main color.

Questions to consider:

What colors do you expect to find in the markers you chose?

What did you see after 30 minutes? Did any of the colors surprise you?

Do all pens work with this experiment? What about whiteboard pens or sharpies? Are waterproof markers different from other types?