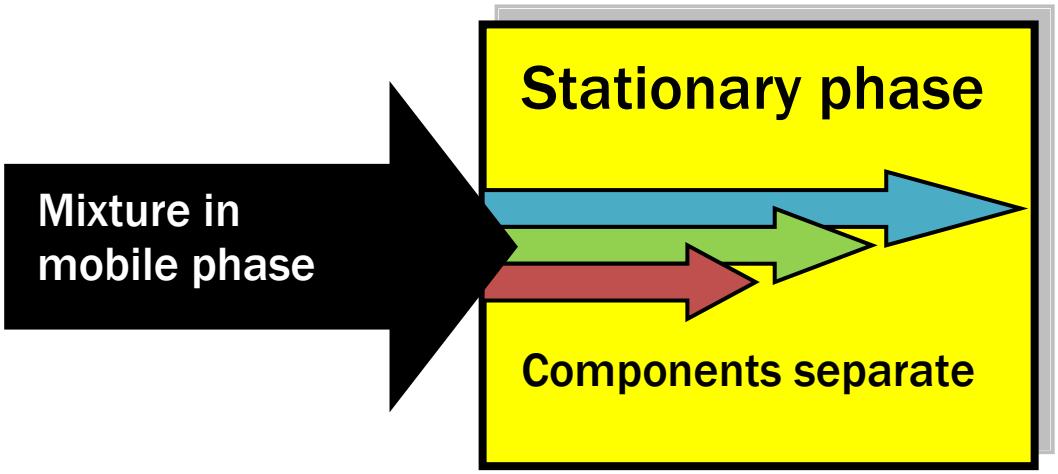
Edith Cowan University
School of Natural Sciences

CHALK CHROMATOGRAPHY

Chromatography is a way to **separate mixtures** using a **mobile phase** (like an alcohol) moving along a **stationary phase** (like a stick of chalk). The mobile phase carries the components in the mixture along with it, but at different rates, so the components separate as they go.



Use chromatography to make your own ‘rainbow chalk’!

CHALK CHROMATOGRAPHY

1. Find some pieces of ‘old fashioned’ white chalk – not the ‘low dust’ or ‘dust free’ kind.
2. Draw or spot a dot or stripe on a piece of chalk, about 1cm from the end. You can use a marker pen, ink or food colouring.
3. Pour rubbing alcohol (isopropyl alcohol) into a jar or cup, about 0.5cm deep.
4. Stand the chalk upright in the jar or cup so the line or dot is just above the liquid.
5. Put a lid or cling wrap over the jar or cup.
6. Watch the colour rise up the chalk! Remove it before the colour reaches the top. Let it dry before writing with it, or keep it for decoration!

Are inks made up of only one colour? Try different brands of the same colour marker pen – are their inks all the same?

Chemists use many kinds of chromatography to separate and identify all sorts of different compounds.

Photo by Anne Helmenstine