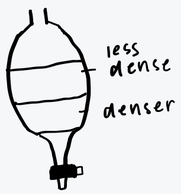
# SEPARATION TECHNIQUES

# Separation

## Density

### Separation funnel




**for immiscible substances**

## Size

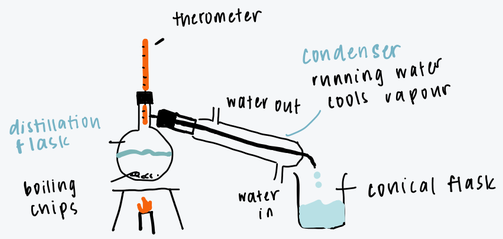
### filtration


Separates liquid from solid-liquid solution

## boiling pt

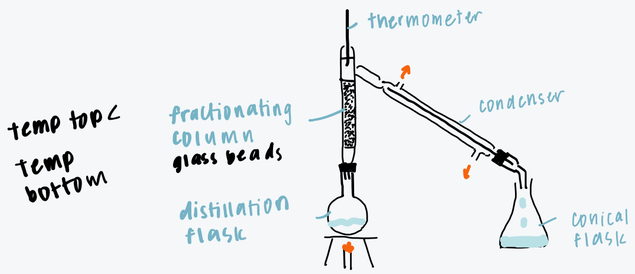
### distillation

Boiling + condensation
Ex: salt water -> water
(water boils leaving the salt)




### fractional distillation

Used for different boiling points

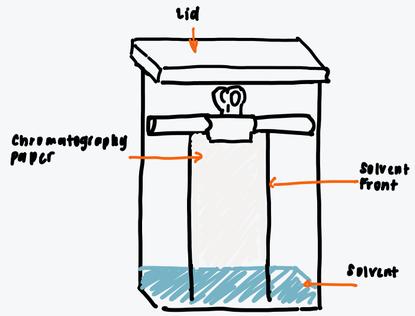



Separates 2 miscible liquids
dissolve in each other

## Magnetic attraction

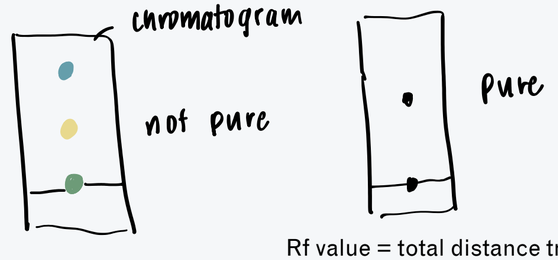
## Solubility

### Chromatography




More soluble =. Greater distance
Pure substance = one spot on the chromatogram

Works on the basis that diff substances have diff solubility in a given solvent




$$Rf: \frac{d_{substance}}{d_{solvent}}$$

Rf value = total distance travelled

Rf value of 0.4 (and total solvent front is 3cm)
then distance travelled is 0.4x3 = 1.2 1.2cm

- locating agent if dyes are transparent

### Crystallisation