

Chromatography

Types	Samples separated	Mobile phase	Stationary phase	Uses
Paper	Dried liquid samples	Liquid solvent	Filter paper strip	One of the most common types of chromatography; to analyse pen inks, lipsticks, food & fabric dyes, etc.
TLC	Dried liquid samples	Liquid solvent	TLC sheet - glass/ plastic plate covered with a thin layer of silica gel	To analyse the dye composition of fibres, inks, lipsticks and paints; to detect pesticide or insecticide residues in food
Liquid eg high performance liquid chromatography (HPLC)	Liquid samples that may incorporate insoluble molecules	Liquid solvent	Column composed of silica or alumina gel powder or suspension of solid beads in a liquid	To test water samples to look for pollution in lakes and rivers; to analyse metal ions and organic compounds in solutions; to analyse blood found at a crime scene
Gas Eg pyrolysis gas chromatography (PGC)	Vaporised samples	Carrier gas, eg nitrogen, hydrogen or helium, is used to move gaseous	Column composed of a liquid or of absorbent solid beads	to detect bombs in airports; to analyse fibres on a person's body; to test for the presence of accelerant in arson cases and residue from explosives (PGCI) to analyse body fluids for the presence and level of alcohol and illegal substances