

Pen Ink Analysis

There was an ink on the note found in the victim's pocket and police hope that it may lead us to who may have committed the murder. This ink is going to be analysed by using Chromatography, this technique can be used to separate many substances present in a mixture, some common uses are drugs in the blood, sugars in juice, pesticides in water and soil and also different inks. Pens of the same colour ink as the sample that was found have been gathered from the suspects and are here for you to analyse. It is your job to determine who is guilty of leaving ink on the desk and if they are possible suspects in the crime. The method used to determine this is as follows, rule a line with a pencil about 2cm from the end of a piece of chromatography paper then place a small dot of ink in the middle of the line, next lower these samples in to test tubes which have 1cm of a mixture of water and alcohol in the bottom of them. If the ink touches the water you will need to start again. Leave for five minutes then remove from the water, recording with the pencil where the solvent got to and lay flat on a piece of white paper. You can get an R_f value by dividing the distance the dot has travelled by the distance the solvent has travelled. Compare the samples from the suspects with the crime scene and fill in the table below with your observations. Remember that you will need to be able to describe these to the rest of your class and be able to prove by your descriptions who this evidence points to as the main suspect.

Suspect's pen	Notes	Match or Not
Suspect 1 Barry Hardingham		
S2 Geoff Blake		
S3 Mike Beach		
Victim		
Crime Scene sample		