

# CSI: Colours in Ink

George Bloggs found his CD player missing at 17:00 hours. A ransom note (Evidence No: 080) was posted through the door of his house, 4 Anystreet, Anytown at approx. 18:00 hours.

Master Bloggs suspected his best friend, John Smith or brother, Tim Bloggs. After a search of both suspects' houses, two black pens were found (Evidence No: 081 and 082), that could have been used to address the envelope.

By separating the different colours found in the black ink of the pens, can you decide which pen was used to write on the envelope??? hence who committed the crime???

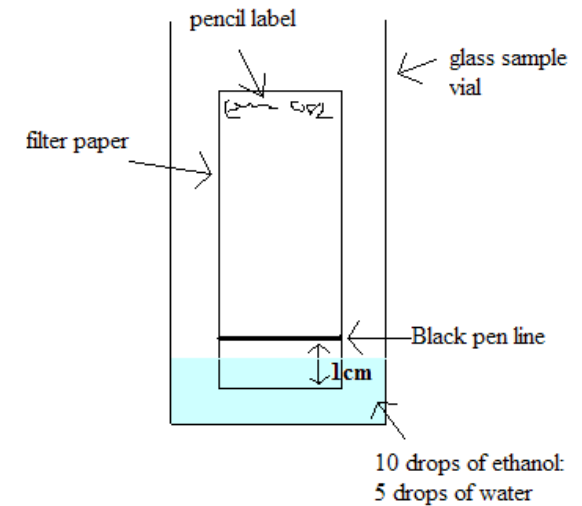
Sergeant's Ink

**To solve this case, the ink in the suspect's pens must be matched to the envelope. You will need:**

- 3 glass sample vials
- beaker of ethanol
- beaker of water
- 2 plastic pipettes
- 2 filter papers
- evidence number 080, 081 and 082
- scissors and a pencil

### Instructions:

1. Using the plastic pipette, squeeze the 'rugby ball' end and place into the water. Release your grip on the rugby ball to draw water up into the pipette.
2. By squeezing gently on the rugby ball, place 5 drops of water into each of the 3 glass vials.
3. Using the other pipette, place 10 drops of ethanol into each of the 3 vials.
4. Label each piece of filter paper at the top in pencil with the evidence numbers; 081 and 082.
5. GENTLY draw a line with the black evidence pen, 081 on the '081' labelled filter paper, 1cm from the bottom (SEE DIAGRAM).
6. Do the same with evidence no. 082 on the '082' labelled filter paper.
7. Carefully cut around the dotted pencil line on the envelope (evidence no. 080) with the scissors.
8. Place both filter papers and the piece cut from the envelope upright into the vials.
9. Wait at least 10 minutes and examine the colours.



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### QUESTIONING IN PROGRESS

- **What has happened on the filter paper?**
- **Write down which colours have been extracted from each piece of evidence.**
- **Do the colours produced by evidence 080 (the envelope) match the colours produced by one of the black pens 081 or 082?**
- **Which pen appears to have been used to write the address on the envelope?**
- **Is the evidence conclusive enough to accuse the owner of this pen?**