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An Algorithm for the Six Most Probable Causes of Fogging

(1) The sensitizer is already decomposed

(2) There is a hostile chemical in the paper, reducing the sensitizer

(3) The safelighting is inadequate under the conditions of working

(4) The mask or negative is not dense enough in its maximum value

(5) The wet chemistry is faulty, chemically reducing sensitizer

(6) The clearing procedure is inadequate, leaving residual iron, etc.

Compare a border region of the sensitized area – coated, but masked during exposure – with the margin of uncoated paper, and answer the following questions in sequence:-

Fog apparent on coating? YES → Sensitizer decomposed (1) or

NO ↓ Very hostile chemical in paper (2)

Fog appears during drying? YES → Fog if dried in total darkness?

NO ↓ YES ↓ NO ↓

Hostile chemical in paper (2) Bad safelight (3)

Fog apparent after exposure? YES → Mask/neg not dense enough (4) (POP)

NO ↓

Fog after wet processing? YES → Sensitizer decomposed (1) (DEV) or

Faulty safelight (3) (DEV) or

NO ↓ Mask/neg not dense enough (4) (DEV) or

Wet chemistry faulty (5)

Stain of sensitizer after wash? YES → Clearing procedure inadequate (6)

NO ↓

Stain in uncoated areas of paper? YES → Wet chemistry contaminated (5)

Notes

It is important to distinguish Fog (unwanted residual image substance) from Stain (unwanted other residual chemicals, especially ferric salts). These are usually distinguishable by different colours – the former grey, the latter yellow.

Fault (4) can be detected by including a small area of high UV blocking – 'Rubylith' – for comparison with the maximum density of the negative.

Some 'tests' depend on whether the process is print-out (POP) or development (DEV). *e.g.* Fogging due to a faulty safelight may not be visible until wet processing is complete, especially for development processes.