

S187_1 Activity 3 Completed Table

Name of technique	Type of fingerprint which can be visualised	Surface on which it is used	How the print is visualised
Acid black/acid violet/acid yellow	Contaminated with blood	Any surface for acid black and acid violet, non-porous only for acid yellow	Fluorescence in the presence of blood
Use of lasers/high intensity light	Contaminated grease, urine or coffee in sweat	Most surfaces	Fluorescence in the presence of contaminants
Gentian violet	Latent fingerprint contaminated with sweat	Prints on sticky tape, latex gloves	Colour change. Stains fatty components of sweat
Iodine fuming	Stains most fingerprints yellow-brown	Any	Colour change
Ninhydrin/DFO	Latent or bloody prints	Porous	Colour change. Ninhydrin stains amino acids in sweat and blood purple/DFO produces red fluorescent product
Physical developer (PD)	Latent prints	Wet porous substances especially paper	Redox reaction which produce visible silver grains
Powders e.g. grey aluminium powder, luminescent powder	Any latent prints	Hard, smooth surfaces	Adheres to grease and dirt left by most fingerprints. No chemical reaction; may be visualised by fluorescence
Radioactive sulphur dioxide gas	Any latent fingerprints	Various e.g. clean, fine fabric, adhesive tape, paper	Gas reacts with water component of fingerprint. Print is radioactive, visualised by autoradiography
Small particle reagent, containing MoS ₂	Prints on wet surfaces – but not very effective	Wet conditions, polystyrene	Colour change. Adheres to fatty components
Solvent Black 3	Latent prints on oily or greasy surfaces	Non-porous substances, especially metal and plastic	Colour change. Adheres to fatty components
Superglue fuming, then Basic Yellow	Latent prints	Non-porous substances – rubber, metals, electrical tape. Small samples only as a chamber needed for development	Polymerisation, then fluorescence. Water causes superglue to polymerise; then stained
Vacuum metal deposition	Most latent prints on small items	Smooth, non-porous substances e.g. polythene, glass	Physical adherence. Thin film of metal formed on latent print