Chemical Processing For Latent Prints

Chemical processing is best performed in a laboratory or controlled environment. Chemical processing involves safety considerations since the chemicals used may constitute a hazard. Personal protective equipment (PPE) must be worn at all times: gloves, eye protection, mask; use of a chemical hood is recommended.

Chemical	Surfaces	ALS	Filter	Result	CAUTIONS
Amido Black	Blood-contaminated impressions on light-color, non-porous surfaces	N/A — Stains proteins a **blue-black** visible to the unaided eye	N/A		Solvents used in preparation of the working solution can be flammable. Harmful if inhaled or contacts skin. Irritates skin, lungs, and eyes.
Basic Yellow	Applied after Cyanoacrylate Ester fuming on non-porous: • Glass • Metal • Shiny plastic	From **400nm UV** through **455nm Blue**	**Orange** or **yellow**		Solvents used in preparation of the working solution can be flammable. Toxic.
Cyanoacrylate Ester or Super Glue	Non-porous: • Glass • Metal • Shiny plastic Semi-porous: • Glossy paint • Waxed paper • Food containers	N/A — Prints develop a frosted white and may be visualized with oblique white light or further processed with a non-porous dye stain	N/A		Fumes are strong irritant to the lungs and eyes. Evidence should be developed in a sealed chamber.

Diazafluoren-9-one (DFO)	Porous: • Paper • Unfinished wood • Cardboard • Wall board	Prints develop **light pink** & may be fluoresced at **470nm Blue-Green**	**Orange**		Flammable. Harmful if swallowed and causes eye irritation.
Chemical	Surfaces	ALS	Filter	Result	CAUTIONS
Iodine	Light-color porous: • Paper • Unfinished wood • Wall board	N/A — Prints develop **brown** visible to the unaided eye	N/A		Fumes are highly toxic and should not be inhaled. Evidence should be developed in a ventilated and filtered safety hood.
Indanedione	Porous: • Paper • Unfinished wood • Cardboard • Wall board	**532nm Green**	**Orange** or **red**		Spray should not be inhaled. Evidence should be developed in a ventilated and filtered safety hood.
Leuco-Crystal Violet	• Sticky side of adhesive tapes • Blood-contaminated impressions • Porous surfaces	N/A — Prints develop **purple** visible to the unaided eye	N/A		Solvents used in preparation of the working solution can be flammable. Causes severe skin burns and eye damage.
Ninhydrin	Porous: • Paper • Unfinished wood • Cardboard • Wall board	N/A — Prints develop **purple** visible to the unaided eye	N/A		Solvents used in preparation of the working solution can be flammable. Causes skin irritation and serious eye irritation.

Rhodamine 6G	Applied after Cyanoacrylate Ester fuming on non-porous: • Glass • Metal • Shiny plastic	**UV** **495nmBlue-Green** to **540nm Green** **625nm Red**	N/A **Orange** or **red** **Red**		Solvents used in preparation of the working solution can be flammable. Harmful if inhaled or absorbed through skin.
Chemical	**Surfaces**	**ALS**	**Filter**	**Result**	**CAUTIONS**
Small particle reagent	Wet surfaces: • Beverage cans or bottles • Vehicles • Oxidized or galvanized metal • Sticky side of adhesive tapes	N/A — Use white or dark gray reagent to contrast with background surface color	N/A		Some skin irritation may develop with repeated exposure.
Sudan Black	• Plastic baggies • Waxy-coated drinking cups and plates • Food stuff–contaminated non- and semi-porous items • Greasy surfaces	N/A — Prints develop **dark blue** to **black** visible to the unaided eye	N/A		Solvents used in preparation of the working solution can be flammable. May cause eye, skin, or respiratory irritation.