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NOTES AND CONSIDERATIONS:

Forensic evidence (& the surfaces it's found on) have varying chemical & physical properties. The correct wavelength & goggles along with a dark environment are needed to view evidence. Camera filters can be substituted for a pair of goggles provided they are the same color/tint. The power of the light source will dictate how close the user needs to be to the evidence in order to see it. Stronger light sources enable the user to stand farther away while weaker light sources require the user to be closer in order to visualize evidence.

The chart below is a tool to help guide forensic searches. Primary & secondary wavelengths are listed for each type of evidence along with the best tools to use. In some cases, a tertiary wavelength or goggle may be needed to visualize evidence. For example: For detection of latent prints, a 495 nm light source and orange goggles should first be used. If unsuccessful, switch to yellow goggles. If still unsuccessful, switch to a 525 nm light source and use orange goggles followed by red goggles.

Evidence	Primary Light Source	Best Way To See	2nd Best Way To See	Secondary Light Source	Best Way To See	2nd Best Way To See
Accelerants: Oil, Gas, Turpentine	365-395 nm*			445-470 nm		
Area Search	White		—	—	—	—
Bite Marks	850 nm**		—	365-395 nm*		
Blood: Dried or Wet	445-470 nm			365-395 nm*		
Blood: Dried on Dark Clothing	850 nm**		—	—	—	—
Bone and Tooth Fragments	445-470 nm			365-395 nm*		
Bruising	365-395 nm*			850 nm**		—
Fibers and Hairs <i>Hairs, Fibers, Trace Evidence</i>	445-470 nm			365-395 nm*		
GSR: Gun Shot Residue	445-470 nm			850 nm**		—
Latent (Finger) Prints <i>Processed with Fluorescent Dye/Powder</i>	495 nm			525 nm		
Narcotics				365-395 nm*		
Serological / Body Fluids <i>Saliva, Semen, Sweat, Urine</i>	445-470 nm			365-395 nm*		
Shoeprints	White	—		—	—	—
Trace Evidence: Misc.	445-470 nm			365-395 nm*		
Questioned Documents	365-395 nm*			850 nm**		—














* Clear Goggles can be used as well.

** Must use with camera with infrared Capability (ex. Fuji IS-1). Evidence cannot be visualized with Goggles or with naked eye.

WAVELENGTH & GOGGLE COMBINATIONS TO VISUALIZE EVIDENCE

Notes and Considerations:

Combinations of different goggles and wavelengths are needed to see evidence. This is due to variations in the chemical and physical properties of the background and evidence itself. The list below indicates the order that goggles are most commonly used with specific wavelengths. For fire investigation, orange goggles should be used first followed by yellow.

Order of Use	365 nm 380 nm 395 nm	445 nm 450 nm 470 nm	495 nm	525 nm 532 nm	850 nm	White
First						
Second					—	—
Third		—			—	—

*Camera with Infrared capability is needed with IR light source. Evidence cannot be viewed with goggles.

**No goggles or filters are needed with white light.

Polycarbonate Wraparound Goggles

Features:

- Color and tint specific
- Fog-preventing air circulation slots
- UV 400--100% UV protection
- ANSI Z87.1
- Impact resistant



P/N 600-1050



P/N 600-1040



P/N 600-1030



P/N 600-1010



P/N 600-1020