Deviation Request Form (DRF)

Directions: The Initiator will complete Sections A through C. Additional continuation pages can be included if necessary.

Initiator	Leslie Daugherty	**Date**	9/1/2020

A. Requested deviation applies to (Technical Procedure – include specific section):

Technical Procedure for the use of the Cyanovac, Technical Procedure for Leuco Crystal Violet, Technical Procedure for Rhodamine 6G, Technical Procedure for the use of the Superglue Fuming Wands -3.0

B. Requested deviation:

Remove Ultra Lite ALS.

C. Necessity for the deviation:

No longer an available ALS.

D. Technical review and Authorization (to be completed by the Quality Manager and/or Technical Leader)
Comments(to include merits and impacts):

Approved	☑	Yes	☐	No	Duration	until processing procedure is approved
Signature	Leslie Daugherty Digitally signed by Leslie Daugherty DN: CN=Leslie Daugherty, E=ldaugherty@ncdoj.gov Reason: I am the author of this document Location: Date: 2020-09-01 12:15:23 Foxit PhantomPDF Version: 9.3.0				Date	9/1/2020

E. Quality Assurance Authorization (to be completed by the Quality Manager, Forensic Scientist Manager or designee)

Acceptable within general QA guidelines and good laboratory practice?	☑	Yes	☐	No
Significant negative impact to Crime Laboratory Quality System?	☐	Yes	☑	No

Restrictions/limitations:

☑	Authorized	☐	Rejected	Signature	Karen W. Morrow Digitally signed by Karen W. Morrow Date: 2020.09.01 15:51:39 -04'00'	Date	9.1.2020

Technical Procedure for the use of the Super Glue Fuming Wands

1.0 Purpose - This procedure is a non-porous development procedure.

2.0 Scope - This procedure is a step in the processing of non-porous evidence that may contain impressions that require developing/enhancing.

2.1 The Super Glue Fuming Wand polymerizes the latent impression using cyanoacrylate ester applied via the heating of cyanoacrylate ester by a portable butane heat wand. The Super Glue Wand offers a portable means of super gluing an item as well as an alternative method for processing large, stationary or bulky items of evidence. Numerous materials, including plastic bags, weapons, metals, and various other substrates, may be processed using the Super Glue Fuming Wand. Cyanoacrylate ester shall be used as a preliminary process when using subsequent processing techniques. Fluorescent dye staining, in conjunction with laser examinations, is dependent on the proper use of cyanoacrylate ester fuming techniques.

3.0 Definitions

- **Alternate light source -** Any of the multiple forensic light sources readily available in the Latent Evidence Section including, but not limited to, the CrimeScope, Mini-CrimeScope, TracER Laser, and Ultra-Lite ALS.
- **Ambient light -** Light that is readily available in the office environment (i.e., natural light or light that emanates from an office lighting source).
- **CE -** Cyanoacrylate ester, also known as super glue.
- **Super Glue Fuming Wand -** Any of the multiple, portable, fuming wand units that are used in the processing of non-porous items of evidence with the assistance of cyanoacrylate ester.

4.0 Equipment, Materials and Reagents

4.1 Equipment and Materials

- Super Glue Fuming Wand
- Isobutane fuel

4.2 Reagents

- Cyanoacrylate ester (Fuming Cartridge/Tip)

5.0 Procedure

5.1 Prior to the use of the Super Glue Fuming Wand, the Forensic Scientist shall familiarize himself/herself with the multiple buttons, levers, and windows that are present on the wand which include, but are not limited to, the following:

- Ignition Button
- On/Off Button
- Control Lever
- Fuel Window
- Fuel Refill Port
- Cartridge Extraction Tool

5.2 Fueling Procedure

5.2.1 Make sure the on/off button is in the off position.

5.2.2 With the nozzle of the refill can pointed down, press the nozzle into the refill port on the end of the wand handle. The gas will overflow the port when the wand is full.

5.2.3 Look at the window just below the control lever to see if the wand has been properly fueled. You should see a clear liquid through the window.

5.2.4 Move the on/off button to the on position and allow the isobutane to flow for two (2) seconds and turn to the off position.

5.3 Ignition Procedure

5.3.1 Set the lever at 4 and set the on/off button to the ON position.

5.3.2 Push the ignition button slowly and hold for approximately three (3) seconds after it clicks. Release the ignition button and look into the barrel of the heat tip. If the wand heat source is glowing, the system is ready for use. If there is no glow after the second attempt to ignite, continue to set the control lever to the next lowest setting until ignition is achieved.

5.3.3 Wand temperature can be controlled by moving the gas control toward the off position.

5.3.4 To turn the system off, move the on/off button to the OFF position until it clicks.

5.4 Latent Impression Development

5.4.1 After ignition of the wand is complete, grasp one (1) disposable fuming cartridge with the cartridge extractor tool. While pinching the disposable cartridge with the extractor tool, place the small end of the cartridge on the end of the fuming wand. Make sure it fits tightly to prevent it falling off during processing.

5.4.2 Within thirty (30) seconds, a cyanoacrylate ester vapor stream will begin to appear. Place the wand control lever at a setting that will produce a vapor stream that is approximately one half (1/2) to one (1) inch long before the vapor billows. The more heat applied, the more vapor produced.

5.4.3 Hold the fuming wand approximately six (6) to nine (9) inches from item to be processed. Do not hold the wand any closer in order to prevent over-fuming.

5.4.4 Pass the wand over the entire desired surface area while maintaining the distance described.

5.4.5 Once item has been fumed, allow it to dry.

5.4.6 Developed impressions shall either be recorded according to the Technical Procedure for Friction Ridge Analysis and Comparison or developed further using additional non-porous development techniques.

Note: Allow the unit to cool sufficiently prior to storing.

5.5 Standards and Controls - Forensic Scientists shall produce a self-made test print to be processed concurrently with items of evidence.

5.6 Calibration - See Super Glue Fuming Wand operating manual for further information on controls and specifications.

5.7 Sampling – N/A

5.8 Calculations - N/A

5.9 Uncertainty of Measurement - N/A

6.0 Limitations – The Super Glue Fuming Wand is for use in the processing of non-porous evidence.

6.1 The cyanoacrylate ester fuming process is vital to any subsequent treatment with fluorescent dyes and laser and/or alternate light source examinations (see Fluorescent Dyes and Laser/Alternate Light Sources).

7.0 Safety - Always wear gloves during the refueling procedure as skin contact with the isobutane may cause frostbite.

7.1 Never touch the fuming end of the wand during processing as the tip area becomes extremely hot.

7.2 Allow the unit to cool completely prior to removing spent cyanoacrylate ester tips and storing.

8.0 References

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9.0 Records - N/A

10.0 Attachments - N/A

Revision History		
Effective Date	Version Number	Reason
09/17/2012	1	Original Document
10/31/2013	2	Added issuing authority to header
03/30/2017	3	Header Update – Removed Digital reference.
01/19/2018	4	Updated issuing authority in header 5.4.1 & 5.5 - Moved requirement for test print to "Standards and Controls." 5.4.6 – Updated procedure reference.