



Latent Print Processing Test No. 16-5191 Summary Report

This test was sent to 130 participants. Each sample pack contained three pieces of simulated crime scene evidence. Participants were asked to process each piece for latent fingerprints and report their findings. Data were returned from 107 participants (82% response rate) and are compiled into the following tables:

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This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

Manufacturer's Information

Each sample pack consisted of three items of simulated crime scene evidence. Each item was divided into labeled sections and contained one latent fingerprint. The items consisted of a glossy photograph (Item 1), a paper resident notification (Item 2), and a plastic ziptop baggie (Item 3). Participants were asked to process each item for latent fingerprints, utilizing the method(s) deemed most appropriate for the substrate being examined.

SAMPLE PREPARATION-

New, unopened packages of glossy photo paper and copy paper were used for those samples that could not be cleaned. The nonporous plastic bag used in this test was cleaned with water and a paper towel before latent prints were applied. Each item was divided into sections labeled A, B, C, and D, as one print would be deposited in only one of the four sections. For each item, either an acid or lipid enhancer was applied to the depositing individual's finger to assist in the longevity of the print. Each print was deposited straight down and firmly onto the substrate. A randomly selected group of samples were processed in-house to confirm the location and viability of the deposited prints before shipping to participants.

SAMPLE PACK ASSEMBLY-

Each item was packed into its pre-labeled item envelope. Following predistribution testing, each item envelope was sealed with evidence tape and initialed with "CTS". These were then placed into a sample pack box and sealed with packaging tape.

VERIFICATION-

Predistribution examiners were able to recover ridge detail in the expected section of each item.

| <u>Item Number</u> | <u>Test Samples</u> | <u>Enhancer Used</u> | <u>Print Location</u> | <u>Pattern Detail</u> |
|--------------------|-----------------------|----------------------|-----------------------|-----------------------|
| 1 | glossy photograph | oil + acid | D | whorl |
| 2 | resident notification | acid | B | whorl |
| 3 | plastic baggie | oil | C | whorl |

Summary Comments

Each sample pack contained three items of evidence to be processed for latent prints: a glossy photograph (Item 1), a paper resident notification (Item 2), and a zip-top plastic baggie (Item 3). Each item was divided into four sections, which were labeled with the letters A-D. Participants were asked to determine which of the four sections contained a latent print on each piece of evidence. (Refer to the Manufacturer's Information for preparation details).

Due to the tenuous nature of latent fingerprints, it was expected that some participants may not be successful with the recovery of the deposited print on each item. Participants who did not develop a print on an item were therefore not flagged as outliers to the consensus.

Of the 107 participants, 91 (85%) were able to successfully recover a print in the expected section for all three items. For Item 1, all 107 participants located the print in section "D". For Item 2, 92 of 107 participants (86%) located the print in section "B". Fourteen participants (13%) were not able to recover the print on the item, and one participant located a print in section "C". For Item 3, 105 of 107 participants (98%) located the print in section "C". The remaining two participants recovered the print in a different section – one participant identified a print in section "B", and the other participant found the print in section "D".

Summary statistics for the reported development and preservation methods were calculated for each item at the end of each methods table. The techniques included in the summaries are the preloaded options from the CTS Web Portal, and do not reflect every answer provided by participants. These running totals are cumulative for each item; therefore, if a participant listed the same technique multiple times for one item, each occurrence was added into the final total.

A majority of participants reported performing some type of nondestructive visual examination prior to conducting chemical development on each item. Additionally, photography was the predominantly utilized preservation method across all three items.

For print development on the glossy photograph (Item 1), a majority of participants used either cyanoacrylate fuming (reported 92 times) or powder dusting (94), or a combination thereof. Due to the glossy, semi-porous nature of the photograph, some labs elected to follow up the cyanoacrylate fuming with porous processing techniques like ninhydrin (23) or DFO (18). More participants attempted to lift the recovered print from the Item 1 photograph than did for the other two items provided in the test, with 39 reported instances.

For print development on the porous resident notification (Item 2), ninhydrin was the predominantly reported processing technique (reported 98 times). Many participants preceded their ninhydrin treatment with DFO (42) to improve the chances of ridge development. The use of an alternate light source was commonly reported in conjunction with these two methods (35).

For development of prints on the nonporous plastic baggie (Item 3), participants relied heavily on cyanoacrylate (CA) fuming (reported 100 times). The CA treatment was frequently followed by a dye stain treatment (61) as a means to enhance the visibility of the developed ridge detail on the clear baggie. An alternate light source (44) was used both before and after the CA treatment by some participants.

For participants who reported observing first level detail in the prints on all three items, the development of the latent prints was usually sufficient for the ridge pattern of each print to be identified. The Item 2 resident notification had the fewest pattern identifications, which mirrors the lesser success of the print development process for this item. Some participants do not perform print pattern analysis in their routine casework and, as such, reported "N/A" to the pattern type question; therefore, no official consensus is established for any of the items. For those who identified pattern types, the most common responses for each item were: Item 1 – Whorl; Item 2 – Whorl; Item 3 – Whorl. The most frequent response for each item corresponds to the expected results for pattern reporting.

Print Location

TABLE 1 - Item 1

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| 27EQX9 | D | 7WRH3Y | D | B4CAD9 | D |
| 2DYNNG | D | 84VMRX | D | BD4Q6X | D |
| 3LQQ6H | D | 86LQL6 | D | BN9F89 | D |
| 3V98V4 | D | 86NFMG | D | C32P6X | D |
| 437C6Y | D | 8X7826 | D | CBBUF4 | D |
| 44KLDZ | D | 93TEY4 | D | DAFTRQ | D |
| 4JBNU4 | D | 987Z8B | D | DBALMA | D |
| 62A28B | D | 9NAV3U | D | DHTM8T | D |
| 67HLQ2 | D | 9X28GV | D | E2EZW3 | D |
| 6CCGTA | D | A8K3V2 | D | EFJY3N | D |
| 6HDX4F | D | A9XD89 | D | EJJAZ9 | D |
| 6J7N9U | D | AB33C3 | D | ET6E7M | D |
| 6VN778 | D | AD7ZJP | D | FANPA2 | D |
| 6ZG6K3 | D | ATJ8YU | D | FCHB3R | D |
| 78DL8D | D | AUXT9W | D | G7M3XN | D |
| 7DH7TW | D | B38GLV | D | GAHWQJ | D |

TABLE 1 - Item 1

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| GBHWT6 | D | NCAZLD | D | U7FAKA | D |
| GHC6AP | D | NM9WLU | D | UPUUFRR | D |
| HLTNW6 | D | NMTFPF | D | V4Q4ZD | D |
| HPWHRN | D | NTWJGY | D | V92GFQ | D |
| HQAUUY | D | NWWPXQ | D | VHATYE | D |
| HV2YLH | D | NXRBBM | D | VRZE28 | D |
| J26KQQ | D | NXRBRG | D | VY2Q2A | D |
| JKFCTT | D | NY48WL | D | W89MK8 | D |
| JM6JDP | D | NYYN9J | D | WAE998 | D |
| JNET42 | D | PGVFQB | D | WJ29KB | D |
| K2WXQN | D | QMFT7N | D | WKD36G | D |
| KPM6JH | D | QP7WYV | D | WTPZAN | D |
| M3LTNG | D | R7Q82N | D | WW33VJ | D |
| M6RBPX | D | RR8KRQ | D | WXXMK6 | D |
| M7NLML | D | T78HFM | D | XE2GR4 | D |
| MBWAZN | D | THYAZR | D | YK6LG3 | D |
| NBT8NN | D | TJ9EBU | D | YN4WEN | D |

TABLE 1 - Item 1

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| YNM3A8 | D | | | | |
| YQCAYB | D | | | | |
| Z4W964 | D | | | | |
| ZC8BNJ | D | | | | |
| ZEB76Z | D | | | | |
| ZLXYGZ | D | | | | |
| ZN6C39 | D | | | | |
| ZTUTEY | D | | | | |

| | | |
|-------------------------|-------|-------------------------|
| Response Summary | | Total Participants: 107 |
| Location | Total | |

| | |
|------|-----|
| A | 0 |
| B | 0 |
| C | 0 |
| D | 107 |
| None | 0 |

TABLE 1 - Item 2

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| 27EQX9 | B | 84VMRX | B | BN9F89 | None |
| 2DYNNG | B | 86LQL6 | None | C32P6X | B |
| 3LQQ6H | B | 86NFMG | None | CBBUF4 | B |
| 3V98V4 | B | 8X7826 | B | DAFTRQ | B |
| 437C6Y | B | 93TEY4 | B | DBALMA | B |
| 44KLDZ | B | 987Z8B | B | DHTM8T | B |
| 4JBNU4 | None | 9NAV3U | B | E2EZW3 | B |
| 62A28B | B | 9X28GV | B | EFJY3N | B |
| 67HLQ2 | None | A8K3V2 | B | EJJAZ9 | B |
| 6CCGTA | B | A9XD89 | B | ET6E7M | B |
| 6HDX4F | None | AB33C3 | B | FANPA2 | C |
| 6J7N9U | B | AD7ZJP | B | FCHB3R | None |
| 6VN778 | B | ATJ8YU | B | G7M3XN | B |
| 6ZG6K3 | B | AUXT9W | B | GAHWQJ | None |
| 78DL8D | B | B38GLV | B | GBHWT6 | B |
| 7DH7TW | B | B4CAD9 | B | GHC6AP | B |
| 7WRH3Y | B | BD4Q6X | B | HLTNW6 | B |

TABLE 1 - Item 2

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| HPWHRN | B | NTWJGY | B | V92GFQ | B |
| HQAUUY | B | NWWPXQ | B | VHATYE | B |
| HV2YLH | None | NXRBBM | B | VRZE28 | B |
| J26KQQ | B | NXRBRG | B | VY2Q2A | B |
| JKFCTT | B | NY48WL | B | W89MK8 | B |
| JM6JDP | B | NYYN9J | None | WAE998 | B |
| JNET42 | B | PGVFQB | B | WJ29KB | B |
| K2WXQN | B | QMFT7N | B | WKD36G | B |
| KPM6JH | B | QP7WYV | B | WTPZAN | B |
| M3LTNG | B | R7Q82N | B | WW33VJ | B |
| M6RBPX | B | RR8KRQ | B | WXXMK6 | B |
| M7NLML | B | T78HFM | B | XE2GR4 | B |
| MBWAZN | B | THYAZR | B | YK6LG3 | B |
| NBT8NN | None | TJ9EBU | B | YN4WEN | B |
| NCAZLD | B | U7FAKA | None | YNM3A8 | B |
| NM9WLU | B | UPUUFU | B | YQCAYB | B |
| NMTFPF | B | V4Q4ZD | None | Z4W964 | B |

TABLE 1 - Item 2

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| ZC8BNJ | B | | | | |
| ZEB76Z | None | | | | |
| ZLXYGZ | B | | | | |
| ZN6C39 | B | | | | |
| ZTUTEY | B | | | | |

| Response Summary | | Total Participants: 107 |
|------------------|-------|-------------------------|
| Location | Total | |

| | |
|------|----|
| A | 0 |
| B | 92 |
| C | 1 |
| D | 0 |
| None | 14 |

TABLE 1 - Item 3

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| 27EQX9 | C | 84VMRX | C | BN9F89 | C |
| 2DYNNG | C | 86LQL6 | C | C32P6X | C |
| 3LQQ6H | C | 86NFMG | C | CBBUF4 | C |
| 3V98V4 | C | 8X7826 | C | DAFTRQ | C |
| 437C6Y | C | 93TEY4 | C | DBALMA | C |
| 44KLDZ | C | 987Z8B | C | DHTM8T | C |
| 4JBNU4 | C | 9NAV3U | C | E2EZW3 | C |
| 62A28B | C | 9X28GV | C | EFJY3N | C |
| 67HLQ2 | C | A8K3V2 | C | EJJAZ9 | C |
| 6CCGTA | C | A9XD89 | C | ET6E7M | C |
| 6HDX4F | C | AB33C3 | C | FANPA2 | B |
| 6J7N9U | C | AD7ZJP | C | FCHB3R | C |
| 6VN778 | C | ATJ8YU | C | G7M3XN | C |
| 6ZG6K3 | C | AUXT9W | C | GAHWQJ | C |
| 78DL8D | C | B38GLV | C | GBHWT6 | C |
| 7DH7TW | C | B4CAD9 | C | GHC6AP | C |
| 7WRH3Y | C | BD4Q6X | C | HLTNW6 | C |

TABLE 1 - Item 3

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| HPWHRN | C | NTWJGY | C | V92GFQ | C |
| HQAUUY | C | NWWPXQ | C | VHATYE | C |
| HV2YLH | C | NXRBBM | C | VRZE28 | C |
| J26KQQ | C | NXRBRG | C | VY2Q2A | C |
| JKFCTT | C | NY48WL | C | W89MK8 | C |
| JM6JDP | D | NYYN9J | C | WAE998 | C |
| JNET42 | C | PGVFQB | C | WJ29KB | C |
| K2WXQN | C | QMFT7N | C | WKD36G | C |
| KPM6JH | C | QP7WYV | C | WTPZAN | C |
| M3LTNG | C | R7Q82N | C | WW33VJ | C |
| M6RBPX | C | RR8KRQ | C | WXXMK6 | C |
| M7NLML | C | T78HFM | C | XE2GR4 | C |
| MBWAZN | C | THYAZR | C | YK6LG3 | C |
| NBT8NN | C | TJ9EBU | C | YN4WEN | C |
| NCAZLD | C | U7FAKA | C | YNM3A8 | C |
| NM9WLU | C | UPUUFR | C | YQCAYB | C |
| NMTFPF | C | V4Q4ZD | C | Z4W964 | C |

TABLE 1 - Item 3

| WebCode | Location | WebCode | Location | WebCode | Location |
|---------|----------|---------|----------|---------|----------|
| ZC8BNJ | C | | | | |
| ZEB76Z | C | | | | |
| ZLXYGZ | C | | | | |
| ZN6C39 | C | | | | |
| ZTUTEY | C | | | | |

| | | |
|-------------------------|-------|-------------------------|
| Response Summary | | Total Participants: 107 |
| Location | Total | |

| | |
|------|-----|
| A | 0 |
| B | 1 |
| C | 105 |
| D | 1 |
| None | 0 |

Development Methods

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| 27EQX9 | Visual Examination | |
| | Cyanoacrylate Fuming | temp 120, processing time 8 minutes |
| | Powder Dusting | magnetic black powder |
| 2DYNNG | Visual Examination | white light, visible fingermark |
| | Cyanoacrylate Fuming | 10 minutes fuming time, visible fingermark |
| | Dye Stain | Basic Yellow 40, visible fingermark |
| | Powder Dusting | |
| 3LQQ6H | Visual Examination | |
| | Powder Dusting | |
| 3V98V4 | Visual Examination | Naked eye |
| | Alternate Light Source | RUVIS |
| | Cyanoacrylate Fuming | Lumicyano |
| 437C6Y | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Powder Dusting | Magnetic powder |
| | DFO | |
| | Ninhydrin | |
| | Dye Stain | |
| | Physical Developer PD | |
| 44KLDZ | Visual Examination | Mark down general appearance / size |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Alternate Light Source | BMT and UV (Neg) |
| | Cyanoacrylate Fuming | Out of Stock - wait for shipment (did not arrive in time) |
| | Dye Stain | Did not proceed to do without cyanoacrylate fuming first |
| | Alternate Light Source | Did not proceed to do without dye stain |
| | Powder Dusting | Black powder and fiberglass brush |
| 4JBNU4 | Visual Examination | |
| | Cyanoacrylate Fuming | 10 min., 80% humidity |
| | 1,2-Indanedione | 60 min, 50 degrees C, no added humidity |
| 62A28B | Visual Examination | White light |
| | Powder Dusting | Dusting took 2 min |
| 67HLQ2 | Visual Examination | |
| 6CCGTA | Visual Examination | White light |
| | Cyanoacrylate Fuming | Processing time 10 minutes, cabinet set on 80 RH%, glueplate set on 120 degrees. 2 grams of glue used. |
| | Powder Dusting | Magna-jet black |
| 6HDX4F | Powder Dusting | 15 minutes |
| 6J7N9U | Visual Examination | ambient/conventional white light (reflective surface) |
| | Cyanoacrylate Fuming | Misonix-CA6000 chamber; 7:00 min. fuming cycle |
| | DFO | Caron Environmental Chamber; 100°C, 0% RH; 20:00 min |
| | Ninhydrin | Caron Environmental Chamber; 80°C, 65% RH; 2:00 min |
| | Physical Developer PD | Sirchie Pre-Mixed solutions; 15:00 min processing time |
| 6VN778 | Visual Examination | No latents visible. |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|----------------------------------|---|
| | Cyanoacrylate Fuming | No latents visible. |
| | Powder Dusting | Red-wop fluorescent powder. Latent print visible, need further enhancement. |
| | Alternate Light Source | Latent print of possible value developed and photographed (quadrant D). |
| 6ZG6K3 | Visual Examination (white light) | |
| | Superglue | Temperature: 120°C, humidity: 77.9, processing time: 7 minutes |
| | Basic Yellow 40 | |
| 78DL8D | Cyanoacrylate Fuming | 15 min fume at 80% R.H. |
| | Mag Powder | |
| 7DH7TW | Visual Examination | Ambient light and 532nm Laser with orange goggles |
| | Cyanoacrylate Fuming | Room temp, 80% humidity for ~9min |
| | DFO | Applied chemical, dried, heated at 100 degC for 20 min |
| | Ninhydrin | Applied chemical, dried, heated at 80 deg C with 65% humidity for ~2 min |
| | Physical Developer PD | Applied in steps, rinsed, dried |
| 7WRH3Y | Visual Examination | oblique lighting |
| | Cyanoacrylate Fuming | vacuum chamber at 37oC vapor release temp 82oC for 45 min fume. cure 30 min |
| | 1,2-Indanedione | with ZnCl in Pet ether: saturated front and back. let sit 2 hrs. view with laser 532nm with orange filter |
| | Ninhydrin | in Pet ether: saturated front and back, let sit 24hrs, viewed with visible light |
| | Powder Dusting | gentle dusting. viewed with visible light |
| 84VMRX | Photography: Printed 1:1 | Photographed visible latent prior to any chemical or powder processing |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Cyanoacrylate Fuming | Humidity Cycle for 15 min to reach 80% RH; Glue Cycle for 10 min @ 120 deg C; Purge Cycle for 20 min |
| | Dye Stain | MBD dye stain applied with squirt bottle, allow to dry, visualize with ALS (blue light 430-470 nm and yellow filter GG495, 476 nm) |
| | Powder Dusting | Magnetic Powder applied with a magnetic brush until ridge detail developed |
| 86LQL6 | Visual Examination | |
| | Cyanoacrylate Fuming | 20 minutes after humidity level was ready |
| | Visual Examination | |
| | Powder Dusting | fluorescent fingerprint powder, red wop |
| | Visual Examination | ALS |
| | Ninhydrin | on the back of the photograph |
| | Visual Examination | |
| 86NFMG | Visual Examination | |
| | Alternate Light Source | used 365nm, 450nm, and 532nm |
| | Cyanoacrylate Fuming | used 2gm cyanoacrylate |
| | Visual Examination | |
| | Alternate Light Source | 254nm |
| | Powder Dusting | magnetic powder |
| | DFO | 100 degrees F for 20 minutes |
| | Ninhydrin | 76% humidity, 76 degrees F for 15 minutes |
| | Dye Stain | R6G, Ardrex, and MBD |
| | Alternate Light Source | used 365nm, 450nm, and 532nm |
| 8X7826 | Visual Examination | With magnifier |
| | Alternate Light Source | ALS and LASER |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|--------------------------|--|
| 93TEY4 | Visual | |
| | Cyanoacrylate | Safefume 48S CA chamber for 12 minutes at 80% humidity |
| | Magnetic White Powder | |
| 987Z8B | First Visual | Use the PL500 and also the Polilight Flare +2 using the white light mode. Spot a possible fingerprint. |
| | Anti Stoke Lazer Viewing | Using ASV magnetic powder to enhance the spotted latent on the multicoloured frontside of exhibit. |
| | Fluorescence | Using fluorescence on the backside of semi-glossy surface at the powder downflow bench. |
| | PoliCyano | 5g PoliCyano by using the MVC 3000 cabinet @ 25 min glue time & 230°C temp. |
| 9NAV3U | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | fuming time 7 min 25 sec |
| | Powder Dusting | |
| 9X28GV | Cyanoacrylate Fuming | 80% humidity 10 minute glue time |
| | Dye Stain | MBD Dye Stain |
| | Powder Dusting | Standard Black Powder |
| | Powder Dusting | Black Magnetic Powder |
| A8K3V2 | Visual Exam | |
| | Cyanoacrylate Fuming | 73°F/ 53% RH, 10 minutes fuming time |
| | Black Magnetic Powder | |
| A9XD89 | Visual Examination | |
| | Cyanoacrylate Fuming | 15 minutes development time |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Powder Dusting | Magna Jet Black |
| AB33C3 | ambient light | |
| | Alternate Light Source | Green and blue channels of laser |
| | Cyanoacrylate Fuming | Fuming chamber, 11 minutes |
| | Powder Dusting | black magnetic powder |
| AD7ZJP | Visual Examination | Impression observed |
| | Cyanoacrylate Fuming | |
| ATJ8YU | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Magnetic Powder | |
| | DFO | |
| | Ninhydrin | |
| | RAM | |
| | Physical Developer PD | |
| AUXT9W | Visual | 112916 @ 1045, photo 001-1 |
| | CA | 112916 @ 1152, photo 001-1-1 |
| B38GLV | Visual Examination | under white light |
| | Cyanoacrylate Fuming | under vacuum, fume ~45m, cure~60m |
| | 1,2-Indanedione | with ZnCl in pet ether: sprayed, air dried & viewed with orange goggles under 532nm laser |
| | Ninhydrin | in pet ether: sprayed, air dried, ninhydrine heat chamber~10m (175oF, small amt h2o) view under white light |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|---|---|
| | Dye Stain | Rhodamine 6G in methanol: sprayed, air dried, viewed with orange goggles under 532nm laser |
| | Powder Dusting | Bichromatic powder: brushed on, viewed under white light, lifted |
| B4CAD9 | Visual Examination | Examined the evidence in the presence of white Light |
| | Alternate Light Source | Examined the evidence in the presence of two light sources 445nm and 532nm |
| | Cyanoacrylate Fuming | Following condition used for Fuming: Humidifying for 15min and attained 80% Humidity then Glue time was 15 min under Temperature of 120degC |
| | Visual Examination | Examined the fumed evidence in the presence of white Light |
| | Powder Dusting | Yellow Fluorescent Powder used to powder the evidence |
| BD4Q6X | Visual Examination | Visual with magnifier using ALS & Laser |
| | Cyanoacrylate Fuming | |
| | Visual Examination | Visual with magnifier using ALS |
| | Powder Dusting | Black magnetic powder |
| | Visual Examination | Visual with magnifier |
| BN9F89 | 1st visual examination | Poliflare light source of various wave lengths range are utilised to search for prints on exhibits. |
| | Polycyano UV | MVC 3000 chamber at 230°C for 25 min. |
| | Fingerprint powder: Orange Fluorescent powder | Performed on the downflow bench using Poliflare light source of 450nm and orange goggles. |
| C32P6X | Visual Examination | |
| | Cyanoacrylate Fuming | 10 min fuming time |
| | Powder Dusting | carbon black powder |
| CBBUF4 | Visual Examination | |
| | Cyanoacrylate Fuming | ~120°C, ~75% relative humidity, timed auto |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|----------------------|--|
| | Dye Stain | R.A.M. |
| | Powder Dusting | White powder |
| DAFTRQ | Visual Examination | Laser 532 nm 577nm , Episcopal white light, crimescope |
| | Lumicyano | Lumicyano CST, 120°C , 30 min fumigation |
| | Powder Dusting | Magnétic Powder |
| | 1,2-Indanedione | 165°C for 10 seconds |
| | Ninhydrin | 5 days waiting |
| DBALMA | Powder Dusting | Blue Magnetic Powder. Item 1 - developed latent in Q-D. |
| DHTM8T | Visual Examination | white light, UV - 555nm - Polilight PL500, suitable googles |
| | Cyanoacrylate Fuming | processing time - 15 minutes, humidity - 80% |
| | Visual Examination | white light |
| | Powder Dusting | Mag. Black Ruby |
| | Visual Examination | white light, UV |
| E2EZW3 | Powder Dusting | 13.00 - 14.00 +26C |
| | Visual Examination | |
| EFJY3N | Visual Examination | White Light - Oblique |
| | Cyanoacrylate Fuming | Labconco CAPture BT Chamber, 1.5g Cyanoacrylate, 80% humidity, 10 min fume time, CA heat 250 degrees F |
| | Powder Dusting | Magnetic Powder |
| EJJAZ9 | Visual Examination | Found LP prior to additional processing. |
| | Powder Dusting | Black Magnetic Powder |
| | Visual Examination | No additional LP's found. |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| ET6E7M | Visual Examination | 10 min |
| | Ruvis | 35 min |
| | Cyanoacrylate Fuming | 15 min |
| | Flourescent Powder | 10 min |
| | Alternate Light Source | 10 min |
| | Powder Dusting | 15 min |
| FANPA2 | Cyanoacrylate Fuming | 8 min, 80 % humidity |
| | Dye Stain | Basic Yellow 40 |
| FCHB3R | Visual Examination | A visual examination was done with CrimeLiteML with white light and 1.8x magnification. Approximately 2 minutes. |
| | Cyanoacrylate Fuming | Fuming was done in a Foster + Freeman MVC3000 chamber set to 120 degrees Celcius and 80% RH. Approximately 45 minutes. |
| | Powder Dusting | Magnetic powder dusting. Item was dusted with magnetic powder at room temperature. Approximately 5 minutes |
| G7M3XN | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Powder Dusting | magnetic |
| | DFO | |
| | Ninhydrin | |
| | Dye Stain | RAM |
| | Physical Developer PD | |
| GAHWQJ | Visual Examination | Done on 10/21/2016 - viewed under normal lighting -sent to photo |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Cyanoacrylate Fuming | Done on 10/21/2016 - AirScience Chamber: 80% humidity, temperature 22 degrees Celcius/72 degrees Fahrenheit; 30 minute glue time, 30 minute purge cycle; sent to photo |
| | Powder Dusting | Done on 11/15/2016; White magnetic powder on front; black magnetic powder on back - sent to photo |
| | Ninhydrin | Done on 11/18/2016, applied by spray bottle; placed in humidity chamber: temperature 38.7 degrees Celcius, 71.8 RH |
| GBHWT6 | Visual Examination | |
| | Alternate Light Source | 365nm (long wave UV), 455nm, 532nm (LASER) |
| | Cyanoacrylate Fuming | 70% relative humidity, fuming time 1:30, 10:00 purge |
| | Alternate Light Source | RUVIS (short wave UV - 254nm) |
| | Powder Dusting | black magnetic powder |
| | DFO | 20 min in dry oven |
| | Alternate Light Source | 532nm (LASER) |
| | Ninhydrin | 5-15 min in humidity chamber at 76 degrees C and 76% relative humidity |
| | Dye Stain | RAM (Rhodamine 6G, Ardrex, MBD) |
| | Alternate Light Source | 365nm (long wave UV), 455nm, 532nm (LASER) |
| GHC6AP | Visual Examination | |
| | Cyanoacrylate Fuming | Relative humidity: 80% |
| | Powder Dusting | Magnetic powder |
| | DFO | temperature: 100C. Processing time: 10 min |
| | Ninhydrin | Temperature: 80C. Relative humidity: 65%. Processing time: 5 min |
| | Physical Developer PD | Processing time: 10 min |
| | Dye Stain | Basic Yellow 40 |
| HLTNW6 | Cyanoacrylate Fuming | 01/11/2016 in at 12pm. Lab temp = 21.5C. MVC3000 RH=79 |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|----------------------|---|
| | Dye Stain | 2/11/2016. 10.30am |
| | Crystal Violet | 3/11/2016. 8-9am |
| | Sudan Black | 3/11/2016. 9.30-10.15am |
| | Powder Dusting | 3/112016. 12-1.30pm |
| HPWHRN | Visual Examination | under normal lighting conditions |
| | Cyanoacrylate Fuming | vacuum fume 60min, cure 30min |
| | 1,2-Indanedione | with ZnCl in pet ether: saturated photo,air dried,view under laser 532nm with orange filter |
| | Ninhydrin | in pet ether: saturated photo, air dried, placed in ninhydrin chamber until control developed purple test print |
| | Dye Stain | Rhodamine 6G in methanol: saturated photo, air dried, view under laser 532nm with orange filter |
| | Powder Dusting | bichromatic powder: dusted photo and viewed under normal lighting conditions |
| | Powder Dusting | black powder: dusted and viewed under normal lighting conditions |
| HQAUUY | Cyanoacrylate Fuming | 75 % humidity, 9 min |
| | Dye Stain | Basic Yellow 40 |
| HV2YLH | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | MRM1- | |
| | Magna Powder | |
| | Basic Yellow | |
| | Water Rinse | |
| J26KQQ | Cyanoacrylate Fuming | 80% humidity, 7 minute fume time |
| | Powder Dusting | Black Magnetic Powder |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Dye Stain | Rhodamine 6G |
| | Alternate Light Source | 495nm, Orange goggles |
| JKFCTT | Visual Examination | Available light/flashlight, Tracer Laser (532nm), Crimescope ALS (350-515nm) |
| | Powder Dusting | Black magnetic powder |
| | Powder Dusting | Black powder |
| JM6JDP | Visual Examination | Examined for visible latent prints |
| | Alternate Light Source | Examined for visible latent prints |
| | Cyanoacrylate Fuming | Fumed in Misonix CA-6000, approximately 3 grams cyanoacrylate at 80% humidity for 13 minutes. |
| | Dye Stain | R6G in methanol carrier, applied with wash bottle |
| | Powder Dusting | Black magnetic powder applied with magnetic wand |
| JNET42 | Visual Examination | |
| | Alternate Light Source | UV-365nm, 455nm, LAS-532nm |
| | Cyanoacrylate Fuming | 2 grams |
| | Visual Examination | |
| | Alternate Light Source | RUVIS-254nm |
| | Powder Dusting | Magnetic Powder |
| | DFO | 20 minutes @ 99F |
| | Ninhydrin | 15min @ 76F and 76%RH |
| | Dye Stain | R6G, Ardrex, MBD |
| | Alternate Light Source | UV-365nm, 455nm, LAS-532nm |
| K2WXQN | Visual Examination | White Low Angle Light. Print visible in quadrant "D". Photo obtained. |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Alternate Light Source | Low Angle 555 nm filter. Print visible in quadrant "D". Photo obtained. |
| | Cyanoacrylate Fuming | 30 Minutes @ 80% humidity. Print visible in quadrant "D". Photo obtained. |
| | Powder Dusting | Magnetic Powder. Print visible in quadrant "D". Photo obtained. Lift obtained after photo. |
| KPM6JH | Visual Examination | |
| | Cyanoacrylate Fuming | 30 drops of glue; 12 minutes of fuming |
| | Powder Dusting | Magnetic powder |
| | DFO | 20 minutes at 100 degrees Celsius |
| | Ninhydrin | 2 minutes at 80 degrees Celsius and 65% humidity |
| M3LTNG | Powder Dusting | Use of virgin magnetic powder and wand. |
| M6RBPX | Visual Examination | |
| | Cyanoacrylate Fuming | 10 mins |
| | Powder Dusting | Disposable brush and black powder applied |
| M7NLML | Visual Examination | Looked at under white light and laser (532 nm) with orange goggles |
| | Cyanoacrylate Fuming | Superglued in a CA-6000 superglue chamber at 80% humidity. Looked at under white light when complete |
| | Dye Stain | Rhoadmine 6G. Looked at under 532nm laser with orange goggles |
| | Powder Dusting | Used black powder and then examined under white light |
| MBWAZN | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | Powder Dusting | magnetic powder & black powder |
| NBT8NN | Visual Inspection | |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|-----------------------|--|
| | CA - Cyanoacrylate | 35 drops of CA in chamber for 12 minutes with 80% humidity |
| | Standard White Powder | Brushed on |
| NCAZLD | Visual Examination | Light and Magnification |
| | Cyanoacrylate Fuming | 80% Humidity, 15 minutes |
| | Powder Dusting | Magnetic Powder |
| | DFO | 100 degrees C, 20 minutes |
| | Ninhydrin | 80 degrees C, 70% humidity, 20 minutes |
| | Dye Stain | Ardrox |
| NM9WLU | Visual examination | white light and fluorescence examination 350-650nm |
| | Cyanoacrylate Fuming | processing in fuming cabinet for 15 min., heat superglue to about 120°C and humidity 75% Rh, exam with white light |
| | Fluorescence powder | examination in UV light |
| NMTFPF | Visual Examination | Oblique lighting. |
| | Powder Dusting | Magnetic powder. |
| NTWJGY | Cyanoacrylate Fuming | 6/11/2016 8.00 - 9.40am. RH =79. MVC3000 |
| | Dye Stain | BY40. 6/11/2016. 10am |
| | Crystal Violet | 6/11/2016 1.30am |
| | Sudan Black | 6/11/2016 11.50am |
| | Powder Dusting | Black powder. 6/11/2016 1pm |
| NWWPXQ | Visual Examination | White ambient light, ALS alternate light source, good quality print was detected. |
| | Cyanoacrylate Fuming | A small improvement of the print. |
| | Powder Dusting | Black magnetic powder enhanced the existing print. |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | DFO | ALS alternate light source (green light, 500 - 550 nm). No print was visualized. |
| | Ninhydrin | No improvement of the print. |
| NXRBBM | Vis | Ambient Light |
| | Superglue Fuming | RH 72%, hot plate, 10 min in Air Science Chamber |
| | Magnetic Pdr | Grey mag pdr |
| NXRBRG | Visual Examination | |
| | Alternate Light Source | UV, LASER, CRIMESCOPE |
| | Cyanoacrylate Fuming | RUVIS |
| | MAGNETIC POWDER | |
| | DFO | |
| | Ninhydrin | |
| | Dye Stain | RAM |
| | Physical Developer PD | |
| NY48WL | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | Powder Dusting | |
| NYYN9J | Visual Examination | The item was examined for a couple of minutes, how to process the item was determined and information about the surface was recorded. |
| | Photocopied | The item was photocopied to preserve the look of the item in case the item was damaged or destroyed during examination. |
| | Cyanoacrylate Fuming | The item was placed inside cyanoacrylate chamber with cyanoacrylate ester in a disposable tray for approximately 45 minutes. |
| | Powder Dusting | The item was dusted with black magnetic powder for approximately 5 minutes for the finger print to develop. |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| PGVFQB | Cyanoacrylate Fuming | Item #1 was placed in the superglue chamber for approximately 10 minutes. |
| | Powder Dusting | Black powder was gently applied using a latent print brush. |
| QMFT7N | Visual Examination | white, 350-590 nm |
| | Alternate Light Source | 350-590 nm |
| | Cyanoacrylate Fuming | 80% humidity |
| | fingerprint powder | black magnetic |
| QP7WYV | Visual Examination | Visual examination |
| | Alternate Light Source | Inherent fluorescence exam using 532nm, 455nm, 365nm and 254nm wavelengths - print found |
| | Cyanoacrylate Fuming | item fumed for 1.5 minutes using 2g superglue heated on 300C hotplate at 70% humidity. Item then examined visually and with 254nm |
| | Powder Dusting | Black magnetic powder applied using magnetic wand |
| | DFO | DFO painted onto item then put in 100C oven for 20 minutes. Examined visually and with 532nm |
| | Ninhydrin | NIN painted on item, allowed to dry, then put in humidity chamber for 15 minutes at 76C 76%RH |
| | Dye Stain | RAM applied to item then examined using 365nm, 455nm, and 532nm wavelengths |
| R7Q82N | Cyanoacrylate Fuming | 80 % humidity, 8 min |
| | Dye Stain | Basic Yellow 40 |
| RR8KRQ | Cyanoacrylate Fuming | USING A MASON VACTRON MVC5000 ON AUTO CYCLE |
| T78HFM | Cyanoacrylate Fuming | The item was placed in the Cyanocrylate Chamber for few minutes. |
| THYAZR | Visual Examination | |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|-----------------------------------|--|
| | Powder Dusting | Magnetic |
| TJ9EBU | Visual examination | |
| | Fluorescence examination | |
| | Superglue fuming | temperature heating plate: 100°C, humidity: 80%, time: 30 min |
| | Indestructible white Hi-Fi powder | |
| U7FAKA | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Magnetic Powder | |
| | DFO | |
| | Dye Stain | RAM |
| UPUUFRR | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | 6 min |
| | Powder Dusting | magna black |
| V4Q4ZD | Visual Examination | side lighting |
| | Cyanoacrylate Fuming | SafeFume Chamber (20 minutes at ~80% humidity, ~76.5 degrees F.) |
| | Powder Dusting | Jet Black Magnetic Powder |
| V92GFQ | Visual Examination | |
| | Cyanoacrylate Fuming | ~120°C, ~75% relative humidity, timed auto |
| | Dye Stain | Ardrox |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| VHATYE | Visual Examination | with white light |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | 15 minutes with 80% RH |
| | Dye Stain | Rhodamine 6G, viewed under 515nm light with orange filter |
| | Powder Dusting | Magnetic and Black |
| VRZE28 | Cyanoacrylate Fuming | 9 mins fuming, 45 mins venting |
| | Gel lift | gel lift and gel scanner used |
| | Powder Dusting | red fluorescent powder |
| | Alternate Light Source | 455-CSS nm |
| VY2Q2A | Visual Examination | |
| | Alternate Light Source | 532nm, 450nm, 365nm |
| | Cyanoacrylate Fuming | visual and RUVIS exams after |
| | magnetic powder | |
| | DFO | 20 min in a dry oven |
| | Ninhydrin | 10 min in a humidity cabinet |
| | Dye Stain | RAM; 532nm, 450nm, 365nm exams after |
| | Physical Developer PD | |
| W89MK8 | Visual Examination | |
| | Alternate Light Source | Used 365nm (UV), 532nm (Laser), 254nm (RUVIS) & 450nm (Crimescope) |
| | Cyanoacrylate Fuming | Used 254nm (RUVIS) |
| | Powder Dusting | Magnetic Powder |
| | DFO | placed item in dry oven for 20mins, 100C temp |
| | Ninhydrin | 75% Humidity, 74C Temp, 10 minutes Processing Time |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Dye Stain | RAM dye stain. Used 532nm (Laser), 365nm (UV), & 450nm (Crimescope) |
| | Physical Developer PD | |
| WAE998 | Visual Examination | |
| | Alternate Light Source | UV, LASER, Crimescope |
| | Cyanoacrylate Fuming | |
| | Alternate Light Source | RUVIS |
| | Powder Dusting | Magnetic Powder |
| | DFO | |
| | Alternate Light Source | LASER |
| | Ninhydrin | |
| | Dye Stain | RAM |
| | Alternate Light Source | LASER, UV, Crimescope |
| | Physical Developer PD | |
| WJ29KB | Cyanoacrylate Chamber | @ 22 min in chamber @ 74°F w/ 80% Humidity |
| | Magnetic Powder | |
| WKD36G | Visual Examination | |
| | Cyanoacrylate Fuming | Processing time 4 min and 30 sec. |
| | Powder Dusting | Magna-jet black |
| | Dye Stain | Basic Yellow 40 |
| | Alternate Light Source | Quaser, 400-469 nm, yellow filters. |
| WTPZAN | Powder Dusting | |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| WW33VJ | Powder Dusting | Application of black ferric oxide. |
| WXXMK6 | Visual Examination | Oblique lighting and examining each quadrant on the item on different angles, a possible print was visible on quadrant D. |
| | Powder Dusting | Magnetic powder was used to process the front glossy side of the photo on each quadrant. A latent print developed on quadrant D. |
| XE2GR4 | Cyanoacrylate Fuming | Misonix fume hood 80% humidity ~ 1 hour |
| | Powder Dusting | Fluorescent powder w/ UV light |
| YK6LG3 | Visual Examination | 5 MIN |
| | Cyanoacrylate Fuming | Air Science Chamber 30min processing 80% humidity 69 degree F temp |
| | Powder Dusting | regular black powder |
| YN4WEN | Visual Examination | |
| | Cyanoacrylate Fuming | ~120°C, ~75% relative humidity, timed auto |
| | Dye Stain | Rhodamine 6G |
| YNM3A8 | Visual Examination | Visually examined exhibit |
| | Alternate Light Source | Examined exhibit using white light, UV, 415nm and 505nm |
| | Cyanoacrylate Fuming | CF exhibit then visual examination with white light |
| | Rhodamine 6G | Spray on Rhodamine 6G and visual examination with 505nm and orange filter. Print located in quadrant D |
| YQCAYB | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | Powder Dusting | black magnetic powder |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|----------------------------|--|
| Z4W964 | Visual Examination | For approximately one minute, the item was visually examined before any latent print development technique was used. The Forensic Light Source Crime-lite ML was used. The white light examination feature was used, and it provided a 1.8 magnification. |
| | Cyanoacrylate Fuming | For approximately forty minutes, the item was in the Foster & Freeman MVC 3000 Superglue Fingerprint Fuming Cabinet (calibration data for the cabinet indicates a temperature of 120 degrees and RH% of 80%. Arrowhead Forensics Cyanoacrylate bottle 1. lot # A2616 and BP2819-4 water - Molecular Biology grade, lot # 152767 were used. |
| | Visual Examination | The item was again visually examined (about thirty seconds), using the same equipment as step 1. |
| | Powder Dusting | The item was gently dusted using a Sirchie Fiberglass Fingerprint Powder, catalog # 1-0015. The Protector Downdraft Powder Station was used for dusting. |
| | Visual Examination | The item was again visually examined before any attempt to lift any latent prints (approximately one minute). |
| ZC8BNJ | Visual Examination | White crimelite 2 - ridge detail visible - photograph. |
| | Cyanoacrylate Fuming | MVC 5000 cabinet no. 4, 120C, 81.7% RH. Autocycle - approx 15 mins humidity, 20 mins glue and 40 mins purge - ridge detail enhanced - photograph. |
| | Powder dusting/Gel lifting | Appropriate powder e.g. fluorescent to increase contrast against background and/or gel lifting - ridge detail enhanced - photograph. |
| ZEB76Z | Visual Examination | with magnifying light |
| | Cyanoacrylate Fuming | Approximately 10 minutes with heat plate and added humidity |
| | Powder Dusting | regular black powder with brush |
| ZLXYGZ | Visual Examination | |
| | Cyanoacrylate Fuming | Appx. 10 minutes in the CAE chamber with added humidity |
| | Powder Dusting | black magnetic powder |
| ZN6C39 | Visual Examination | Latent print visible and photographed. |
| | Cyanoacrylate Fuming | Atmospheric pressure, ambient temperature at 80% relative humidity for 4 minutes. |

TABLE 2 - Item 1

| WebCode | Development Methods | Method Details |
|---------|------------------------------------|---|
| | Powder Dusting | Magnetic black powder used, latent print re-photographed. |
| ZTUTEY | Visual exam | |
| | Superglue fuming | 72% relative humidity for 12 minutes |
| | Magnetic powder gray then black | |
| | Fingerprint powder grey then black | |

| Response Summary | | | | Participants: 107 |
|------------------------|----|--------------------|----|---|
| | | Methods Utilized | | |
| Alternate Light Source | 40 | Physical Developer | 10 | **Note: Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants. |
| Cyanoacrylate Fuming | 92 | Powder Dusting | 94 | |
| DFO | 18 | Visual Examination | 99 | |
| Dye Stain | 32 | 1,2-Indanedione | 5 | |
| Ninhydrin | 23 | | | |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| 27EQX9 | Visual Examination | |
| | DFO | |
| | Alternate Light Source | 495 nm, orange filter/ 555nm red filter |
| | Ninhydrin | |
| 2DYNGG | Visual Examination | white light, no visible fingermark |
| | Alternate Light Source | Blue fluorescent light, vaguely visible fingermark |
| | Ninhydrin | 5 minutes, 62% humidity, 80 degrees celsius, visible fingermark |
| 3LQQ6H | Visual Examination | |
| | Ninhydrin | |
| 3V98V4 | 1,2-Indanedione | +ZnCl ₂ : 165°C / 10 seconds |
| 437C6Y | Visual Examination | |
| | Alternate Light Source | |
| | DFO | |
| | Ninhydrin | |
| | Physical Developer PD | |
| 44KLDZ | Visual Examination | Mark down general appearance / size |
| | Alternate Light Source | BMT and UV (Neg) |
| | Ninhydrin | Dip until saturated, air dry and place in locker. Waited until 11-30-16 to scan for developed latents. |
| 4JBNU4 | Visual Examination | |
| | 1,2-Indanedione | 60 min, 50 degrees C, no added humidity |
| 62A28B | Ninhydrin | Temperature 80 C, Humidity 60 % |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| 67HLQ2 | Visual Examination | White |
| | 1,2-Indanedione | Chamber Nin2, 50 Degrees C, 45 Mins |
| | Visual Examination | Laser |
| 6CCGTA | Visual Examination | White light |
| | Ninhydrin | Climatecabinet set on 80 degrees and 65 RH%, processingtime 5 minutes. |
| 6HDX4F | Ninhydrin | 10 minutes |
| 6J7N9U | Visual Examination | ambient/conventional white light |
| | Alternate Light Source | Coherent Tracer Laser (green) |
| | DFO | Caron Environmental Chamber; 100*C, 0% RH; 20:00 min |
| | Ninhydrin | Caron Environmental Chamber; 80*C, 65% RH; 2:00 min |
| | Physical Developer PD | Sirchie Pre-Mixed solutions; 15:00 min processing time |
| 6VN778 | Visual Examination | No latents visible. |
| | Ninhydrin | Latent print of possible value developed and scanned (quadrant B) |
| 6ZG6K3 | DFO | Dried: 99°C |
| 78DL8D | 1,2-Indanedione | 100 degrees C for 3 min., Laser |
| 7DH7TW | Visual Examination | Used both ambient light and 532nm laser with orange goggles |
| | DFO | Applied, dried, heated at 100 degC for ~20 min |
| | Ninhydrin | Applied, dried, heated at 80 degC with 65% humidity for ~2min |
| | Physical Developer PD | Applied in steps, rinsed, dried |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| 7WRH3Y | 1,2-Indanedione | with ZnCl in Pet ether: Saturated paper, let sit 24hrs, viewed with laser 532nm with orange filter |
| | Ninhydrin | in Pet ether: saturated paper, let sit for 24hs, viewed with visible light |
| 84VMRX | Ninhydrin | Item dipped for 5-10 sec, air dried, placed in Fingerprint Chamber (75 deg C, 80% humidity for 5 min) |
| 86LQL6 | Visual Examination | |
| | Ninhydrin | spray with HFE ninhydrin, 2 times both sides |
| | steam | |
| | Visual Examination | |
| 86NFMG | Visual Examination | |
| | Alternate Light Source | 365nm, 450nm, and 532nm |
| | DFO | 100 degrees F for 20 minutes |
| | Ninhydrin | 76% humidity, 76 degrees F for 15 minutes |
| 8X7826 | Visual Examination | With magnifier |
| | Alternate Light Source | ALS and LASER |
| | DFO | Heated in 100C oven for 20 minutes |
| | Alternate Light Source | LASER |
| 93TEY4 | Visual | |
| | DFO & ALS | Sprayed pre-mixed DFO and viewed with the UltraLite ALS |
| | Ninhydrin | Dipped the paper in the ninhydrin and then applied humidity with a steam iron |
| 987Z8B | First Visual | PL500 lightsource with wavelength of 000nm. |
| | DFO/HFE | Use spraying method and allow to air dry. |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|-------------------------|--|
| | Climate control cabinet | Using the Nincha cabinet on the DFO mode set at 100°C for 25 minutes (no humidity). |
| | Ninhydrin/HFE | Use spraying method and allow to airdry |
| | Climate control cabinet | Using the Nincha cabinet on the Nin mode set at 80°C for 7 minutes and 65% humidity. |
| 9NAV3U | Visual Examination | |
| | Alternate Light Source | |
| | DFO | 100 C for 20 min |
| | Ninhydrin | 80 C, 65% humidity, 2 min |
| | Physical Developer PD | 20 min |
| 9X28GV | Ninhydrin | 80% humidity - 75 degrees c - 5 minutes |
| A8K3V2 | Visual | |
| | Indanedione/ ZnCl | 10 seconds w heat press laser (532nm), orange filter |
| | Ninhydrin | 15 seconds - steam iron |
| A9XD89 | Visual Examination | |
| | Ninhydrin | 2 dippings, weak development |
| AB33C3 | Ambient light | |
| | 1,2-Indanedione | placed in oven at 100 degrees Celsius for 20 minutes, View with green channel of laser |
| | Ninhydrin | Heated with steam iron |
| AD7ZJP | Visual Examination | |
| | Laser | |
| | Alternate Light Source | |
| | Ninhydrin | |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|--------------------------|--|
| ATJ8YU | Visual Examination | |
| | Alternate Light Source | |
| | DFO | |
| | Ninhydrin | |
| | Physical Developer PD | |
| AUXT9W | Visual | 112916 @ 1115, neg |
| | Nin | 112916 @ 1340, photo 001-3 |
| B38GLV | Visual Examination | under white light |
| | 1,2-Indanedione | with ZnCl in pet ether: sprayed, air dried, viewed with orange goggles under 532nm laser |
| | Ninhydrin | in pet ether: sprayed, air dried, placed in ninhydrine heat chamber ~10m (175oF, sm. amt h2o added for humidity), view under white light |
| B4CAD9 | Visual Examination | Examined with Naked eye |
| | Alternate Light Source | Examined the evidence in the presence of two light sources 445nm and 532nm |
| | 1,2-Indanedione | Evidence was dyed and dried in oven for 20min at 100degC |
| | Ninhydrin | Evidence was dyed and dried in oven for 20min at 80degC and 65% Humidity |
| BD4Q6X | Visual Examination | Visual with magnifier using ALS & Laser |
| | 1,2-Indanedione | Heat in oven at 100 degrees C for 20 minutes |
| | Visual Examination | Visual with magnifier using Laser |
| BN9F89 | First visual examination | Poliflare light source of various wave lengths range are utilised to search for prints |
| | DFO | Procedure done under chemical fume cabinet at 25°C whereby exhibit is dipped in petri-dish containing DFO. |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|---------------------|---|
| | Ninhydrin | Procedure done under chemical fume cabinet at 25°C whereby evidence is dipped in a petri-dish containing Ninhydrin. |
| C32P6X | Ninhydrin | 24h, 26°C, 65% rel. humidity |
| CBBUF4 | Visual Examination | |
| | DFO | ~200°F, 10 minutes |
| | Ninhydrin | ~80°C, ~65% relative humidity |
| DAFTRQ | Visual Examination | Laser 532 nm 577nm; crimescope |
| | 1,2-Indanedione | 165°C for 10 seconds |
| | Ninhydrin | 5 days waiting |
| DBALMA | DFO | Tray submersion; heated to 212F @ 10 min; ALS @ 495nm with orange filter; latent in Q-B |
| | Ninhydrin | Tray submersion; steam iron used (weaker development) |
| DHTM8T | Visual Examination | white light, UV - 555nm - Polilight PL500, suitable googles |
| | DFO | processing time - 20 minutes, temperature - 95 degree Celsius |
| | Visual Examination | 495 nm, orange coloured google |
| | Ninhydrin | processing time - 3 hours, temperature - 25 - 30 degree Celsius, humidity - 70% |
| | Visual Examination | white light |
| E2EZW3 | Ninhydrin | +25 C 17 - 20.10.2016 |
| | Visual Examination | |
| EFJY3N | Visual Examination | White Light |
| | Ninhydrin | HFE7100 Solution, pipetted, steam iron |
| EJJAZ9 | Visual Examination | No LP's found. |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | 1,2-Indanedione | HFE7100 base, dipped Item 2, allowed to air dry, heated in t-shirt press at 300 degrees F for 12 seconds |
| | Alternate Light Source | BrightBeam, 532nm, Orange Barrier |
| | Ninhydrin | HFE7100 base |
| | Visual Examination | No additional LP's found. |
| ET6E7M | Visual Examination | 5 min |
| | DFO | 20 min |
| | Alternate Light Source | 15 min |
| | Ninhydrin | 15 min |
| FANPA2 | Ninhydrin | 5 min, temp. 80C, 65 % humidity |
| FCHB3R | Visual Examination | A visual examination was done with CrimeLiteML with white light and 1.8x magnification. Approximately 2 minutes. |
| | Ninhydrin | Sirchie Ninhydrin Special formula was sprayed on evidence in the fume hood and a standard GE iron was used to steam the evidence. Approximately 24 hours. |
| G7M3XN | Visual Examination | |
| | Alternate Light Source | |
| | DFO | |
| | Ninhydrin | |
| | Physical Developer PD | |
| GAHWQJ | Visual Examination | 10/21/2016; viewed under normal lighting |
| | Ninhydrin | 10/21/2016; applied by spray bottle; placed in humidity chamber, temp: 38.8 degrees celcius, 70.8 RH |
| | Ninhydrin | 11/17/2016; applied by spray bottle; placed in humidity chamber; temperature 38.7 degrees Celcius, 71 RH |
| | Physical Developer PD | 11/18/2016; Three part solution |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| GBHWT6 | Visual Examination | |
| | Alternate Light Source | 365nm (long wave UV), 455nm, 532nm (LASER) |
| | DFO | 20 min in dry oven |
| | Alternate Light Source | 532nm (LASER) |
| | Ninhydrin | 5-15 min in humidity chamber at 76 degrees C and 76% relative humidity |
| GHC6AP | DFO | Temperature: 100C. Processing time: 10 min |
| | Ninhydrin | Temperature: 80C. Relative humidity: 65%. Processing time: 5 min |
| | Physical Developer PD | Processing time: 10 min |
| HLTNW6 | DFO | 1/11/2016. 12.20-12.40pm. Humidity Chamber at 100C |
| | Ninhydrin | 2/11/2016. 9.30-9.45 at 65% RH |
| HPWHRN | Visual Examination | under normal lighting conditions |
| | 1,2-Indanedione | with ZnCl in pet ether: saturated document, air dried, viewed under laser 532nm with orange filter |
| | Ninhydrin | in pet ether: saturated document, air dried, placed in ninhydrin chamber until control developed purple test print, viewed under normal lighting conditions |
| HQAUUY | Ninhydrin | temp 80 C, 65 % humidity, 5 min |
| HV2YLH | Visual Examination | |
| | Ninhydrin | |
| | Silver Nitrate | |
| J26KQQ | DFO | DFO chamber at 100 degrees for 20 Mins |
| | Alternate Light Source | 475nm with orange goggles |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Ninhydrin | Ninhydrin Chamber at 75 degrees for 5 Mins |
| JKFCTT | Visual Examination | Available light, Tracer Laser (532nm), Crimescope ALS (350-515nm) |
| | 1,2-Indanedione | Sprayed on item, dry heat iron (30 seconds-1 minute) and visual exams with available light and Tracer Laser (532 nm) |
| | Ninhydrin | (HFE 7100 carrier) Sprayed on item, steam iron (30 seconds) and visual exam with available light |
| JM6JDP | Visual Examination | Coherent 532 nm laser |
| | 1,2-Indanedione | Applied with wash bottle. Heated iron held above evidence with no steam for 3-4 minutes |
| | Ninhydrin | Ninhydrin in HFE-7100 carrier used. Applied with wash bottle. Heated iron used with steam and held above evidence for 3-4 minutes. |
| JNET42 | Visual Examination | |
| | Alternate Light Source | UV-365nm, 455nm, LAS-532nm |
| | DFO | 20 minutes @ 99F |
| | Ninhydrin | 15min @ 76F and 76%RH |
| K2WXQN | Visual Examination | White low angle light. Results negative. |
| | Alternate Light Source | Multiple filters applied. Results negative. |
| | DFO | After dipping item in DFO the item was allowed to dry then placed in a 200 F DFO oven for 25 minutes. Print visible in quadrant "B" under ALS@455nm with orange barrier filter. Photo obtained. |
| | Ninhydrin | Thirty six hour development time. Minimal development noted. Additional twenty four hours development time allowed with no additional development noted. No photo obtained. |
| KPM6JH | Visual Examination | |
| | DFO | 20 minutes at 100 degrees Celsius |
| | Ninhydrin | 2 minutes at 80 degrees Celsius and 65% humidity |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|-----------------------|---|
| | Physical Developer PD | 15 minutes in PD solution |
| M3LTNG | Ninhydrin | A positive and negative control with my prints was made on a white piece of copy paper. Control was dipped and two prints appeared in the positive control area. Item was then dipped and |
| M6RBPX | Visual Examination | |
| | Ninhydrin | Print visible after process |
| | Steam | Applied steam on 10/27/16 |
| M7NLML | Visual Examination | Examined under white light and also 532 nm laser with orange goggles |
| | 1,2-Indanedione | Item was sprayed with indanedione and heated under a heat press at 250 degrees F. Item was then looked at under a 532 nm laser with orange goggles |
| | Ninhydrin | Item was sprayed with ninhydrin. Iron was used for heat and humidity to develop latent print. Item was looked at under white light |
| MBWAZN | Visual Examination | |
| | Ninhydrin | ninhydrin & moist heat |
| NBT8NN | Iodine | Disposable iodine applicator used |
| | DFO | Surface sprayed with DFO and then heated with a steam iron; viewed using ALS UltraLite BMT @ 315nm |
| | Ninhydrin | Dipped in solution, dried, heated with a steam iron |
| NCAZLD | Visual Examination | light and magnification |
| | DFO | 100 degrees C, 20 minutes |
| | Ninhydrin | 80 degrees C, 70% humidity, 20 minutes |
| NM9WLU | Visual examination | white light and fluorescence examination 350nm-650nm |
| | DFO | Item dipped in the liquid, heated in oven for 20 min. at 95°C, examine with 505nm |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Ninhydrin | Item dipped in the liquid, heated in oven for 10 min. at 80°C, 65% Rh, examine with white light |
| NMTFPF | Visual Examination | Viewed at different angles to see if any fingerprint oil, etc. was visible. |
| | Ninhydrin | Paint method. |
| NTWJGY | DFO | 6/11/2016 10.05 - 1035am Temp 100C. |
| | Ninhydrin | 6/11/2016 11.00 - 11.15am Temp 75C, Humidity 65Rh. |
| NWWPXQ | Visual Examination | White ambient light, ALS alternate light source, no print detected. |
| | DFO | ALS alternate light source (green light, 500-550 nm). Good quality print detected. |
| | Ninhydrin | No improvement of the print detected, same quality as after DFO. |
| NXRBBM | Vis | Ambient light |
| | Ninhydrin | Humidity Chamber for 10 min, 80°F & 60% humidity |
| | Oil Red O | Processed in tray for 30 min |
| NXRBRG | Visual Examination | |
| | Alternate Light Source | UV, LASER, CRIMESCOPE |
| | DFO | |
| | Ninhydrin | |
| | Physical Developer PD | |
| NY48WL | Visual Examination | |
| | Ninhydrin | |
| NYYN9J | Visual Examination | The item was examined for a couple of minutes, how to process the item was determined and information about the surface was recorded. |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Photocopied | The item was photocopied to preserve the look of the item in case the item was damaged or destroyed during examination. |
| | Ninhydrin | The item was gently sprayed with Ninhydrin with acetone solution to saturate the item for approximately 2 -3 minutes. Once the item was completely dried, a steam iron was used to hover over the item for approximately 5 minutes to develop any fingerprints. No prints were developed so the item reexamined the next morning for print development and the steam iron was used once more. |
| PGVFQB | 1,2-Indanedione | Item #2 was processed for latent prints using Indanedione. I then used the DFO oven and placed item #2 in the oven for approximately 20 minutes at 200 degrees. I was able to view the latent print using an ALS, viewing the print between 450nm-515nm while wearing orange goggles. |
| QMFT7N | Visual Examination | white |
| | Alternate Light Source | 350-590 nm |
| | 1,2-Indanedione | 450-590 nm |
| | DFO | 450-590 nm |
| | Ninhydrin | white 450-590 nm |
| QP7WYV | Visual Examination | Visual examination |
| | Alternate Light Source | Inherent fluorescence exam using 532nm, 455nm, and 365nm wavelengths |
| | DFO | DFO painted onto item then put in 100C oven for 20 minutes. Examined visually and with 532nm - print found |
| | Ninhydrin | NIN painted on item, allowed to dry, then put in humidity chamber for 15 minutes at 76C 76%RH |
| R7Q82N | Ninhydrin | One minute treatment with steam iron |
| RR8KRQ | DFO | I used a weis gallenkamp oven, set on the DFO setting (100 degrees centigrade and deactivated humidity function) for 20 minutes, followed by examination using high intensity light source green 490-560nm |
| T78HFM | Ninhydrin | The item was treated with Ninhydrin solution by dipping it for a few seconds. Then, the item was air dried. |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|---|---|
| THYAZR | Visual Examination Ninhydrin | |
| TJ9EBU | Visual examination Fluorescence examination DFO Ninhydrin | temperature: 100°C, time: 20 min temperature: 80°C, humidity: 62%, time: 10 min |
| U7FAKA | Visual Examination Alternate Light Source DFO Ninhydrin Physical Developer PD | |
| UPUUF8 | Visual Examination Alternate Light Source DFO Ninhydrin | 20 min 6 min |
| V4Q4ZD | Ninhydrin Visual Examination | Petroleum Ether carrier, dipped, Oven (80 degrees C. for 60 minutes) After processing and on three (3) different dates |
| V92GFQ | Visual Examination Ninhydrin | ~80°C, ~65% relative humidity |
| VHATYE | Visual Examination | with white light |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Alternate Light Source | |
| | 1,2-Indanedione | placed in 100 C oven for 10 min, viewed under 515nm light with orange filter |
| | Ninhydrin | placed in 80 C oven with 80% RH for ten min |
| VRZE28 | Ninhydrin | Premixed spray followed by steam heat, repeated once |
| | Alternate Light Source | All available wavelengths |
| VY2Q2A | Visual Examination | |
| | Alternate Light Source | 532nm, 450nm, 365nm |
| | DFO | 20 min in dry oven |
| | Ninhydrin | 10 min in humidity cabinet |
| | Physical Developer PD | |
| W89MK8 | Visual Examination | |
| | Alternate Light Source | Used 365nm (UV), 532nm (Laser), 254nm (RUVIS) & 450nm (Crimescope) |
| | DFO | placed item in Dry Oven for 20mins, 100C temp. Visualized with use of Alternate Light Source (Laser & Crimescope) |
| | Ninhydrin | 75% Humidity, 74C Temp, 10 minutes Processing Time |
| | Physical Developer PD | |
| WAE998 | Visual Examination | |
| | Alternate Light Source | UV, LASER, Crimescope |
| | DFO | |
| | Alternate Light Source | LASER |
| | Ninhydrin | |
| | Physical Developer PD | |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|----------------------------------|--|
| WJ29KB | Ninhydrin (Petroleum Ether ENIN) | Sprayed paper w/ENIN left to Hand-Dry @ 10min at room temp. |
| | Steam Iron | Applied Heat Source for @ 1-2 minutes. |
| WKD36G | Visual Examination | |
| | Ninhydrin | Climatcabinet set on 80 degrees and 65 RH%, 5 minutes processing time. |
| | Alternate Light Source | Quaser 503-587 nm with orange filters. Visible fingerprint. |
| | Ninhydrin | Visible fingerprint without lightsource. |
| WTPZAN | Ninhydrin | used heat press |
| WW33VJ | Ninhydrin | By adding ninhydrin without acetone for a 24 hours' dry time |
| WXXMK6 | Visual Examination | Viewed items at different angles to see if there was anything visible. |
| | Ninhydrin | A positive and negative test control was dipped into the ninhydrin. After the results of the test controls were confirmed, ninhydrin was brushed onto Item 2. After Item 2 dried, it was placed in a plastic zip bag and placed in Evidence Vault 1 - Locker #33 for development. On 11-25-16, a latent print developed on quadrant "B". |
| XE2GR4 | Powder Dusting | Magnetic black powder |
| | Ninhydrin | 24 hour dry |
| | Ninhydrin | with steam heat |
| YK6LG3 | Visual Examination | 5 min |
| | Ninhydrin | Sprayed 2 min, let it sit overnight |
| | Physical Developer PD | Maleic Acid prewash, 3 part solution physical developer, rinse in water then let it dry overnight |
| YN4WEN | Visual Examination | |
| | Ninhydrin | ~80°C, ~65% relative humidity |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| YNM3A8 | Visual Examination | Visual Examination - no print |
| | Alternate Light Source | White Light, UV, 415 & 505nm - no print |
| | 1,2-Indanedione | Sprayed 1,2-Indanedione on paper, allowed to dry. Heat press 175 degrees celsius for 10 seconds, visualised 505 nm and orange filter. Print located in quadrant B |
| | Ninhydrin | Sprayed ninhydrin and allowed to dry, put in humidity chamber for 10 minutes at 80 degrees celsius/65% humidity. Visualised under white light and 555nm - no development |
| YQCAYB | Visual Examination | |
| | DFO | heat |
| | Alternate Light Source | 495, orange |
| | Ninhydrin | heat and humidity |
| Z4W964 | Visual Examination | For approximately one minute, the item was visually examined before any latent print development technique was used. The Forensic Light Source Crime-lite ML was used. The white light examination feature was used, and it provided a 1.8 magnification. |
| | Ninhydrin | The item was placed under a Labconco Protector Laboratory Hood, and sprayed to saturation with an Arrowhead Forensics Ninhydrin Acetone Solution # A-2681, bottle 1. The item was sprayed for approximately thirty seconds, and allowed to dry for approximately twenty minutes. |
| | Ironing | A GE Steam Iron was used to hover over the item. This was done for approximately seven minutes |
| | Visual Examination | Using the same equipment as in step 1, the item was examined for approximately forty seconds. |
| ZC8BNJ | Visual Examination | White crimelite 2 - no ridge detail visible. |
| | DFO | DFO oven no. 3, 100C, 20 mins processing time, DFO batch no. 15AT569. Ridge detail enhanced - photograph. |
| | Ninhydrin | NIN oven no. 1, 80C, 62% RH, 4 mins processing time. NIN batch no. 109782. Ridge detail enhanced - photograph. |
| | Physical Developer PD | This treatment would have been completed if the case was serious/[protocol] as per lab policy. |

TABLE 2 - Item 2

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| ZEB76Z | Visual Examination | with magnifying light |
| | 1,2-Indanedione | rinsed item with chemical, allowed to dry, place in oven at 200 degrees Fahrenheit for 10 minutes |
| ZLXYGZ | Visual Examination | |
| | 1,2-Indanedione | Applied IND to the entire surface and let it dry for appx. 7 minutes. I then placed it in an oven at 200 degrees F for appx. 20 minutes |
| ZN6C39 | Visual Examination | No latent prints visible. |
| | DFO | Treated with DFO, allowed to dry, heated at 100 C for 20 minutes |
| | Alternate Light Source | Examined at 495nm with orange filter & 555nm with red filter. Latent print photographed. |
| | Ninhydrin | Treated with ninhydrin, allowed to develop for over 24 hours, latent print re-photographed. |
| ZTUTEY | Visual exam | |
| | Indanedione | no additional humidity, oven at 100°C |
| | Laser | green laser w/orange filter |

Response Summary

Participants: 107

Methods Utilized

| | | | |
|------------------------|----|--------------------|----|
| Alternate Light Source | 35 | Physical Developer | 16 |
| Cyanoacrylate Fuming | 0 | Powder Dusting | 1 |
| DFO | 42 | Visual Examination | 86 |
| Dye Stain | 0 | 1,2-Indanedione | 23 |
| Ninhydrin | 98 | | |

****Note:** Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| 27EQX9 | Visual Examination | |
| | Cyanoacrylate Fuming | temp 120, processing time 8 minutes |
| | Dye Stain | rhodamine 6G |
| | Alternate Light Source | 495 nm, orange filter |
| | Powder Dusting | magnetic black powder |
| 2DYNNG | Visual Examination | white light, visible fingermark |
| | Cyanoacrylate Fuming | 10 minutes, visible fingermark |
| | Dye Stain | Basic yellow 40, visible fingermark |
| 3LQQ6H | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | Powder Dusting | |
| 3V98V4 | Visual Examination | Naked eye |
| | Alternate Light Source | RUVIS |
| | Cyanoacrylate Fuming | Lumicyano |
| 437C6Y | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Dye Stain | |
| 44KLDZ | Visual Examination | Mark down general appearance / size |
| | Alternate Light Source | BMT and UV (Neg) |
| | Cyanoacrylate Fuming | Out of Stock - wait for shipment (did not arrive in time) |
| | Dye Stain | Did not proceed to do without cyanoacrylate fuming first |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Alternate Light Source | Did not proceed to do without dye stain |
| | Powder Dusting | Black powder and fiberglass brush |
| 4JBNU4 | Visual Examination | |
| | Cyanoacrylate Fuming | 10 min, 80% humidity |
| | Dye Stain | |
| 62A28B | Visual Examination | White light |
| | Powder Dusting | Dusting 5 min |
| 67HLQ2 | Visual Examination | White, RUVIS |
| 6CCGTA | Visual Examination | White light. |
| | Cyanoacrylate Fuming | Processing time 10 minutes, cabinet set on 80 RH%, glueplate set on 120 degrees. 2 grams of glue used. |
| | Dye Stain | Basic Yellow 40 |
| | Alternate Light Source | 445 nm, yellow filters. |
| 6HDX4F | Powder Dusting | 10 minutes |
| 6J7N9U | Visual Examination | ambient/conventional white light (reflective surface) |
| | Cyanoacrylate Fuming | Misonix-CA6000; 7:00 min fuming cycle |
| | Dye Stain | Basic Yellow 40; methanol based solution; viewed with ALS |
| 6VN778 | Visual Examination | No latent print visible. |
| | Cyanoacrylate Fuming | Latent print visible, needs further enhancement. |
| | Dye Stain | Rhodamine 6G. Latent print visible, needs further enhancement. |
| | Alternate Light Source | Latent print of possible value developed and photographed (quadrant C). |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|----------------------------------|---|
| 6ZG6K3 | Visual Examination (white light) | |
| | Superglue | Temperature: 120°C, humidity: 77.9, processing time: 7 minutes |
| | Basic Yellow 40 | |
| 78DL8D | Cyanoacrylate Fuming | 15 min fume at 80% R. H. |
| 7DH7TW | Visual Examination | Ambient light |
| | Cyanoacrylate Fuming | Room temp and 80% humidity ~9min |
| | Dye Stain | Used R6G - applied, rinsed with water, dried |
| 7WRH3Y | Visual Examination | oblique lighting |
| | Cyanoacrylate Fuming | under vacuum chamber temp 37oC vapor release temp 82oC, fume 45 min, cure 30 min |
| | Dye Stain | Rhodamine 6G: saturated bag, viewed with laser 532nm with orange filter |
| 84VMRX | Photography | Photographed visible latent prior to any chemical or powder processing |
| | Cyanoacrylate Fuming | Humidity Cycle for 15 min to reach 80% RH; Glue Cycle for 10 min @ 120 deg C, Purge Cycle for 20 min |
| | Dye Stain | MBD dye stain applied with squirt bottle, allow to dry, visualize with ALS (blue light 430-470 nm and yellow filter GG 495, 476 nm) |
| | Powder Dusting | Standard Black Powder applied with standard powder brush and black magnetic powder applied with magnetic brush until ridge detail developed |
| 86LQL6 | Visual Examination | |
| | Cyanoacrylate Fuming | 20 minutes after humidity level was ready |
| | Dye Stain | rhodamine water-based |
| | Visual Examination | ALS |
| 86NFMG | Visual Examination | |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Alternate Light Source | 365nm, 450nm, and 532nm |
| | Cyanoacrylate Fuming | 2gm cyanoacrylate |
| | Visual Examination | |
| | Alternate Light Source | 254nm |
| | Dye Stain | R6G, Ardrex, and MBD |
| | Alternate Light Source | 365nm, 450nm, and 532nm |
| 8X7826 | Visual Examination | with magnifier |
| | Alternate Light Source | ALS and LASER |
| 93TEY4 | Visual | |
| | Cyanoacrylate | Safefume 48S CA chamber for 12 minutes at 80% humidity |
| | MBD & ALS | MBD was applied using a squirt bottle and viewed with the UltraLite ALS |
| 987Z8B | First Visual | Using the Polilight Flare +2 light source on the white light wavelenth. |
| | Fluorescence powder | Using fluorescence powder and checked by using the orange goggles with a 450 nm light. |
| | CyanoBloom | Using the MVC 3000 fuming cabinet with the following: Glue time = 25 min, Glue temp = 120°C, at 80% humidity |
| | Basic Yellow | Stained print by dipping the target area for approx. 2-3 minutes & rinse with slow running water. Airdry and view with orange goggles & blue light. |
| 9NAV3U | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | fuming time 7 min 25 sec |
| | Dye Stain | |
| 9X28GV | Cyanoacrylate Fuming | 80% humidity 10 minute glue time |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------------|--|
| | Dye Stain | MBD Dye Stain |
| | Powder Dusting | Black Magnetic Powder |
| A8K3V2 | Visual | |
| | Cyanoacrylate Fuming | 73°F/ 53% RH, 10 minutes fuming time |
| | Rhodamine 6G (R6G) Dye Stain | Water based dye stain, laser at 532nm, orange filter |
| A9XD89 | Visual Examination | oblique light (i blänk) |
| | Cyanoacrylate Fuming | 15 min development time |
| | Dye Stain | Basic Yellow 40 |
| AB33C3 | Ambient light | |
| | Alternate Light Source | viewed with green and blue channels |
| | Cyanoacrylate Fuming | fuming chamber, 11 minutes |
| | Powder Dusting | black magnetic power |
| AD7ZJP | Visual Examination | Impression observed |
| | Cyanoacrylate Fuming | |
| | Dye Stain | rhodamine 6G |
| | Laser | |
| ATJ8YU | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | RAM | |
| AUXT9W | Visual | 112916 @ 1130, int area "C", photo 001-2 |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|--------------------------|---|
| | CA | 112916 @ 1152, same mark, photo 001-2-1 with RUVIS |
| | MBD | 112916 @ 1345, same mark, photo 001-2-2 with FLS |
| B38GLV | Visual Examination | under white light |
| | Cyanoacrylate Fuming | under vacuum, fume ~45m, cure ~60m |
| | Dye Stain | Rhodamine 6G in methanol: sprayed, air dried, viewed with orange goggles under 532nm laser |
| | Powder Dusting | Bichromatic powder: brushed on, viewed under white light |
| B4CAD9 | Visual Examination | Examined the evidence in the presence of white Light |
| | Alternate Light Source | Examined the evidence in the presence of two light sources 445nm and 532nm |
| | Cyanoacrylate Fuming | Following condition used for Fuming: Humidifying for 15min and attained 80% Humidity then Glue time was 15 min under Temperature of 120degC |
| | Visual Examination | Examined the evidence in the presence of white Light |
| | Dye Stain | Evidence was dyed with Rhodamine 6G |
| | Powder Dusting | Yellow Fluorescent Powder used to powder the evidence |
| BD4Q6X | Visual Examination | Visual with magnifier using ALS & Laser |
| | Cyanoacrylate Fuming | Visual with magnifier using ALS |
| BN9F89 | First visual examination | Poliflare light source with various wave length range are being utilised for searching of prints. |
| | Polycyano UV | Performed in MVC 3000 chamber at 230°C for 25 min. |
| C32P6X | Visual Examination | |
| | Cyanoacrylate Fuming | 10 min fuming time |
| | Dye Stain | Basic Yellow |
| CBBUF4 | Visual Examination | |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Cyanoacrylate Fuming | ~120°C, ~75% relative humidity, timed auto |
| | Dye Stain | R.A.M. (475nm, Orange filter) |
| DAFTRQ | Visual Examination | Laser 532 nm 577nm; crimescope |
| | Lumicyano | Lumicyano CST, 120°C , 30 min fumigation |
| | Dye Stain | BY40 in methanol,sprayed |
| DBALMA | Cyanoacrylate Fuming | CyanoSafe chamber (atmospheric); humidifier active; 14 drops cyanoacrylate @ 25 minutes latent in Q-C |
| | Dye Stain | Rhodamine 6G reagent (R6G). Dye stained - spray method - rinsed with cold water & dried |
| DHTM8T | Visual Examination | white light, UV - 555nm - Polilight PL500, suitable goggles |
| | Cyanoacrylate Fuming | processing time - 15 minutes, humidity - 80% |
| | Visual Examination | white light |
| | Dye Stain | Basic Yellow 40 |
| | Visual Examination | UV-495 nm, yellow coloured google |
| E2EZW3 | Cyanoacrylate Fuming | WET- 80%, TEMP.+30C , TIME 10.00 - 10.50 |
| | Visual Examination | |
| | Powder Dusting | |
| EFJY3N | Visual Examination | White Light - Transmitted |
| | Cyanoacrylate Fuming | Labconco CApture BT Chamber, 1.5g Cyanoacrylate, 80% humidity, 10 min fume time, CA heat 250 degrees F |
| | Dye Stain | R6G methanol solution |
| | Alternate Light Source | Cohernt Tracer Laser 532nm |
| EJAZ9 | Visual Examination | Found LP prior to additional processing. |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Cyanoacrylate Fuming | Air Science Safefume Chamber 2 at 72 degrees F, 80% humidity, 20 minutes, Arrowhead Forensics CA |
| | Visual Examination | No additional LP's found. |
| | Dye Stain | Rhodamine 6G 1:200,000 ratio in water due to previously being marked with permanent marker (Sharpie?) otherwise would have used methanol base |
| | Alternate Light Source | BrightBeam, 532nm, Orange Barrier, no additional LP's found. |
| ET6E7M | Visual Examination | 10 min |
| | Ruvis | 15 min |
| | Cyanoacrylate Fuming | 15 min |
| | Dye Stain | 20 min R6G |
| | Alternate Light Source | 15 min |
| FANPA2 | Cyanoacrylate Fuming | 8 min, 80 % humidity |
| FCHB3R | Visual Examination | A visual examination was done with CrimeLiteML with white light and 1.8x magnification. Approximately 2 minutes. |
| | Cyanoacrylate Fuming | Fuming was done in a Foster + Freeman MVC3000 chamber set to 120 degrees Celcius and 80% RH. Approximately 45 minutes. |
| | Powder Dusting | Magnetic powder dusting. Item was dusted with magnetic powder at room temperature. Approximately 5 minutes. |
| G7M3XN | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Dye Stain | RAM |
| GAHWQJ | Visual Examination | 10/21/2016; viewed under normal lighting - sent to photo |
| | Cyanoacrylate Fuming | 10/21/2016; AirScience SafeFume Chamber: 80% humidity; Temperature: 22 degrees Celcius/72 degrees Fahrenheit; 30 minute glue time, 30 minute purge cycle - sent to photo |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Dye Stain | 11/15/2016; Ardrox; Applied by wash bottle, rinsed with tap water; viewed under UV light - sent to photo |
| | Powder Dusting | 11/18/2016; Black magnetic powder - sent to photo |
| GBHWT6 | Visual Examination | |
| | Alternate Light Source | 365nm (long wave UV), 455nm, 532nm (LASER) |
| | Cyanoacrylate Fuming | 70% relative humidity, fuming time 1:30, 10:00 purge |
| | Alternate Light Source | RUVIS (254nm - short wave UV) |
| | Dye Stain | RAM (Rhodamine 6G, Ardrox, MBD) |
| | Alternate Light Source | 365nm (long wave UV), 455nm, 532nm (LASER) |
| GHC6AP | Cyanoacrylate Fuming | Relative humidity: 80% |
| | Dye Stain | Basic Yellow 40 |
| HLTNW6 | Cyanoacrylate Fuming | 1/11/2016. 12pm. Lab temp = 21.5. MVC3000, RH=79 |
| | Dye Stain | BY40. 2/11/2016. 10.25 - 11.30am |
| | Crystal Violet | 3/11/2016 8.15-9.15am |
| | Sudan Black | 3/11/2016 9.45-10.50am |
| | Powder Dusting | Black Powder, 3/11/2016 12.15-1.25pm |
| HPWHRN | Visual Examination | under normal lighting conditions |
| | Cyanoacrylate Fuming | vacuum fumed for 60min, cured 30min |
| | Dye Stain | Rhodamine 6G: saturated bag, air dried, viewed under laser 532nm with orange filter |
| | Powder Dusting | black powder: dusted bag, viewed under normal lighting conditions |
| HQAUUY | Cyanoacrylate Fuming | 75 % humidity, 8 min |
| | Dye Stain | Basic Yellow 40 |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| HV2YLH | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | MRM10 | |
| | Basic Yellow | |
| | Water Rinse | |
| J26KQQ | Cyanoacrylate Fuming | 80% humidity, 7 minute fume cycle |
| | Dye Stain | Rhodamine 6G |
| | Alternate Light Source | 495nm with orange goggles |
| JKFCTT | Visual Examination | Available light/flashlight, Tracer Laser (532 nm), Crimescope ALS (350-515 nm) |
| | Cyanoacrylate Fuming | Enclosed chamber with heat source and humidity (5 minutes) |
| | Dye Stain | Rhodamine 6G (sprayed on item) and visual exam with Tracer Laser (532 nm) |
| | Powder Dusting | Black magnetic powder |
| JM6JDP | Visual Examination | White light applied to visualize latent prints. |
| | Cyanoacrylate Fuming | Fumed in Misonix CA-6000, approximately 3 grams cyanoacrylate at 80% humidity for 13 minutes. |
| | Dye Stain | R6G in methanol carrier, applied with wash bottle |
| JNET42 | Visual Examination | |
| | Alternate Light Source | UV-365nm, 455nm, LAS-532nm |
| | Cyanoacrylate Fuming | 2 grams |
| | Visual Examination | |
| | Alternate Light Source | RUVIS-254nm |
| | Dye Stain | R6G, Ardrex, MBD |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Alternate Light Source | UV-365nm, 455nm, LAS-532nm |
| K2WXQN | Visual Examination | White low angle light. Print visible in quadrant "C". Photo obtained. |
| | Alternate Light Source | Low angle 555 nm light. Print visible in quadrant "C". Photo obtained. |
| | Cyanoacrylate Fuming | 30 minutes at 80% humidity. Print visible in quadrant "C". Photo obtained. |
| | Dye Stain | MBD dye stain. Print visible in quadrant "C" under 455 nm als with orange barrier filter. Photo obtained. |
| KPM6JH | Visual Examination | |
| | Cyanoacrylate Fuming | 30 drops of glue; 12 minutes of fuming |
| | Dye Stain | Basic Yellow 40 |
| M3LTNG | Powder Dusting | Virgin black fingerprint powder was used with a new brush |
| M6RBPX | Visual Examination | |
| | Cyanoacrylate Fuming | 10 minutes |
| | Powder Dusting | Disposable brush with magnetic and black powders applied |
| M7NLML | Visual Examination | Item was analyzed under white light and 532 nm laser using orange goggles |
| | Cyanoacrylate Fuming | Item was fumed in a CA-6000 superglue chamber at 80% humidity. Item was analyzed under white light |
| | Dye Stain | Item was sprayed with Rhodamine 6G. After drying item was analyzed under a 532nm laser with orange goggles |
| MBWAZN | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | Alternate Light Source | MBD |
| NBT8NN | Visual Inspection | |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|----------------------|--|
| | CA - Cyanoacrylate | 35 drops of CA in chamber for 12 minutes with 80% humidity |
| | MBD Dye Stain | Surface rinsed with dye stain and viewed using UltraLite BMT ALS |
| NCAZLD | Visual Examination | light and magnification |
| | Cyanoacrylate Fuming | 80% humidity, 15 minutes |
| | Dye Stain | Ardrox |
| | Powder Dusting | |
| NM9WLU | Visual examination | white light and fluorescence examination 350nm-650nm |
| | Cyanoacrylate | processing in fuming cabinet for 15 min., heat superglue to about 120°C and humidity 75% Rh, exam with white light |
| | Basic Yellow 40 | sprayed item, washed it by water, dried and exam with 450nm |
| NMTFPF | Visual Examination | Oblique lighting. |
| | Powder Dusting | Magnetic powder. |
| NTWJGY | Cyanoacrylate Fuming | 6/11/2016 8.00 - 9.40am RH=79 MVC3000 |
| | Dye Stain | BY40 6/11/2016 10am |
| | Crystal Violet | 6/11/2016 11.30am |
| | Sudan Black | 6/11/2016 11.50am |
| | Powder Dusting | Black Powder 6/11/2016 1pm |
| NWWPXQ | Visual Examination | White ambient light, ALS alternate light source (blue light, 430-470 nm), good quality print detected in both white ambient light and the ALS light. |
| | Cyanoacrylate Fuming | Improvement of the print detected especially in the lower area. |
| | Dye Stain | Basic yellow 40 made the print brighter. |
| NXRBBM | Vis | Ambient light |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Superglue Fuming | RH 72%, hot plate, 10 min in Air Science chamber |
| NXRBRG | Visual Examination | |
| | Alternate Light Source | UV, LASER, CRIMESCOPE |
| | Cyanoacrylate Fuming | RUVIS |
| | Dye Stain | RAM |
| NY48WL | Visual Examination | |
| | Cyanoacrylate Fuming | |
| NYYN9J | Visual Examination | The item was examined for a couple of minutes, how to process the item was determined and information about the surface was recorded. |
| | Cyanoacrylate Fuming | The item was placed inside cyanoacrylate chamber with cyanoacrylate ester in a disposable tray for approximately 45 minutes. |
| | Powder Dusting | The item was dusted with black magnetic powder for approximately 5 minutes for the finger print to develop. |
| PGVFQB | Cyanoacrylate Fuming | Item #3 was placed in the superglue chamber for approximately 10 minutes. |
| | Powder Dusting | Black powder was gently applied using a latent print brush. |
| QMFT7N | Visual Examination | white |
| | Alternate Light Source | 350-590 nm |
| | Cyanoacrylate Fuming | 80 % humidity |
| | Ardrox | 350-450 nm |
| | Basic Yellow 40 | 350-450 nm |
| QP7WYV | Visual Examination | Visual examination - print found |
| | Alternate Light Source | Inherent fluorescence exam using 532nm, 455nm, 365nm and 254nm wavelengths |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|--------------------------|---|
| | Cyanoacrylate Fuming | item fumed for 1.5 minutes using 2g superglue heated on 300C hotplate at 70% humidity. Item then examined visually and with 254nm |
| | Dye Stain | RAM applied to item then examined using 365nm, 455nm, and 532nm wavelengths |
| R7Q82N | Cyanoacrylate Fuming | 80 % humidity, 8 min |
| RR8KRQ | Cyanoacrylate Fuming | USING A MASON VACTRON MVC5000 CABINET ON AUTO CYCLE |
| T78HFM | Cyanoacrylate Fuming | The sample was placed in the Cyanocrylate Chamber for few minutes. |
| THYAZR | Visual Examination | |
| | Cyanoacrylate Fuming | 6 mins |
| | Powder Dusting | Magnetic |
| TJ9EBU | Visual examination | |
| | Fluorescence examination | |
| | Superglue fuming | temperature heating plate: 100°C, humidity: 80% |
| | Basic Yellow 40 | |
| U7FAKA | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | |
| | Dye Stain | RAM |
| UPUUFR | Visual Examination | |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | 6 min |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Dye Stain | BY40 |
| V4Q4ZD | Visual Examination | side lighting |
| | Cyanoacrylate Fuming | Safefume chamber (20 minutes at ~ 80 % humidity, at ~76.5 degrees F.) |
| | Powder Dusting | Silk Black Powder |
| V92GFQ | Visual Examination | |
| | Cyanoacrylate Fuming | ~120°C, ~75% relative humidity, timed auto |
| | Dye Stain | Ardrox |
| VHATYE | Visual Examination | with white light |
| | Alternate Light Source | |
| | Cyanoacrylate Fuming | 15 min with 80% RH |
| | Dye Stain | Rhodamine 6G, viewed under 515 nm light with orange filter |
| | Powder Dusting | Magnetic and Black |
| VRZE28 | Cyanoacrylate Fuming | 9 minutes fuming, 45 mins venting |
| VY2Q2A | Visual Examination | |
| | Alternate Light Source | 532nm, 450nm, 365nm |
| | Cyanoacrylate Fuming | visual and RUVIS exams after |
| | Dye Stain | RAM; 532nm, 450nm, 365nm |
| W89MK8 | Visual Examination | |
| | Alternate Light Source | Used 365nm (UV), 532nm (Laser), 254nm (RUVIS) & 450nm (Crimescope) |
| | Cyanoacrylate Fuming | Used 254nm (RUVIS) |
| | Dye Stain | RAM dye stain. Used 532nm (Laser), 365nm (UV), & 450nm (crimescope) |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------------------|--|
| | Powder Dusting | Black Fingerprint Powder |
| WAE998 | Visual Examination | |
| | Alternate Light Source | LASER, UV, Crimescope |
| | Cyanoacrylate Fuming | |
| | Alternate Light Source | RUVIS |
| | Dye Stain | RAM |
| | Alternate Light Source | LASER, UV, Crimescope |
| WJ29KB | Cyanoacrylate Chamber | @ 22 minutes in chamber @ 74°F w/80% humidity |
| | R6G (Rhodamine 6G) | R6G was applied to area w/ visible ridge detail - let dry @ 10 min |
| | Methenol Rinse | Rinse R6G from evidence let dry @ 10 min |
| | AIL-570 (Alternative Light Source) | Viewed under ALS @ 570 /w orange goggles |
| WKD36G | Visual Examination | |
| | Cyanoacrylate Fuming | Processing time 4 min and 30 sec. |
| | Dye Stain | Basic Yellow 40 |
| | Alternate Light Source | Quaser, 400-469 nm, yellow filters. |
| WTPZAN | Cyanoacrylate Fuming | 8 min |
| | Powder Dusting | |
| WW33VJ | Cyanoacrylate Fuming | Cyanoacrylate fuming hood for 60 minutes. |
| | Powder Dusting | Application of black ferric oxide for its visualization |
| WXXMK6 | Visual Examination | Using oblique lighting and examining Item 3 in different angles, a possible print was visible in quadrant C. |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|--|
| | Powder Dusting | Magnetic powder was used to process the interior of Item 3. A latent print developed in quadrant C. |
| XE2GR4 | Cyanoacrylate Fuming | Misonix fume hood 80% humidity ~ 1 hour total |
| YK6LG3 | Visual Examination | 5 MIN |
| | Cyanoacrylate Fuming | Air Science chamber 30 min processing 80% humidity 69 degree F temp |
| | Dye Stain | 30ml Methanol 1000ml Ardrex in wash bottle, rinse item let it air dry |
| | Powder Dusting | regular black powder |
| YN4WEN | Visual Examination | ALS (415nm, yellow filter) |
| | Cyanoacrylate Fuming | ~120°C, ~75% relative humidity, timed auto |
| | Dye Stain | R.A.M. |
| YNM3A8 | Visual Examination | Looked over exhibit |
| | Alternate Light Source | Used white light, UV, 415nm and 505nm |
| | Cyanoacrylate Fuming | CF exhibit, visual examination and white light with black backing paper. Print in quadrant C. |
| | Rhodamine 6G | Apply Rhodamine 6G stain by spraying. Visualise with 505nm and orange filter - further development of print observed |
| YQCAYB | Visual Examination | |
| | Cyanoacrylate Fuming | |
| | Dye Stain | RAM |
| | Alternate Light Source | 495, orange |
| | Powder Dusting | black magnetic powder |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|----------------------|--|
| Z4W964 | Visual Examination | For approximately one minute, the item was visually examined before any latent print development technique was used. The Forensic Light Source Crime-lite ML was used. The white light examination feature was used, and it provided a 1.8 magnification. |
| | Cyanoacrylate Fuming | For approximately forty minutes, the item was in the Foster & Freeman MVC 3000 Superglue Fingerprint Fuming Cabinet (calibration data for the cabinet indicates a temperature of 120 degrees and RH% of 80%. Arrowhead Forensics Cyanoacrylate bottle 1. lot # A2616 and BP2819-4 water - Molecular Biology grade, lot # 152767 were used. |
| | Visual Examination | The item was again visually examined (about thirty seconds), using the same equipment as step 1. |
| | Powder Dusting | The item was gently dusted using a Sirchie Fiberglass Fingerprint Powder, catalog # 1-0015. The Protector Downdraft Powder Station was used for dusting. |
| | Visual Examination | The item was again visually examined before any attempt to lift any latent prints (approximately one minute). |
| ZC8BNJ | Visual Examination | White crimelite 2 - ridge detail visible - photograph. |
| | Cyanoacrylate Fuming | MVC 5000 cabinet no. 4, 120C, 81.7% RH. Autocycle - approx 15 mins humidity, 20 mins glue and 40 mins purge - ridge detail enhanced - not photographed at this stage. |
| | Dye Stain | Basic Yellow 40 dye stain dissolved in ethanol. Fluoresced using blue high intensity light source 420-470nm - ridge detail enhanced - photograph. |
| | Basic Violet 3 | This treatment would have been completed if the case was serious/[Protocol] as per lab policy. |
| ZEB76Z | Visual Examination | with magnifying light |
| | Cyanoacrylate Fuming | approximately 10 minutes with heat plate and added humidity |
| | Powder Dusting | regular black powder with brush |
| ZLXYGZ | Visual Examination | I photographed the print with oblique lighting |
| | Cyanoacrylate Fuming | Appx. 10 minutes in the CAE chamber with added humidity |
| | Powder Dusting | Black Magnetic Powder |
| ZN6C39 | Visual Examination | Latent print visible and photographed. |

TABLE 2 - Item 3

| WebCode | Development Methods | Method Details |
|---------|------------------------|---|
| | Cyanoacrylate Fuming | Atmospheric pressure, ambient temperature at 80% relative humidity for 4 minutes. |
| | Dye Stain | Treated with rhodamine 6G |
| | Alternate Light Source | Examined at 495 nm with orange filter, latent print re-photographed. |
| | Powder Dusting | Magnetic black powder used, latent print re-photographed. |
| ZTUTEY | Visual Exam | |
| | Superglue fuming | 72% relative humidity for 12 minutes |

Response Summary

Participants: 107

Methods Utilized

| | | | | |
|------------------------|-----|--------------------|----|---|
| Alternate Light Source | 44 | Physical Developer | 0 | **Note: Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants. |
| Cyanoacrylate Fuming | 100 | Powder Dusting | 37 | |
| DFO | 0 | Visual Examination | 94 | |
| Dye Stain | 61 | 1,2-Indanedione | 0 | |
| Ninhydrin | 0 | | | |

Preservation Methods

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|---|
| 27EQX9 | Photography | f20 - f22/ 60mm |
| 2DYNNG | Lifting | Mikrosil |
| | Lifting | carbon powder |
| 3LQQ6H | Lifting | |
| 3V98V4 | Photography | |
| 437C6Y | None | |
| 44KLDZ | Lifting | Black powder lift with latent tape onto a latent card |
| 4JBNU4 | Photography | Using RUVIS, and laser with orange filter |
| 62A28B | Lifting | Hinged lifters |
| 67HLQ2 | Photography | Ruvis |
| 6CCGTA | Photography | Between methods used. |
| 6HDX4F | Lifting | Frosted Tape |
| 6J7N9U | Photography | Foster+Freeman DCS4 System |
| 6VN778 | Photography | Nikon D3X Macro |
| 6ZG6K3 | Photography | |
| 7DH7TW | Photography | Foster & Freeman DCS-4 with Nikon D700 camera using white paddle light for both visual and cyanoacrylate photos |
| 7WRH3Y | Photography | Digital camera after processing |
| | Lifting | after dusting |

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|--------------------------|--|
| 84VMRX | Photography | Visible latent photographed prior to chemical or powder processing. Photographed again after cyanoacrylate fuming. Visible and cyanoacrylate prints photographed with white light and polarizer filter with scale - Printed 1:1. Dye stain did not enhance enough for photography. |
| | Lifting | Tape lifted after magnetic powder processing with 2" clear tape, placed on white card |
| 86NFMG | None | |
| 8X7826 | Photography | Axial lighting |
| 93TEY4 | Lift | Lifting tape placed on a black background card |
| 987Z8B | Keep exhibits dry | Package separately |
| | Photographing | Photograph with scale sticker. |
| | Keep exhibits seperately | Safe keep exhibits with the fingerprint areas away from possible friction. |
| 9NAV3U | Photography | |
| 9X28GV | Lifting | Tape lift - Standard Black Powder |
| | Lifting | Duplicate Tape Lift - Black Magnetic Powder |
| A8K3V2 | Photography | Photographed after visual (fiber optic light), cyanoacrylate (fiber optic light), black magnetic powder (fiber optic light) |
| A9XD89 | Photography | |
| AB33C3 | Photography | I used axial light after ambient light and CA. I used direct light after BMP |
| AD7ZJP | Photography | |
| ATJ8YU | None | |
| AUXT9W | Digital Photo | 001-1 and 001-1-1 |
| B38GLV | Photography | after Cyanoacrylate fuming, ninhydrine, powder and lifting |
| | Lifting | after powdering |

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|-----------------------------------|--|
| B4CAD9 | Photography | Photographed the mark using ALS 445nm using camera filter 445nm and 495nm. |
| BD4Q6X | Photography | With side lighting |
| BN9F89 | Photographing of the latent print | PL 500 (Poliview light source) and Nikon D700 camera are utilised for capturing the fingerprint image |
| C32P6X | Photography | |
| CBBUF4 | Photography | |
| DAFTRQ | Photography | Nikon 105mm on Nikon D300 ; filter TIFFEN 15 and TIFFEN 21 |
| DBALMA | Photography | Item 1 (scaled photo) - poly tape covered area after. Open lighting w/ 60mm MACRO lens (1/3200 sec @ f5) |
| DHTM8T | Photography | |
| E2EZW3 | Scanning | |
| EFJY3N | Photography | Nikon D200, Coaxial lighting for unprocessed and post cyanoacrylate, Oblique and diffuse lighting post magnetic powder |
| EJJAZ9 | Photography | Nikon D7000 with macro lens, stored on backed up servers, photographed LP after initial visual exam and after powder. |
| ET6E7M | Photography | 35 min |
| | Lifting | 10 min |
| FCHB3R | Lifting | Print was lifted with lift tape and placed on a lift card. |
| | Packaging | Lift card was placed in an envelope and sealed. Item was placed in an envelope and sealed. |
| G7M3XN | none | none |
| GAHWQJ | Scanning | CanoScan LiDE 70, Adobe Photoshop CS6; Mitsubishi Printer |
| | Photography | Nikon D5200 camera, Adobe Photoshop CS6, Mitsubishi Printer |

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|--|
| GBHWT6 | None | |
| GHC6AP | Photography | |
| HLTNW6 | Lifting | Black powder lift was preserved |
| | Photography | Photographs taken in every step of the process |
| HPWHRN | Photography | photograph of print was taken after dusting with bichromatic powder |
| | Photography | photograph of print taken after dusting with black powder |
| HQAUUY | Photography | |
| HV2YLH | Lifting | |
| | Photography | |
| J26KQQ | Photography | 1:1 digital photo |
| | Lifting | Tape lift |
| JKFCTT | Photography | Using ring lighting, green filter, blue filter |
| JM6JDP | Photography | Nikon D700 used to capture latent print in TIFF format. Saved in digital archive system |
| JNET42 | None | |
| K2WXQN | Photography | Filled frame with ruler in photo to set scale. Photos were obtained after each process in which the print was visible. |
| | Lifting | Lift was obtained after powder dusting. |
| KPM6JH | Photography | Nikon D700 camera and Schott paddle-light attachment |
| M3LTNG | Lifting | Latent print lifted with standard lifting tape and placed on a Latent Print Card labeled as sub exhibit 165191(SD1274)1A |
| M6RBPX | Lifting | Lifted using clear tape and transferred to fingerprint card |
| M7NLML | Photography | Nikon D700 |

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|------------------------|--|
| MBWAZN | Photography | |
| NBT8NN | Photography | |
| NCAZLD | Lifting | Tape lift after magnetic powder |
| NM9WLU | Photography | Nikon D80, lens Nikon AF MicroNikkor 60mm |
| NMTFPF | Lifting | Lifting with tape and fixing on latent card. |
| NTWJGY | Photography Lifting | |
| NWWPXQ | Photography | After each method except DFO. |
| NXRMBB | Digital Image | Photographed impression in Quadrant D following Vis exam, Superglue & pdr |
| NXRBRG | none | |
| NY48WL | Photography | |
| NYYN9J | Lifting | Lift tape was gently placed over the fingerprint and removed lifting the fingerprint. The tape was placed on a white lift card. The lift card was filled out with information regarding where the lift was lifted. |
| PGVFQB | Photography Lifting | The developed latent print was photographed using the digital capturing system (DCS). I used latent lifting tape to preserve the latent print, and apply it to the lift card. |
| QMFT7N | Photography | CANON EOS 400D |
| QP7WYV | None | |
| T78HFM | Lifting | Lift Card |
| THYAZR | Lifting | |

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|---|---|
| TJ9EBU | Photography Black latent print lifting | |
| U7FAKA | none | |
| UPUUFR | Photography Photography Lifting | visual cna + powder mikrosil, then photo |
| V4Q4ZD | Photography | After fuming and dusting (Adobe Photoshop) |
| V92GFQ | Photography | |
| VHATYE | Photography Lifting | with white light with white Mikrosil |
| VRZE28 | Photography | digital photography |
| VY2Q2A | none | |
| W89MK8 | Other | None |
| WAE998 | None | |
| WJ29KB | Photographed Tape | As is into files in the Foray and Justice Trax Systems Placed clear tape over Ridge Detail to preserve |
| WKD36G | Photography Lifting | Between methods used. White microsil (liftingpaste) after powder-dusting. |
| WTPZAN | Lifting Photography | |
| WW33VJ | Photography Lifting | Taking a picture of the latent revealed Lifting the latent with tape and put it on a contrast card |

TABLE 3 - Item 1

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|---|
| WXXMK6 | Lifting | Standard lifting tape was used to lift the latent print from quadrant D and placed on a latent card. |
| XE2GR4 | Photography | Digital Camera |
| YK6LG3 | Photography | digital camera (Nikon D5200) tethered to computer, Adobe photoshop CS6 |
| YN4WEN | Photography | |
| YNM3A8 | Photography | Photographed at every stage of development in case print rubs off |
| YQCAYB | Photography | |
| Z4W964 | Lifting | Using lifting tape and a lift card, a latent print was lifted/recovered from Quadrant D of this item. |
| ZC8BNJ | Photography | Nikon D700 camera kit, DCS4 image capture software used |
| | Lifting | Scene Safe BVDA gellifters black |
| ZEB76Z | Lifting | with clear tape, attached to lift card |
| ZLXYGZ | Lifting | I lifted the visible print with adhesive tape and applied it to a lift card |
| ZN6C39 | Photography | Nikon D810 with 60 mm micro lens |
| ZTUTEY | Digital photography | |

Response Summary

Participants: 102

Methods Utilized

| | |
|-------------|----|
| Lifting | 39 |
| Photography | 72 |
| Scanning | 2 |

****Note:** Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.

TABLE 3 - Item 2

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|---|
| 27EQX9 | Photography | f20, 60mm |
| 2DYNNG | Photography | |
| 3LQQ6H | Scanning | |
| 3V98V4 | Photography | |
| 437C6Y | None | |
| 44KLDZ | Scanning | Placed on Epson V700 with ruler and scanned in at 1000dpi. |
| 62A28B | Photography | |
| 6CCGTA | Photography | Between methods used. |
| 6J7N9U | Photography | Foster+Freeman DCS4 system |
| 6VN778 | Scanning | Scanned in at 1000 dpi/.tiff image |
| 6ZG6K3 | Photography | 515Nm, orange filter |
| 7DH7TW | Photography | Foster & Freeman DCS-4 with Nikon D700 camera used green light with orange filter |
| 7WRH3Y | Photography | after each processing |
| 84VMRX | Photography | Photographed with white light and green filter with scale; printed 1:1 |
| 86NFMG | None | |
| 8X7826 | Photography | LASER illumination |
| 93TEY4 | Photographed | |
| 987Z8B | Photographing | Photograph fingerprint with scale sticker to be able to show originality for court purposes or further investigation. |
| | Safekeeping | Keep out of extreme heat or sunlight - keep it in a dark place. |

TABLE 3 - Item 2

| WebCode | Preservation Methods | Method Details |
|---------|----------------------------|---|
| 9NAV3U | Photography | |
| 9X28GV | Photography | DCS4 System - Green Filter - With Scale - Printed Natural Size |
| A8K3V2 | Photography | After Indanedione/ ZnCl (532nm laser & orange filter) |
| A9XD89 | Photography | |
| AB33C3 | Photography Scanning | Used orange filter on camera lens |
| AD7ZJP | Scanning | |
| ATJ8YU | None | |
| AUXT9W | Digital Scan | 001-3 @ 1000ppi |
| B38GLV | Photography | after indanedione and ninhydrin |
| B4CAD9 | Photography | Photographed the mark after 1,2-Indanedione using ALS 532nm using orange camera filter 529nm |
| BD4Q6X | Photography | using Laser |
| C32P6X | Photography | |
| CBBUF4 | Photography | |
| DAFTRQ | Photography | Nikon 105mm on Nikon D300 ; filter TIFFEN 15 and TIFFEN 21 |
| DBALMA | Photography Photography | (DFO) ALS @ 495nm with orange filter on 60mm MACRO lens and scaled (1/15 sec @ f5) (Ninhydrin) open lighting - 60mm Macro lens & scaled (1/8000 sec @f5) |
| DHTM8T | Photography | |
| E2EZW3 | Scanning | |

TABLE 3 - Item 2

| WebCode | Preservation Methods | Method Details |
|---------|---------------------------|--|
| | Photography | |
| EFJY3N | Photography | Nikon D200, Direct Lighting |
| EJJAZ9 | Photography | Nikon D7000 with macro lens, stored on backed up servers, photographed LP after Indanedione and after Ninhydrin. |
| ET6E7M | Photography | 15 min |
| FCHB3R | Packaging | Item was placed in envelope and sealed |
| G7M3XN | none | none |
| GBHWT6 | None | |
| GHC6AP | Photography | |
| HLTNW6 | Photography | |
| HPWHRN | Photography | photographs of prints taken after each processing method |
| HQAUUY | Photography | |
| HV2YLH | No ridge detail developed | |
| J26KQQ | Photography | 1:1 digital photo |
| JKFCTT | Photography | Using available lighting and Tracer Laser |
| JM6JDP | Photography | D700 camera used to capture latent print as TIFF and saved to digital archive system. |
| JNET42 | None | |
| K2WXQN | Photography | Filled frame with ruler in photo to set scale. Photos were obtained after each process in which the print was visible. |
| KPM6JH | Photography | Nikon D700 camera with Crime-lite 4x4 (Blue/Green light with orange filter) |

TABLE 3 - Item 2

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|--|
| M3LTNG | Scanning | Item was scanned onto an SD card and submitted via [Laboratory] form to the photo lab for printing. Photos received from the photo lab and labeled and sealed and submitted to the [Laboratory] records and ID Division on 11-30-16 at 0900 hours. |
| M6RBPX | Scanning | |
| M7NLML | Photography | Nikon D700 |
| MBWAZN | Photography | |
| NCAZLD | Photography | With D2Xs after DFO, with ALS and orange filter |
| NM9WLU | Photography | Nikon D80, lens Nikon AF MicroNikkor 60mm. After DFO method was use orange filter and light 505nm |
| NMTFPF | Scanning | Epson Perfection V700 photo scanner. |
| NTWJGY | Photography | |
| NWWPXQ | Photography | After DFO and ninhydrin. |
| NXRMBM | Digital Image | Photographed impression in Quadrant B following Ninhydrin process |
| NXRBRG | none | |
| NY48WL | Photography | |
| NYYN9J | Photography | Photography would be used to preserve this type of fingerprint; however, no fingerprints were developed. |
| PGVFQB | Photography | I used the DCS to photograph the latent print. I used the ALS to view the latent print at 450nm-515nm and an orange filter. I was able to photograph the latent print. |
| QMFT7N | Photography | CANON EOS 400D |
| QP7WYV | None | |
| T78HFM | Photography | |

TABLE 3 - Item 2

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|---|
| THYAZR | Scanning | |
| TJ9EBU | Photography | |
| U7FAKA | none | |
| UPUUFR | Photography | ninhydrin |
| V4Q4ZD | Scanning | Adobe Photoshop |
| V92GFQ | Photography | |
| VHATYE | Photography | under 515nm light with orange filter |
| VRZE28 | Photography | digital photography |
| VY2Q2A | none | |
| W89MK8 | Other | None |
| WAE998 | None | |
| WJ29KB | Flat bed scanner | Scanned @ 1:1 ratio w/1200 DPi into files of Foray/Justice Trax systems |
| WKD36G | Photography | Between methods used. |
| WTPZAN | Photography | |
| WW33VJ | Photography | Taking a picture to preserve the latent revealed, because it might be lost through the time |
| WXXMK6 | Scanning | An Epson V700 scanner was used to scan Item 2 - quadrant B in TIFF format. |
| XE2GR4 | Photography | digital camera |
| YK6LG3 | Photography | Scanner (Canon, Canoscan LiDe 70) Adobe Photoshop CS6 |

TABLE 3 - Item 2

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|--|
| YN4WEN | Photography | |
| YNM3A8 | Photography | Photographed at every stage of enhancement in case paper got damaged |
| YQCAYB | Photography | |
| Z4W964 | Photography | Using a red pencil, the ridge detail found in quadrant B was marked, and a request to have a 1:1 photograph of this area was made. |
| ZC8BNJ | Photography | Nikon D700 camera kit, DCS4 image capture software used |
| ZLXYGZ | Photography | I took two photographs of the item. One close-up using a yellow/orange filter at 445-550nm. I also took one overall photo |
| ZN6C39 | Photography | Nikon D810 with 60 mm micro lens |
| ZTUTEY | Digital Photography | |

Response Summary

Participants: 102

Methods Utilized

| | |
|-------------|----|
| Lifting | 0 |
| Photography | 70 |
| Scanning | 14 |

****Note:** Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|--|
| 27EQX9 | Photography | f16, f20 |
| 2DYNNG | Photography | |
| 3LQQ6H | Lifting | |
| 3V98V4 | Photography | |
| 437C6Y | None | |
| 44KLDZ | Lifting | Black powder lift with latent tape onto a latent card |
| 4JBNU4 | Photography | using white light, and laser with orange filter |
| 62A28B | Lifting | Hinged lift |
| 67HLQ2 | Photography | Backlit, White Light |
| 6CCGTA | Photography | Between methods used. |
| 6HDX4F | Lifting | Frosted Tape |
| 6J7N9U | Photography | Foster+Freeman DCS4 system |
| 6VN778 | Photography | Nikon D3X Macro. |
| 6ZG6K3 | Photography | |
| 7DH7TW | Photography | Foster & Freeman DCS-4 with Nikon D700 camera used white paddle light for both visual and cyanoacrylate photos |
| 7WRH3Y | Photography | after each processing |
| 84VMRX | Photography | Visible latent photographed prior to any chemical or powder processing (white light & polarizer filter with scale); MBD dye stained latent photographed with ALS (blue light 430-470 nm & yellow filter GG495, 476nm) and a scale; all Printed 1:1 |
| | Lifting | Tape lifted after powder processing with 2" clear tape, placed on white card |

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|--|
| 86NFMG | None | |
| 8X7826 | Photography | Room lighting |
| 93TEY4 | Photographed | |
| 987Z8B | Photographing | Photograph fingerprint with scale sticker to be able to show originality if required for further investigation or for court purposes. |
| | Safekeeping | Keep away from extreme heat. |
| 9NAV3U | Photography | |
| 9X28GV | Photography | Black card and polarizer prior to processing DCS4 System with scale printed to natural size |
| | Photography | Fluorescent light - yellow filter after MBD processing DCS4 System with scale printed to natural size |
| | Lifting | Tape Lift - Black Magnetic Powder |
| A8K3V2 | Photography | After visual (fiber optic light), cyanoacrylate fuming (fiber optic light), R6G (532nm laser, orange filter) |
| A9XD89 | Photography | |
| AB33C3 | Photography | direct light |
| AD7ZJP | Photography | |
| ATJ8YU | None | |
| AUXT9W | Digital Photo | 001-2, 001-2-1 and 001-2-2 |
| B38GLV | Photography | after Cyanoacrylate fuming and Rhodamine 6G |
| B4CAD9 | Photography | Mark was photographed after first visual examination and then after fuming with white light. And after dye stain using ALS 532nm using camera filter 550nm |
| BD4Q6X | Photography | using white light & dark background |

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|-----------------------------------|--|
| BN9F89 | Photographing of the latent print | PL 500 (Poliview light source) and Nikon D700 camera are utilised for capturing the fingerprint image |
| C32P6X | Photography | |
| CBBUF4 | Photography | |
| DAFTRQ | Photography | Nikon 105mm on Nikon D300 ; filter TIFFEN 15 and TIFFEN 21 |
| DBALMA | Photography | Cyanoacrylate ester. See above; photographed w/ 60mm MACRO lens open lighting for 1/1600 sec @ f5 |
| | Photography | R6G. Photo w/ 60mm MACRO - ALS @ 495nm w/ orange filter for 1/8 sec @ f5 |
| DHTM8T | Photography | |
| E2EZW3 | Photography Scanning | |
| EFJY3N | Photography | Nikon D200, Direct Transmitted Light for unprocessed and post CA, Tracer Laser post dye stain |
| EJJAZ9 | Photography | Nikon D7000 with macro lens, stored on backed up servers, photographed LP after initial visual exam, after CA fuming, and after dye stain. |
| ET6E7M | Photography | 15 min |
| FCHB3R | Lifting Packaging | Print was lifted with lift tape and placed on a lift card. Lift card was placed in an envelope and sealed. Item was placed in an envelope and sealed. |
| G7M3XN | none | none |
| GAHWQJ | Photography | Nikon D5200 Camera, UV Light, Adobe Photoshop CS6, Mitsubishi Printer |
| GBHWT6 | None | |
| GHC6AP | Photography | |

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|------------------------|--|
| HLTNW6 | Photography Lifting | Black powder |
| HPWHRN | Photography | photograph of prints taken after chemical processing and after dusting with black powder |
| HQAUUY | Photography | |
| HV2YLH | Photography | |
| J26KQQ | Photography | 1:1 digital photo |
| JKFCTT | Photography | Using ring lighting, Crimescope ALS (crime scene search mode), and Tracer Laser |
| JM6JDP | Photography | D700 camera used to capture latent print as TIFF and saved to digital archive system. |
| JNET42 | None | |
| K2WXQN | Photography | Filled frame with ruler in photo to set scale. Photos were obtained after each process in which the print was visible. |
| KPM6JH | Photography | Nikon D700 camera with Crime-lite 4x4 (Green light, white light, and blue light with yellow filter) |
| M3LTNG | Lifting | Latent print was lifted with standard lifting tape and placed on a Latent Print Card and labeled as sub-exhibit 165191(SD1274)3A |
| M6RBPX | Lifting | Lifted from baggie using clear tape, then transferred to a fingerprint card |
| M7NLML | Photography | Nikon D700 |
| MBWAZN | Photography | |
| NBT8NN | Photography | |
| NCAZLD | Photography | with D2Xs after visual exam using direct lighting |

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|--|
| NM9WLU | Photography | Nikon D80, lens Nikon AF MicroNikkor 60mm, light 505nm and orange filter |
| NMTFPF | Lifting | Lifting with tape and fixing on latent card. |
| NTWJGY | Photography | |
| NWWPXQ | Photography | After each step. |
| NXRMBB | Digital Image | Photographed impression in Quadrant C following Vis Exam & Superglue fuming |
| NXRBRG | none | |
| NY48WL | Photography | |
| NYYN9J | Lifting | Lift tape was gently placed over the fingerprint and removed lifting the fingerprint. The tape was placed on a white lift card. The lift card was filled out with information regarding where the lift was lifted. |
| PGVFQB | Photography | I was able to capture the patent print using the DCS. |
| | Lifting | I used latent lifting tape to preserve the latent print and apply it to the lift card. |
| QMFT7N | Photography | CANON EOS 400D |
| QP7WYV | None | |
| T78HFM | Lifting | Lift card |
| THYAZR | Lifting | |
| TJ9EBU | Photography | |
| U7FAKA | none | |
| UPUJFR | Photography | visual |
| | Photography | CNA+BY40 |

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|-----------------------------|---|
| V4Q4ZD | Photography | After fuming and dusting (Adobe Photoshop) |
| V92GFQ | Photography | |
| VHATYE | Photography | under 515nm light with orange filter |
| VRZE28 | Photography | digital photography |
| VY2Q2A | none | |
| W89MK8 | Other | None |
| WAE998 | None | |
| WJ29KB | Cut & Mount Photographed | Section cut w/ ridge detail & mounted on 3XS black lift card for better contrast w/orange filter lense and ALS @ 570 for files in Justice Trax & Foray |
| WKD36G | Photography | Between methods used. |
| WTPZAN | Lifting Photography | |
| WW33VJ | Photography Lifting | Taking a picture of the latent revealed Lifting the latent with tape. |
| WXXMK6 | Lifting | Standard lifting tape was used to lift a latent print from quadrant C and placed on a latent card. |
| XE2GR4 | Photography | Digital camera |
| YK6LG3 | Photography | digital camera (Nikon D5200) tethered to computer Adobe photoshop CS6 |
| YN4WEN | Photography | |
| YNM3A8 | Photography | Photograph every stage in case print rubs off |

TABLE 3 - Item 3

| WebCode | Preservation Methods | Method Details |
|---------|----------------------|---|
| YQCAYB | Photography | |
| Z4W964 | Lifting | Using lifting tape and a lift card, a latent print was lifted/recovered from Quadrant D of this item. |
| ZC8BNJ | Photography | Nikon D700 camera kit, DCS4 image capture software used |
| ZEB76Z | Photography | direct light with black card underneath item |
| | Lifting | with clear tape, attached to lift card |
| ZLXYGZ | Photography | I took two photos of the print. One close-up with oblique lighting and one overall photo. |
| | Lifting | After applying black powder, I lifted the print with tape and applied it to a lift card |
| ZN6C39 | Photography | Nikon D810 with 60 mm micro lens |
| ZTUTEY | Digital Photography | |

Response Summary

Participants: 102

Methods Utilized

| | |
|-------------|----|
| Lifting | 21 |
| Photography | 80 |
| Scanning | 1 |

****Note:** Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.

First-Level Detail Findings

TABLE 4 - Item 1

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| 27EQX9 | Yes | Whorl |
| 2DYNNG | N/A | N/A |
| 3LQQ6H | Yes | Whorl |
| 3V98V4 | Yes | Whorl |
| 437C6Y | Yes | Loop |
| 44KLDZ | N/A | N/A |
| 4JBNU4 | Yes | Whorl |
| 62A28B | Yes | Whorl |
| 67HLQ2 | Yes | Whorl |
| 6CCGTA | Yes | Loop |
| 6HDX4F | Yes | Whorl |
| 6J7N9U | Yes | Whorl |
| 6VN778 | Yes | Whorl |
| 6ZG6K3 | No | |
| 78DL8D | Yes | Whorl |
| 7DH7TW | Yes | Whorl |
| 7WRH3Y | N/A | N/A |
| 84VMRX | N/A | N/A |
| 86LQL6 | N/A | N/A |
| 86NFMG | Yes | Whorl |
| 8X7826 | Yes | Whorl |
| 93TEY4 | Yes | Whorl |
| 987Z8B | Yes | Whorl |
| 9NAV3U | Yes | Whorl |

TABLE 4 - Item 1

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| 9X28GV | N/A | N/A |
| A8K3V2 | Yes | Loop |
| A9XD89 | Yes | Whorl |
| AB33C3 | Yes | Whorl |
| AD7ZJP | Yes | Whorl |
| ATJ8YU | Yes | Loop |
| AUXT9W | Yes | Whorl |
| B38GLV | Yes | Whorl |
| B4CAD9 | Yes | Whorl |
| BD4Q6X | Yes | Whorl |
| BN9F89 | Yes | Whorl |
| C32P6X | No | |
| CBBUF4 | Yes | Whorl |
| DAFTRQ | Yes | Whorl |
| DBALMA | Yes | Whorl |
| DHTM8T | Yes | Whorl |
| E2EZW3 | Yes | Whorl |
| EFJY3N | Yes | Loop |
| EJJAZ9 | Yes | Whorl |
| ET6E7M | Yes | Whorl |
| FANPA2 | Yes | N/A |
| FCHB3R | Yes | Whorl |
| G7M3XN | Yes | Whorl |
| GAHWQJ | Yes | Whorl |
| GBHWT6 | Yes | Whorl |

TABLE 4 - Item 1

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| GHC6AP | Yes | Loop |
| HLTNW6 | Yes | Whorl |
| HPWHRN | N/A | N/A |
| HQAUUY | Yes | N/A |
| HV2YLH | N/A | N/A |
| J26KQQ | Yes | Whorl |
| JKFCTT | Yes | Whorl |
| JM6JDP | Yes | Whorl |
| JNET42 | Yes | Whorl |
| K2WXQN | Yes | Whorl |
| KPM6JH | Yes | Whorl |
| M3LTNG | N/A | N/A |
| M6RBPX | Yes | Whorl |
| M7NLML | Yes | N/A |
| MBWAZN | Yes | Whorl |
| NBT8NN | Yes | Whorl |
| NCAZLD | Yes | Whorl |
| NM9WLU | No | |
| NMTFPF | N/A | N/A |
| NTWJGY | Yes | Whorl |
| NWWPXQ | Yes | N/A |
| NXRBBM | N/A | Whorl |
| NXRBRG | Yes | Whorl |
| NY48WL | Yes | Whorl |
| NYYN9J | Yes | Whorl |

TABLE 4 - Item 1

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| PGVFQB | N/A | N/A |
| QMFT7N | Yes | Whorl |
| QP7WYV | Yes | Loop |
| R7Q82N | Yes | N/A |
| RR8KRQ | Yes | Whorl |
| T78HFM | N/A | N/A |
| THYAZR | Yes | Whorl |
| TJ9EBU | Yes | Whorl |
| U7FAKA | Yes | N/A |
| UPUUFRR | Yes | Whorl |
| V4Q4ZD | Yes | Whorl |
| V92GFQ | Yes | Whorl |
| VHATYE | Yes | Loop |
| VRZE28 | Yes | Whorl |
| VY2Q2A | No | N/A |
| W89MK8 | Yes | Whorl |
| WAE998 | Yes | Whorl |
| WJ29KB | N/A | N/A |
| WKD36G | Yes | Whorl |
| WTPZAN | Yes | N/A |
| WW33VJ | Yes | Whorl |
| WXXMK6 | N/A | N/A |
| XE2GR4 | Yes | Whorl |
| YK6LG3 | Yes | Whorl |
| YN4WEN | Yes | Whorl |

TABLE 4 - Item 1

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| YNM3A8 | Yes | Whorl |
| YQCAYB | Yes | Whorl |
| Z4W964 | Yes | Whorl |
| ZC8BNJ | N/A | N/A |
| ZEB76Z | N/A | N/A |
| ZLXYGZ | N/A | N/A |
| ZN6C39 | Yes | Whorl |
| ZTUTEY | Yes | Whorl |

| Findings Summary | | Total Participants: 107 |
|-------------------------|-------|-------------------------|
| 1st Level | Total | |

| | |
|-------|----|
| Arch | 0 |
| Loop | 8 |
| Whorl | 70 |
| No | 4 |
| N/A | 18 |

*NOTE: These numbers may not add up to the total # of participants, as not all who found first level detail could determine one specific pattern type.

TABLE 4 - Item 2

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| 27EQX9 | Yes | Whorl |
| 2DYNNG | N/A | N/A |
| 3LQQ6H | Yes | Whorl |
| 3V98V4 | Yes | Whorl |
| 437C6Y | Yes | Whorl |
| 44KLDZ | N/A | N/A |
| 4JBNU4 | No | |
| 62A28B | Yes | Whorl |
| 67HLQ2 | No | N/A |
| 6CCGTA | Yes | Whorl |
| 6HDX4F | N/A | N/A |
| 6J7N9U | Yes | Whorl |
| 6VN778 | Yes | Whorl |
| 6ZG6K3 | Yes | Whorl |
| 78DL8D | Yes | Whorl |
| 7DH7TW | Yes | Whorl |
| 7WRH3Y | N/A | N/A |
| 84VMRX | N/A | N/A |
| 86LQL6 | N/A | N/A |
| 86NFMG | N/A | N/A |
| 8X7826 | Yes | Whorl |
| 93TEY4 | Yes | Whorl |
| 987Z8B | Yes | Whorl |
| 9NAV3U | Yes | Whorl |
| 9X28GV | N/A | N/A |

TABLE 4 - Item 2

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| A8K3V2 | Yes | Whorl |
| A9XD89 | Yes | Arch |
| AB33C3 | Yes | Whorl |
| AD7ZJP | No | |
| ATJ8YU | Yes | Whorl |
| AUXT9W | Yes | Whorl |
| B38GLV | Yes | Whorl |
| B4CAD9 | Yes | Whorl |
| BD4Q6X | Yes | Whorl |
| BN9F89 | No | N/A |
| C32P6X | Yes | Whorl |
| CBBUF4 | Yes | Whorl |
| DAFTRQ | Yes | Whorl |
| DBALMA | Yes | Whorl |
| DHTM8T | Yes | Whorl |
| E2EZW3 | Yes | Whorl |
| EFJY3N | Yes | Whorl |
| EJJAZ9 | Yes | Whorl |
| ET6E7M | Yes | Whorl |
| FANPA2 | Yes | N/A |
| FCHB3R | No | |
| G7M3XN | Yes | N/A |
| GAHWQJ | No | |
| GBHWT6 | Yes | Whorl |
| GHC6AP | Yes | Whorl |

TABLE 4 - Item 2

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| HLTNW6 | Yes | Whorl |
| HPWHRN | N/A | N/A |
| HQAUUY | Yes | N/A |
| HV2YLH | N/A | N/A |
| J26KQQ | Yes | Whorl |
| JKFCTT | Yes | Whorl |
| JM6JDP | Yes | Whorl |
| JNET42 | Yes | Whorl |
| K2WXQN | Yes | Whorl |
| KPM6JH | Yes | Whorl |
| M3LTNG | N/A | N/A |
| M6RBPX | Yes | Whorl |
| M7NLML | Yes | Whorl |
| MBWAZN | Yes | Whorl |
| NBT8NN | N/A | N/A |
| NCAZLD | Yes | Whorl |
| NM9WLU | Yes | Whorl |
| NMTFPF | N/A | N/A |
| NTWJGY | Yes | Whorl |
| NWWPXQ | Yes | Whorl |
| NXRMBB | N/A | Whorl |
| NXRBRG | Yes | Whorl |
| NY48WL | Yes | Whorl |
| NYYN9J | No | |
| PGVFQB | N/A | N/A |

TABLE 4 - Item 2

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| QMFT7N | No | |
| QP7WYV | Yes | Whorl |
| R7Q82N | Yes | N/A |
| RR8KRQ | Yes | Whorl |
| T78HFM | N/A | N/A |
| THYAZR | Yes | N/A |
| TJ9EBU | Yes | Whorl |
| U7FAKA | No | N/A |
| UPUUFRR | Yes | Whorl |
| V4Q4ZD | No | |
| V92GFQ | Yes | Whorl |
| VHATYE | Yes | Whorl |
| VRZE28 | Yes | Whorl |
| VY2Q2A | Yes | Whorl |
| W89MK8 | Yes | Whorl |
| WAE998 | Yes | Whorl |
| WJ29KB | N/A | N/A |
| WKD36G | Yes | N/A |
| WTPZAN | Yes | N/A |
| WW33VJ | Yes | Whorl |
| WXXMK6 | N/A | N/A |
| XE2GR4 | Yes | N/A |
| YK6LG3 | Yes | Whorl |
| YN4WEN | Yes | Whorl |
| YNM3A8 | Yes | Whorl |

TABLE 4 - Item 2

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| YQCAYB | Yes | Whorl |
| Z4W964 | Yes | Arch |
| ZC8BNJ | N/A | N/A |
| ZEB76Z | N/A | N/A |
| ZLXYGZ | N/A | N/A |
| ZN6C39 | Yes | Whorl |
| ZTUTEY | Yes | Whorl |

| Findings Summary | | Total Participants: 107 |
|------------------|-------|--|
| 1st Level | Total | |
| Arch | 2 | *NOTE: These numbers may not add up to the total # of participants, as not all who found first level detail could determine one specific pattern type. |
| Loop | 0 | |
| Whorl | 66 | |
| No | 10 | |
| N/A | 21 | |

TABLE 4 - Item 3

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| 27EQX9 | Yes | Whorl |
| 2DYNNG | N/A | N/A |
| 3LQQ6H | Yes | Whorl |
| 3V98V4 | Yes | Whorl |
| 437C6Y | Yes | Whorl |
| 44KLDZ | N/A | N/A |
| 4JBNU4 | Yes | Whorl |
| 62A28B | Yes | Whorl |
| 67HLQ2 | Yes | Whorl |
| 6CCGTA | Yes | Whorl |
| 6HDX4F | Yes | Whorl |
| 6J7N9U | Yes | Whorl |
| 6VN778 | Yes | Whorl |
| 6ZG6K3 | Yes | Whorl |
| 78DL8D | Yes | Whorl |
| 7DH7TW | Yes | Whorl |
| 7WRH3Y | N/A | N/A |
| 84VMRX | N/A | N/A |
| 86LQL6 | N/A | N/A |
| 86NFMG | Yes | Whorl |
| 8X7826 | Yes | Whorl |
| 93TEY4 | Yes | Whorl |
| 987Z8B | Yes | Whorl |
| 9NAV3U | Yes | Whorl |
| 9X28GV | N/A | N/A |

TABLE 4 - Item 3

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| A8K3V2 | Yes | Whorl |
| A9XD89 | Yes | Loop |
| AB33C3 | Yes | Whorl |
| AD7ZJP | Yes | Whorl |
| ATJ8YU | Yes | Whorl |
| AUXT9W | Yes | Whorl |
| B38GLV | Yes | Whorl |
| B4CAD9 | Yes | Whorl |
| BD4Q6X | Yes | Whorl |
| BN9F89 | Yes | Whorl |
| C32P6X | Yes | Whorl |
| CBBUF4 | Yes | Whorl |
| DAFTRQ | Yes | Whorl |
| DBALMA | Yes | Whorl |
| DHTM8T | Yes | Whorl |
| E2EZW3 | Yes | Whorl |
| EFJY3N | Yes | Whorl |
| EJJAZ9 | Yes | Whorl |
| ET6E7M | Yes | Whorl |
| FANPA2 | Yes | N/A |
| FCHB3R | Yes | Whorl |
| G7M3XN | Yes | Whorl |
| GAHWQJ | Yes | Whorl |
| GBHWT6 | Yes | Whorl |
| GHC6AP | Yes | Whorl |

TABLE 4 - Item 3

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| HLTNW6 | Yes | Whorl |
| HPWHRN | N/A | N/A |
| HQAUUY | Yes | N/A |
| HV2YLH | N/A | N/A |
| J26KQQ | Yes | Whorl |
| JKFCTT | Yes | Whorl |
| JM6JDP | Yes | Whorl |
| JNET42 | Yes | Whorl |
| K2WXQN | Yes | Whorl |
| KPM6JH | Yes | Whorl |
| M3LTNG | N/A | N/A |
| M6RBPX | Yes | Whorl |
| M7NLML | Yes | Whorl |
| MBWAZN | Yes | Whorl |
| NBT8NN | Yes | Whorl |
| NCAZLD | Yes | Whorl |
| NM9WLU | Yes | Whorl |
| NMTFPF | N/A | N/A |
| NTWJGY | Yes | Whorl |
| NWWPXQ | Yes | Whorl |
| NXRMBB | N/A | Whorl |
| NXRBRG | Yes | Whorl |
| NY48WL | Yes | Whorl |
| NYYN9J | Yes | Whorl |
| PGVFQB | N/A | N/A |

TABLE 4 - Item 3

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| QMFT7N | Yes | Whorl |
| QP7WYV | Yes | Whorl |
| R7Q82N | Yes | N/A |
| RR8KRQ | Yes | Whorl |
| T78HFM | N/A | N/A |
| THYAZR | Yes | Whorl |
| TJ9EBU | Yes | Whorl |
| U7FAKA | Yes | N/A |
| UPUUFRR | Yes | Whorl |
| V4Q4ZD | Yes | Whorl |
| V92GFQ | Yes | Whorl |
| VHATYE | Yes | Whorl |
| VRZE28 | Yes | Whorl |
| VY2Q2A | Yes | Whorl |
| W89MK8 | Yes | Whorl |
| WAE998 | Yes | Whorl |
| WJ29KB | N/A | N/A |
| WKD36G | Yes | N/A |
| WTPZAN | Yes | Whorl |
| WW33VJ | Yes | Whorl |
| WXXMK6 | N/A | N/A |
| XE2GR4 | Yes | Whorl |
| YK6LG3 | Yes | Whorl |
| YN4WEN | Yes | Whorl |
| YNM3A8 | Yes | Whorl |

TABLE 4 - Item 3

| WebCode | First Level Detail? | Identified Pattern? |
|---------|---------------------|---------------------|
| YQCAYB | Yes | Whorl |
| Z4W964 | Yes | Whorl |
| ZC8BNJ | N/A | N/A |
| ZEB76Z | N/A | N/A |
| ZLXYGZ | N/A | N/A |
| ZN6C39 | Yes | Whorl |
| ZTUTEY | Yes | Whorl |

| Findings Summary | | Total Participants: 107 |
|------------------|-------|--|
| 1st Level | Total | |
| Arch | 0 | *NOTE: These numbers may not add up to the total # of participants, as not all who found first level detail could determine one specific pattern type. |
| Loop | 1 | |
| Whorl | 83 | |
| No | 0 | |
| N/A | 18 | |

Additional Comments

TABLE 5

| WebCode | Additional Comments |
|---------|--|
| 2DYNNG | The fingerprint on Item 1 was difficult to lift. Best result was accomplished with carbon powder and "fingerprint lifter". Lifting with Mikrosil did not work. In retrospect dying with Basic Yellow 40 might have been a mistake. |
| 3V98V4 | Regarding results for item 1, we specify that the general pattern was whorl (double loop). As a part of the general pattern is missing (lower part), it could also be a right loop. |
| 437C6Y | The print detected on Item 1 could be either a loop or a whorl. There was not enough ridge detail detected to make that determination. |
| 7WRH3Y | The photo was a good challenge. |
| 86LQL6 | Indanedione is usually used before ninhydrin on our paper items. We did not have all the chemicals to make a new indanedione solution. What we had was expired as we have not used it recently. A quality control is taking before using any processing procedures. |
| 987Z8B | On item no 3 (plastic baggie) were also friction ridge impressions & marks visible but it were not good enough to meet the 7 point criteria as required for identification by the [Country] courts. |
| A8K3V2 | Faint ridge detail in Item 1 indicates it is likely a double loop whorl, but the more developed portion of the print appears to be a loop. |
| ATJ8YU | The pattern type for the latent print recovered on Item 1 is either a left slant loop or a whorl. |
| BN9F89 | According to my knowledge and experience of working in the crime scene laboratory, methods that I used for processing the evidence of this test, are correct and very effective. My statement is supported by the control samples that were used during the processing. As it can be seen with Item 2 which had no prints and my positive control has print developed on it. |
| DAFTRQ | For Item 1 and 3, the latent was already visible with optical detection. For Item 2, the latent was already visible with Indanedione treatment. There was a lot of other unexpected latents on Item3 (all sections) found with cyanoacrylate. |
| DBALMA | latent print 3 is on inside of baggie |
| E2EZW3 | Scanning, photography format- JPG, |
| EFJY3N | For Item 1, Glossy Photograph: Development of fingerprint revealed 80-90% of the pattern area. The pattern observed was indicated as a Loop for question 1-6), but would be referenced to a whorl in a casework scenario. Based on the ridge flow present at the base of the loop there is a chance that the pattern could actually be a double loop whorl. |
| FCHB3R | During all examinations proper personal protective equipment was used. This included lab coat, examination gloves and chemical resistant gloves. |
| G7M3XN | Pattern type for Item 2 was not noted during the processing and is no longer visible. |
| GAHWQJ | The test strip that was used before the application of Ninhydrin on Item 2 (10/21/2016) did have a positive reaction, however no latent prints were developed on Item 2. The second application of Ninhydrin on that same Item 2 was a new batch that again had a positive reaction on the test strip, but still failed to develop any latent prints on Item 2. |
| GHC6AP | The fingerprint pattern on item 3 can also be named as a "double loop". |
| JM6JDP | Item 1 for question #1-6 asks for a pattern type. The system would not let you select both loop and whorl. Latent developed was partial although most likely a whorl, there is a chance it could have been |

TABLE 5

| WebCode | Additional Comments |
|---------|--|
| | a loop if more detail was present but the testing system makes you choose only one. |
| K2WXQN | Print from item one should be reference to a loop due to light powder adhesion to the print near the bottom of the pattern area. |
| M7NLML | Latent developed on glossy photograph (Item #1) was faint and pattern type couldn't be determined. |
| NM9WLU | Fluorescence examination was with Polilight PL500 |
| NWWPXQ | The print in D on item 1 was difficult to determine first level detail due to lack of lower area/delta in the print. |
| NYYN9J | This Laboratory normally does not divide the evidence items up into quadrants for development during examination. The entire item is examined for any potential latent prints. |
| QMFT7N | ITEM 2 1.2 IND - Whorl |
| QP7WYV | The print on Item 1 could be either a loop or whorl. No delta was visible and the bottom portion of the print was cut off, making it difficult to fully identify the pattern. |
| RR8KRQ | The marks seen on item 1, item 3 are very obvious and could be photographed as they are with no further treatments being necessary, however if this was real live casework items 1 and 3 could have further enhancement processes carried out on them. For instance item 1 could be powdered and any marks photographed or lifted, as small patch test corner of BY40 fluorescent dye to stain the cyanoacrylate marks (the photograph appears to be almost non porous, however a patch test would ascertain this), a further treatment of basic violet 3 could also be carried out (if the photograph was found to be non-porous). If the photograph was found to be porous then 1,8 - diazafuoren-9-one (DFO) and ninhydrin (nin) could be carried out to fully sequence treat and optimise ridge detail enhancement as recommend by [Agency]. Item 3 could have been treated with BY40 fluorescent dye to stain the cyanoacrylate marks and examined under high intensity light source to visualise the marks. It could then be treated with basic violet 3 for a full sequence as recommended by [Agency]. We only treat items from serious and major crime to a full sequence of treatments. Item 2 was treated with DFO and examined with a high intensity light source (green crime lite 490-560nm). The mark is very clear and would be photographed at this stage if this was live casework. Item 2 could then be treated with nin and then physical developer (PD) if a full sequence of treatments was required, again we tend to do this on items from serious and major crime. Control samples are used for each batch of treatments that are performed. The control samples with items 1,2 and 3 were all positive. All treatments, and equipment used are accredited, calibrated and maintained in accordance with [accreditation body] scientific standards. |
| THYAZR | Print did not develop fully with Ninhydrin (item 2). Control was used and worked properly. |
| U7FAKA | I failed to note the pattern types, though I believe they were both whorls just based on memory. We do not typically note pattern type in our notes and I forgot that I was required to on the test. |
| UPUUF8 | Item 3, plastic baggie, fingerprint was on the inside of the bag. |
| V4Q4ZD | After fuming of the plastic baggie (item 3) ridge detail was detected on the outside of the plastic baggie but was not considered to be part of the test. |
| VRZE28 | The impression on item 2 was partial. The fingertip area (above the core) was clear but the rest of the impression was faint/smeared. Ridge flow indicated that it was a whorl impression, but it could be a loop. For comparison purposes, I would first compare whorls, but I would not rule out any loops. |
| VY2Q2A | The pattern for item 1 could not be determined. First level detail was recovered, however the pattern could have been a loop or a whorl. Only the top of the core and tip were developed. |
| W89MK8 | Item 1 could also have the potential to be a loop type pattern |

TABLE 5

| WebCode | Additional Comments |
|---------|--|
| WKD36G | Item 2 should have been examined with several different lightsources before treatment with ninhydrine. Testpatches have been used before application with the different methods. |
| WW33VJ | Sample 1: Fundamental type is a sinuous whorl fingerprint located in the D zone. Sample 2: Fundamental type is a large ovoid whorl fingerprint located in the B zone. Sample 3: Fundamental type is a double loop whorl fingerprint located in the C zone. |
| XE2GR4 | Ridge detail was developed on Item 2; however, not enough to determine pattern. This print is unsuitable for comparison. |
| YK6LG3 | Had two smudges (no ridge detail) on Item 3 in quadrant B |

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program Test No. 16-5191: Latent Print Processing

DATA MUST BE RECEIVED BY December 12, 2016 TO BE INCLUDED IN THE REPORT

Participant Code: **U1234A**

WebCode: **3CXFT2**

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB and A2LA. Please select one of the following statements to ensure your data is handled appropriately.

This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section on the last page must be completed and submitted.)

This participant's data is NOT intended for submission to ASCLD/LAB, ANAB or A2LA.

Scenario:

During the week of 31 July 2016, three items of evidence were recovered from a crime scene. Police have requested that you process each item of evidence for latent prints. These items will not undergo additional testing in other departments, so you may use destructive testing if necessary.

Instructions:

All item packaging has been labeled with a CTS item number and each item divided into four quadrants, which have been indicated as A-D. A single latent print has been deposited in one of these areas for each item. Only those areas within the A-D labeled sections need to be processed.

Items Submitted (Sample Pack LAP2):

Item 1: Glossy photograph, 4.5" x 8", divided into quadrants A-D.

Item 2: Resident notification, 5.5" x 8.5", divided into quadrants A-D.

Item 3: Plastic baggie, 5" x 8", divided into quadrants A-D.

Please inspect your sample sets upon receipt. If the tape seal on any of your individual items is broken, please contact CTS for replacement samples.

For each item, in which quadrant (A, B, C, D) was the latent print recovered?

Please indicate only the single letter of your determined location; further explanation may be provided in the Additional Comments. If no print is recovered, please enter "None". Responses such as "N/A", "-", "No Result" are unacceptable.

Item 1 _____

Item 2 _____

Item 3 _____

Please return all pages of this data sheet.

Participant Code: **U1234A**

WebCode: **3CXFT2**

Results for Item 1:

Glossy photograph, 4.5" x 8", divided into quadrants A-D.

1-1.) Date Received: _____ **1-2.) Date(s) Analyzed:** _____

1-3.) What method(s) of development were used during your examination?

| <u>Method (please list in order)</u> | <u>Method-specific information (ex. temperature, processing time)</u> |
|--------------------------------------|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

1-4.) What method(s) of preservation were used, if any, following latent print development?

| <u>Method (please list in order)</u> | <u>Method-specific information</u> |
|--------------------------------------|------------------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

(If additional space is needed, copy this page and attach in the appropriate place within the data sheet.)

1-5.) Was first level detail recovered?

If you are not trained to make detail/pattern determinations, please select "N/A".

Yes No N/A

1-6.) If first level detail was recovered, what pattern was identified?

If you are not trained to make detail/pattern determinations, please select "N/A".

Arch Loop Whorl N/A

Please return all pages of this data sheet.

Participant Code: **U1234A**

WebCode: **3CXFT2**

Results for Item 2:

Resident notification, 5.5" x 8.5", divided into quadrants A-D.

2-1.) Date Received: _____ **2-2.) Date(s) Analyzed:** _____

2-3.) What method(s) of development were used during your examination?

| <u>Method (please list in order)</u> | <u>Method-specific information (ex. temperature, processing time)</u> |
|--------------------------------------|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

2-4.) What method(s) of preservation were used, if any, following latent print development?

| <u>Method (please list in order)</u> | <u>Method-specific information</u> |
|--------------------------------------|------------------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

(If additional space is needed, copy this page and attach in the appropriate place within the data sheet.)

2-5.) Was first level detail recovered?

If you are not trained to make detail/pattern determinations, please select "N/A".

Yes No N/A

2-6.) If first level detail was recovered, what pattern was identified?

If you are not trained to make detail/pattern determinations, please select "N/A".

Arch Loop Whorl N/A

Please return all pages of this data sheet.

Participant Code: **U1234A**

WebCode: **3CXFT2**

Results for Item 3:

Plastic baggie, 5" x 8", divided into quadrants A-D.

3-1.) Date Received: _____ **3-2.) Date(s) Analyzed:** _____

3-3.) What method(s) of development were used during your examination?

| <u>Method (please list in order)</u> | <u>Method-specific information (ex. temperature, processing time)</u> |
|--------------------------------------|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

3-4.) What method(s) of preservation were used, if any, following latent print development?

| <u>Method (please list in order)</u> | <u>Method-specific information</u> |
|--------------------------------------|------------------------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

(If additional space is needed, copy this page and attach in the appropriate place within the data sheet.)

3-5.) Was first level detail recovered?

If you are not trained to make detail/pattern determinations, please select "N/A".

Yes No N/A

3-6.) If first level detail was recovered, what pattern was identified?

If you are not trained to make detail/pattern determinations, please select "N/A".

Arch Loop Whorl N/A

Please return all pages of this data sheet.

Participant Code: **U1234A**

WebCode: **3CXFT2**

Additional Comments

Additional Questions (optional)

1.) List the most common items of evidence your laboratory routinely processes for latent prints.

(Ex. plastic bags, paper documents, etc.)

2.) List the most common development method used in your laboratory for nonporous surfaces. What approximate percentage of casework items are processed this way?

3.) List the most common development method used in your laboratory for porous surfaces. What approximate percentage of casework items are processed this way?

| | |
|---|--|
| <p>Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by <i>December 12, 2016</i> to be included in the report. Emailed data sheets are not accepted.</p> | <p>Participant Code: U1234A</p> |
| <p>QUESTIONS? TEL: +1-571-434-1925 (8 am - 4:30 pm EST) EMAIL: forensics@cts-interlab.com www.ctsforensics.com</p> | <p>ONLINE DATA ENTRY: www.cts-portal.com FAX: +1-571-434-1937 MAIL: Collaborative Testing Services, Inc. P.O. Box 650820 Sterling, VA 20165-0820 USA</p> |

Please return all pages of this data sheet.

Collaborative Testing Services - Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code: **U1234A**

WebCode: **3CXFT2**

for Test No. **16-5191: Latent Print Processing**

This release page must be completed and received by **December 12, 2016** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

Have the laboratory's designated individual complete the following steps **only if your laboratory is accredited in this testing/calibration discipline** by one or more of the following Accreditation Bodies.

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory

ASCLD/LAB Certificate No. _____

ANAB Certificate No. _____

A2LA Certificate No. _____

Step 2: Complete the Laboratory Identifying Information in its entirety

Signature and Title _____

Laboratory Name _____

Location (City/State) _____

Accreditation Release**Return Instructions**

Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.

*Questions? Contact us 8 am-4:30 pm EST
Telephone: +1-571-434-1925
email: forensics@cts-interlab.com*

Please return all pages of this data sheet.

Page 6 of 6