Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

Latent Print Processing
Test No. 17-5191 Summary Report

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 169 participants and are compiled into the following tables:

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 yellow sticky note (Item 1), a white ceramic tile (Item 2), and four pieces of duct tape (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-

The nonporous tile was cleaned with water and a paper towel before the latent print was applied. New, sealed packs of notepads and rolls of tape were used for the samples that could not be cleaned. Both the tile and sticky note were divided into sections with a marker and labeled A, B, C, and D. The duct tape was cut into four segments, each labeled as either A, B, C, or D. For each item, either an acid or lipid enhancer was applied to the individual's finger prior to deposition to assist in the longevity of the print. 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 with necessary protective materials. 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.

Item Number	Test Samples	Enhancer Used	Print Location	Pattern Detail
1	yellow sticky note	acid	A	loop
2	white ceramic tile	oil	C	whorl
3	duct tape	oil	C	arch

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Summary Comments

Each sample pack contained three items of evidence to be processed for latent prints: a yellow sticky note (Item 1), a white ceramic tile (Item 2), and a length of duct tape (Item 3). Each item was divided into four sections or pieces, which were labeled with the letters A-D. Participants were asked to determine which of the four sections or pieces of each evidence item contained a latent print. (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 169 participants, 161 (95%) were able to successfully recover a print in the expected section for all three items. For Item 1, all but two participants located the print in section "A" (99%), while one was unable to recover the print and reported "None", and one gave no response. For Item 2, all participants were successful in locating the print in section "C". For Item 3, 162 participants (96%) located the print in section "C". Six participants did not recover the print and reported "None", and one gave no response.

Summary statistics for the reported development and preservation methods were calculated for each item at the end of each methods table. The summary 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. The techniques included in the summaries are the preloaded options from the CTS web portal, and do not reflect every answer provided by participants. Future iterations of this test will remove the specific options of "Wet Wop" and "Sticky Side Powder" and replace them with a more generic "wet powder suspension" as the preloaded option, much in the manner of the "dye stain" selection. This will provide a better picture of the general technique utilized by participants, regardless of product manufacturer or type of powder suspension.

A majority of participants reported performing some type of nondestructive visual examination with varied lighting sources prior to conducting additional development techniques on each item. Photography was the predominantly utilized preservation method across all three items, but was often used in conjunction with lifting and/or scanning.

For print development on the yellow sticky note (Item 1), participants primarily utilized ninhydrin to develop the latent print (reported 140 times). An alternate light source was often used to assist in visualizing the print (51). Ninhydrin was used either by itself or in conjunction with other porous development techniques, including DFO (39), 1,2-Indanedione (30), and Physical Developer (17). For print development on the white ceramic tile (Item 2), a majority of participants started with cyanoacrylate fuming (reported 126 times) and followed up with powder dusting (119) to enhance, using a variety of powders. Some participants elected to use a dye stain (66) subsequent to fuming instead of powder dusting; while a variety of dye stains were named by participants, only those explicitly identified as "dye stain" in the method column were tabulated. Once again, ALS was used in conjunction with other methods for enhancement (59). For development of prints on the pieces of duct tape (Item 3), most participants used a wet powder suspension on the adhesive side of the tape, recording the use of Wet Wop (reported 77 times) and Sticky Side Powder (30). Other variations of wet powder suspensions were also listed, prompting the aforementioned proposed change to the portal preloaded methods. Some participants used a combination of cyanoacrylate fuming (29) and a dye stain (19) to enhance the ridge detail on the tape.

For participants who reported observing first level detail in the prints on all three items, there was general consistency in the patterns reported. 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 consensus is established for any of the items. For those who identified pattern types, the most common responses for each item were: Item 1 – Loop; Item 2 – Whorl; Item 3 – Arch. The most frequent response for each item corresponds to the expected results for pattern reporting. Several participants reported "not suitable for determination," indicating that although they were able to develop some first level detail, the results were insufficient to determine the specific pattern.

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Print Location

TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
2A2VMB	A	67KQCH	A	9274G6	A
2AJQ8X	A	6BKVBW	A	947GWG	A
2BTVH2	A	6CQFYW	A	96GFTB	A
2DWNEL	A	6CT3FB	A	99ZDG2	A
2KHJFP	A	6QB324	A	9Q23UY	A
2WPGFJ	A	74EG4L	A	9YCFY9	A
34NGCQ	A	79RG2D	A	AAAUYX	A
3A9JBF	A	7C8U2Z	A	ANMBZ9	A
3M2VUK	A	7F837B	A	AP8PUD	A
3QKZHH	A	7FNADD	A	B777EG	A
4DRQGU	A	7LFJNC	A	BEZH64	A
4FXALH	A	7MCWB4	A	BG8M77	A
4JELC8	A	867WV9	A	BH2BN2	A
4QWAUF	A	872FVP	A	BMUJN3	A
4RTKPH	A	8BBV3R	A	BUT967	A
4WFG9E	A	8U4YLE	A	C4DPGD	A
4WJYEP	A	8YHCL2	A	C67PC4	A

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TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
CGZ726	A	GCDRKZ	A	K6YD7K	A
CPDZDZ	A	GCT8UV	A	KCZKPT	A
CRGVW4	A	GELX72	A	KNDMBR	A
D8TH87	A	GNMMJV	A	KXZL4H	A
DER8PB	None	GZXTY6	A	KZ9UD3	A
DGJABQ	A	HDZQC4	A	LE3MBN	A
DKBGPR	A	HG3KEE	A	LH4PHD	A
DQ3LPN	A	HLEN73	A	LHK3M2	A
DQALUX	A	HRZRP6	A	LKPTRV	A
DZQGKX	A	HXTFWW	A	MBWPD2	A
E487JZ	A	J8UC7R	A	MKM8UV	A
EATCZ9	A	JAVKA3	A	MNP2W7	A
ERVWZG	A	JB6PL7	A	MPZ4FJ	A
F4GQMV	A	JGEY2E	A	MTWRWQ	A
F6D7YR		JHRFAL	A	MVMQDB	A
FCUHDT	A	JWR6EY	A	N4DRDK	A
FCY2ZV	A	JYHDH9	A	N6QB8Q	A
GATRRY	A	K2JUAW	A	NGH2RU	A

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TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
NKKQFW	A	RPNX9W	A	VVLJUG	A
NNFQ9X	A	RUKFRH	A	VWR6HG	A
NQREYP	A	RVDDYP	A	WDTKRL	A
P4VZYU	A	RVTWJL	A	WDV3XX	A
P8QTTP	A	T8HZGK	A	WHPX4C	A
PAGZBZ	A	TK76MV	A	WKDEBY	A
PBMP6W	A	TYZN4J	A	WR9KLR	A
PGEPR6	A	U7FPXM	A	X7M7KB	A
PMLFWV	A	UDZQFK	A	XE6GYC	A
PVWHEQ	A	UG6BAC	A	XHMPBH	A
Q2ZY9W	A	ULXBQT	A	XVCJMC	A
Q3AXFY	A	UN27AW	A	XW2ZUY	A
QBPM7K	A	UPEVFU	A	XWLHTE	A
QDD3D8	A	UWW8TV	A	Y4HNBM	A
QP7HJV	A	UXN8NK	A	Y9BT4Q	A
QRC8HX	A	V4EWRV	A	YA89CG	A
QXHLN9	A	V67WMK	A	YMRTR4	A
R3B64C	A	VGU77J	A	YUQH99	A

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TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
YW2CWL	A				
YZGREZ	A				
Z2NLFH	A				
Z4XET6	A				
Z74YG6	A				
ZBTE6C	A				
ZJNLJC	A				
ZQNXLZ	A				
ZWRZMU	A				
ZZVFD7	A				

Response Summary Total Participants: 169

Location	Total
A	167
B	0
C	0
D	0
None	1

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TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
2A2VMB	C	6BKVBW	C	96GFTB	C
2AJQ8X	C	6CQFYW	C	99ZDG2	C
2BTVH2	C	6CT3FB	C	9Q23UY	C
2DWNEL	C	6QB324	C	9YCFY9	C
2KHJFP	C	74EG4L	C	AAAUYX	C
2WPGFJ	C	79RG2D	C	ANMBZ9	C
34NGCQ	C	7C8U2Z	C	AP8PUD	C
3A9JBF	C	7F837B	C	B777EG	C
3M2VUK	C	7FNADD	C	BEZH64	C
3QKZHH	C	7LFJNC	C	BG8M77	C
4DRQGU	C	7MCWB4	C	BH2BN2	C
4FXALH	C	867WV9	C	BMUJN3	C
4JELC8	C	872FVP	C	BUT967	C
4QWAUF	C	8BBV3R	C	C4DPGD	C
4RTKPH	C	8U4YLE	C	C67PC4	C
4WFG9E	C	8YHCL2	C	CGZ726	C
4WJYEP	C	9274G6	C	CPDZDZ	C
67KQCH	C	947GWG	C	CRGVW4	C

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TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
D8TH87	C	GNMMJV	C	KXZL4H	C
DER8PB	C	GZXTY6	C	KZ9UD3	C
DGJABQ	C	HDZQC4	C	LE3MBN	C
DKBGPR	C	HG3KEE	C	LH4PHD	C
DQ3LPN	C	HLEN73	C	LHK3M2	C
DQALUX	C	HRZRP6	C	LKPTRV	C
DZQGKX	C	HXTFWW	C	MBWPD2	C
E487JZ	C	J8UC7R	C	MKM8UV	C
EATCZ9	C	JAVKA3	C	MNP2W7	C
ERVWZG	C	JB6PL7	C	MPZ4FJ	C
F4GQMV	C	JGEY2E	C	MTWRWQ	C
F6D7YR	C	JHRFAL	C	MVMQDB	C
FCUHDT	C	JWR6EY	C	N4DRDK	C
FCY2ZV	C	JYHDH9	C	N6QB8Q	C
GATRRY	C	K2JUAW	C	NGH2RU	C
GCDRKZ	C	K6YD7K	C	NKKQFW	C
GCT8UV	C	KCZKPT	C	NNFQ9X	C
GELX72	C	KNDMBR	C	NQREYP	C

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TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
P4VZYU	C	RVTWJL	C	WDV3XX	C
P8QTTP	C	T8HZGK	C	WHPX4C	C
PAGZBZ	C	TK76MV	C	WKDEBY	C
PBMP6W	C	TYZN4J	C	WR9KLR	C
PGEPR6	C	U7FPXM	C	X7M7KB	C
PMLFWV	C	UDZQFK	C	XE6GYC	C
PVWHEQ	C	UG6BAC	C	XHMPBH	C
Q2ZY9W	C	ULXBQT	C	XVCJMC	C
Q3AXFY	C	UN27AW	C	XW2ZUY	C
QBPM7K	C	UPEVFU	C	XWLHTE	C
QDD3D8	C	UWW8TV	C	Y4HNBM	C
QP7HJV	C	UXN8NK	C	Y9BT4Q	C
QRC8HX	C	V4EWRV	C	YA89CG	C
QXHLN9	C	V67WMK	C	YMRTR4	C
R3B64C	C	VGU77J	C	YUQH99	C
RPNX9W	C	VVLJUG	C	YW2CWL	C
RUKFRH	C	VWR6HG	C	YZGREZ	C
RVDDYP	C	WDTKRL	C	Z2NLFH	C

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TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
Z4XET6	C				
Z74YG6	C				
ZBTE6C	C				
ZJNLJC	C				
ZQNXLZ	C				
ZWRZMU	C				
ZZVFD7	C				

Response Summary Total Participants: 169

Location	Total
A	0
B	0
C	169
D	0
None	0

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TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
2A2VMB	C	6BKVBW	C	96GFTB	C
2AJQ8X	C	6CQFYW	C	99ZDG2	C
2BTVH2	C	6CT3FB	C	9Q23UY	C
2DWNEL	C	6QB324	C	9YCFY9	C
2KHJFP	C	74EG4L	C	AAAUYX	C
2WPGFJ	C	79RG2D	C	ANMBZ9	None
34NGCQ	C	7C8U2Z	C	AP8PUD	C
3A9JBF	C	7F837B	C	B777EG	C
3M2VUK	C	7FNADD	C	BEZH64	C
3QKZHH	C	7LFJNC	C	BG8M77	C
4DRQGU	C	7MCWB4	C	BH2BN2	C
4FXALH	C	867WV9	C	BMUJN3	C
4JELC8	C	872FVP	C	BUT967	C
4QWAUF	C	8BBV3R	C	C4DPGD	C
4RTKPH	C	8U4YLE	C	C67PC4	C
4WFG9E	C	8YHCL2	C	CGZ726	C
4WJYEP	C	9274G6	C	CPDZDZ	C
67KQCH	C	947GWG	C	CRGVW4	C

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TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
D8TH87	C	GNMMJV	None	KXZL4H	C
DER8PB	C	GZXTY6	C	KZ9UD3	C
DGJABQ	C	HDZQC4	C	LE3MBN	C
DKBGPR	C	HG3KEE	C	LH4PHD	C
DQ3LPN	C	HLEN73	C	LHK3M2	C
DQALUX	C	HRZRP6	C	LKPTRV	None
DZQGKX	C	HXTFWW	C	MBWPD2	C
E487JZ	C	J8UC7R	C	MKM8UV	C
EATCZ9	C	JAVKA3	C	MNP2W7	C
ERVWZG	C	JB6PL7	C	MPZ4FJ	C
F4GQMV	C	JGEY2E	C	MTWRWQ	C
F6D7YR		JHRFAL	C	MVMQDB	C
FCUHDT	C	JWR6EY	C	N4DRDK	C
FCY2ZV	C	JYHDH9	C	N6QB8Q	C
GATRRY	C	K2JUAW	C	NGH2RU	C
GCDRKZ	C	K6YD7K	C	NKKQFW	C
GCT8UV	C	KCZKPT	C	NNFQ9X	C
GELX72	None	KNDMBR	C	NQREYP	C

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TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
P4VZYU	C	RVTWJL	C	WDV3XX	C
P8QTTP	C	T8HZGK	C	WHPX4C	C
PAGZBZ	C	TK76MV	C	WKDEBY	C
PBMP6W	C	TYZN4J	C	WR9KLR	C
PGEPR6	C	U7FPXM	C	X7M7KB	C
PMLFWV	C	UDZQFK	C	XE6GYC	C
PVWHEQ	C	UG6BAC	C	XHMPBH	C
Q2ZY9W	C	ULXBQT	C	XVCJMC	C
Q3AXFY	None	UN27AW	C	XW2ZUY	C
QBPM7K	C	UPEVFU	C	XWLHTE	C
QDD3D8	C	UWW8TV	C	Y4HNBM	C
QP7HJV	C	UXN8NK	C	Y9BT4Q	C
QRC8HX	C	V4EWRV	C	YA89CG	C
QXHLN9	C	V67WMK	C	YMRTR4	C
R3B64C	C	VGU77J	C	YUQH99	C
RPNX9W	C	VVLJUG	C	YW2CWL	C
RUKFRH	C	VWR6HG	C	YZGREZ	C
RVDDYP	C	WDTKRL	C	Z2NLFH	C

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TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
Z4XET6	C				
Z74YG6	C				
ZBTE6C	None				
ZJNLJC	C				
ZQNXLZ	C				
ZWRZMU	C				
ZZVFD7	C				

Response Summary Total Participants: 169

Location	Total
A	0
B	0
C	162
D	0
None	6

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Development Methods

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
2A2VMB	Visual Examination	
	Ninhydrin	Lot #: HFENIN171013, developed overnight
	Physical Developer (PD)	Maleic Acid Prewash MAP171011, PD171107
2AJQ8X	Ninhydrin	Lot #100517KVC, exp. 10-5-18, + control. Steam iron development + 24 hours to fully develop. Photography
2BTVH2	Powder Dusting	mag powder-negative results
	DFO	positive results
2DWNEL	Visual Exam - White Light	0855
	Nihydrin	Steam iron - 0920
2KHJFP	Visual Examination	
	Ninhydrin	
	Visual Examination	
2WPGFJ	Visual Examination	White, blue and green light
	DFO	100 degrees Celsius for 20 minutes
	Ninhydrin	80 degrees Celsius, 65% humidity for 5 minutes
34NGCQ	Visual Examination	
	Alternate Light Source	visual with laser (BrightBeam)
	1,2-Indanedione	1,2-Indanedione Zinc Chloride (IND-Zn) lot#091317, heat press 30 seconds-100 degrees C
	Alternate Light Source	visual with laser
	Ninhydrin	HFE 7100 lot#060917
	Steam Iron	
	Visual Examination	
3A9JBF	Visual Examination	White light examination using crime-lite 400nm-700nm
	Alternate Light Source	Quaser (filtered arc lamp) at wavelengths: UV (340-413NM) BLUE (400-469NM) GREEN (491-548NM)
	DFO	DFO (batch DF0003/17 Exp 10/12/17) treated and conditioned for 20mins at 100 degrees celcius (dry oven) marks visualised using quaser at 491-548nm
	Ninhydrin	Ninhydrin (batch NINWS005/17 exp 24/10/18) treated and conditioned for 4 mins at 80 degrees celsius relative humidity approx 62%
3M2VUK	Visual Examination	

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Ninhydrin	dipped item in ninhydrin solution and air dired. Placed into humidity chamber ~20 min, 65 degC 28% humidity
	Visual Examination	Developed latent print in section A
3QKZHH	Visual Examination	
	Ninhydrin	Heptane-PE, 1st application 10/17/17 air dry overnight (4:30pm-11:45am). Second application 10/18/17 11:55 am with 10 second exposure to steam.
4DRQGU	Visual Examination	Oblique lighting and magnifier
	Ninhydrin	Development chamber at 70 degree C and 65% humidity for 10 minutes.
4FXALH	Visual Examination	Oblique lighting and white light.
	1,2-Indanedione	Humidity Chamber: 60 minutes, 50C, 60% humidity.
	Alternate Light Source	Tracer Laser (532nm) and orange goggles for viewing.
4JELC8	Ninhydrin	steam iron
4QWAUF	DFO soaking for item 1	After the item was soaked in 1,8-Diazafluoren-9-one it was then placed in oven @ 110°C for 15 minutes
4RTKPH	Visual Examination	Photography of item
	Ninhydrin Hepatane	Print visable after process. DIpped in Ninhydrin saturating note. Dried 45 minutes.
	Steam	Applied steam on 11/19/17 with iron.
4WFG9E	Visual Examination	
	DFO	20 minutes, 100 degrees
	Visual Examination	
	Ninhydrin	30 minutes, 80 degrees, RH-65%
	Visual Examination	
4WJYEP	Visual Examination	
	Alternate Light Source	LASER (532nm), 455nm, UV (365nm)
	DFO	Allowed to dry and then placed in dry oven for 20 min
	Ninhydrin	Allowed to dry and then placed in humidity chamber for 5 min
67KQCH	Visual Examination	Ambient/Conventional lighting and Forensic light source examination, light UV and POLILIGHT PL 400, Range between 470nm – 590nm.
	1,2-Indanedione	100 degrees celsius for 20 minuts. Work Process: 20-30 minutes
	Ninhydrin	Petroleum Ether Base. 80 degrees celsius, humidity 62%, humidity cycle: 20 minutes. Work Process: 20-30 minutes.

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Developed Technique	Submerged application: The appropriate amount of Indanadione is placed in a glass tray. Then, this object is inserted into the tray and left it between 8 and 10 seconds. Let it dry at room temperature for approximately 3 minutes, preferably at a dark place. Finally, it's introduced into the drying oven. In reference of Ninhydrin, the submerged application used is the same as the Indanadione.
6BKVBW	Visual Examination	Negative
	Ninhydrin	Control Positive. Dipped. Allowed to dry. Applie steam. Latent developed on Section A.
6CQFYW	Visual Examination	Oblique lighting
	Ninhydrin	Item 1 was dipped into a tray of Petroleum Ether based Ninhydrin and removed once it was saturated. Item 1 was dried under a fume hood for approximately ten minutes. A steam iron was then used to accelerate the development process.
6CT3FB	Ninhydrin	HFE, dipped and air dried.
	Steam iron	air dried and left in secure location until 11/2/17
6QB324	Ninhydrin	5 min, 80C, RH 65%
74EG4L	Visual	
	Ninhydrin	
	Humidity	steam iron
79RG2D	DFO	spray application in fume hood - dried, heated @ 212F for 10 minutes
	Ninhydrin	spray application in fume hood - dried, steam-ironed
7C8U2Z	Visual Examination	
	1,2-Indanedione	Heated item for approximately 20 minutes. Used green laser with orange filter to visualize
	Ninhydrin	Sprayed item with ninhydrin and let dry. Used iron with humidity to visualize
7F837B	1,2-Indanedione	heat press 160 Celsius for 10 seconds
7FNADD	Visual Examination	Forensic light source.
	Ninhydrin	
	Visual Examination	
	Steam exposure	
7LFJNC	Ninhydrin	dipping stain
7MCWB4	Visual Examination	
	Ninhydrin	70°C/ 70% humidity/ 20 minutes processing time. Caron model 6105-2

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
867WV9	Visual Examination (White Light) DFO	
872FVP	Visual Examination Alternate Light Source 1,2-Indanedione Alternate Light Source Physical Developer (PD)	
8BBV3R	Ninhydrin	+ control for Ninhydrin Lot #100517KVC Exp 10/5/18. used humidity from iron. After humidity from iron the item was secured in locker and given further time to process and develop. Item was removed on 10/24/17
8U4YLE	Ninhydrin	Sprayed the note with Ninhydrin under the fume hood; once dry, the note was moved to the fuming cabinet/heat chamber and left for 10 minutes at 175 degrees F; a partial print was visible at this time but not a pattern so I left the note in longer; after 20 more minutes (30 total), the note was removed
8YHCL2	Ninhydrin Steam Iron Wait 48 hours	+ ctrl, thoroughly wet item. Lot: 100517KVC. Exp: 10/5/18 Apply steam 10 seconds
9274G6	Visual Examination Ninhydrin Physical Developer (PD)	fluorescent lighting Lot #HFENIN171013; Humidity chamber at temp.38.7C, Humidity at 72.0%, Used steam iron Lot #PD171102
947GWG	1,2-Indanedione	
96GFTB	Visual Examination Alternate Light Source DFO Ninhydrin Physical Developer (PD)	No result. Polilight and Crime-lite ML2 - no result. Processing time 10 min (100°C, 0% humidity). Fluorescent fingermark in section A (Crime-lite ML2 450-510 nm). Best result. Processing time 5 min (80°C, 65% humidity). Fingermark in section A. Processing time 11 min. No result.
99ZDG2	Ninhydrin	2 hours
9Q23UY	Visual Examination Alternate Light Source DFO	

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Ninhydrin	
9YCFY9	Ninhydrin	Application process
AAAUYX	Visual Examination	
	Alternate Light Source	Coherent Tracer Green Laser
	DFO	100*C; 20 min processing time
	Ninhydrin	80*C, 65% RH; 2 min processing time
	Physical Developer (PD)	15 min processing time in PD solution
ANMBZ9	Visual	5 minutes
	Ninhydrin	4 hours, steam iron used on highest setting
AP8PUD	1,2-Indanedione	60 min at 50 degrees C, 60% humidity, viewed with 532nm light source, photographed with orange filter
B777EG	Visual Inspection	
	Ninhydrin / Induced Humidity	Item dipped in ninhydrin, air dried, heated with induced humidity with standard iron
BEZH64	Visual Examination	white light
	Ninhydrin	ninhydrin spray "NIN-PRINT", t 22°C, 8 h
BG8M77	Pre-Processing Screening	Item visually inspected, viewed under oblique lighting and then under ALS
	Ninhydrin	Dipping method; 1 minute contact time, air dried overnight
BH2BN2	Visual Examination	Desk/Fluorescent light
	Ninhydrin	HFE Ninhydrin Spray Method - Allowed to air dry & develop at room temp for 72 hours
BMUJN3	Ninhydrin	applied moist heat
BUT967	Ninhydrin	sprayed and air dried 15 hours at room temp
C4DPGD	Visual Examination	visual inspection
	1,2-Indanedione	Dipped in Indanedione and then air dried. After air drying the item, the item was placed in oven at approximately 200 degrees for apporoximately for one hour.
C67PC4	Visual Examination	A flashlight was used to examine the item.
	Documentation Photography	Photographs were taken to document the original state of the item prior to chemical processing.
	Ninhydrin	Ninhydrin HFE Base-Working Solution was used to saturate the item. Once the item was completely dry a steam iron was used to hasten development. A faint impression was developed in section "A". The Item was placed back in its original envelope, placed in storage, and left for 24 hours to see if any further development would occur.

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
CGZ726	Ninhydrin	Ninprint, allowed to sit overnight after treatment
	Steam heat	via iron
CPDZDZ	Ninhydrin	Forensic climate cabinet FKC-MK4, temperature 80°C, humidity 70, processing time, about 8 minutes
CRGVW4	Visual Examination	
	Alternate Light Source	
	Ninhydrin	Steam iron
D8TH87	Visual Examination	
	Ninhydrin	Waited three days for development
DER8PB	Visual Examination	
	Ninhydrin	I poured a small (enough) amount of ninhydrin solution into a tray. I immersed the sticky note in the solution. I removed the sticky note and allowed it to dry for approx. 10 days. No prints developed.
DGJABQ	DFO	dipped in DFO twice and heated in chamber at 100C for 20minutes
DKBGPR	Visual Examination	Omnichrome "Omniprint 1000"
	Ninhydrin	Ninhydrin spray, room temperature 23°C, processing time 5 hours
DQ3LPN	Visual Examination	
	Alternate Light Source	420-470 nm, orange filter glasses used
	Ninhydrin	item saturated with ninhydrin and allowed to air dry, steam iron used to apply humid heat, control positive
DQALUX	Visual Examination	desk lamp
	Ninhydrin	HFENINHYDRIN, spray method, let sit for 24hrs
	Physical Developer (PD)	prewashed using maleic acid solution, used PD three solution method, rinsed with water
DZQGKX	Visual Examination	With and without extra light -> No prints were discovered
	Ninhydrin	Temperature 72 C, humidity 65 %, processing time 6 minutes
	Visual Examination	A print was discovered in section A
E487JZ	Visual Examination	
	Ninhydrin	Attestor Nincha S31: temp 50´C, hum 65%, time 30min
EATCZ9	Visual Examination	
	Ninhydrin	Dipped in ninhydrin, 2 seconds each side. Dried for 5 min. Humidity Chamber for 20 min, 65 deg C, 21% humidity.
ERVWZG	Visual Examination	

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Alternate Light Source	Laser/UV/450nm
	1,2-Indanedione	
	Physical Developer (PD)	
F4GQMV	Ninhydrin	Spray-dry-heat and steam
FCUHDT	Visual Examination	Oblique Lighting
	DFO	100 C for 20 minutes with no humidity
	Alternate Light Source	475 nm with orange barrier goggles
	Ninhydrin	75 C for 5 minutes petroleum ether carrier
FCY2ZV	Ninhydrin	Aerosal Spray followed by heat
GATRRY	DFO	Placed in oven@200 degrees for approx. 10 min Photo with ALS at 455-CSS NM in Raw/JPEG
GCDRKZ	Visual Examination	
	Ninhydrin	Steam iron
GCT8UV	Ninhydrin	Sprayed paper thoroughly with chemical, used heat to activate and bring out the friction ridge.
GELX72	Visual Examination	Processing time: 1 minute
	Ninhydrin	Processing time: 10 minutes
	steam iron	Processing time: 3 minutes
GNMMJV	Ninhydrin	Applied heat from iron
GZXTY6	Visual Examination	
	1,2-Indanedione	HFE7100 carrier fluid, 300 degree F T-shirt press for 15 seconds.
	Ninhydrin	HFE7100 carrier fluid, steam iron for 30 seconds
HDZQC4	Ninhydrin	HR=62%, T°=80°C, Time = 3'
HG3KEE	Visual Examination	
	Alternate Light Source	
	1,2-Indanedione	
	Physical Developer (PD)	
HLEN73	Visual Examination	White light and ALS 415nm-505nm
	Ninhydrin	Reagent tested, applied to item via pipet, dried, reapplied, cure 72 hrs.
	Visual Examination	white light, faint visible detail present
	Steam	Applied with an iron, additional development achieved

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
HRZRP6	Visual Examination	Natural and white light
	Alternate Light Source	Spectral sweep with Polilight PL400 from 350nm to 590nm
	1,2-Indanedione	Dipping the sample 8-10 seconds, drying at room temperature for 3 minutes approximately (dark room), heat the sample for 20 min. 100 °C (Technohispania Oven)
	Alternate Light Source	Spectral sweep with Polilight PL400 from 470nm to 590 nm
	Ninhydrin	Dipping the sample 8-10 seconds. Drying at room temperature for 3 minutes approximately. Heat the sample 20 min. 80°C and 62% humidity (TechniHispania Oven)
HXTFWW	DFO	Put in DFO chamber at 200 degrees for 10 mins
	Alternate Light Source	After processed, used ALS at CSS Frequency to photograph latent found
J8UC7R	Ninhydrin	72C / 62% moisture, 6min prosessing time
JAVKA3	Visual Examination	
	Fluorescence Examination	
	DFO	temperature: 100°C, time: 20 min
	Ninhydrin	temperature: 80°C, humidity: 62%, time: 10 min
JB6PL7	Ninhydrin	Ninhydrin spray at approximate 7 inches from the item. The item was air dried for 72 hours.The room temperature was 23C.
	LPPM-R4	
JGEY2E	Alternate Light Source	Rofin polilight PL500; white light, UV, 415nm, 440nm, 450nm, 470nm, 490nm, 505nm, 530nm, 555nm, 590nm, 620nm.
	1,2-Indanedione	Indanedione Soln: spray onto surface of item, airdry & heat at 170 degrees celcius for 10 seconds. Observed at 505nm wearing orange goggles
	Ninhydrin	Spray onto surface of item. airdry and treat in humidity chamber for 10 mins (65% humidity/80 degrees C). Observe with white light and/or 450nm orange goggles
JHRFAL	Visual Examination	White light
	Ninhydrin	Ninhydrin spray "NIN-PRINT" B-78500, BVDA. Room temperature 20.5 degrees. Room humidity 58%
JWR6EY	Visual Examination	
	Ninhydrin	Heptane was room tempurature
JYHDH9	Visual Examination	Room light, flashlight
	Alternate Light Source	Tracer Laser
	Alternate Light Source	Crimescope ALS
	1,2-Indanedione	+ Heat oven + Tracer Laser
	Ninhydrin	(HFE) + Steam iron

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
K2JUAW	Ninhydrin	
K6YD7K	Visual Examination	Natural light, white light.
	Ninhydrin	Ninhydrin spray was used to find latent print on a yellow sticky note. The sticky note was left in dark room (about 22 degrees Celsius) for 48 hours. The latent print was recovered in section "A".
KCZKPT	Visual Examination	White light only, results negative.
	Alternate Light Source	Multiple filters, results negative.
	DFO	200 F for twenty minutes. Viewed under ALS with positive results in Section "A".
	Ninhydrin	Dipped and allowed 36 hours for development.
KNDMBR	Ninhydrin	Room Temp., iron steam heat
KXZL4H	Powder Dusting	processed with magnetic powder with negative results
	DFO	dipped in DFO for 5 seconds, then air dried. Process completed a second time. Then in fingerprint chamber for 20minutes at 100C
KZ9UD3	Alternate Light Source	
	Ninhydrin	
LE3MBN	Ninhydrin	80 degree C, 65% rh, 10 min development
LH4PHD	Visual Examination	Visual exam of evidence for presence of latent prints. No latent prints observed
	Ninhydrin	Dip item in Ninhydrin. Let item air dry. Use steam iron to facilitate processing. Observed a single latent in quadrant A
LHK3M2	Ninhydrin	Dipped in ninhydrin ~60 sec. Air-dried ~2 min. Placed in humidity chamber 20 min @ 65 deg C, 21% humidity.
LKPTRV	Visual Examination	Processing Time: 1 minute
	Ninhydrin	Processing Time: 30 minutes
	Steam Iron	Processing Time: 2 minutes at highest setting
MBWPD2	Visual Examination	
	Alternate Light Source	
	DFO	100 degrees Celsius, 20 minutes
	Ninhydrin	80 degrees Celsius, 65 humidity, 5 minutes
MKM8UV	Visual Examination	
	Alternate Light Source	
	Ninhydrin	Steam iron

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WebCode	Development Methods	Method Details
MNP2W7	Visual Examination	Light on my desk and in the ceiling
	Alternate Light Source	520nm at 8 watts
	1,2 - Indanedion Zinc Chloride	heat press set at 212 degrees Fahrenheit for 30 seconds and viewed with the laser
MPZ4FJ	Visual Examination	
	Ninhydrin	
MTWRWQ	DFO	DFO Oven, Approximately 7-10 minutes at approximately 170-180 degrees
	Alternate Light Source	
MVMQDB	Visual Examination	No visible latent prints observed
	Ninhydrin	Lot #062817-01; dipped 5-10 sec; air dry; fingerprint chamber (75 deg C, 80% humidity, 5 min)
N4DRDK	Visual Examination	ambient, green
	DFO	100 C, 20min
	Ninhydrin	80 C, 65% humidity, 2min
	Physical Developer (PD)	
N6QB8Q	Ninhydrin	Labrum Klimat, temperature: 72 Celsius, humidity: 65%, processing time: 6 minutes
NGH2RU	Visual Examination	under white light
	Alternate Light Source	fluorescence examination (350 nm - 650 nm under appropriate color barrier filters)
	DFO	baked in the chamber DFO at approximately 100°C (200°F) for 10 minutes; fluorescence examination in alternate light source (505 - 530 nm under orange or red barrier filters)
	Ninhydrin	in the chamber with a humidity 65% and temperature 50°C for 10 minutes; visual examination under white light and fluorescence examination in alternate light source (470 nm - 570 nm)
NKKQFW	Visual Examination	Item examined visually under white light and ALS
	DFO	Dipped in DFO Solution, allowed to air dry; visualized under ALS at 505-530nm
	Ninhydrin	Dipped in Ninhydrin solution, allowed to air dry, visualized under white light
NNFQ9X	Visual Examination	White ambient light. No print detected.
	DFO	A good quality print was detected.
	Ninhydrin	No improvement of the print.
NQREYP	DFO	DFO Oven for approximately 8-10 minutes at 170-180 degrees
	Alternate Light Source	455

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WebCode	Development Methods	Method Details
P4VZYU	Visual Examination	
	Ninhydrin	Heptane ninhydrin was used. Wait time for the development of prints was three day instead of policy of ten days. The item was kept in an unsealed plastic sleeve.
P8QTTP	Visual Examination	Fluorescent/LED white light
	Alternate Light Source	530nm
	Iodine fuming	20 min in chamber
	DFO	In oven for 20 min at 100 degrees C
	Ninhydrin	Humidity chamber for 20 min at 80 degrees C and 65% relative humidity
	Physical Developer (PD)	10 min RO-DI water bath, 15 min maleic acid, 35 min in PD solution
PAGZBZ	Ninhydrin	Steam Iron
PBMP6W	Visual Examination	
	DFO	100 C, 20 min, rel hum under 10%
	Alternate Light Source	Green light, print visible in green light
PGEPR6	Visual Examination	
	Alternate Light Source	UV, 450nm, and LASER 535nm
	DFO	Oven 20min, exam LASER
	Ninhydrin	Humidity chamber 5min
PMLFWV	Visual Examination	3 minutes
	led light	10 minutes
	Ninhydrin	28 minutes, temperature 82 Celsius
PVWHEQ	Visual Examination	White, low angle light. Results were negative.
	Alternate Light Source	Multiple filters applied. Results were negative.
	DFO	The item was dipped in DFO and allowed to air dry. The item was then placed in a 200F DFO oven for 25 minutes. One print visible in quadrant "A" under alternate light source (ALS) under 455nm filter viewed with an orange barrier filter (goggles).
	Ninhydrin	The item was dipped in ninhydrin and allowed to air dry. The item was then allowed 36 hours of development time. One print was visible in quadrant "A".
Q2ZY9W	Visual Examination	
	Alternate Light Source	
	DFO	CYCLOHEXANE
	Ninhydrin	CYCLOHEXANE

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Physical Developer (PD)	
Q3AXFY	Visual Examination	Room temperature and light. Time taken 1 minute.
	Ninhydrin	The item was placed in a tray with ninhydrin. Time taken 2 minutes then left for drying. Then the item was placed in a heating chamber at 80°C and 65% humidity for 5 minutes.
QBPM7K	Visual Examination	ambient light
	Ninhydrin	HFEninhydrin, spray method, let it dry and waited
	Physical Developer (PD)	maleic acid prewash with three solution physical developer method
QDD3D8	Alternate Light Source	crimescope, laser 532nm and 577nm
	1,2-Indanedione	10 seconds at 165°Celsius
	Ninhydrin	48 hours waiting
QP7HJV	Visual Examination	Flashlight
	1,2-Indanedione	apply to paper, dry 3 minutes, humidity chamber at 50°C, 60%, 60 minutes, control positive
	Alternate Light Source	Tracer laser 532 nm with orange filter
QRC8HX	Visual Examination	AMBIENT LIGHT
	1,2-Indanedione	IND-ZN, HEAT PRESS, APPROXIMATELY 332 DEGREES F, APPROXIMATELY 10 SECOND HEAT APPLICATION
	Alternate Light Source	LASER AT 532NM, ORANGE FILTER
	Ninhydrin	STEAM IRON FOR APPROXIMATELY 30 SECONDS, WAITED 1 DAY FOR VISUAL EXAM AT APPROXIMATELY 73 DEGREES F
QXHLN9	Magnetic Powder	Lot #201701045; Exp. date 12/2027
	Ninhydrin	Lot #100517KVC; Exp. date 10/5/2018. Positive control; after spraying ninhydrin on item, used steam iron for 30-60 seconds after item was dry (did not allow iron to come into contact with item)
	Print Development	Placed in secured locker until next working day to allow print to develop
R3B64C	Visual Examination	Ambient/Overhead Lighting
	Alternate Light Source	Laser: Green and Blue Wavelengths
	1,2-Indanedione	IND-ZN, followed by Heat Press, 30 seconds, 212^ F; Examined with Laser: green wavelength
	Ninhydrin	Acetone carrier, followed by steam iron
RPNX9W	Visual Examination	White light, visual
	Ninhydrin	sprayed and heated
	Visual Examination	white light

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
RUKFRH	Visual Exam	
	Indanedione	100°C oven for 10 minutes; viewed using green laser w/red filter
	Ninhydrin Heptane - PE	80°C oven w/~60% humidity for 10 minutes
RVDDYP	1,2-Indanedione	submerged about 30 seconds 2 times
RVTWJL	Dye Stain (Fluorescent)	Evidence was saturated with 1,8-Diazafluoren-9-one, air-dried, heated in oven for 20 min at 100°C.
	Dye Stain	Subsequently, evidence was saturated with ninhydrin, steamed dried.
	Visualization	Visualized under laser light system.
T8HZGK	Visual Examination	
	Ninhydrin	ninhydrin sprayed on paper, processing time 72h room temperature
TK76MV	Visual Examination	white light
	Ninhydrin	Processed in room temperature and humidity, since the climate chamber was broken.
TYZN4J	Ninhydrid	humidy 70%, heat 80°C, time 6 min
U7FPXM	Visual Examination	
	Alternate Light Source	
	Ninhydrin	Steam iron
UDZQFK	1,2-Indanedione	temp 65 C, hum 65%, time 30 min.
UG6BAC	Visual Examination	Used ambient light Used ambient light and reflected it off surfaces. Conducted a visual for about 60-120 seconds on item.
	Alternate Light Source	Used an ALS Crimescope (FOR-923C-2112) and TracER (TRG801904).
	1,2-Indanedione	Applied IND, let dry for about 15 minutes, then acclerated in Oven at 100 degrees F for 10 minutes. Put under TracER (TRG801904)
	Ninhydrin	Applied NIN, let dry for about 15 minutes. Put into humidity chamber to accelerate; 50 degrees C, 72% humidity, for about 15 minutes. Visually examined under ambient light.
ULXBQT	Ninhydrin	Photographed packaging and evidence. Used Ninhydrin Heptane, dipped item for approx 30 seconds, let dry and then used heat transfer press at 225 degrees for 15 seconds.
UN27AW	1,2-Indanedione	3h, 50°C, 40% rel. humidity
	Ninhydrin	24h, 26°C, 65% rel. humidity
UPEVFU	Visual Examination	with white light and magnifier
	Ninhydrin	non-running formula applied with rinse bottle, dried in hood, secured in locker for viewing in 7 days

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WebCode	Development Methods	Method Details
UWW8TV	Visual Examination	White light & magnification
	1,2-Indanedione	Applied IND with squirt bottle, let dry (approx. 1 min.), placed in oven (approx. 1 hour @ 200 F), viewed with ALS & filters
UXN8NK	Visual Examination	White light, results negative
	Alternate Light Source	Multiple filters, results negative
	DFO	200 F degrees, for 20 mintues. Print visible in section A under ALS.
	Ninhydrin	36 hour development time. Print visible in section A.
V4EWRV	Visual Examination	I viewed item 1 with a table magnifier at room temperature.
	Ninhydrin	I applied Ninhydrin with a squirt bottle at room temperature. I checked item 1 on 11/1/17.
V67WMK	Visual Examination	
	1,2-Indanedione	Utilized heat press @~160 degrees Celsius for approximately 10 seconds
	Laser Exam	532 nm with orange barrier filter
VGU77J	Ninhydrin	Convection oven (90 - 100°C) maxium 1 minute
VVLJUG	Visual Examination	Visually examined item with direct light
	Ninhydrin	HFENIN171013, sprayed item with HFE Ninhydrin. When dry used iron for heat and humidity.
	Physical Developer (PD)	Placed item in maleic acid prewash- MAP171011, then physical developer-PD171116. Rinsed in water.
VWR6HG	Visual Examination	fluorecent lamp
	Ninhydrin	Hfeninhydrin spray bottle, Humidity cabinet 72%
	Physical Developer (PD)	PD3 Maleic Acid pre-wash, Dip method
WDTKRL	Visual Examination	in natural light and light from forensic illuminator, no prints
	DFO	time - 20 min., temp. - 100 C, print was observed in section A
	Ninhydrin	time - 24 h, temp. - 25 C, RH - 65%, developed fingerprint didn't became any better and didn't find any more fingerprint
WDV3XX	Visual Examination	
	Alternate Light Source	
	1,2-Indanedione	
	Physical Developer (PD)	
WHPX4C	Visual Examination	Visual examination with ambient light, laser @532nm
	DFO	Applied, let dry, heat @ 100degC for 20min, viewed with orange goggles and green light
	Ninhydrin	Applied, let dry, heat @ 80degC and 65% humidity for 2 min, viewed with ambient light

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Physical Developer (PD)	Rinsed, soaked in Maleic acid, rinsed, treated with PD, rinsed and let dry, viewed with ambient light
WKDEBY	Visual Examination	
	Alternate Light Source	
	1,2-Indanedione	
	Physical Developer (PD)	
WR9KLR	Visual Examination	Blue light 420-470 nm.
	Ninhydrin	80°C, 65 % humidity
X7M7KB	Ninhydrin	NINHYRIN batch 126494, expiry date 30.10.2018. Ninhydrin purchased ready made from BANNER Chemicals. CofC/CofA available. Treated in Weiss Gallenkamp Oven labelled by [Laboratory] as cabinet #3 81.1 degrees, 63.6% Humidity - process time 6minutes. One best treatment selected, as crime type not indicated in sceneria (this is in accordance with our lab procedures) I would have sequentially treated this item with DFO, Ninhydrin, followed by Physical Developer if this had been a serious offence. Control sample used and was positive.
XE6GYC	Ninhydrin	Item treated using Ninhydrin batch #126494. Together with a control sample these were placed into a Gallenkamp Oven for 6 minutes. A temperature of 79.9 degrees celcius and humidity of 63.0% was reached. The items were removed and assessed for any positive results.
XHMPBH	Visual Examination	
	Alternate Light Source	
	UV Light	
	Ninhydrin	Heat and Humidity chamber for 20 minutes
XVCJMC	Visual Exam	A) w/ Ambient and directed lighting techniques. B) ALS w/& w/o orange filter
	Ninhydrin Heptane PE	spray mist - dry - direct steam heat & humidity - visible FRD found.
XW2ZUY	Ninhydrin	Freon based ninhydrin. Item was submerged, allowed to fully dry. Heat and humidity was applied using an iron on steam setting
XWLHTE	Developing Latent Prints on Latent Absorbent Surfaces with Ninhydrin	The evidence was processed at a temperature of 22°C to 34% of relative humidity, was applied Ninhydrin to 0.5% in diethyl ether, and was left for 24 hours in the gas extraction chamber.
Y4HNBM	Visual Examination	
	Alternate Light Source	
	Iodine	crystals
	Ninhydrin	spray

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
	Silver Nitrate	spray
Y9BT4Q	Visual Examination	I performed a visual examination with room lighting. No print was observed.
	1,2-Indanedione	I applied 1,2-Indanedione to the sticky note, let it dry for 3 minutes in a fume hood with the fan on. I then placed the sticky note into the oven at 200 degrees for one hour. After removing it from the oven, I viewed it with an ALS at 480-550nm of light using a yellow/orange filter (510nm.) The print was observed.
YA89CG	Visual Examination	Photos taken
	Ninhydrin	Dip in ninhydrin solution - air dry
	Steam Iron	steam iron applied
	Time in a locker	placed in plastic sleeve in locker
YMRTR4	DFO	DFO was sprayed onto item. Item was then hung in a fume hood and dried. Item was then dipped in DFO. Item was then dried in the fume hood. Item was then placed in a caron model 6105 fingerprint chamber for 20 minutes at 100 degrees Celsius. Item was then sprayed with Ninhydrin and air dried in fume hood. Item was then placed in caron model 6105 fingerprint chamber for 3 minutes at 80 degrees celsius and 65% humidity.
	Ninhydrin	
YUQH99	Visual Examination	ambient/overhead lighting used
	DFO	Chamber heated to 97C and item heated with control paper 20min. Settings: Dry bulb - 100C, Wet Bub-65C, Safety thermostat 110C, acceptable rande 95-105C
	Alternate Light Source	475 nm with orange goggles
	Ninhydrin	Chamber heated to 74C with humidity. Item heated for 4 minutes. Settings: Dry bulb - 75C, Wet Bub-65C, Safety thermostat 90C, acceptable rande 70-80C
	Visual Examination	overhead ambient light
	Ninhydrin	Chamber heated to 73C with humidity. Item in chamber for 4 minutes. Settings: Dry bulb - 75C, Wet Bub-65C, Safety thermostat 90C, acceptable rande 70-80C
	Visual Examination	overhead ambient light
YW2CWL	Iodine Fuming	Fuming, less than 1 minute
	Ninhydrin	Spray method, used an iron to apply heat and humidity
	Silver Nitrate	Spray Method, developed within 5 minutes
YZGREZ	Visual Examination	White light
	DFO	Dip 20 sec, Heat for ~ 20 min.
	Ninhydrin	Dip twice. Apply heat/humidity ~ 5 min.

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TABLE 2 - Item 1

WebCode	Development Methods	Method Details
Z2NLFH	Visual Examination	
	Alternate Light Source	
	Ninhydrin	Lot # NINNOV170818; control good
Z4XET6	Visual Examination	
	DFO	100 C for 20 minutes
	Alternate Light Source	535nm with red filter
	Ninhydrin	ambient temperature for 24 hours
Z74YG6	Visual Examination	
	DFO	Developed at ~80 degrees C for ~20min
	Alternate Light Source	Viewed at 515nm using red filter
ZBTE6C	Ninhydrin	moist steam heat
ZJNLJC	Visual Inspection	
	Ninhydrin	Testing paper - ok, temp 80°C, moisture 65, time 6 min, sunlight in plastic
ZQNXLZ	Visual Examination	no visible ridge detail
	Ninhydrin	positive control, saturated, dried, steam, visible ridge detail
ZWRZMU	Visual Examination	
	Alternate Light Source	365nm, 450nm, Laser
	DFO	
	Alternate Light Source	Laser only
	Ninhydrin	
	Visual Examination	
ZZVFD7	Visual Examination	White light
	Ninhydrin	Ninhydrin spray "Nin-Print", room temperature 22°C, 6 hours

Response Summary

Participants: 169

Methods Utilized

Alternate Light Source	51	Powder Dusting	3
Cyanoacrylate Fuming	0	Sticky Side Powder	0
DFO	39	Visual Examination	123
Dye Stain	2	Wet Wop	0
Ninhydrin	140	1,2-Indanedione	30
Physical Developer	17		

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

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TABLE 2 - Item 2

WebCode	Development Methods	Method Details
2A2VMB	Visual Examination	
	Cyanoacrylate Fuming	Lot #: CA170622, 80% Relative Humidity, 30 minute superglue fume, 30 minute purge cycle
	Dye Stain	Ardrox, ARD170816, print fluoresced under alternate light source (Crime Scope)
	Powder Dusting	Black Powder
2AJQ8X	CFC	Lot N/A, exp. 2-11-18, + control
	Black Powder	
2BTVH2	Powder Dusting	black powder- negative results
	Powder Dusting	Mag powder- positive results
2DWNEL	Visual Exam - White Light	0859
	Cyanoacrylate	Superglue chamber w/humidity 0930
	Dye Stain - MBD2	Viewed w/ FLS - orange goggles 1025
2KHJFP	Visual Examination	Ridge detail is visible in "C" quadrant
	Cyanoacrylate Fuming	13 minutes at 70% humidity
	Visual Examination	
	Powder Dusting	Black Powder
	Visual Examination	
2WPGFJ	Visual Examination	Ambient and white light
	Cyanoacrylate Fuming	Glue heating at 120 degrees Celsius for 5 minutes in 80% humidity
	Dye Stain	Basic Yellow 40
34NGCQ	Visual Examination	
	Alternate Light Source	visual with laser (BrightBeam)
	Cyanoacrylate Fuming	5 minutes in tank, lot#072717
	Visual Examination	
	Dye Stain	R6G lot#092517
	Alternate Light Source	visual with laser (BrightBeam)
	Powder Dusting	black magnetic
	Visual Examination	
3A9JBF	Visual Examination	White light examination using crime-lite 400-700nm
	Alternate Light Source	Quaser (filtered arc lamp) at wavelengths: UV (340-413nm) BLUE (400-469nm) and green (491-548nm)

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TABLE 2 - Item 2

WebCode	Development Methods	Method Details
	Cyanoacrylate Fuming	Superglue fuming (2.5g of CNA) 15 MINUTE GLUE CYCLE at 80% relative humidity using mason vactron MVC3000
	Dye Stain	Basic yellow 40 ethanol based solution (batch BY40E008/17, no exp) item dipped for approximately 10 seconds, rinsed, dried and viewed at 400-469nm
3M2VUK	Visual Examination	Exam for any visual prints
	Powder Dusting	Dusted lightly with black powder developing a print in section C
3QKZHH	Visual Examination	
	Alternate Light Source	RUVIS short wave ultra-violet light
	Powder Dusting	black volcanic powder
4DRQGU	Visual Examination	Oblique lighting and magnifier
	Cyanoacrylate Fuming	Development chamber at with cyanoacrylate heated to approximately 200 degrees C for approximately 5 minutes.
	Powder Dusting	Processed item using bllack latent powder.
4FXALH	Visual Examination	Oblique lighting, white light, and fluorescent light.
	Cyanoacrylate Fuming	12 minutes and 80% humidity.
	Alternate Light Source	RUVIS: UV light and UV goggles.
	Rhodamine 6G	
	Alternate Light Source	Tracer Laser (532nm) and orange goggles for viewing.
	Powder Dusting	Black Powder
4JELC8	Powder Dusting	
4QWAUF	R6G coating	The item was placed in vacuum chamber with superglue for about 2 hours and then covered in Rhodamine 6G solution.
4RTKPH	Visual Examination	Photography of item
	Cyanoacrylate Fuming	Ten minutes inside fuming tank. QC test print reacted positive for process.
	Powder Dusting	Disposable sterile brush with disposable sterile bacl powder.
4WFG9E	Visual Examination	
	Cyanoacrylate Fuming	chamber-20 minutes, RH-80%
	Visual Examination	
	Basic Yellow 40	350-505 nm light, using yellow/orange filters
	Visual Examination	
4WJYEP	Visual Examination	
	Alternate Light Source	LASER (532nm), 455nm, UV (365nm)

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WebCode	Development Methods	Method Details
	Cyanoacrylate Fuming	
	Alternate Light Source	RUVIS
	Dye Stain	RAM
	Alternate Light Source	LASER (532nm), 455nm, UV (365nm)
67KQCH	Visual Examination	Ambient/Conventional lighting and Forensic light source examination, light UV and POLILIGHT PL 400, range between 360nm – 490nm.
	Cyanoacrylate Fuming	Humidity 85%, 60 degrees Celsius. Total Cycle: 15 minuts. Warming Cycle: 3 minutes, Glue Cycle: 6 minutes. Purge Cycle: 6 minutes.
	Dye Stain	Submerged application: ARDROX Liquid, this object is inserted into the tray and left it 15 seconds. Let it dry at room temperature for approximately 30 seconds and then rinsed with water.
6BKVBW	Visual Examination	Possible ridge detail visible on Section C
	Powder Dusting	Control Positive. Processed with black powder. Ridge detail on Section C. Lifted with tape and put on latent lift card.
6CQFYW	Visual Examination	Oblique lighting
	Powder Dusting	Using a brush, black silk powder was lightly dusted over the entire surface of Item 2.
6CT3FB	Powder Dusting	Black powder with fingerprint brush
	Powder Dusting	black magnetic powder with fingerprint magnetic wand
6QB324	Cyanoacrylate Fuming	8 min, RH 80%
	Powder Dusting	Magnetic Jet Black
74EG4L	Visual	
	CA Fuming	Safefume 485 chamber for 12 minutes with 80% humidity
	Powder	Magnetic black
79RG2D	Powder Dusting	Black fingerprint powder, fiberglass brush used for application
7C8U2Z	Visual Examination	
	Cyanoacrylate Fuming	75% humidity in chamber. Six minutes fuming and 10 minutes purging. Chamber #2 used. Viewed under white light
	Dye Stain	Rhodamine 6G. Sprayed item. Viewed with green laser under orange filter
7F837B	Cyanoacrylate Fuming	humidity ~60%
	Dye Stain	MeOH based R6G
	Powder Dusting	black magnetic powder and black powder
7FNADD	Visual Examination	

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WebCode	Development Methods	Method Details
	Alternate Light Source	
	Cyanoacrylate Fuming	
	MRM-10 powder	
7LFJNC	Powder Dusting	black powder
7MCWB4	Visual Examination	
	Cyanoacrylate Fuming	5 minutes
	Rhodamine 6G Methanol	Methanol rinse
	Bichromatic Powder	
867WV9	Visual Examination (000-515nm)	
	Superglue	Temperature - 129°C. Humidity - 82%
	Basic Yellow	
872FVP	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	
	Alternate Light Source	
8BBV3R	Cyanoacrylate Fuming	+ control for CFC Exp 2-11-18; enter chamber @ 1242 hours. Item went through one cycle of cyanoacrylate approximately 30 minutes
	Black Powder	processed item with Black Powder (fingerprint)
8U4YLE	Visual Examination	Upon visual examination, a finger impression was observed in the section labeled “C”
	Powder Dusting	The entire ceramic tile was then processed using powder dusting with dual contrast powder; a visible fingerprint with ridge flow and minutiae was develop in the sectioned labeled “C” but it appeared the center of the print had been smeared
8YHCL2	Cyanoacrylate Fuming	70% humidity, 10 minutes fuming, + control. Lot: N/A. Exp: 2/11/18
	Black Powder	Brush
9274G6	Visual Examination	fluorescent lighting
	Cyanoacrylate Fuming	Lot #CA170622; Humidity temp 80%; processing time 30mins Purged 30mins.
	Dye Stain	Ardrox Lot#ARD170816
	Powder Dusting	black fingerprint powder
947GWG	Cyanoacrylate Fuming	Rhodamine 6G

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WebCode	Development Methods	Method Details
96GFTB	Visual Examination	Fingermark in section C.
	Alternate Light Source	Polilight 620-650 nm, Crime-lite ML2 450-510 nm - fingermark in section C.
	Cyanoacrylate Fuming	Fuming time 15 min (CA temperature 120°C, 80% humidity). Fingermark in section C.
	Powder Dusting	Black magnetic powder. Fingermark in section C. Best result.
	Dye Stain	Basic Yellow 40 ethanol solution. Fluorescent fingermark in section C (Crime-lite ML2 420-470 nm). Background staining appeared.
99ZDG2	Cyanoacrylate Fuming	Approximately 90 minutes
	Powder Dusting	black powder
9Q23UY	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	BY40
9YCFY9	Powder Dusting	Black & silver magnetic powder
AAAUYX	Visual Examination	
	Cyanoacrylate Fuming	8 min processing time
	Dye Stain	methanol based Rhodamine 6G
	Alternate Light Source	Green light/orange goggles to view dye stain results
ANMBZ9	Cyanoacrylate Fuming	1 hour, temp 120 C, 75% RH
	Powder Dusting	10 minutes, bichromatic
	Visual	5 minutes
AP8PUD	Cyanoacrylate Fuming	11 minute fume time, 80% humidity
	RUVIS	Reflected Ultra Violet Imaging System
	Dye Stain	Rhodamine 6G, 532nm light source used, orange filter
	Powder Dusting	
B777EG	Visual Inspection	
	Cyanoacrylate	Item in chamber for 12 min @ 80% humidity and 35 drops of CA
	MBD	Item rinsed with dye stain and viewed with ALS and orange filter
BEZH64	Visual Examination	white light
	Cyanoacrylate Fuming	SAFEFUME 48S, glue ARON ALPHA, 80%Rh, 30min
	Powder Dusting	FINGERPRINT POWDER MAGNETIC BLACK

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WebCode	Development Methods	Method Details
BG8M77	Pre-Process Screening	Item visually inspected, viewed under oblique lighting and then under ALS
	Powder Dusting	Black virgin powder, new brush and lifted using standard fingerprint lifting tape
BH2BN2	Visual Examination	Desk/Fluorescent Light
	Cyanoacrylate Fuming	Air Science Chamber - 30 min development at 70 deegrees w/ 80% humidity
	Dye Stain	M Star - Wash bottle - Air dry with no rinse - Viewed with CrimeScope at 495
	Powder Dusting	Black powder - Brush Application
BMUJN3	Powder Dusting	Black magnetic powder
BUT967	Cyanoacrylate Fuming	misonix fume chamber
	Powder Dusting	black magnetic powder
C4DPGD	Visual Examination	visual inspection
	Cyanoacrylate Fuming	Applied humidity, circulating air for approximately 15 minutes.
	Magnetic Powder	Applied magnetic powder with a magnetic wand.
C67PC4	Visual Examination	A flashlight was used to examine the item.
	Documentation Photography	Photographs were taken to document the original state of the item prior to chemical processing.
	Cyanoacrylate Fuming	Labconco BT Fumming Chamber was used.
	Dye Stain	Rhodamine 6G - Working Solution was used to stain the item.
	Alternate Light Source	Orange googles and a TracER Laser were used to view the item.
CGZ726	Alternate Light Source	Oblique lighting
	Cyanoacrylate Fuming	9 minutes processing before venting chamber
	Powder Dusting	Regular black powder
CPDZDZ	Fingerprint Powder	Magnetc jet black B-45000, proc. time: a few second
CRGVW4	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	120°C, 75% Relative Humidity
	Powder Dusting	
D8TH87	Visual Examination	
	Alternate Light Source	Used PoliLIGHT 500: UV and 415nm-505nm to view
	Cyanoacrylate Fuming	20 minutes in MVC 5000 chamber
	Powder Dusting	Magnetic and Black powder used

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WebCode	Development Methods	Method Details
DER8PB	Visual Examination	
	Cyanoacrylate Fuming	Placed the ceramic tile in the superglue chamber for approx. 10 minutes.
	Powder Dusting	I applied the powder to the ceramic tile.
DGJABQ	Powder Dusting	black powder with fiberglass brush
DKBGPR	Visual Examination	Omnichrome "Omniprint 1000"
	Cyanoacrylate Fuming	automatic cyanoacrilate fuming chambers "Safefume 48S", humidity 80%, temperature 25.7°C, processing time 30 min
	Powder Dusting	powder magnetic jet black
DQ3LPN	Visual Examination	
	Cyanoacrylate Fuming	positive control
	Powder Dusting	dusti ident powder
DQALUX	Visual Examination	desk lamp
	Cyanoacrylate Fuming	Airscience Printbuster Pro Safe Fume chamber, Humidity 80% temperature 70 degrees, process time about 30 minutes, purge time 30 minutes
	Dye Stain	M-Star dye stain using spray method, left to air dry
	Alternate Light Source	Visualized M-STAR usign Crime Scope forensic light source at 495nm
	Powder Dusting	black powder utlizing brush
DZQGKX	Visual Examination	With and without extra light. A print was discovered in section C. Not yet possible to preserve.
	Cyanoacrylate Fuming	Includes preheating about 30 minutes with the sample inside the chamber. Adding water ca. 16 ml. Once the vaporization is completed 10 drops of glue are added. After 2-3 minutes the ventilation will be activated. Glue heater temp: 220 C, water heater temp: 210 C.
	Visual Examination	With and without extra light. The print in section C. Still not possible to preserve.
	Dye Stain	A Basic Yellow 40 treatment.
	Visual Examination	A print in the section C became visible when using ultraviolet light.
E487JZ	Visual Examination	
	Cyanoacrylate Fuming	Foster & Freeman MVC1000: temp 120´C, hum 80%+time 12min, cyano.time 10min
	Powder Dusting	Ferrioxide
EATCZ9	Visual Examination	Faint impression noted
	Powder Dusting	Used twirling technique to apply black powder (5 seconds). Lifted one latent lift

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WebCode	Development Methods	Method Details
ERVWZG	Visual Examination	
	Alternate Light Source	Laser/UV/450nm
	Cyanoacrylate Fuming	
	Dye Stain	RAM
F4GQMV	Cyanoacrylate Fuming	
	Powder Dusting	black
F6D7YR	Visual Examination	Oblique Lighting
	Powder Dusting	Black Powder
FCUHDT	Visual Examination	oblique lighting
	Cyanoacrylate Fuming	80% relative humidity for six (6) minutes; approx. twelve (12) drops of CA
	Powder Dusting	Black Magnetic Powder
	Dye Stain	Rhodamine 6G - Petroleum Ether Carrier
	Alternate Light Source	495 nm with orange barrier goggles
FCY2ZV	Powder Dusting	Powder Brush used
GATRRY	Powder Dusting	Black powder on entire surface
GCDRKZ	Visual Examination	
	Cyanoacrylate Fuming	120°C, 75% Relative Humidity
	Dye Stain	Ardrox, 415nm, yellow filter
GCT8UV	Cyanoacrylate Fuming	Placed in fuming chamber with dime size amout of CAE.
	Dye Stain	Yellow dye was sprayed on the entire surface, rinsed with water and allowed to dry for approximately 1 hour.
GELX72	Visual Examination	Processing time: 1 minute
	Cyanoacrylate Fuming	Processing time: 1 hour 20 minutes: Temperature 120° C; Auto humidity cycle =75%-80%.
	Powder Dusting	Processing time: 3 minutes; Bicromatic powder used
GNMMJV	Powder Dusting	Black Magnetic Powder applied
GZXTY6	Visual Examination	
	Cyanoacrylate Fuming	SafeFume Chamber, 67 degrees F, 80% humidity, 20 minutes
	Dye Stain	R6G dye stain water carrier fluid
HDZQC4	Cyanoacrylate Fuming	HR=80%, T°=23°C, Time=5'
	Dye Stain	Basic Yellow 40

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WebCode	Development Methods	Method Details
HG3KEE	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	
HLEN73	Visual Examination	Latent visible w/direct reflect lighting technique.
	Cyanoacrylate Fuming	Atmospheric chamber, 75% humidity, 15 min fume time (allowed to harden).
	Powder Dusting	Magnetic black powder - edges only developed
	MRM-10	Washed over area and dried. FLS at 450 nm - No visible development.
HRZRP6	Visual Examination	Natural and white light
	Alternate Light Source	Spectral sweep with Polilight PL400 from 350nm to 590nm
	Cyanoacrylate Fuming	TechnoHispania Cabin, Cyanocrylate (1.5 g); Humidity 75% Temperature plate 65 °C (Heating plate time 3 minutes, Fixation time 6 minutes, Purge time 6-10 minutes), Total process time 20 minutes
	Dye Stain	ARDROX sprayed on item. Fixation time 30 seconds. Rinse with water. Drying at room temperature
HXTFWW	Powder Dusting	powdered and observed latent right away
J8UC7R	Visual Examination	
	Powder Dusting	Carbon
JAVKA3	Visual Examination	
	Fluorescence Examination	
	Cyanoacrylate Polimeryzation (Superglue Fuming)	temperature of the heating plate: 100°C, humidity: 80%, time: 30 min.
	Basic Yellow 40	
JB6PL7	Cyanoacrylate Fuming	The item was treated with cyanocrylate ester fuming for a minute. The process was expedite with heat. Then, the latent print was itensified with black powder.
	LPPM R4	
JGEY2E	Alternate Light Source	Rofin polilight PL500; White, UV, 415nm, 450nm,470nm, 490nm, 505nm, 530nm, 590nm
	Cyanoacrylate Fuming	Foster & Freeman MVC3000. 0.4g glue, Auto-cycle
	Rhodamine 6G stain	View with 505nm, orange goggles
	Ardrox Stain	Stain - wash - view with UV, clear goggles
JHRFAL	Visual Examination	White light

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WebCode	Development Methods	Method Details
	Cyanoacrylate Fuming	Cyanoacrylate fumming chamber "Air Science Safefume 48S" Cyanoacrylate B-83050, BVDA. Humidity 80%. Target temperature 85 degrees, processing time 25 min. Room temperature 20.5 degrees.
	Small particle reagent	SPR Black, B-86000, BVDA. Item was sprayed for 5-6 seconds.
JWR6EY	Visual Examination	
	Cyanoacrylate Fuming	MVC Chamber 20 minutes
	Powder Dusting	Magnetic powder
	Powder Dusting	Black powder
JYHDH9	Visual Examination	Room light, flashlight
	Alternate Light Source	Tracer Laser
	Alternate Light Source	Crimescope ALS
	Powder Dusting	Black Magnetic Powder
K2JUAW	Powder Dusting	Magnetic Powder
K6YD7K	Visual Examination	Natural light, white light.
	Cyanoacrylate Fuming	The latent print was developed 25 minutes (80% - humidity). The latent print was recovered in section "C".
	Powder Dusting	Later the latent print was developing with Magnetic Power black (to enhance contrast)
KCZKPT	Visual Examination	White light only, print visible in Section "C".
	Alternate Light Source	Multiple filters, print visible in Section "C".
	Cyanoacrylate Fuming	Thirty minute fuming in vacuum chamber. Print visible in Section "C".
	Powder Dusting	Magnetic powder, print visible in Section "C".
KNDMBR	Cyanoacrylate Fuming	Room temp., 45 minutes in chamber
	Powder Dusting	
KXZL4H	Powder Dusting	processed with black powder
KZ9UD3	Visual Examination	Naked eye
LE3MBN	Visual Examination	flash light from the side
	Cyanoacrylate Fuming	80% rh (+/-5%), 120 degrees C glue temp, 8 min glue time, 1.5-2.0 g glue
	Dye Stain	BY-40 solution: 2 g/l Basic Yellow 40 in 96% ethanol
LH4PHD	Visual Examination	Visual examination of item for latent prints. No latent prints observed.
	Cyanoacrylate Fuming	Sirchie FR200 fuming chamber for approximately 10 minutes (water added to a small beaker to increase humidity).

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WebCode	Development Methods	Method Details
	Dye Stain	Rhodamine 6G used to stain item post cyanoacrylate. A single latent print was observed in quadrant C.
	Alternate Light Source	Viewed item using a Rofin Polilight @ 505nm with orange goggles. A single latent print observed in quadrant C.
LHK3M2	Powder Dusting	Processed on down-draft table with black powder and fiberglass brush.
LKPTRV	Visual Examination	Processing Time: 1 minute
	Cyanoacrylate Fuming	Processing Time: 1 hour 30 minutes; Temperature: 120 degrees Celsius; auto humidity cycle at 75-80%
	Powder Dusting	Processing Time: 3 minutes; Bi-Chromatic powder
MBWPD2	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	80% humidity, 10 minutes
	Powder Dusting	
MKM8UV	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	120°C, 75% Relative Humidity
	Powder Dusting	
MNP2W7	Visual Examination	Light on desk and in ceiling
	Alternate Light Source	520nm at 8 watts
	Cyanoacrylate Fuming	fumed in chamber for 11 min
	Visual Examination	light on desk and in ceiling
	Dye Stain	R6G
	Alternate Light Source	Laser 520nm at 8 watts
MPZ4FJ	Visual Examination	
	Cyanoacrylate Fuming	
	Powder Dusting	
MTWRWQ	Powder Dusting	Black Powder
MVMQDB	Visual Examination	Visible latent print observed w/ ambient white light; not visible with direct white light or alternate light source; unable to photograph
	Cyanoacrylate Fuming	Lot# 201706068, Humidity Cycle (RH 80%, 15 min), Glue Cycle (120 deg C, 10 min), Purge Cycle (20 min)
	Dye Stain	MBD Dye Stain (Lot# 092017-01), Squirt bottle, Air Dry
	Alternate Light Source	Blue Light (430-470 nm), Yellow filter (GG495)

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WebCode	Development Methods	Method Details
	Powder Dusting	Standard Black Powder (Lot# 201506013), Powder brushed until ridge detail develops
N4DRDK	Visual Examination	ambient
	Cyanoacrylate Fuming	6 min 30sec
	Dye Stain	BY40
N6QB8Q	Cyanoacrylate Fuming	Labrum Klimat, fuming temperature: 200 Celsius, humidity: 250 Celsius, processing time 10 minutes
	Powder Dusting	Magnetic powder (Magna Jet Black)
NGH2RU	Visual Examination	under white light
	Alternate Light Source	fluorescence examination (350 nm - 650 nm under appropriate color barrier filters)
	Cyanoacrylate Fuming	in the fuming chamber with a humidity 80% for 7 minutes; visual examination under white light and fluorescence examination in alternate light source (350 nm - 650 nm)
	Basic Yellow 40	fluorescence examination in alternate light source (350 nm - 505 nm under yellow or orange color barrier filters)
NKKQFW	Visual Examination	Item examined visually under white light and ALS
	Cyanoacrylate Fuming	Automated chamber used, 80% humidity, fumed for 10 minute cycle
	Dye Stain	Rhodamine 6G, dispensed directly onto item, allowed to air dry.
NNFQ9X	Visual Examination	White ambient light. A print was detected.
	Cyanoacrylate Fuming	No improvement of the print.
	Powder Dusting	Black magnetic powder. The existing print was enhanced.
	Dye Stain	Basic yellow 40. No improvement of the print.
NQREYP	Powder Dusting	black powder
P4VZYU	Visual Examination	
	Cyanoacrylate Fuming	20 minutes in MVC 5000
	Powder Dusting	Magnetic powder
	Powder Dusting	Black powder
P8QTTP	Visual Examination	Fluorescent/LED white light
	Alternate Light Source	530nm
	Cyanoacrylate Fuming	20 min in chamber
	Dye Stain	Rhodamine 6G viewed at 530nm; Ardrox viewed at 365nm
	Powder Dusting	Black latent print powder
PAGZBZ	Cyanoacrylate Fuming	Vacuum Chamber and Gel Pack

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WebCode	Development Methods	Method Details
	Powder Dusting	Black
PBMP6W	Visual Examination	saw weak print or something similar
	Cyanoacrylate Fuming	5 min, ca 80% rel hum
	Powder Dusting	Magna jet black, print developed
	Dye Stain	Basic Yellow 40, no improvement compared to powder dusting
PGEPR6	Visual Examination	
	Alternate Light Source	UV, 450nm, LASER 535nm
	Cyanoacrylate Fuming	
	Dye Stain	RAM
PMLFWV	Visual Examination	20minutes
	led light	5 minutes
	Cyanoacrylate Fuming	55 minutes
	led light	5 minutes
	Cyanoacrylate dye	29 minutes
	UV light	11 minutes
	Black powder	7 minutes
PVWHEQ	Visual Examination	White, low angle light. Print visible in quadrant "C". Photo obtained.
	Alternate Light Source	Low angle 555nm filter. Print visible in quadrant "C". Photo obtained with orange barrier filter attached to camera and alternate light source (ALS) set to 555nm.
	Cyanoacrylate Fuming	30 minute fume time at 80% humidity. Print visible in quadrant "C". Photo obtained.
	Powder Dusting	Magnetic powder applied. Print visible in quadrant "C". Lift obtained.
Q2ZY9W	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	Basic Yellow 40
Q3AXFY	Visual Examination	at room temperature 23°C using room light only. Time taken 1 minute.
	Powder Dusting	Black powder used on white surface. Time taken 2 minutes.
QBPM7K	Visual Examination	ambient light
	Cyanoacrylate Fuming	30 minute fume time, air science chamber with 80% relative humidity
	Dye Stain	M-Star spray method, forensic light source (crimescope)

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WebCode	Development Methods	Method Details
	Powder Dusting	black powder
QDD3D8	Alternate Light Source	crimescope, leser 532nm and 577nm, white light coaxial incident
	Cyanoacrylate Fuming	Lumicyano CST at 120°Celsius, 30 minutes fumigation
	Dye Stain	Basic Red 14
QP7HJV	Visual Examination	Flashlight
	Cyanoacrylate Fuming	12 minutes, 80% humidity, control positive
	Alternate Light Source	RUVIS, control positive
	Dye Stain	Rhodamine 6G on item and control, dry 3 minutes
	Alternate Light Source	Tracer laser 532 nm, orange filter on camera, control positive
QRC8HX	Visual Examination	AMBIENT LIGHT & FLASHLIGHT
	Cyanoacrylate Fuming	75 DEGREE F CHAMBER TEMPERATURE, 67% RELATIVE HUMIDITY, AT LEAST 10 MINUTES
	Dye Stain	RHODAMINE 6G, METHANOL CARRIER, LASER VISUALIZATION AT 532NM, ORANGE FILTER
	Powder Dusting	BLACK POWDER, FIBERGLASS TYPE BRUSH
QXHLN9	Cyanoacrylate Fuming Chamber (CFC)	Cyanoacrylate - Exp. date 2/11/2018. Humidity set - 70%. Fume time: 10 minutes. Purge time: 10 minutes. Positive control
	Black Powder	Lot #0513026. Exp. date 12/2018
R3B64C	Visual Examination	Ambient/overhead lighting
	Alternate Light Source	Laser: Green & Blue Wavelengths
	Cyanoacrylate Fuming	10 minutes, fish tank w/ humidity
	Powder Dusting	Magnetic Black Powder
	Dye Stain	R6G in Methanol, examined with Laser: green wavelength
RPNX9W	Visual Examination	white light
	Krimesite (UV)	UV exam for latents
	Cyanoacrylate Fuming	15 minutes
	Krimesite (UV)	UV exam for latents
	Dye Stain	Basic Yellow 40 spray and water rinse
	Alternate Light Source	450 nm with orange googles/barrier filter
RUKFRH	Visual Exam	
	Cyanoacrylate Fuming	fuming chamber 72% humidity - 12 minutes
	RAY Dye Stain	let stain sit = 15 seconds before rinsing; viewed using SPEX at CSS wavelength w/orange filter

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WebCode	Development Methods	Method Details
	Black Powder	
RVDDYP	Powder Dusting	by Magnetic Black
RVTWJL	Fuming	Fumed for 1 hour with vacuum chamber temperature at 37°C and vapor release temperature at 82°C.
	Dye Stain (Fluorescent)	Dye stained with rhodamine 6G batch #W111617 and air-dried.
	Visualization	Visualized with a laser light system
T8HZGK	Visual Examination	
	Cyanoacrylate Fuming	humidity 80%, processing time 34min
	Powder Dusting	black magnetic powder
TK76MV	Visual Examination	white light, blue light + yellow filter,
	Cyanoacrylate Fuming	80% humidity, heating plate 120 C
	Dye Stain	basic yellow 40
	Powder Dusting	carbon powder
TYZN4J	Cyvac (glue)	heat: 37°C (basic), heat: 82°C (heating), vacum: minus 80-90 kPa, time: 45 min
	Fingerprint Powder	concentraded black (coal, carbon)
U7FPXM	Visual Examination	
	Alternate Light Source	CSS, orange filter
	Cyanoacrylate Fuming	120°C, 75% Relative Humidity
	Dye Stain	Ardrox, 350nm
UDZQFK	Alternate Light Source	UV-light 350-380 nm
UG6BAC	Visual Examination	Used ambient light and reflected it off surfaces. Conducted a visual for about 60-120 seconds on item.
	Alternate Light Source	Used an ALS Crimescope (FOR-923C-2112) and TracER (TRG801904).
	Cyanoacrylate Fuming	Put into a CA-3000 (MYCA601-0024) at 80% humdity with 1.75g of Superglue. Fumed for 6 minutes, purged for 10 minutes. Removed, and visual/ambient light examined, then used a flashlight.
	Dye Stain	Rhodamine 6G, Methanol based. Applied to item after CA. Allowed to dry for about 25 minutes. Item was then put under a TracER (TRG801904) and examined for about 3 minutes.
ULXBQT	Powder Dusting	Photographed packaging and evidence. Processed item using Cyanoacrylate fuming process, 10 mins inside chamber, followed by black graphite powder to develop print.
UN27AW	Visual Examination	
	Cyanoacrylate Fuming	10 min, 120°C, 85% rel. humidity

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WebCode	Development Methods	Method Details
	Dye Stain	Basic Yellow
UPEVFU	Visual Examination	with white light and magnifier
	Cyanoacrylate Fuming	in chamber with control, heat plate, humidity, for approximately 7-10 minutes
	Powder Dusting	with magnetic powder/wand over the entire item
UWW8TV	Visual Examination	White light & magnification
	Cyanoacrylate Fuming	placed in fume chamber #3 with hot water & CAE in aluminum dish with heat (approx. 20 min.)
	Powder Dusting	Applied black magnetic powder
UXN8NK	Visual Examination	White light, print visible in section C.
	Alternate Light Source	Multiple filters. Print visible in section C.
	Cyanoacrylate Fuming	30 minutes of fuming with 80% humidity. Print visible in section C.
	Powder Dusting	Magnetic powder. Print visible in section C.
V4EWRV	Visual Examination	I viewed item 2 with a table magnifier.
	Cyanoacrylate Fuming	I placed item 2 in a superglue chamber, I applied hot water in a beaker and added a dime size drop of superglue to the hot plate. I let the item fume for approximately 20 minutes.
	Powder Dusting	I applied black powder to the entire surface of item 2 using a fingerprint brush.
V67WMK	Visual Examination	
	Powder Dusting	Black magnetic powder
VGU77J	Powder Dusting	Double-toned magnetic powder (black and silver)
VVLJUG	Visual Examination	Visually examined item with light
	Cyanoacrylate Fuming	CA170622- Placed item in superglue tank for 30 minutes at 80% humidity with a hot plate.
	Dye Stain	M-Star-MS171101. Covered item in M-Star using wash bottle. Examined item with a crimescope CS-16-500.
	Powder Dusting	Covered item in black powder using a brush.
VWR6HG	Visual Examination	Fluorecent Lamp
	Cyanoacrylate Fuming	Air Science Safefume tank -30 minutes
	Dye Stain	Ardrox- washbottle
	Alternate Light Source	Crimescope
	Powder Dusting	black powder brush
WDTKRL	Visual Examination	in natural light and light from forensic illuminator, print was observed in section C

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TABLE 2 - Item 2

WebCode	Development Methods	Method Details
	Cyanoacrylate Fuming	time - 15 min., RH - 80%, glue - 2g, developed fingerprint did become better
	Basic Yellow 40	to achive even better contrast - positive result
WDV3XX	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	
WHPX4C	Visual Examination	Viewed with ambient light, laser @ 532nm
	Cyanoacrylate Fuming	1g CA added to chamber heating plate, 80% humidity ran for ~9min., let set, viewed with ambient light and green light
	Dye Stain	Applied water based R6G, rinsed with water, let dry, viewed with green light and orange goggles
WKDEBY	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	
WR9KLR	Visual Examination	Blue light 420-470 nm.
	Cyanoacrylate Fuming	80 %, heating plate 120 C
	Powder Dusting	carbon powder
X7M7KB	Cyanoacrylate Fuming	Cyanoacrylate batch 62514. Treated in MVC5000 Superfume cabinet labelled as cabinet#2 by [Laboratory]. 3.51grams of Cyanoacrylate used, CofC available. Cabinet reached 120 degrees, 81% Humidity - processing time 1 hour.
	Dye Stain	Basic Yellow Ethanol based dye stain - batch reference given by [Laboratory] 15AT153 - Ethanol batch 17/799B, BY40 batch 201703150. CofC(s) available. One best treatment selected, SG/DYE is classed as one treatment in our Laboratory. I would have treated this item sequentially using cyanoacrylate fuming and dye stain, followed by Basic Violet 3 if this had been a serious offence.
XE6GYC	Cyanoacrylate Fuming	The item together with a prepared control sample were placed inside the MVC5000 #4. 4.53g of cyanoacrylate adhesive was measured in a foil tray and placed onto the heating plate. The process was completed using the auto cycle on the cabinet. (Relative humidity of approx 80% with a heating temperature of approx 120°C) On completion of the cycle the items were removed and assessed for any positve results.
	Dye Stain	The items were immersed into Basic Yellow 40 stain batch #15AT153 then rinsed with cold running water and left to dry.
	Alternate Light Source	Once dry the item and control sample were assessed for any positive results using a blue 80S crime-lite (430-470nm)

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TABLE 2 - Item 2

WebCode	Development Methods	Method Details
XHMPBH	Visual Examination	
	Alternate Light Source	
	UV Light	
	Cyanoacrylate Fuming	20 minutes
	Powder Dusting	
	Dye Stain	Ardrox
	Dye Stain	Rhodamine 6G
XVCJMC	Visual Exam	Ambient + Directed lighting techniques. ALS w/orange filter
	Physical	Applied magnetic powder w/magnetic brush.
XW2ZUY	Powder Dusting	standard black powder
XWLHTE	Revealed for Latent Prints on Smooth Surfaces or Polished with Cyanoacrylate and Graphite Magnetic Black Color	The evidence was processed at a temperature of 22°C to 34% of relative humidity, for a period of 50 minutes in the fumigation chamber of Cyanoacrylate, then it was applied graphite magnetic color black
Y4HNBM	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Magna Powder	
	MRM10	
	Basic Yellow	
	Methanol Rinse	
Y9BT4Q	Visual Examination	I performed a visual examination with room lighting. No print was observed.
	Cyanoacrylate Fuming	Using a dime size amount of superglue, I placed the tile into the chamber. I added a beaker of hot water to provide humidity. The vapor release was on for eight minutes. I then removed my item from the chamber. No print was observed.
	Powder Dusting	I applied black magnetic powder to the tile using a magnetic brush. One print developed.
YA89CG	Visual Examination	Photos taken
	Powder Dusting	black powder
	Powder Dusting	black powder
YMRTR4	Powder Dusting	72' F, 20 seconds
YUQH99	Visual Examination	oblique white light and ambient light

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WebCode	Development Methods	Method Details
	Cyanoacrylate Fuming	CA6K2: 80% humidity, 22 drops of glue on tin, 7 minute fume cycle w/ circulation fan and 10 minute purge
	Visual Examination	oblique white light
	Powder Dusting	Black Magnetic Powder
	Dye Stain	R6G, petroleum ether, spray bottle application
	Alternate Light Source	495 nm with orange foggles
YW2CWL	Cyanoacrylate Fuming	Fume/humidity added, developed over 15 minutes
	Powder Dusting	Black powder and lift tape
	Dye Stain	MBD
YZGREZ	Visual Examination	White light
	Cyanoacrylate Fuming	Tank #2, Liquid CAE with H2O, ~15min
	Powder Dusting	Black powder
Z2NLFH	Visual Examination	
	Alternate Light Source	visibly noted print in quadrant C
	Cyanoacrylate Fuming	Lot # CA170210; control good; 5 min
	Powder Dusting	black powder
Z4XET6	Visual Examination	
	Cyanoacrylate Fuming	80% relative humidity, 8 minutes
	Dye Stain	
	Alternate Light Source	495nm with orange filter
Z74YG6	Visual Examination	
	Powder Dusting	Black magnetic powder
ZBTE6C	Powder Dusting	Black Magenetic Powder
ZJNLJC	Visual Inspection	
	Digital Photography	
	Adhesive Steam	4 min. moisture 65
	Ferri Oksid	
	Digital Photography	
ZQNXLZ	Visual Examination	no visible ridge detail
	Cyanoacrylate Fuming	Positive control, Foster Freeman Chamber, 10 min. visible but no contrast
	Powder Dusting	Dusti Ident, fiberglass brush, visible ridge detail

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WebCode	Development Methods	Method Details
ZWRZMU	Visual Examination	Non-porous processing, processed quadrant only
	Alternate Light Source	365nm, 450nm, Laser
	Cyanoacrylate Fuming	
	Visual Examination	
	RUVIS	254nm
	Dye Stain	Rhodamine, Ardrox, MBD
	Alternate Light Source	365nm, 450nm, Laser
ZZVFD7	Visual Examination	White light
	Cyanoacrylate Fuming	Cianoacrilate, automatic cyanoacrilate fuming chambers "Safefume 48S", humidity 80%, processing time 30 min.
	Powder Dusting	powder magnetic black

Response Summary

Participants: 169

Methods Utilized

Alternate Light Source	59	Powder Dusting	119
Cyanoacrylate Fuming	126	Sticky Side Powder	0
DFO	0	Visual Examination	128
Dye Stain	66	Wet Wop	0
Ninhydrin	0	1,2-Indanedione	0
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.

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WebCode	Development Methods	Method Details
2A2VMB	Visual Examination	
	Wet Wop	Lot #: WW150526, 20 seconds on tape and rinse off
2AJQ8X	Black WetWop	Lot #N/A, Exp. 9/9/19, + control. Allowed to dry overnight after rinsing
2BTVH2	Wet Wop	applied black wet wop with soft bristle brush to sticky side of C quadrant tape
2DWNEL	Visual Exam - White Light	0910
	Cyanoacrylate	Superglue chamber w/humidity 0930
	Dye Stain - MBD2	Viewed w/FLS - orange goggles
2KHJFP	Visual Examination	
	Wet Wop	Black WetWop
	Visual Examination	
2WPGFJ	Wet Powder (black)	Wet powder applied for 10-15 seconds before rinsing with tap water
34NGCQ	Visual Examination	
	Alternate Light Source	visual with laser (BrightBeam)
	Wet Powder Black	lot#3185
	Visual Examination	
3A9JBF	Visual Examination	White light examination using crime-lite 400-700nm
	Alternate Light Source	Quaser (filtered arc lamp) at wavelengths: UV (340-413nm) Blue (400-469nm) Green (491nm-548nm)
	Black powder suspension	Wet powder suspension applied to adhesive sides and rinsed, once dry marks visualised with white light
3M2VUK	Visual Examination	
	Wet powder-black	Lightly brushed with wet black powder - sit for 1 minute. Lightly rinse with water to see any detail.
3QKZHH	Visual Examination	
	Evident Wet Powder	applied 4:40 pm 10/17/17. Air dried over night.
4DRQGU	Visual Examination	Oblique lighting and magnifier
	Wet Wop	Applied wetwop-black with bursh on sticky side of tape and then rinsed off with water after approximately 15 seconds.
4FXALH	Visual Examination	Oblique lighting, white light, and fluorescent light.
	Wet Wop	Black wetwop.
4JELC8	Wet powder	

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WebCode	Development Methods	Method Details
4QWAUF	Wet Wop painting	Each duct tape adhesive side was painted with black Wet Wop and then washed away with water after 15 seconds
4RTKPH	Visual Examination	Photpgrahy of item
	Wet Wop	QC test print = positive for WetWop. Applied WetWop to tape with brush, waited 15 seconds, the rinsed with slow running clear water. Let tape air dry.
4WFG9E	Visual Examination	
	Wet Powder	
	Visual Examination	
4WJYEP	Visual Examination	
	Alternate Light Source	LASER (532nm), 455nm, UV (365nm)
	Alternate Black Powder	
67KQCH	Visual Examination	Ambient/Forensic lighting
	Cyanoacrylate Fuming	Humidity 85%, 60 degrees Celsius. Total Cycle: 15 minuts. Warming Cycle: 3 minutes, Glue Cycle: 6 minutes. Purge Cycle: 6 minutes.
	EZFLO	It's prepared with 10 ml. EZFLO + 30 ml distilled water. From this liquid we use 5 ml mixed in a bol with 5 ml of black adhesive powder. We apply to the duct tape with a brush. After 10 seconds, rinse in water. Let it dry.
6BKVBW	Visual Examination	Possible ridge detail visible on piece of tape labeled C..
	Wet Wop	Black Wet Powder used. Control positibe. Applied wet powder with bruch to stickee side. Waited 15-20 seconds then rinsed off with water. Ridge detail developed on C.
6CQFYW	Visual Examination	Oblique lighting
	Wet Wop	Using a brush, the WetWop was applied to the adhesive side of Item 3 until the surfaces were fully covered. The Wetwop was left on Item 3 for approximately 10 seconds, then rinsed with cool water and air dried.
6CT3FB	Sticky Side Powder	paint on, leave for 15 sec, rinse off with cold water
6QB324	Cyanoacrylate Fuming	8 min, RH 80%
	Wet Powder (KTM)	
74EG4L	Visual	
	Crystal Violet	
79RG2D	Sticky Side Powder	Pre-mixed "Wet-Wop" applied using squirrel hair brush, rinsed w/ cool water after 15 seconds. dried
7C8U2Z	Visual Examination	
	Cyanoacrylate Fuming	Chamber #2. 75 % humidity. Six minutes fuming and 10 minutes purging. Viewed with white light.

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WebCode	Development Methods	Method Details
	Dye Stain	Rhoadmine 6G. Sprayed items. Viewed with green laser with orange filter
	Wet Wop	Applied black wet wop. Let sit 1-2 minutes. Rinse with cold water
7F837B	Wet Wop	black WetWop
7FNADD	Visual Examination	
	Alternate Light Source	
	wet powder	
7LFJNC	Dye Stain	brushing
7MCWB4	Visual Examination	
	Sticky Side Powder	water rinse
867WV9	Visual Examination (000-515nm)	Temperature - 129°C. Humidity - 82%
	Superglue	
	Basic Yellow	
872FVP	Visual Examination	
	Alternate Light Source	
	Wet Wop	
8BBV3R	WetWop	+ control Exp 9/9/19 (Black color). Wetwop was painted on the adhesive side of each piece of tape and rinsed off after fifteen seconds. Item was allowed to air dry
8U4YLE	Wet Powder	Each piece of tape was removed from the paper using Kelly forceps and one at a time, the wet powder was painted on the adhesive side with a camel hair brush. The wet powder was left for about 8 sec. and then rinsed with water. A visible fingerprint was developed on the piece of tape labeled “C”
8YHCL2	Cyanoacrylate Fuming	70% humidity, 10 minute fuming, + control. Exp: 2/11/18. Lot: N/A
	Wet Wop Black	Camel hair brush, let sit 60 seconds, gentle rinse w/water. Let dry. Lot: 1003885-REN0614. Exp: 9/9/19. + ctrl
9274G6	Visual Examination	fluorescent lighting
	Wet Wop	Lot #WW150526; applied to adhesive side of tapes then rinsed. Hung to dry.
947GWG	Wet Wop	
96GFTB	Visual Examination	No result.
	Alternate Light Source	Polilight 450-490 nm, Crime-lite ML2 450-510 nm - fingermark in section C.
	Cyanoacrylate Fuming	Fuming time 15 min (CA temperature 120°C, 80% humidity). Fingermark in section C.

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WebCode	Development Methods	Method Details
	Dye Stain	Basic Yellow 40 ethanol solution. Fluorescent fingermark in section C (Crime-lite ML2 420-470 nm). Best result.
99ZDG2	Wet Wop	Black - Approx 10 minutes
9Q23UY	Visual Examination	
	Alternate Light Source	
	Sticky Side Powder	CARBON
9YCFY9	Gentian Violet	Dipping method
AAAUYX	Visual Examination	
	Gentian Violet	
ANMBZ9	Cyanoacrylate Fuming	1 hour, temp 120 C, 75% RH
	Powder Dusting	10 minutes-bichromatic
	Visual	5 minutes
AP8PUD	Wet Wop	
B777EG	Visual Inspection	
	Crystal Violet	Item dipped in crystal violet and rinsed with water
BEZH64	Sticky Side Powder	WET POWDER BLACK, t 22°C, 10 s.
BG8M77	Pre-Process Screening	Item visually inspected, viewed under oblique lighting and then under ALS
	Dye Stain	Gentian Violet; One minute contact time then rinsed with deionized water, air dried
BH2BN2	Visual Examination	Desk/Fluorescent light
	Wet Wop	Black - Tap water rinse - Air Dry
BMUJN3	Cyanoacrylate Fuming	Sealed in tank 20 minutes
	Wet Wop	Applied with brush and rinsed
BUT967	water based crystal violet	dipped approx 30 seconds and rinsed gently
C4DPGD	Visual Examination	Visual inspection
	Wet Powder	Applied Wet Powder (black) on adhesive side of tape.
C67PC4	Visual Examination	A flashlight was used to examine the item.
	Documentation Photography	Photographs were taken to document the original state of the Item prior to chemical processing.
	Wet Wop	Black WetWop was used on the adhesive side of the tape only.
CGZ726	Gentian Violet	Gentian violet applied then rinsed with tap water

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WebCode	Development Methods	Method Details
CPDZDZ	Wet Powder	black, batch WP 160524, ex. date: May 2018, proc. time: with water about 30 second.
CRGVW4	Visual Examination	
	Alternate Light Source	
	Sticky Side Powder	
D8TH87	Visual Examination	
	Cyanoacrylate Fuming	20 minutes in the MVC 5000 chamber
	Powder Dusting	Magnetic and black powder
	Sticky Side Powder	Waited approximately 30 seconds for print to develope
DER8PB	Visual Examination	
	Wet Powder	I poured a small amount in a tray. I used a camel hair brush and applied the Wet Powder to the adhesive side of the tape. I rinsed the solution off with tap water after approx. 20 seconds.
DGJABQ	Wet Wop	applied wet wop utilizing a brush and rinsed with cool water
DKBGPR	Visual Examination	Omnichrome "Omniprint 1000"
	Wet Wop	Wet powder black, processing time 15 s, room temperature 23°C
DQ3LPN	Visual Examination	
	Alternate Light Source	420-470 nm, orange filter glasses used
	Wet Wop	black wetwop applies used camel hair brush and left on for approximately 20 seconds and rinsed with tap water, positive control
DQALUX	Visual Examination	desk lamp
	Wet Wop	White wet wop, paint brush method, applied and rinsed with water, allow to dry
DZQGKX	Visual Examination	With and without extra light -> no prints were discovered.
	Wet Wop	A Wet Powder Black treatment. Wet Powder needs to be applied with the brush to the adhesive sides of the duct tapes. 10-15 seconds after the treatment the suspension is rinsed away.
	Visual Examination	A print was discovered in section C.
E487JZ	Visual Examination	
	Wet Powder, Black	
EATCZ9	Visual Examination	
	Wet Powder	Painted on with brush 10 sec. Let chemical dry 10 sec. Rinsed with cold tap water.
ERVWZG	Visual Examination	

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WebCode	Development Methods	Method Details
	Alternate Light Source	Laser/UV/450nm
	Alternate Black	
F4GQMV	Wet Wop	black
FCUHDT	Visual Examination	oblique lighting
	Cyanoacrylate Fuming	80% relative humidity for six (6) minutes; approximately twelve (12) drops of glue
	Dye Stain	basic yellow 40 - methanol carrier
	Alternate Light Source	45 nm with yellow barrier goggles
FCY2ZV	Wet Wop	Wet Wop applied to adhesive side of Duct Tape and immediately rinsed with water.
GATRRY	Wet Wop	WetWop on sticky side of tape. Rinsed with H2O
GCDRKZ	Visual Examination	
	Wet Wop	
GCT8UV	Wet Wop	Black Wet Wop powder was painted on sticky side of tape with a brush, rinsed off with water, and allowed to air dry.
GELX72	Visual Examination	Processing time: 1 minute
	Cyanoacrylate Fuming	Processing time: 1 hour 20 minutes: Temperature 120 ° C; Auto humidity cycle= 75%-80%.
	Powder Dusting	Processing time: 3 minutes: Bicromatic powder; per our protocol, this item would have been processed for the possible presence of epithelial cells on the sticky side and latent prints on the non-sticky side.
GNMMJV	Cyanoacrylate Fuming	Sealed in tank for 20 minutes
	Wet Wop	applied with brush and rinsed with water
GZXTY6	Visual Examination	
	Wet Wop	Black wetwop
HDZQC4	Cyanoacrylate Fuming	HR=80%, T°=21°C, Time= 5'
	Dye Stain	Yellow Basic 40
HG3KEE	Wet Wop	
HLEN73	Visual Examination	white light only
	Wet Wop	(Black) App;ied to adhesive side with camel hair brush. Rinsed under light stream of water.
HRZRP6	Visual Examination	Natural and white light
	Alternate Light Source	Spectral sweep with Polilight PL400 from 350nm to 590nm

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WebCode	Development Methods	Method Details
	Cyanoacrylate Fuming	TechnoHispania Cabin, Cyanocrylate (1.5 g); Humidity 75% Temperature plate 65 °C (Heating plate time 3 minutes, Fixation time 6 minutes, Purge time 6-10 minutes) Total process time 20 minutes
	Sticky Side Powder	EZFLO (sticky side powder and EZFLO solution SIRCHIE) painting the adhesive side with the solution; 10-15 seconds fixing. Rinse with water
	Dye Stain	ARDROX sprayed on the non adhesive side, fixation time 30 seconds. Rinse with water. Drying at room temperature.
HXTFWW	Wet Wop	Applied wet wop to adhesive side and rinsed with water
J8UC7R	Wet Wop	Wet powder, room temp. 10-15 sec. duration of action
JAVKA3	Visual Examination	
	Fluorescence Examination	
	Wet Powder Black (suspension)	
JB6PL7	Dye Stain	Fluorescent gentian violet solution was applied to the four pieces by dipping the adhesive side of the tape for one minute. Then, the excess of the gentian violet was removed by carefully rinsing with tap water. Finally, the item was air dried.
	LPPM R4	
JGEY2E	Alternate Light Source	Adesive and Non-adhesive side: White light, 350nm - 650nm. Nil find - 10 mins
	Sticky Side Powder	Black Powder - rinse with water - 20mins - print located area C
	Cyanoacrylate Fuming	Non adhesive side: Rhodamine 6G - 505nm orange filter, nil find, 45 mins
JHRFAL	Visual Examination	White light
	Wet Wop	Wet Powder Black Helling. Item was painted with brush and hold for 15 seconds in the room temperature 20.5 degrees. After 15 seconds item was washed with running water.
JWR6EY	Visual Examination	
	Sticky Side Powder	black sticky-side powder, photo flow at room temp, rinse for 30 seconds
JYHDH9	Visual Examination	Room light, Flashlight
	Alternate Light Source	Tracer Laser
	Alternate Light Source	Crimescope ALS
	Cyanoacrylate Fuming	5 minutes with heat and humidity
	Dye Stain	Rhodamine 6G + Tracer Laser
K2JUAW	Dye Stain	Gentain Violet
K6YD7K	Visual Examination	Natural light, white light.

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TABLE 2 - Item 3

WebCode	Development Methods	Method Details
	Sticky Side Powder	We were used black wet powder to develope latent print on the four pieces of duct tape adhesive side (10 seconds and wash with flowing water). The latent print was recovered on tape piece "C".
KCZKPT	Visual Examination	White light only, negative results.
	Alternate Light Source	Multiple filters, negative results.
	Sticky Side Powder	Positive results on sticky side of tape piece "C".
KNDMBR	Wet Wop	Room temp., normal drying time
KXZL4H	Wet Wop	applied wetwop, let item sit for 15 seconds then rinsed with water
KZ9UD3	Sticky Side Powder	Black powder suspension
LE3MBN	Wet Powder	
LH4PHD	Visual Examination	Visual exam of each item for latent prints. No latent prints observed.
	Wet Wop	Use a small brush to "paint" WetWop onto the sticky side of each piece of duct tape. Let sit for a few seconds and rinse with a light stream of water.
LHK3M2	Wet Powder-Black	Brushed tape with wet powder and run under warm water, then air-dried.
LKPTRV	Visual Examination	Processing Time: 2 minutes
	Cyanoacrylate Fuming	Processing time : 1 hour 30 minutes; Temperature: 120 degrees Celsius, auto humidity cycle at 75-80%
	Powder Dusting	Processing Time: 5 minutes; Magnetic powder; This laboratory does not have validated processes to perform analysis on sticky side items; sticky side would be swabbed for possible epithelial cells in this laboratory and glossy side processed for latent prints.
MBWPD2	Visual Examination	
	Alternate Light Source	
	Wet Powder Black	
MKM8UV	Visual Examination	
	Alternate Light Source	415nm, yellow filter
	Cyanoacrylate Fuming	120°C, 75% Relative Humidity
	Wet Wop	
MNP2W7	Visual Examination	Light on desk and in ceiling
	Alternate Light Source	Laser at 520nm at 8 watts
	Cyanoacrylate Fuming	fumed in chamber for 11 minutes
	Visual Examination	Light on desk and in ceiling

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WebCode	Development Methods	Method Details
	Dye Stain	R6G
	Alternate Light Source	laser 520nm at 8 watts
MPZ4FJ	Visual Examination	
	Wet Wop	
MTWRWQ	Wet Wop	Painted the wetwop on the adhesive side of the duct tape, rinsed it with water, allowed to dry
MVMQDB	Visual Examination	No visible latent prints
	Wet Wop	Black (Lot# 112216-01), Brush on for 10 sec, allowed to sit for 10-20 sec, cold water rinse, air dry
N4DRDK	Visual Examination	ambient, green
	Gentian Violet	
	Wet Wop	
N6QB8Q	WetPowder Black	Applied with fingerprintbrush set for 10 sec, then rinsed with cold water
NGH2RU	Visual Examination	under white light
	Alternate Light Source	fluorescence examination (350 nm - 650 nm under appropriate color barrier filters)
	WetWop	WetWop (black) - under white light
NKKQFW	Visual Examination	Item examined visually under white light and ALS
	Liquidrox (Ardrox & Liquinox)	Solution painted on sticky side, set for 10 seconds, then rinsed w/distilled water. Visualized under ALS at 350-415 nm w/yellow barrier filter
NNFQ9X	Visual Examination	White ambient light. No print detected.
	Wet powder	A good quality print was detected.
NQREYP	Wet Wop	black, applied on sticky side of tape, rinsed with water.
P4VZYU	Visual Examination	
	Sticky Side Powder	I let the black sticky-side powder stand on the tape for approximately 15 seconds before rinsing. I let the tape air dry prior to photography.
P8QTTP	Visual Examination	Fluorescent/LED white light
	Alternate Light Source	530nm
	Cyanoacrylate Fuming	20 min in chamber
	Dye Stain	Rhodamine 6G viewed at 530nm, Ardrox viewed at 365nm
	Gentian violet	Dipped/agitated for 2 min, rinsed with water
	Powder Dusting	Black latent print powder

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WebCode	Development Methods	Method Details
PAGZBZ	Wet Wop	
PBMP6W	Visual Examination	nothing seen
	Wet Wop	wet powder black, print seen in C, adhesive side
PGEPR6	Alternate Black Powder	
PMLFWV	visual	3 minutes
	led light	5 minutes
	sticky side powder, alternate black powder, ash gray powder, gentian violet	30 minutes
	led light	10 minutes
PVWHEQ	Visual Examination	White, low angle light. Results were negative.
	Alternate Light Source	Multiple filters applied. Results were negative.
	Sticky Side Powder	Sticky side of tape was processed with sticky side powder with positive results noted in quadrant "C". Photo obtained.
Q2ZY9W	Visual Examination	
	Alternate Light Source	
	Sticky Side Powder	
	Wet Wop	Wet Powder
Q3AXFY	Visual Examination	done at room temperature and light torch.
	Powder Dusting	Black powder applied on the two sides of the tape.
QBPM7K	Visual Examination	ambient light
	Sticky Side Powder	black wet wop, brush and rinse method
QDD3D8	Alternate Light Source	crimescope, laser 532nm, laser 577nm
	Wet Wop	black wet powder
QP7HJV	Visual Examination	flashlight
	Wet Wop	WetWop Black, rinse with water and allow to dry
QRC8HX	Visual Examination	AMBIENT LIGHT
	Sticky Side Powder	WAITED AT LEAST 30 SECONDS AFTER APPLICATION BEFORE RINSING WITH WATER
QXHLN9	UN-DU	Used UNDU to remove adhesive side of tape from wax paper
	CFC	Cyanoacrylate - Exp. date 2/11/2018. Humidity set - 70%. Fume time: 10 minutes. Purge time: 10 mins. Positive control

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WebCode	Development Methods	Method Details
	Sticky Side Powder (WetWop)	Exp date 09/09/2019, positive control, WetWop used only on sticky side of duct tape. Allowed to sit for 30-60 seconds - followed by rinsing
	Dry	Allowed to air dry in secured locker until next working day
R3B64C	Visual Examination	Ambient/Overhead lighting
	Alternate Light Source	Laser: Green & Blue wavelengths
	Sticky Side Powder	Black
RPNX9W	Visual Examination	white light
	Sticky Side Powder	WETWOP, the water rinse
	Visual Examination	white light
RUKFRH	Visual Exam	
	Wet Wop	apply, let sit = 15 seconds, rinse
RVDDYP	Mixing ULTRA SOL and Soot Dust	submerged about 1 minute
RVTWJL	Painting (WetWop)	With a camel hair brush, wet wop was painted on to the adhesive side, after 15-30 seconds, rinsed gently.
	Visualization	Visualized by eye.
T8HZGK	Visual Examination	
	Wet Wop	wetwop used on sticky side of the tape, rinsed of with water after 20 seconds
TK76MV	Visual Examination	white light
	Sticky Side Powder	grey powder
TYZN4J	Wet Powder (black)	10-15 sec
U7FPXM	Visual Examination	
	Alternate Light Source	CSS, orange filter
	Cyanoacrylate Fuming	120°C, 75% Relative Humidity
	Dye Stain	Ardrox, 350nm
UDZQFK	Sticky Side Powder	Product name Wet Powder
UG6BAC	Visual Examination	Used ambient light and reflected it off surfaces. Conducted a visual for about 60-120 seconds on item.
	Cyanoacrylate Fuming	Put into a CA-3000 (MYCA601-0024) at 80% humdity with 1.75g of Superglue. Fumed for 6 minutes, purged for 10 minutes. Removed, and visual/ambient light examined, then used a flashlight.
	Dye Stain	Rhodamine 6G, Methanol based. Applied to item after CA. Allowed to dry for about 25 minutes. Item was then put under a TracER (TRG801904) and examined for about 3 minutes.

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WebCode	Development Methods	Method Details
	Sticky Side Powder	Used on tape adhesive side. Mixed with PhotoFlo, applied, let sit for about 60 seconds, then rinsed with cold water. Set to dry, adhesive side up. Viewed with ambient light.
ULXBQT	Wet Wop	Photographed packaging and evidence. Brushed black Wetwop on duct tape, waited 20 seconds, and rinsed tape with cold water. Let duct tape dry.
UN27AW	Visual Examination	
	Wet Wop	carbon based suspension
UPEVFU	Visual Examination	with white light and magnifier
	Wet Powder	apply black wet powder to adhesive side, wait approximately 30 seconds, rinse with water
UWW8TV	Visual Examination	White light & magnification
	Cyanoacrylate Fuming	non-adhesive side, place in chamber #3 with hot water & CAE in dish with heat (approx. 20 min.)
	Powder Dusting	Non-adhesive side, applied black magnetic powder
	Wet Wop	Adhesive side, applied & let sit (approx. 30 sec.), rinsed with water
UXN8NK	Visual Examination	White light, negative.
	Alternate Light Source	Multiple filters, negative.
	Sticky Side Powder	Sticky side powder was used on the sticky side of the tape and print visible in section C.
V4EWRV	Visual Examination	I viewed item 3 with a table magnifier.
	Sticky Side Powder	I applied wet powder with a camel hair brush to item 3, four 2" pieces of tape and then rinsed the tape with running water. I let the four pieces of tape air dry in the vented hood.
V67WMK	Visual Examination	
	Wet Wop	Black
VGU77J	Powder Dusting	Double-toned magnetic powder (black and silver)
VVLJUG	Visual Examination	Visually examined items with direct light
	Wet Wop	WW150526- Coated adhesive side of tape with black wetwop using a brush. Rinsed with water.
VWR6HG	Visual Examination	Fluorecent Lamp
	Cyanoacrylate Fuming	AirScience Safefume tank- 30 minutes
	Dye Stain	Crystal violet stain -washbottle
	Wet Wop	Brush applied
	Dye Stain	M-Star - washbottle
	Alternate Light Source	Crimescope

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TABLE 2 - Item 3

WebCode	Development Methods	Method Details
WDTKRL	Visual Examination	in natural light and light from forensic illuminator, print was observed on duct tape, labeled as piece C
	Wet Powder Black	applied with brush waited 20 sec - rinsed with cold running tap water, the fingerprint became more visible
WDV3XX	Visual Examination	
	Alternate Light Source	
	Wet Wop	
WHPX4C	Visual Examination	Visual examination with both ambient light and laser @ 532nm.
	Cyanoacrylate Fuming	1g CA added to chamber heating plate, 80% humidity ran for ~9min., let set, viewed with ambient light and green light
	Dye Stain	Applied water based R6G, rinsed with water, let dry, viewed with green light and orange goggles
	Wet Wop	Applied black wetwop with paint brush, rinsed, let dry and viewed with ambient light
WKDEBY	Visual Examination	
	Alternate Light Source	
	Wet Wop	
WR9KLR	Visual Examination	Blue light 420-470 nm.
	Powder suspension	"Wet powder"
X7M7KB	Wet Wop	Powder Suspension Black Carbon purchased ready made from WA products. No CofC available as not provided by the supplier however chemical is validated internally in accordance with [Agency] accredited procedures. Batch reference allocated by [Laboratory] #18. One best treatment selected, however I would treated sequetially with powder suspension followed by Basic Violet 3 if this had been a serious offence.
XE6GYC	Powder Suspension (PS) Black Carbon	A control sample and item were applied with PS Black Carbon batch #18 using a brush onto the surface of the adhesive side of the tapes then rinsed using cold running water. These were assessed for any positve results. They were then left to dry.
XHMPBH	Visual Examination	
	Alternate Light Source	
	UV Light	
	Sticky Side Powder	
XVCJMC	Visual Exam	Use Ambient and directed lighting
	Wet Powder	Applied WetWop (black) to adhesive side of tape & rinsed w/water - then dried and mounted on clear acetate
XW2ZUY	Wet Wop	black wetwop applied with brush, set for 15 seconds-then rinsed with tap water

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TABLE 2 - Item 3

WebCode	Development Methods	Method Details
XWLHTE	Developing for Latent Prints in Adhesive Surfaces, using Gentian Violet	The evidence was processed at a temperature of 22°C to 34% of relative humidity, was applied Gentian Violet at 1% in H2O, each piece of tape was dipped for 5 minutes, and then cleaned with distilled water to remove the chemical saturation
Y4HNBM	Visual Examination	
	Alternate Light Source	
	WetWop	
Y9BT4Q	Visual Examination	I performed a visual examination with room lighting. No print was observed.
	Wet Powder	I removed the tape from the sheet of paper and applied black Wet Powder to the adhesive sides of the pieces of tape using a brush. I left the Wet Powder on for about 15 seconds and then rinsed the tape with cold water. I then let the tape air dry for 20 minutes. A print was observed.
YA89CG	Visual Examination	photos taken
	Sticky Side Powder	applied with brush, rinsed in water
YMRTR4	Wet Wop	let stand 1 minute, rinsed with water
YUQH99	Visual Examination	ambient/overhead light and oblique white light
	Cyanoacrylate Fuming	CA 6K2: 80% humidity, 22 drops of glue used, 7 min fume cycle with circulation fan, 10 minute purge
	Visual Examination	oblique white light
	Dye Stain	BAsic Yellow, applied with a dedicated paint brush and rinsed with a wash bottle full of DiH2O
	Alternate Light Source	ALS 415nm with yellow goggles
YW2CWL	Wet Wop	Pre-mixed solution, brush method
YZGREZ	Visual Examination	White light
	Sticky Side Powder	~15 sec. & rinse. Reapply ~15 sec. & rinse
	Wet Wop	~ 5 sec. & rinse
Z2NLFH	Visual Examination	
	Alternate Light Source	
	Wet Wop	Lot # WWB170123; control good
Z4XET6	Visual Examination	
	Wet Wop	
Z74YG6	Visual Examination	
	Wet Wop	Black with water rinse
ZBTE6C	Cyanoacrylate Fuming	sealed tank, 20 minutes

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TABLE 2 - Item 3

WebCode	Development Methods	Method Details
ZJNLJC	Removing Tapes	
	Visual Inspection	
	Black Wet Powder	Pretesting wet powder - ok - Processing time 15-20 sec. Rinse with cold water
ZQNXLZ	Freezer	Froze to release the adhesive
	Visual Examination	No visible ridge detail
	Wet Wop	Black wetwop applied with camel hair brush, rinsed with water, visible ridge detail
ZWRZMU	Visual Examination	Adhesive processing only
	Alternate Black Powder	
	Visual Examination	
ZZVFD7	Visual Examination	White light
	Wet Powder	Wet Powder Black CS-0092, processing time 15 seconds, room temperature 22°C

Response Summary

Participants: 169

Methods Utilized

Alternate Light Source	35	Powder Dusting	8
Cyanoacrylate Fuming	29	Sticky Side Powder	30
DFO	0	Visual Examination	116
Dye Stain	19	Wet Wop	77
Ninhydrin	0	1,2-Indanedione	0
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.

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Preservation Methods

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
2A2VMB	Scanning	Ninhyrdin print, Scanner-enhanced with photoshop
2AJQ8X	Photography	Photoshop enhancement, print 1:1
2BTVH2	Photography	digital photograph captured with Foster & Freeman camera
2DWNEL	Scanner	Image scanned at 1000 ppi
2KHJFP	Photography	
34NGCQ	Photography	Canon
	Scanning	Epson V700
3A9JBF	Photography	Nikon D600 DSLR, Nikon capture control 2 and adobe photoshop CS6 used to capture images and process them. Crime-lite/ quaser used to light marks during capture
3M2VUK	Photography	Photographed with digital camera, printed photo and burned to cd
3QKZHH	Photography	scaled photograph, SPEX forensics camera, 35mm focal length, 4904wX3280l pixel, 88dpi
4DRQGU	Photography	Saved digital images on DVD and in LIMS case file for potential latent print comparision.
4FXALH	Photography	Raw. Orange filter on lens while photographing in conjunction with Tracer Laser. Acquired to ADAMS.
4JELC8	Scanning	
4QWAUF	Photography	Each latent lift was photographed under a forensic laser
4RTKPH	Scanning	Epson Perfection V800 scanner, one overall scan of latent developed print on sticky note
4WFG9E	Photography	digital photography RAW, JPG
4WJYEP	None	
67KQCH	Photography	Digital Capturing System Nikon D-80, forensic light UV and POLILIGHT PL 400, 505nm filter, orange lens filter used.
6BKVBW	Scanned	Item 1 placed between 2 pices of cardboard and put into evidence envelope. Photocopy made before and after processing.
6CQFYW	Photography	Nikon JPEG format; white lighting
6CT3FB	Photography	DCS-4
6QB324	Photography	
74EG4L	Photograph	Nikon 5100

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
79RG2D	Photography	w/ scale. Macro lens (60mm) with orange filter, ALS @ 495, f5 @ 1/30 sec (400 ISO)
	Photography	w/ scale. Macro lens (60mm) ALS (open-white), f5 @ 1/8000sec (400 ISO)
7C8U2Z	Photography	Nikon D700 (Camera #2)
	Scanning	Scanned ninhydrin print at 1000 dpi in TIFF. Scanner was Epson V700
7F837B	Photography	image with LASER (532nm) w/orange filter
7FNADD	Scanning	The ridge detail was scanned in a TIFF format at 1200 DPI.
7LFJNC	Scanning	scan to CD
7MCWB4	Photographs	Raw with scale.
867WV9	Photography	
872FVP	None	
8BBV3R	Digital Photography	Print found on item A. Print was digitally photographed and digitally enhanced in Photoshop and printed. Photo (print) was calibrated and fit 1:1 with a scale that was photographed with the print. Item printed and packaged as evidence.
8U4YLE	Photography	An image was captured using the AFIS camera system and the image was saved to the computer under the file name: FT17-5191.OI.CHC.L000
8YHCL2	Photograph	Digital camera, w/scale
	Enhancement	Photoshop
9274G6	Scanning	CanoScan Lide 70; Scanned at 1200dpi using Adobe Photoshop CS6
947GWG	Photography	
96GFTB	Photography	used for DFO, using foster+freeman Crime-lite 4x4 light source (500-550 nm, filter OG570)
	Scanning	used for Ninhydrin, using Epson Perfection 4870 Photo scanner.
99ZDG2	Scanning	
9Q23UY	Photography	
9YCFY9	Scanning	Scanned prints on an EPSON scanner
AAAUYX	Photography	
ANMBZ9	Scanning	Photocopy

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
AP8PUD	Photography	
	ADAMS	Authenticated Digital Asset Management System, secure server
B777EG	Photography	Nikon 5100
BEZH64	Photography	camera CANON EOS 700 D, oblique light
BG8M77	Scanning	Epson V700 photo scanner at 1200dpi. Files sent to Photo lab for creation of LA Print photographs
BH2BN2	Photography	Canon desktop scanner @ 1200 - Enhancements in Adobe Photoshop
BMUJN3	Photography	Raw-Fine
BUT967	Photography	digital
C4DPGD	Photography	Crime-Lite 4 x 4, Green 500-550 nm with orange filer 1% (nom) 529 nm, camera F9 ISO 200
C67PC4	Photography	Documentation and exam quality photographs were taken after chemical processing, with a Nikon DSLR camera and white 6" linear scale. Photoshop CS5 was used to scale, enhance, and annotate the images.Photoshop CS5 was used to scale, enhance, and annotate the images..
CGZ726	Photography	Digital photography, RAW
	Scanning	TIF format, 1000 dpi
CRGVW4	Photography	
D8TH87	Scanning	1000 dpi capture
DGJABQ	Photography	photographed item 1:1 utilizing DCS5, alternate light
DKBGPR	Scanning	Scanner "Canon 900F Mark II", 1000dpi
DQ3LPN	Photography	1:1 photo with scale
DQALUX	Scanning	Epson PERFECTION V500 Photo scanner, utilized Adobe Photoshop CD6 64 Bit
DZQGKX	Photography	Photographing with a measure
E487JZ	Photography	Canon after nin. EOS %D Mark III + Canon 100mm Macro IS 2.8L
EATCZ9	Photography	Photographed and saved in Foray as Latent A
ERVWZG	None	
F4GQMV	Scanning	
FCUHDT	Photography	Post DFO and ALS. 475 nm of light was used with orange barrier goggles

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
FCY2ZV	Photography	Digital Photographs (JPEG and RAW)
GATRRY	Photography	In RAW/JPEG. Photo enhanced to grayscale in Photoshop
GCDRKZ	Photography	
GCT8UV	Photography	Macro lens used to capture image
GELX72	photocopy	Photocopy made of print.
GNMMJV	Photography	Raw Fine
GZXTY6	Photography	BrightBeam 532nm laser, orange barrier filter for Indanedion, white light for Ninhydrin
HDZQC4	Photography	
HG3KEE	None	
HLEN73	Scanning	Resolution set to 1200 ppi. Recorded in a TIF file.
HRZRP6	Photography	Nikon D90; AF-S Micro Nikkor 105mm 1:2.8G Lens
HXTFWW	Photography	Digital Camera shot on RAW Fine to document the latent
J8UC7R	Photography	
JAVKA3	Photography	
JB6PL7	LPPM-R4	Camera Nikon D700, format Tiff. One latent print was developed on quadrant A.
JGEY2E	Photography	Life size photo and 5 x enlargement using 60mm macro lens and f/22
JHRFAL	Scanning	Scanner Epson perfection V700 photo
JWR6EY	Scanning	one scan taken at 1000 ppi
JYHDH9	Photography	Room light, Tracer Laser, Room light + Green filter
K2JUAW	Photography	
K6YD7K	Photography	The latent print was photagraphed. Camera: Canon Power Shot SX20 IS
KCZKPT	Photography	Photographed obtained after DFO processing and Ninhydrin processing
KNDMBR	Scanning	
KXZL4H	Photography	photographed item 1:1
KZ9UD3	Photography	

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
LE3MBN	Photography	
LH4PHD	Photography	Canon EOS Rebel used to photograph the item as a whole, post processing to show which quadrant contains the latent. Use Nikon D3X with macro lens on a copy stand to take close up of latent, with and without a scale. Digital images uploaded to object repository of LIMS system.
LHK3M2	Photography	Photographed to scale and preserved in Foray (Preserved on CD as well)
LKPTRV	Photography	Requested 1:1 photographs by the Photography Unit
MBWPD2	Photography	After DFO and after Ninhydrin
MKM8UV	Photography	Green filter
MNP2W7	Photography	used the laser to light the image while photographing
MPZ4FJ	Photography	
MTWRWQ	Photography	Digital photo with scale and macro lens; TIFF File; used ALS
MVMQDB	Photography	Nikon D700, 105 mm lens, w/ scale, white light w/ green filter, digital enhancement, printed 1:1
N4DRDK	Photography	
N6QB8Q	Photography	Canon EOS 6D
NGH2RU	Photography	after DFO - in alternate light source at 505 nm using a orange colored bandpass filter
	Photography	after ninhydrin - under white light
NKKQFW	Photography	DFO - ALS at 505 nm w/orange barrier filter; Ninhydrin - white light. both 60mm macro lens w/Canon 7D Mark II Camera in RAW
	Software upload	Uploaded to Foray Digital Workplace software, enhanced in Photoshop, Printed 1:1 on photo paper
NNFQ9X	Photography	ALS alternate light (green light 500-550 nm) for DFO.
NQREYP	Photography	Scale, macro lens, raw/fine (TIFF)
P4VZYU	Scanning	I used the Epson Perfection V700 to scan the item at 1000 PPI in 24 bit color.
P8QTTP	Photography	Uploaded and preserved in ADAMS digital workplace
PAGZBZ	Scanning	
PBMP6W	Photography	
PGEPR6	None	

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
PMLFWV	digital imaging	the developed latent print (A) was preserved by digital imaging at high resolution capturing (based on the Interpol international standard)
PVWHEQ	Photography	Filled frame with ruler to set scale. An orange camera filter and alternate light source (ALS) set at 455nm was used to photograph the print after DFO processing. Photos were obtained after each process in which the print was visible.
Q2ZY9W	Photography	
Q3AXFY	Scanning	The developed mark was scanned.
QBPM7K	Photography	scanner, photoshop
QDD3D8	Photography	Nikon 105mm on Nikon D800, laser 532nm with filter laser Coherent, white light
QP7HJV	Photography	RAW, orange filter on lense, uploaded to ADAMS
QRC8HX	Photography	LASER AT 532NM, ORANGE FILTER
QXHLN9	Photographed	Photographed and uploaded into Photoshop to print
	Re-Packaged in Original Packaging	Placed original photos in evidence envelope, completed info, sealed initialed & dated. Item 1 placed between 2 pieces of cardboard & placed in original envelope; sealed, initialed, & dated
R3B64C	Photography	Camera
RPNX9W	Photography	D-SLR TIF format
RUKFRH	Digital Photography	after each step where FRD visible - Indanedione, Ninhydrin
RVDDYP	Photography	according the criminalistic requirements
RVTWJL	Digital Capture	latent print developed was photographed
T8HZGK	Photography	
U7FPXM	Photography	
UDZQFK	Photography	
UG6BAC	Photography	Items under ALS/LAS were filtered through an orange filter, or no filter depending on outcome, reviewed, enhanced, and uploaded into Mideo. No photos deleted, all uploaded.
ULXBQT	Scanning	Scanned latent print at 2400 DPI using TIFF and printed image using Microsoft Publisher
UN27AW	Photography	orange filter, green light
UPEVFU	Photography	tiff file format images to include close-up and overalls using the DCS system

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
UWW8TV	Photography	captured with ALS settings @ 460-510 nm & 500-550 nm with 529 nm orange filter
UXN8NK	Photography	Print photographed after each process when visible.
V4EWRV	Photography	I used the Digital Capturing System (DCS) and took 3 .tiff images of the latent print developed on item 1, section A.
V67WMK	Photography	Nikon DSLR in TIFF format
VGU77J	Photography	Macro photography taken and attached to the file.
VVLJUG	Photography	Item photographed using Nikon D5200 and 50 watt LED light sources.
	DVD	Captured image was enhanced in Adobe Photoshop CS6 and burned onto a DVD.
VWR6HG	Scanning	photoshop CS6
WDTKRL	Photography	latent print was photographed, with a macro camera lens and linear scale
WDV3XX	NONE	
WHPX4C	Photography	Nikon D-700 with Foster and Freeman DCS4 software using both green light and orange filter and Ambient light without filter.
WKDEBY	None	
WR9KLR	Photography	
X7M7KB	Photography	DCS4 system, white light source used with a green filter. Fno.11, shutter speed 1/250 sec, Focus point 0.4
XE6GYC	Photography	DCS4 (Digital Capture System) using the white light on the 4x4 Crime-lite as a light source.
XHMPBH	Photography	After Ninhydrin
XVCJMC	Photography	point camera - focus - shutter - release. Use filters - orange - when needed.
XWLHTE	Fixing by Means Scanning	Fixed image using scanner Perfection V8000 photo at 1200 DPI image resolution
Y4HNBM	Scanning	Ninhydrin
Y9BT4Q	Photography	I captured the print using photography. I used the Digital Capturing System (DCS) and burned the photos to a CD.
YA89CG	Photography	scale used for 1:1 photograph
YMRTR4	Photography	The latent fingerprint on Item 1 was photographed utilizing the DCS5 fingerprint imaging workstation. The item was placed between cardboard provided and sealed with the envelope provided.

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TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
YUQH99	Photography	After DFO - ALS @45nm, orange barrier filter, (.TIF)
	Scanning	after 1st Ninhydrin - 1:1, flatbed scanner, 1200dpi
	Scanning	after 2nd Ninhydrin - 1:1, flatbed scanner, 1200dpi
YW2CWL	Photography	Digital camera
YZGREZ	Photography	DCS4 System. DFO = Green Light (500-550nm) with OG590 Bright Red filter, f8 @ 1/1.5sec.
	Photography	DCS4 System. Ninhydrin = White light, f8@1/250 sec.
Z2NLFH	Photography	Photographed one (1) friciton ridge impression
Z4XET6	Photography	60mm, 1.6sec exposure, f/16, ISO 100, exposure bias -4/6
Z74YG6	Photography	
ZJNLJC	Digital Photography	
ZQNXLZ	Photography	DCS4, B&W 1:1 photograph with a scale
ZWRZMU	None	
ZZVFD7	Photography	Camera Sony DSC-HX300

Response Summary

Participants: 164

Methods Utilized

Lifting	0
Photography	125
Scanning	33

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

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
2A2VMB	Photography	Visual, Cyanoacrylate Fuming, Ardox, Powder -- camera-enhanced with photoshop
2AJQ8X	Tape Lift & Applied to Card	
2BTVH2	Lifting	latent print was lifted with clear tape and applied to white lift card.
	Photography	digital photo captured with Foster & Freeman camera
2DWNEL	Photography	
2KHJFP	Photography	
34NGCQ	Photography	Canon
3A9JBF	Photography	Nikon D600 DSLR, Nikon capture control 2 and adobe photoshop cs6 used to capture marks and process them. crime-lite / quaser used for lighting
3M2VUK	Lifting	Used clear lifting tape over latent print. Lifted off tape and placed onto a white backer
3QKZHH	Photography	scaled photograph, SPEX forensics camera, 35mm focal length, 4904wX3280l pixel, 88dpi
	Photography	Nikon D7200, f/11, 1/60, ISO 200, 50mm focal length
	Lifting	tape lift on white cardboard lift card
4DRQGU	Photography	Saved digital images on DVD and in LIMS case file for potential latent print comparision.
	Lifting	Latent lift tape secured the lift on a white backing card.
4FXALH	Photography	Raw. Orange filter on lens while photographing in conjunction with Tracer Laser. Acquired to ADAMS.
4JELC8	Photography	
4QWAUF	Photography	The latent print was photographed under a forensic laser
4RTKPH	Lifting	Lift latent print using clear tape, then transfered to a fingerprint card.
4WFG9E	Photography	digital photography RAW, JPG
4WJYEP	None	
67KQCH	Photography	Digital Capturing System Nikon D-80, forensic light UV and POLILIGHT PL 400, 360-490 nm filter, orange lens filter used.
6BKVBW	Lifting	Latent print was tape lifted and put on lift card.
6CQFYW	Photography	Nikon JPEG format; white lighting
	Lifting	Lifting tape was placed over the developed print. The tape was then lifted and placed onto a 3x5 inch latent card.

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
6CT3FB	Lifting	2 lifts
6QB324	Photography	
74EG4L	Photograph	Nikon 5100
	Lift	clear tape on white background card
79RG2D	Photography	w/ scale. Macro lens (60mm) ALS (open-white), f5 @ 1/8000sec (400 ISO)
	Lifting	Tape lift. 2" tape strip rolled on w/ roller & placed onto lift card
7C8U2Z	Photography	Nikon D700 (Camer #2)
7F837B	Photography	images with white light, LASER (532nm) w/orange filter and BP
	Lifting	tape lift - BP on white lift back
7FNADD	Photography	Ridge detail photographed in RAW format, with a surface to sensor distance no greater than 0.49 meters.
7LFJNC	Lifting	standard tape
7MCWB4	Photographs	Raw with scale. Beginning/end.
	Lift	
867WV9	Photography	
872FVP	None	
8BBV3R	Black Powder/ Latent Print Lift	After powder processing the fingerprint was lifted using latent print tape and placed on a latent print card. The back of the card was filled out and packaged for analysis
8U4YLE	Lifting	Lifting tape was placed over the recovered print, the tape was then removed from the tile and placed onto a latent lift card, preserving the latent print. Proper documentation was written on the back of the lift card and it was then was placed in the cardboard box.
8YHCL2	Tape + Card	Clear tape, white card
9274G6	Photography	Nikon D5200 Red camera; tethered to computer and captured. Calibrated, enhanced and printed
947GWG	Photography	
96GFTB	Photography	Visible side light for unprocessed fingermark.
	Photography	Visible front light for powdered fingermark.
	Photography	foster+freeman Crime-lite 4x4 light source (430-470 nm, filter GG495) for Basic Yellow 40 developed fingermark.
99ZDG2	Scanning	

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
9Q23UY	Photography	
9YCFY9	Lifting	Lifted print placed on latent print card
AAAUYX	Photography	
ANMBZ9	Lifting	lift card with tape
AP8PUD	Photography	
	ADAMS	Authenticated Digital Asset Management System, secure server
B777EG	Photography	Nikon 5100
BEZH64	Photography	camera CANON EOS 700 D, oblique light
BG8M77	Lifting	Lifted on standard 2" lifting tape and mounted to a department latent print card
BH2BN2	Photography	Nikon DSLR - enhancements in Adobe Photoshop
BMUJN3	Photography	Raw-Fine
BUT967	Photography	digital
C4DPGD	Lifting	Clear tape on white background lift card.
C67PC4	Photography	Documentation and exam quality photographs were taken after chemical processing, with a Nikon DSLR camera and white 6" linear scale. Photoshop CS5 was used to scale, enhance, and annotate the images.
CGZ726	Photography	Digitalphotography, RAW
	Lifting	Two gel lifts used
	Scanning	Gel scans of lifts
CRGVW4	Photography	
D8TH87	Photography	Used 450nm with the OG 550 AG Orange Filter to photograph at 1000 dpi or greater for capture
	Lifting	Tape
DER8PB	Lifting	I used fingerprint tape to lift one print from section C and I placed it on a fingerprint card.
DGJABQ	Lifting	utilitzed latent lift tape and a white latent card
DKBGPR	Photography	Camera :Canon EOS 1D; Lenses: Canon compact-macro lens EF 50 mm f/2.5
DQ3LPN	Photography	1:1 photo with scale
	Lifting	

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
DQALUX	Photography	NIKON D5200 tethered to LENOVO PC, orange YA3 filter for M-STAR photo, Adobe Photoshop CS6 64 bit
DZQGKX	Photography	Photographing the print in dark room with an orange camera filter and measure and using ultraviolet light and goggles.
E487JZ	Photography	after visual Examination
	Photography	after cyanoacrylate
	Photography	after dusting
	Lifting	after dusting
	Photography	after lifting
EATCZ9	Lifting	Clear tape
ERVWZG	None	
F4GQMV	Photography	
F6D7YR	Photography	1:1
	Lifting	Hinge lifter
FCUHDT	Photography	post magnetic powder application white light
	Lifting	post digital photography
FCY2ZV	Photography	Digital Photographs (JPEG and RAW)
GATRRY	Photography	Photographed in RAW/JPEG. Enhanced to grayscale in Photoshop.
GCDRKZ	Photography	
GCT8UV	Photography	Yellow lens filter used, with ALS light at 455 to capture photo of friction ridge.
GELX72	Lifting	Fingerprint lift tape applied to lift card with unique case identifiers and description of location of recovery
GNMMJV	Photography	Raw Fine
GZXTY6	Photography	white light after fuming; BrightBeam 532 nm orange barrier after dye stain
HDZQC4	Photography	
HG3KEE	None	
HLEN73	Photography	Direct reflect lighting/white light both with visible & CA. (Detail not visible w/oblique lighting.) Photographed in RAW.
HRZRP6	Photography	Nikon D90; AF-S Micro Nikkor 105mm 1:2.8G Lens and with Orange Filter (after ARDROX process)
HXTFWW	Photography	Digital camera shot on RAW fine to document the latent

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
J8UC7R	Photography	
JAVKA3	Photography	
JB6PL7	Photography	Camera Nikon D700, format Tiff. One latent print was developed on quadrant C.
	LPPM R4	
JGEY2E	Photography	Life size photo, 5 x enlargement photo using 60mm macro lens
JHRFAL	Scanning	Scanner "Epson perfection V700 photo"
JWR6EY	Lifting	
JYHDH9	Photography	Room light, Crimescope ALS in CSS mode
K2JUAW	Lifting	
K6YD7K	Photography	The latent print was photagraphed. Camera: Canon Power Shot SX20 IS
KCZKPT	Photography	Photographs obtained after each process where print was visible.
	Lifting	Lift obtained of print in Section "C".
KNDMBR	Scanning	
KXZL4H	Photography	photographed 1:1
KZ9UD3	Photography	Using RUVIS
LE3MBN	Photography	420-470 nm light source and yellow filter
LH4PHD	Photography	Canon EOS Rebel camera used to photograph the item post R6G to show latent quadrant. Nikon D3X with macro lens on a copy stand used to photograph the latent in quadrant A. An orange filter on the macro lens with the Rofin Polilight @ 505nm use to fluoresce the R6G stained latent. Latent photographed with and without a scale. Digital images of latent uploaded to object repository of LIMS system.
LHK3M2	Lifting	Lifted with fingerprint tape and preserved on a white backer.
LKPTRV	Lifting	Tape applied to developed print, lifted and applied to lift card with pertinent case information on other side
MBWPD2	Photography	After visual, after alternate light source, after Cyanoacrylate and after Powder dusting
MKM8UV	Photography	
MNP2W7	Photography	used laser to light the image for inherent luminescence
	Photography	Used refracted lighting after CA

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
MPZ4FJ	Lifting	
MTWRWQ	Photography	With scale, macro lens RAW/FINE file
MVMQDB	Photography	Nikon D700, 105 mm lens, Alternate Light Source (Blue Light 430-470 nm), yellow filter (GG 495), w/ scale, digital enhancement, printed 1:1
	Lifting	2" lifting tape placed on white card
N4DRDK	Photography	
N6QB8Q	Photography	Canon EOS 6D
NGH2RU	Photography	after Visual Examination - under white light
	Photography	after Cyanoacrylate Fuming - under white light
	Photography	after Basic Yellow 40 - in alternate light source at 505 nm using a orange colored bandpass filter
NKKQFW	Photography	ALS at 505nm w/orange barrier filter, 60mm macro lens, Canon 7D Mark II in RAW
	Software upload	Uploaded to Foray Digital Workplace software, enhanced in Photoshop, printed 1:1 on Photo Paper
NNFQ9X	Photography	
NQREYP	Photography	Scale, macro lens, Raw/Fine
P4VZYU	Photography	Digital image taken of visible print. F/8 at 1/50th of a second, ISO set at 400 taken in TIFF format.
	Lifting	One tape lift after magnetic powder.
	Lifting	One tape lift after black powder.
P8QTTP	Photography	Uploaded and preserved in ADAMS digital workplace
PAGZBZ	Lifting	Hinge Lifter
	Photography	
PBMP6W	Photography	
PGEPR6	None	
PMLFWV	digital imaging, LED and UV light gel lifter	the development latent (c) was preserved by digital imaging at high resolution capturing (based on the Interpol international standard)
PVWHEQ	Photography	Filled frame with ruler to set scale. Photos were obtained after each process in which the print was visible.
	Lifting	Lift obtained after powder processing.
Q2ZY9W	Photography	

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
Q3AXFY	Lifting	Latentprint hinge lifter used to preserve the developed mark.
QBPM7K	Photography	nikon camera, photoshop
QDD3D8	Photography	Nikon 105mm on Nikon D800, laser 532nm, UV light, white light
QP7HJV	Photography	RAW, orange filter, ADAMS
QRC8HX	Photography	AFTER RHODAMINE 6G WITH LASER AT 532NM & ORANGE FILTER; AFTER BLACK POWDER WITH TUNGSTEN LIGHT
QXHLN9	Tape Lift	Placed "JAFL" lift tape over print, lifted the print and placed on backing card
	Package	Placed backing card in evidence envelope, complete info, sealed, initialed, and dated
R3B64C	Photography	Camera
	Lifting	3M tape on 3 backer
RPNX9W	Photography	D-SLR with TIF format
RUKFRH	Digital Photography	after each step where FRD is visible (fuming, dye stain, powder)
RVDDYP	Photography	according the criminalistic requirements
RVTWJL	Digital Captured	latent print developed was photographed.
T8HZGK	Photography	
U7FPXM	Photography	
UDZQFK	Polycyano fumimg	Photography
UG6BAC	Photography	Items under ALS/LAS were filtered through an orange filter, reviewed, enhanced, and uploaded into Mideo. No photos deleted, all uploaded.
ULXBQT	Lifting	Lifted latent print using frosted tape and placed lift on to a latent print card.
UN27AW	Photography	yellow filter, blue light
UPEVFU	Lifting	clear adhesive tape to lift, then adhere to white latent lift card
UWW8TV	Lifting	placed lift tape over print and pressed down, placed tape on card
UXN8NK	Photography	Photographs obtained after each process where the print was visible.
	Lifting	Lift obtained after powder processing.
V4EWRV	Lifting	I used a piece of fingerprint lifting tape and attached it to a lift card. I wrote the information on the back of the lift card. I.e. lifted from section C.

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
V67WMK	Photography	Nikon DSLR in TIFF format
VGU77J	Lifting	Transfer to color contrast card through cellulose tape.
VVLJUG	Photography	Item photographed with Nikon D5200 and 50 watt LED lights. Crimescope and orange filter used for M-Star photography.
	DVD	Captured images enhanced in Adobe Photoshop CS6 and burned onto a DVD.
VWR6HG	Photography	Nikon 5200 camera, Photoshop CS6
WDTKRL	Photography	latent print was photographed, with a macro camera lens and linear scale
WDV3XX	NONE	
WHPX4C	Photography	Nikon D-700 with Foster and Freeman DCS4 software using both laser @ 532nm and orange filter and Ambient light without filter.
WKDEBY	None	
WR9KLR	Photography	
	Lifting	microsil
X7M7KB	Photography	DCS4 system, 4x4 light source set to BLUE (430-470nm) with a GG495 filter. Fno.11, shutter speed 1/6 secs, Focus point 0.37.
XE6GYC	Photography	DCS4 (Digital Capture System) Photographed using the blue light (430-470nm) on the Crime-lite 4x4 and a 495 viewing filter in front of the camera lens.
XHMPBH	Photography	after UV examination
	Photography	after Powder
XVCJMC	Photography	Aim camera, focus, press shutter release. (use filters - orange - when needed).
XWLHTE	Photography	Camera was used with flush light at 45°
	Scanning	Using scanner Perfection V800 photo at 1200 DPI image resolution
	Collecting	Using adhesive transparent tape
Y4HNBM	Photography	Visual (no chemicals) with FLS at 450
	Lifting	Magna Powder
Y9BT4Q	Lifting	I preserved the print with tape and adhered it to a lift card.
YA89CG	Lifting	placed on lift card
YMRTR4	Lifting	lift tape/ fiingerprint card

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TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
YUQH99	Photography	After mag- 1:1, macro lens, overhead/ambient lighting (.TIF)
	Lifting	after mag + photo = clear tape on to clear acetate backing
	Photography	After R6G - 1:1, ALS @ 495 nm, macro lens, organe barrier filter (.TIF)
YW2CWL	Lifting	
	Photography	Digital camera
YZGREZ	Lifting	Clear tape, white card, two lifts (DUPS)
Z2NLFH	Lifting	Tape lift- one (1) friction ridge impression
Z4XET6	Photography	w/ coaxial light box, 60mm, 1/5 sec exposure, f/20, ISO 100
	Photography	60mm, 1/200 sec exposure, f/11, ISO 100
Z74YG6	Photography	
ZBTE6C	Photography	raw-fine
ZJNLJC	Digital Photography	
ZQNXLZ	Photography	DCS4, B&W 1:1 photograph with a scale
	Lifting	White lift card and clear tape
ZWRZMU	None	
ZZVFD7	Photography	Camera Sony DSC-HX300

Response Summary

Participants: 164

Methods Utilized

Lifting	62
Photography	128
Scanning	5

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

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
2A2VMB	Photography	Camera- enhanced with photoshop
2AJQ8X	Photography	Photoshop enhancement, print 1:1
2BTVH2	Photography	digital photo captured with Foster & Freeman camera
2DWNEL	Photography	
2KHJFP	Photography	
34NGCQ	Photography	Canon
3A9JBF	Photography	Nikon D600 DSLR, Nikon capture control 2, adobe photoshop CS6 used to capture marks and process them, crime lite/ quaser used to light them
3M2VUK	Photography	Photographed with digital camera. Printed image and burned to CD
3QKZHH	Photography	scaled photograph, SPEX forensics camera, 35mm focal length, 4904wX3280l pixel, 88dpi
4DRQGU	Photography	Saved digital images on DVD and in LIMS case file for potential latent print comparision.
4FXALH	Photography	Raw. Acquired to ADAMS.
4JELC8	Photography	
4QWAUF	Photography	The latent print was photographed
4RTKPH	Photography	Photography using scale with digital camera.
4WFG9E	Photography	digital photography RAW, JPG
4WJYEP	None	
67KQCH	Photography	Digital Capturing System Nikon D-80, ambient/conventional lighting.
6BKVBW	Covered with tape	Piece labeled C was placed on a latent card and covered with latent tape to preserve.
6CQFYW	Photography	Nikon JPEG format; white lighting
	Lifting tape	Lifting tape was placed over the developed print and was attached to the original paper it was received on.
6CT3FB	Photography	DCS-4
6QB324	Photography	
74EG4L	Photograph	Nikon 5100
79RG2D	Photography	w/ scale. Macro lens (60mm) ALS (open-white) f5 @1/3200 sec. (400 ISO)

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
7C8U2Z	Photography	Nikon D700 Camera #2
7F837B	Photography	image using white light
7FNADD	Photography	Ridge detail photographed in RAW format with a surface to sensor distance no greater than 0.49 meters
7LFJNC	Scanning	scan to CD
7MCWB4	Clear Plastic	
	Photographs	raw and with scale.
867WV9	Photography	
872FVP	None	
8BBV3R	Digital Photography	Item was digitally photographed with a scale. Item was saved and uploaded to Photoshop and enhanced (grayscale, select area, levels. Dodge/ burn at over 300 pixels and saved as tiff. Enhanced image calibrate fit 1:1. Item printed and packaged as evidence.
8U4YLE	Lifting	The piece of tape labeled "C" was left to dry and then placed on a single clear sheet protector with the adhesive side up. Then a strip of lift tape was placed over the duct tape to hold it into place and preserve the print.
8YHCL2	Photograph	w/scale, digital camera
	Enhancement	Photoshop
9274G6	Photography	Nikon D5200 Red camera tethered to computer and captured. Calibrated, Enhanced and printed
947GWG	Photography	
96GFTB	Photography	foster+freeman Crime-lite 4x4 light source (430-470nm, filter GG495 and 500-550 nm, filter OG570) for unprocessed fingermark.
	Photography	Visible front light for CA developed fingermark.
	Photography	foster+freeman Crime-lite 4x4 light source (430-470 nm, filter GG495) for Basic Yellow 40 developed fingermark.
99ZDG2	Scanning	
9Q23UY	Photography	
9YCFY9	Scanning	Print was scanned on an EPSON scanner
AAAUYX	Photography	
AP8PUD	Photography	
	ADAMS	Authenticated Digital Asset Management System, secure server

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
B777EG	Photography	Nikon 5100
BEZH64	Photography	camera CANON EOS 700 D, oblique light
BG8M77	Scanning	Epson V700 photo scanner at 1200dpi. Files sent to Photo lab for creation of LA Print photographs
BH2BN2	Photography	Nikon DSLR - Enhancements with Adobe Photoshop
BUT967	Photography	digital
C4DPGD	Photography	Nikon D800, ISO 200, Auto, shutter speed 1/90 sec., white light
C67PC4	Photography	Documentation and exam quality photographs were taken after chemical processing, with a Nikon DSLR camera and white 6" linear scale. Photoshop CS5 was used to scale, enhance, and annotate the images.
CGZ726	Photography	Digital photography, RAW
	Scanning	TIF format, 1000 dpi
CRGVW4	Photography	
D8TH87	Photography	1000 dpi or greater for capture
DER8PB	Photography	I used the DCS camera to photograph the developed print in section C.
DKBGPR	Photography	Camera :Canon EOS 1D; Lenses: Canon compact-macro lens EF 50 mm f/2.5
DQ3LPN	Photography	1:1 photo with scale
DQALUX	Photography	NIKON D5200 tether to LENOVO PC, Adobe Photoshop CS6 64 Blt
DZQGKX	Photography	Photographing with a measure.
E487JZ	Photography	both F&F Crimelite UV and standar white. Canon EOS 5D Mark III + Canon 100mm Macro IS 2.8L
EATCZ9	Photography	Photographed and saved in Foray
ERVWZG	None	
F4GQMV	Scanning	
FCUHDT	Photography	post BY 40 and ALS. 415 nm of light was used with yellow barrier goggles.
FCY2ZV	Photography	Digital Photographs (JPEG and RAW)
GATRRY	Photography	PHotographed in RAW/JPEG. Enhanced to grayscale using Photoshop

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
GCDRKZ	Photography	
GCT8UV	Photography	photograph taken with Macro Lens
GZXTY6	Photography	white light
HDZQC4	Photography	
HG3KEE	None	
HLEN73	Photography	Photographed on a copy stand with white light. Photographed in RAW.
HRZRP6	Photography	Nikon D90; AF-S Micro Nikkor 105mm 1:2.8G Lens and with Orange Filter (after ARDROX process)
HXTFWW	Photography	Digital camera shot on RAW Fine
J8UC7R	Photography	
JAVKA3	Photography	
JB6PL7	Photography	Camera Nikon D700, format Tiff. One latent print was developed on quadrant C (piece of tape labeled C).
	LPPM R4	
JGEY2E	Photography	Photograph as per SOPS: f/22 and orange 5 and 2 on macro lens
	Acetate Sheet	Stick to clean acetate sheet
JHRFAL	Photography	camera "Canon EOS50D", lens "EF100 mm 1:2.8 USM"
JWR6EY	Photography	TIFF quality and over 1000 ppi
JYHDH9	Photography	Crimescope ALS in CSS mode, Tracer Laser
K2JUAW	Photography	
K6YD7K	Photography	The latent print was photagraphed. Camera: Canon Power Shot SX20 IS
KCZKPT	Photography	Photographs obtained of results on sticky side of tape piece "C".
KNDMBR	Scanning	
KXZL4H	Photography	photograph 1:1
KZ9UD3	Photography	
LE3MBN	Photography	

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
LH4PHD	Photography	Use Canon EOS Rebel to photograph each piece together showing which piece contained the latent. Use Nikon D3X with a macro lens, on a copy stand, to photograph the latent on piece C, with and without a scale. Digital images of latents uploaded to object repository of LIMS system.
LHK3M2	Photography	Photographed to scale and preserved in Foray (Preserved on CD as well)
LKPTRV	None	Magnetic powder was used; no prints visualized. This laboratory does not have any methods validated to perform analysis for sticky sided items. Sticky side would be swabbed for possible epithelial cells in this laboratory and glossy side of tape would be processed for latent prints.
MBWPD2	Photography	After visual, after alternate light source after Wet Powder Black
MKM8UV	Photography	
MNP2W7	Photography	used laser to light the image for inherent luminescence
	Photography	used laser to light the image after R6G
MPZ4FJ	Photography	
MTWRWQ	Photography	With scale, macro lens, TIFF File
MVMQDB	Photography	Nikon D700, 105 mm lens, white light w/ polarizer filter, w/ scale, digital enhancement, printed 1:1
N4DRDK	Photography	
N6QB8Q	Photography	Canon EOS 6D
NGH2RU	Photography	fluorescence examination - in alternate light source at 530 nm using a orange colored bandpass filter
	Photography	after WetWop - under white light
NKKQFW	Photography	ALS at 415 nm w/yellow barrier filter, 60mm macro lens and Canon 7d Mark II camera in RAW.
	Software upload	Uploaded to Foray Digital Workplace software, enhanced in Photoshop, Printed 1:1 on photo paper
NNFQ9X	Photography	
NQREYP	Photography	Scale, macro lens, Raw/Fine
P4VZYU	Photography	F/8 at 1/400th of a second with ISO set at 400. The digital image was taken in TIFF.
P8QTTP	Photography	Uploaded and preserved in ADAMS digital workplace
PAGZBZ	Scanning	
PBMP6W	Photography	

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
PGEPR6	None	
PMLFWV	digital imaging	the developed latent print (c) was preserved by digital imaging at high resolution capturing (based on the Interpol international standard)
PVWHEQ	Photography	Filled frame with ruler to set scale. Photos were obtained after each process in which the print was visible.
Q2ZY9W	Photography	
QBPM7K	Photography	nikon camera, photoshop
QDD3D8	Photography	Nikon 105mm on Nikon D800, white light
QP7HJV	Photography	RAW, ADAMS
QRC8HX	Photography	TUNGSTEN LIGHT
QXHLN9	Photographed	Photographed and uploaded into Photoshop to print
	Package	Placed original photos in evidence envelope. Completed info, sealed, initialed, and dated
R3B64C	Photography	Camera
RPNX9W	Photography	D-SLR with TIF format
	Covered in wax paper	to preserve adhesive side with latents
RUKFRH	WetWop	Digital photography
RVDDYP	Photography	according the criminalistic requirements
RVTWJL	Digital Capture	latent print developed was photographed
T8HZGK	Photography	
U7FPXM	Photography	
UDZQFK	Photography	
UG6BAC	Photography	Item photographed using ambient light, no fllters, reviewed, enhanced, and uploaded into Mideo. No photos deleted, all uploaded.
ULXBQT	Scanning	Scanned latent print at 2400 DPI using TIFF. Printed image using Microsoft Publisher.
UN27AW	Photography	
UPEVFU	Photography	tiff file format images including close-up and overalls using DCS system
UWW8TV	Photography	Captured using white light

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
UXN8NK	Photography	Photograph obtained after print was visible.
V4EWRV	Photography	I used the Digital Capturing System (DCS) and took 3 .tiff images of the latent print developed on item 3, section C
V67WMK	Photography	Nikon DSLR in TIFF format
VGU77J	Lifting	Attached to a transparent plastic.
VVLJUG	Photography	Item photographed using Nikon D5200 and 50 watt LED light sources.
	DVD	Captured image enhanced in Adobe Photoshop CS6 and burned onto a DVD.
VWR6HG	Photography	Nikon 5200, photoshop CS6
WDTKRL	Photography	latent print was photographed, with a macro camera lens and linear scale
WDV3XX	NONE	
WHPX4C	Photography	Nikon D-700 with Foster and Freeman DCS4 software using green light and orange filter.
WKDEBY	None	
WR9KLR	Photography	
X7M7KB	Photography	DCS4 System, white light source used. Fno.11, shutter speed 1/60 secs, Focus point 0.4.
XE6GYC	Photography	DCS4 (Digital Capture System) using the white light on the Crime-lite 4x4 as a light source.
XHMPBH	Photography	After Sticky Side Powder
XVCJMC	Photography	Aim camera, focus, press shutter release.
XWLHTE	Photography	Camera was used with flush light at 45°. Fingerprint is protected with transparent tape
	Scanning	Using scanner Perfection V800 photo at 1200 DPI image resolution
Y4HNBM	Photography	Visual (no chemicals) with FLS at 450
	Photography	Wetwop
Y9BT4Q	Photography	I captured the print with photography using the Digital Capturing System (DCS) and burned the photos to a CD.
YA89CG	Photography	scale used for 1:1 photograph
YMRTR4	Lifting	lift on C
YUQH99	Photography	1:1

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TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
	Photography	1:1, ALS 415nm, macro lens, yellow barrier filter (.TIF)
YW2CWL	Photography	Digital camera
YZGREZ	Photography	DCS4 System. SSP = white light, polarizing filter, f8 @ 1/30 sec.
	Photography	DCS4 System. Wetwop = white light, polarizing filter, f8 @ 1/8 sec.
Z2NLFH	Photography	Photographed one (1) friciton ridge impression
Z4XET6	Photography	60mm, 1/6 sec exposure, f/11, ISO 100
Z74YG6	Photography	
ZJNLJC	Digital Photography	
ZQNXLZ	Photography	DCS4, B&W 1:1 photograph with a scale
ZWRZMU	None	
ZZVFD7	Photography	Camera Sony DSC-HX300

Response Summary

Participants: 164

Methods Utilized

Lifting	4
Photography	139
Scanning	10

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

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First-Level Detail Findings

TABLE 4 - Item 1

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
2A2VMB	N/A	N/A	7C8U2Z	Yes	Loop
2AJQ8X	N/A	N/A	7F837B	Yes	Loop
2BTVH2	Yes	Loop	7FNADD	N/A	N/A
2DWNEL	Yes	Loop	7LFJNC	N/A	N/A
2KHJFP	Yes	Loop	7MCWB4	Yes	Loop
2WPGFJ	Yes	Loop	867WV9	Yes	Loop
34NGCQ	Yes	Loop	872FVP	Yes	Loop
3A9JBF	Yes	Loop	8BBV3R	N/A	N/A
3M2VUK	Yes	Loop	8U4YLE	Yes	Loop
3QKZHH	Yes	Loop	8YHCL2	N/A	N/A
4DRQGU	N/A	N/A	9274G6	N/A	N/A
4FXALH	N/A	N/A	947GWG	Yes	N/A
4JELC8	N/A	N/A	96GFTB	Yes	Loop
4QWAUF	N/A	N/A	99ZDG2	No	Not suitable for determination
4RTKPH	Yes	Loop	9Q23UY	Yes	Loop
4WFG9E	Yes	Loop	9YCFY9	N/A	N/A
4WJYEP	Yes	Loop	AAAUYX	Yes	Loop
67KQCH	Yes	Loop	ANMBZ9	N/A	N/A
6BKVBW	Yes	Loop	AP8PUD	N/A	N/A
6CQFYW	Yes	Loop	B777EG	Yes	Loop
6CT3FB	No	Not suitable for determination	BEZH64	Yes	Loop
6QB324	Yes	N/A	BG8M77	N/A	N/A
74EG4L	Yes	Loop	BH2BN2	Yes	Loop
79RG2D	Yes	Loop	BMUJN3	Yes	Loop

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TABLE 4 - Item 1

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
BUT967	Yes	Loop	HDZQC4	Yes	Loop
C4DPGD	Yes	Not suitable for determination	HG3KEE	Yes	Loop
C67PC4	Yes	Loop	HLEN73	Yes	Loop
CGZ726	Yes	Loop	HRZRP6	Yes	Loop
CPDZDZ	Yes	Arch, Whorl	HXTFWW	Yes	Loop
CRGVW4	Yes	Loop	J8UC7R	Yes	Loop
D8TH87	N/A	N/A	JAVKA3	Yes	Loop
DER8PB	N/A	N/A	JB6PL7	N/A	N/A
DGJABQ	Yes	Loop	JGEY2E	Yes	Loop
DKBGPR	Yes	Loop	JHRFAL	Yes	Loop
DQ3LPN	Yes	Loop	JWR6EY	N/A	N/A
DQALUX	Yes	Loop	JYHDH9	Yes	Loop
DZQGKX	N/A	N/A	K2JUAW	N/A	N/A
E487JZ	N/A	N/A	K6YD7K	Yes	Loop
EATCZ9	Yes	Loop	KCZKPT	Yes	Loop
ERVWZG	Yes	Loop	KNDMBR	Yes	Not suitable for determination
F4GQMV	Yes	Loop	KXZL4H	Yes	Loop
FCUHDT	Yes	Loop	KZ9UD3	Yes	Loop
FCY2ZV	Yes	Loop	LE3MBN	N/A	N/A
GATRRY	Yes	Loop	LH4PHD	Yes	Loop
GCDRKZ	Yes	Loop	LHK3M2	Yes	Loop
GCT8UV	No	Not suitable for determination	LKPTRV	N/A	N/A
GELX72	N/A	N/A	MKM8UV	Yes	Loop
GNMMJV	Yes	Loop	MNP2W7	Yes	Loop
GZXTY6	Yes	Loop	MPZ4FJ	Yes	Loop

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TABLE 4 - Item 1

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
MTWRWQ	Yes	Loop	RVTWJL	N/A	N/A
MVMQDB	N/A	N/A	T8HZGK	No	Not suitable for determination
N4DRDK	Yes	Loop	TK76MV	Yes	Loop
N6QB8Q	N/A	N/A	TYZN4J	N/A	N/A
NGH2RU	Yes	Loop	U7FPXM	Yes	Loop
NKKQFW	Yes	Loop	UDZQFK	N/A	N/A
NNFQ9X	Yes	Loop	UG6BAC	N/A	N/A
NQREYP	Yes	Loop	ULXBQT	Yes	Loop
P4VZYU	N/A	N/A	UN27AW	Yes	Loop
P8QTTP	Yes	Loop	UPEVFU	N/A	N/A
PAGZBZ	Yes	Loop	UWW8TV	Yes	Loop
PBMP6W	Yes	Loop	UXN8NK	Yes	Loop
PGEPR6	Yes	Loop	V4EWRV	Yes	Loop
PMLFWV	Yes	Loop	V67WMK	Yes	Loop
PVWHEQ	Yes	Loop	VGU77J	Yes	Loop
Q2ZY9W	Yes	Loop	VVLJUG	Yes	Loop
Q3AXFY	Yes	Loop	VWR6HG	Yes	Loop
QBPM7K	Yes	Loop	WDTKRL	Yes	Loop
QDD3D8	Yes	Loop	WDV3XX	Yes	Loop
QP7HJV	N/A	N/A	WHPX4C	Yes	Loop
QRC8HX	Yes	Loop	WKDEBY	Yes	Loop
QXHLN9	N/A	N/A	WR9KLR	N/A	N/A
R3B64C	Yes	Loop	X7M7KB	N/A	N/A
RPNX9W	Yes	Loop	XE6GYC	N/A	N/A
RUKFRH	Yes	Loop	XHMPBH	Yes	Loop
RVDDYP	Yes	Loop			

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TABLE 4 - Item 1

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
XVCJMC	Yes	Loop			
XW2ZUY	Yes	Loop			
XWLHTE	Yes	Loop			
Y9BT4Q	N/A	N/A			
YA89CG	Yes	Loop			
YMRTR4	N/A	N/A			
YUQH99	Yes	Loop			
YW2CWL	Yes	Loop			
YZGREZ	Yes	Loop			
Z2NLFH	Yes	Loop			
Z4XET6	Yes	Loop			
Z74YG6	Yes	Loop			
ZBTE6C	Yes	Not suitable for determination			
ZJNLJC	N/A	N/A			
ZQNXLZ	Yes	Loop			
ZWRZMU	Yes	Loop			
ZZVFD7	Yes	Not suitable for determination			

Findings Summary

Total Participants: 169

1st Level	Total
Arch	1
Loop	114
Whorl	1
No	4
Not Suitable	8
N/A	41

*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.

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TABLE 4 - Item 2

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
2A2VMB	N/A	N/A	7F837B	Yes	Whorl
2AJQ8X	N/A	N/A	7FNADD	N/A	N/A
2BTVH2	Yes	Whorl	7LFJNC	N/A	N/A
2DWNEL	Yes	Loop, Whorl	7MCWB4	Yes	Whorl
2KHJFP	Yes	Whorl	867WV9	Yes	Whorl
2WPGFJ	Yes	Not suitable for determination	872FVP	Yes	Whorl
34NGCQ	Yes	Whorl	8BBV3R	N/A	N/A
3A9JBF	Yes	Loop	8U4YLE	Yes	Not suitable for determination
3M2VUK	Yes	Whorl	8YHCL2	N/A	N/A
3QKZHH	Yes	Loop	9274G6	N/A	N/A
4DRQGU	N/A	N/A	947GWG	Yes	N/A
4FXALH	N/A	N/A	96GFTB	Yes	Whorl
4JELC8	N/A	N/A	99ZDG2	Yes	Whorl
4QWAUF	N/A	N/A	9Q23UY	Yes	Whorl
4RTKPH	Yes	Whorl	9YCFY9	N/A	N/A
4WFG9E	Yes	Whorl	AAAUYX	Yes	Whorl
4WJYEP	Yes	Loop	ANMBZ9	N/A	N/A
67KQCH	Yes	Whorl	AP8PUD	N/A	N/A
6BKVBW	No	Not suitable for determination	B777EG	Yes	Whorl
6CQFYW	Yes	Not suitable for determination	BEZH64	Yes	Whorl
6CT3FB	Yes	Whorl	BG8M77	N/A	N/A
6QB324	Yes	N/A	BH2BN2	Yes	Not suitable for determination
74EG4L	Yes	Whorl	BMUJN3	Yes	Whorl
79RG2D	Yes	Whorl	BUT967	Yes	Not suitable for determination
7C8U2Z	Yes	Whorl	C4DPGD	Yes	Whorl

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TABLE 4 - Item 2

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
C67PC4	Yes	Whorl	HG3KEE	Yes	Whorl
CGZ726	Yes	Not suitable for determination	HLEN73	Yes	Whorl
CPDZDZ	Yes	Loop	HRZRP6	Yes	Whorl
CRGVW4	Yes	Whorl	HXTFWW	Yes	Whorl
D8TH87	N/A	N/A	J8UC7R	Yes	Arch
DER8PB	Yes	Whorl	JAVKA3	Yes	Whorl
DGJABQ	N/A	Not suitable for determination	JB6PL7	N/A	N/A
DKBGPR	Yes	Whorl	JGEY2E	Yes	Loop
DQ3LPN	Yes	Whorl	JHRFAL	Yes	Whorl
DQALUX	Yes	Whorl	JWR6EY	N/A	N/A
DZQGKX	N/A	N/A	JYHDH9	Yes	Whorl
E487JZ	N/A	N/A	K2JUAW	N/A	N/A
EATCZ9	Yes	Whorl	K6YD7K	Yes	Whorl
ERVWZG	Yes	Whorl	KCZKPT	Yes	Whorl
F4GQMV	Yes	Whorl	KNDMBR	Yes	Whorl
F6D7YR	Yes	N/A	KXZL4H	Yes	Whorl
FCUHDT	Yes	Whorl	KZ9UD3	Yes	Whorl
FCY2ZV	Yes	Whorl	LE3MBN	N/A	N/A
GATRRY	Yes	Whorl	LH4PHD	Yes	Whorl
GCDRKZ	Yes	Not suitable for determination	LHK3M2	Yes	Whorl
GCT8UV	Yes	Whorl	LKPTRV	N/A	N/A
GELX72	N/A	N/A	MKM8UV	Yes	Not suitable for determination
GNMMJV	Yes	Whorl	MNP2W7	Yes	Whorl
GZXTY6	Yes	Whorl	MPZ4FJ	Yes	Not suitable for determination
HDZQC4	Yes	Whorl	MTWRWQ	Yes	Whorl

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TABLE 4 - Item 2

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
MVMQDB	N/A	N/A	RVTWJL	N/A	N/A
N4DRDK	Yes	Whorl	T8HZGK	Yes	Whorl
N6QB8Q	N/A	N/A	TK76MV	Yes	Whorl
NGH2RU	Yes	Whorl	TYZN4J	N/A	N/A
NKKQFW	Yes	Whorl	U7FPXM	Yes	Whorl
NNFQ9X	Yes	N/A	UDZQFK	N/A	N/A
NQREYP	Yes	Whorl	UG6BAC	N/A	N/A
P4VZYU	N/A	N/A	ULXBQT	Yes	Whorl
P8QTTP	Yes	Whorl	UN27AW	Yes	Whorl
PAGZBZ	Yes	Whorl	UPEVFU	N/A	N/A
PBMP6W	No	Not suitable for determination	UWW8TV	Yes	Whorl
PGEPR6	Yes	Whorl	UXN8NK	Yes	Whorl
PMLFWV	Yes	Whorl	V4EWRV	Yes	Loop
PVWHEQ	Yes	Whorl	V67WMK	Yes	Whorl
Q2ZY9W	Yes	Whorl	VGU77J	Yes	Whorl
Q3AXFY	Yes	Whorl	VVLJUG	Yes	Whorl
QBPM7K	Yes	Whorl	VWR6HG	Yes	Whorl
QDD3D8	Yes	Whorl	WDTKRL	Yes	Whorl
QP7HJV	N/A	N/A	WDV3XX	Yes	Whorl
QRC8HX	Yes	Whorl	WHPX4C	Yes	Whorl
QXHLN9	N/A	N/A	WKDEBY	Yes	Whorl
R3B64C	Yes	Whorl	WR9KLR	N/A	N/A
RPNX9W	Yes	Whorl	X7M7KB	N/A	N/A
RUKFRH	Yes	Not suitable for determination	XE6GYC	N/A	N/A
RVDDYP	Yes	Whorl	XHMPBH	Yes	Whorl
			XVCJMC	Yes	Whorl

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TABLE 4 - Item 2

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
XW2ZUY	Yes	Whorl			
XWLHTE	Yes	Whorl			
Y9BT4Q	N/A	N/A			
YA89CG	Yes	Whorl			
YMRTR4	Yes	Not suitable for determination			
YUQH99	Yes	Whorl			
YW2CWL	Yes	Whorl			
YZGREZ	Yes	Whorl			
Z2NLFH	Yes	Whorl			
Z4XET6	Yes	Whorl			
Z74YG6	Yes	Whorl			
ZBTE6C	Yes	Whorl			
ZJNLJC	N/A	N/A			
ZQNXLZ	Yes	Whorl			
ZWRZMU	Yes	Whorl			
ZZVFD7	Yes	Whorl			

Findings Summary Total Participants: 169

1st Level	Total
Arch	1
Loop	7
Whorl	103
No	2
Not Suitable	14
N/A	40

*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.

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TABLE 4 - Item 3

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
2A2VMB	N/A	N/A	7FNADD	N/A	N/A
2AJQ8X	N/A	N/A	7LFJNC	N/A	N/A
2BTVH2	Yes	Arch	7MCWB4	Yes	Arch
2DWNEL	Yes	Arch	867WV9	Yes	Arch
2KHJFP	Yes	Arch	872FVP	Yes	Arch
2WPGFJ	Yes	Arch	8BBV3R	N/A	N/A
34NGCQ	Yes	Arch	8U4YLE	Yes	Arch
3A9JBF	Yes	Arch	8YHCL2	N/A	N/A
3M2VUK	Yes	Arch	9274G6	N/A	N/A
3QKZHH	Yes	Arch	947GWG	Yes	N/A
4DRQGU	N/A	N/A	96GFTB	Yes	Arch
4FXALH	N/A	N/A	99ZDG2	Yes	Arch
4JELC8	N/A	N/A	9Q23UY	Yes	Arch
4QWAUF	N/A	N/A	9YCFY9	N/A	N/A
4RTKPH	Yes	Arch	AAAUYX	Yes	Arch
4WFG9E	Yes	Arch	ANMBZ9	N/A	N/A
4WJYEP	Yes	Arch	AP8PUD	N/A	N/A
67KQCH	Yes	Arch	B777EG	Yes	Arch
6BKVBW	Yes		BEZH64	Yes	Arch
6CQFYW	Yes	Arch	BG8M77	N/A	N/A
6CT3FB	Yes	Arch	BH2BN2	Yes	Loop
6QB324	Yes	N/A	BMUJN3	No	Not suitable for determination
74EG4L	Yes	Arch	BUT967	Yes	Arch
79RG2D	Yes	Arch	C4DPGD	Yes	Arch
7C8U2Z	Yes	Arch	C67PC4	Yes	Arch
7F837B	Yes	Arch			

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TABLE 4 - Item 3

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
CGZ726	Yes	Arch	HRZRP6	Yes	Arch
CPDZDZ	Yes	Arch	HXTFWW	Yes	Arch
CRGVW4	Yes	Arch	J8UC7R	Yes	Arch
D8TH87	N/A	N/A	JAVKA3	Yes	Arch
DER8PB	Yes	Arch	JB6PL7	N/A	N/A
DGJABQ	Yes	Arch	JGEY2E	Yes	Loop
DKBGPR	Yes	Arch	JHRFAL	Yes	Arch
DQ3LPN	Yes	Arch	JWR6EY	N/A	N/A
DQALUX	Yes	Not suitable for determination	JYHDH9	Yes	Arch
DZQGKX	N/A	N/A	K2JUAW	N/A	N/A
E487JZ	N/A	N/A	K6YD7K	Yes	Arch
EATCZ9	Yes	Arch	KCZKPT	Yes	Arch
ERVWZG	Yes	Arch	KNDMBR	Yes	Arch
F4GQMV	Yes	Arch	KXZL4H	Yes	Arch
FCUHDT	Yes	Not suitable for determination	KZ9UD3	Yes	Arch
FCY2ZV	Yes	Arch	LE3MBN	N/A	N/A
GATRRY	Yes	Arch	LH4PHD	Yes	Arch
GCDRKZ	Yes	Arch	LHK3M2	Yes	Arch
GCT8UV	Yes	Arch	LKPTRV	N/A	N/A
GELX72	N/A	N/A	MKM8UV	Yes	Not suitable for determination
GNMMJV	No	Not suitable for determination	MNP2W7	Yes	Arch
GZXTY6	Yes	Arch	MPZ4FJ	Yes	Arch
HDZQC4	Yes	Arch	MTWRWQ	Yes	Arch
HG3KEE	Yes	Arch	MVMQDB	N/A	N/A
HLEN73	Yes	Arch	N4DRDK	Yes	Arch

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TABLE 4 - Item 3

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
N6QB8Q	N/A	N/A	TYZN4J	N/A	N/A
NGH2RU	Yes	Arch	U7FPXM	Yes	Arch
NKKQFW	Yes	Arch	UDZQFK	N/A	N/A
NNFQ9X	Yes	Arch	UG6BAC	N/A	N/A
NQREYP	Yes	Arch	ULXBQT	Yes	Arch
P4VZYU	N/A	N/A	UN27AW	Yes	Arch
P8QTTP	Yes	Arch	UPEVFU	N/A	N/A
PAGZBZ	Yes	Arch	UWW8TV	Yes	Arch
PBMP6W	Yes	Arch	UXN8NK	Yes	Arch
PGEPR6	Yes	Arch	V4EWRV	Yes	Arch
PMLFWV	Yes	Arch	V67WMK	Yes	Arch
PVWHEQ	Yes	Arch	VGU77J	Yes	Arch
Q2ZY9W	Yes	Arch	VVLJUG	Yes	Arch
Q3AXFY	No		VWR6HG	Yes	Arch
QBPM7K	Yes	Arch	WDTKRL	Yes	Arch
QDD3D8	Yes	Arch	WDV3XX	Yes	Arch
QP7HJV	N/A	N/A	WHPX4C	Yes	Arch
QRC8HX	Yes	Arch	WKDEBY	Yes	Arch
QXHLN9	N/A	N/A	WR9KLR	N/A	N/A
R3B64C	Yes	Arch	X7M7KB	N/A	N/A
RPNX9W	Yes	Arch	XE6GYC	N/A	N/A
RUKFRH	Yes	Arch	XHMPBH	Yes	Arch
RVDDYP	Yes	Arch	XVCJMC	Yes	Arch
RVTWJL	N/A	N/A	XW2ZUY	Yes	Arch
T8HZGK	Yes	Arch	XWLHTE	Yes	Arch
TK76MV	Yes	Arch	Y9BT4Q	N/A	N/A

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TABLE 4 - Item 3

WebCode	1st Level Detail?	Pattern?	WebCode	1st Level Detail?	Pattern?
YA89CG	Yes	Arch			
YMRTR4	Yes	Arch			
YUQH99	Yes	Arch			
YW2CWL	Yes	Arch			
YZGREZ	Yes	Arch			
Z2NLFH	Yes	Arch			
Z4XET6	Yes	Arch			
Z74YG6	Yes	Arch			
ZBTE6C	No	Not suitable for determination			
ZJNLJC	N/A	N/A			
ZQNXLZ	Yes	Loop			
ZWRZMU	Yes	Arch			
ZZVFD7	Yes	Arch			

Findings Summary Total Participants: 169

1st Level	Total
Arch	114
Loop	3
Whorl	0
No	4
Not Suitable	6
N/A	39

*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.

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Additional Comments

TABLE 5

WebCode	Additional Comments
2DWNEL	Question 2.6 was answered both loop + whorl possible, due to quality of print on the left side. I was unable to determine a 2nd delta or if ridges were curving in that area.
3QKZHH	Item 1: Ninhydrin Heptane-PE validated 8/28/17, test print positive 10/17/17. Item 2: Black powder test print positive 10/17/17. item 3: Evident Wet Powder validated 10/17/17, test print positive 10/17/17.
4WJYEP	Item 2 - print in Quadrant C smudged on left side. Marked as loop, referenced to double loop whorl.
67KQCH	About Item number 2 (One white 3"X6" ceràmic tile), a first preliminary exam with ambient lighting has been done. At first sight, a latent print has been located in the section C.
7C8U2Z	Latent recovered on duct tape could be referenced as a loop.
7F837B	Item 1: normally would follow up with NIN and PD if needed. Item 3: LP on the adhesive side of tape and potentially could be a mirror image
872FVP	Item #3 - print could be a left slant loop reference
ANMBZ9	For item 3, only the non sticky side was processed with cyanoacrylate and powder. The sticky side would be processed for DNA per our protocols.
BH2BN2	The latent fingerprint developed on #3C was marked classified as a loop (low count) but would reference as an arch.
BMUJN3	item 1 - ninhydrin applied - latent recovered in section A and documented with digital photography, item 2 - Black magnetic powder applied to tile - latent recovered in section C and documented with digital photography, item 3 - 4 pieces of duct tape - processed with CAE in tank - wet wop applied and rinsed - friction ridge observed in section C observed to be LQQI - LQQI verified
BUT967	The core from the print developed on item 2 was smudged and could not be determined with certainty. It could be a loop or whorl pattern.
CGZ726	Item 2, the ceramic tile, was observed to have heavy streaking traveling from the A quadrant into the C quadrant. The streaking passed through the majority of the impression located in the C quadrant. The impression may be a left loop or a whorl, but the clarity is too poor to be certain.
CPDZDZ	Every fingerprint: probable match
DQ3LPN	Examination of item 1 revealed a latent impression which may be of value for comparison in section "A". Examination of item 2 revealed a latent impression which may be of value for comparison in section "C". Examination of item 3 revealed a latent impression which may be of value for comparison in section "C".
F6D7YR	This proficiency was used as a Crime Scene proficiency. Analyst was instructed to identify items that could be processed using the techniques available to them in the field and only process those items.
FCUHDT	The piece of tape bearing the developed impression partially adhered on itself after visualization with the alternate light source and before preservation by digital photography. Once separated, the cored part of the developed impression was not present and thus pattern determination could not be performed.
HG3KEE	As requested, only the adhesive side of Item 3 was processed.

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TABLE 5

WebCode	Additional Comments
HRZRP6	ITEM 1: On the indanedione step, is observed positive test on the control sample but no ridges observed on ITEM 1. ITEM 2: Examinated with natural and white light a print is observed. ITEM 3: The item's paper support is preserved until EZFLO's testing.
JGEY2E	Re first level detail recovered for item 2: Pattern identified as a Loop however possible whorl but bottom of print is very distorted. Re first level detail recovered for item 3: nominated as a loop (right sloped) - possibly an arch.
LH4PHD	Item 3 latent: Would mark as an arch, but reference a right loop.
MPZ4FJ	The Item 2 latent showed indications of either movement or a smear preventing pattern type determination.
NGH2RU	Observed additional fragmentary prints development on areas of item No. 2 - one white 3"x6" ceramic tile.
P8QTTP	In the future, I would recommend labeling quadrants with a methanol safe marker so that the letters don't rinse off during chemical processing.
PAGZBZ	Item 2 fingerprint is a double loop whorl. In casework, it would be searched as a whorl and a left slant loop. Item 3 fingerprint is hard to distinguish between a tented arch and a right slant loop. In casework, it would be searched as an arch and a right slant loop.
QBPM7K	Tile item did not yield great results when processed. The superglue was spotty at best and dye stain rinse a lot of detail away.
QRC8HX	Pattern determination is not part of our lab's latent print processing workflow.
UWW8TV	For item #3, duct tape, the non-adhesive side was additionally processed.
WKDEBY	The pattern type for the print observed on Item 3 could also have been a very low-count loop.
X7M7KB	All items were treated in accordance with the [Agency] manual guidelines and our policies and procedures. All items were assumed to be dry as nothing different was indicated in the scenario. Had an indication that the items were wet been made this would have altered my treatment selection. All processes are [Accrediting Body] accredited (IS0:17025). Appropriate PPE worn, and appropriate waste disposal was employed (in accordance with [Accreditation Body] procedures and [Agency] guidelines). All chemicals are from approved [Accreditation Body] supplies and are verified by [Laboratory]. All equipment is maintained and calibrated in accordance with our [Accreditation Body] accreditation. All temperatures/humidity recorded fall within the level of tolerance deemed acceptable according to our [Accreditation Body] procedures. I am a qualified laboratory officer who is subject to on-going assessment against [Accreditation Body] core areas, procedures and [Standards]. The exhibits/paperwork were held in the laboratory secure store upon receipt, during and after processing.
XE6GYC	The work and assessments relating to Items 1-3 were carried out working to accredited International Standards (ISO 17025). The items have been assessed as if they have been received into the laboratory as volume crime using one best treatment. Using the [Agency] visualisation manual as guidance. If these had been received as major/serious crime, full sequential treatments would have been considered relevant to each substrate. If the items had been wet this would also be taken into consideration to decide upon which treatment to use. Personal protective equipment used. All chemicals are checked prior to application of treatment with regards to in date and not expired. All equipment used is regularly maintained, serviced and calibrated in accordance with procedures.
YA89CG	Analyst has been trained in detail/pattern determination but does not currently perform these duties.

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TABLE 5

WebCode	Additional Comments
YUQH99	per submission comment only the adhesive side of the tape pieces and the quadrant labeled side of the sticky note and tile needed to be processed for latent prints. All other box contents (cardboard, wax paper) were accounted for in the item descriptions but not processed for latent prints. The friction ridge detail developed on item 3 could be reference as a loop.
YZGREZ	Per Laboratory policy, Item #01 (sticky note) was photographed prior to latent print development.
ZBTE6C	Item-1: Friction ridge observed after processing (section "A"). Pattern type unable to determine. LQQI. Item-2 Friction ridge observed after processing (section "C"). Pattern type: whorl. SQQI. Item-3 No ridge detail was observed after processing.
ZQNXLZ	Examination of items #1A, #2c and #3c revealed latent impressions which may be of value for comparison. The collected photographs of latent impressions / latent lift cards will remain in the [Laboratory] Latent Print Files.
ZWRZMU	Tile was only processed on side containing quadrants, so processed non-porous and not semi-porous. Some glove marks were found on all pieces of tape on the adhesive side. Only adhesive side of tape processed.

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Appendix: Data Sheet

*****

Collaborative Testing Services ~ Forensic Testing Program

Test No. 17-5191: Latent Print Processing

DATA MUST BE RECEIVED BY ***December 11, 2017*** TO BE INCLUDED IN THE REPORT

Participant Code: WebCode:

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 13 August 2017, 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 sections, 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. Packaging material is not intended to be processed.

Items Submitted (Sample Pack LAP2):

Item 1: One yellow 4"x6" sticky note, divided into sections A-D.

Item 2: One white 3"x6" ceramic tile, divided into sections A-D.

Item 3: Four 2" pieces of duct tape, labeled as pieces A-D (adhesive side intended for processing).

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 section (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.

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Participant Code:
WebCode:

Results for Item 1:

One yellow 4"x6" sticky note, divided into sections A-D.

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

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

Method (please list in order)	Method-specific information (ex. temperature, processing time)

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

Method (please list in order)	Method-specific information

(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 ☐ Not suitable for determination

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Participant Code:
WebCode:

Results for Item 2:

One white 3"x6" ceramic tile, divided into sections A-D.

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

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

Method (please list in order)	Method-specific information (ex. temperature, processing time)

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

Method (please list in order)	Method-specific information

(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 ☐ Not suitable for determination

Please return all pages of this data sheet.

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Participant Code:
WebCode:

Results for Item 3:

Four 2" pieces of duct tape, labeled as pieces A-D (adhesive side intended for processing).

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

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

Method (please list in order)	Method-specific information (ex. temperature, processing time)

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

Method (please list in order)	Method-specific information

(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 ☐ Not suitable for determination

Please return all pages of this data sheet.

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Participant Code:
WebCode:

Additional Comments

Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by ***December 11, 2017*** to be included in the report. Emailed data sheets are not accepted.

QUESTIONS?
TEL: +1-571-434-1925 (8 am - 4:30 pm EST)
EMAIL: forensics@cts-interlab.com
www.ctsforensics.com

Participant Code:

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

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Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code: WebCode:

for Test No. **17-5191: Latent Print Processing**

This release page must be completed and received by ***December 11, 2017*** 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) _____

Return Instructions

Accreditation Release

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

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