



Latent Print Processing Test No. 19-5191 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 187 participants and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample pack consisted of three items of simulated crime scene evidence. Each item was divided into labeled sections and contained one latent fingerprint. The items consisted of a piece of black polyethylene sheeting (Item 1), a flier on a piece of white copy paper (Item 2), and part of a white semigloss cardboard box (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 polyethylene sheeting was cleaned with water and a paper towel before the latent print was applied. New, sealed packs of copy paper were used for the samples that could not be cleaned. The semigloss boxes were wiped with a dry paper towel before the latent print was applied. Each item was divided into sections and labeled A, B, C, and D using a chemical-safe marker (sheeting, boxes) or printed via a laser printer (copy paper). For each item, either an acid or oil enhancer was applied to the individual's finger prior to deposition to assist in the longevity of the print.

SAMPLE PACK ASSEMBLY-

Each item was packed into its pre-labeled item envelope or heat seal packet with necessary protective materials. Following predistribution testing, each item envelope was sealed with evidence tape and initialed with "CTS" while each heat seal was closed using an automated heat sealer. These were then placed into a sample pack box and sealed with packaging tape.

VERIFICATION-

A random selection of prepared test items was processed in-house for latent prints to verify their durability and proper latent print location. Predistribution examiners were able to recover ridge detail in the expected section on all three items.

<u>Item No.</u>	<u>Test Material</u>	<u>Enhancer</u>	<u>Print Location</u>	<u>Pattern</u>
1	black polyethylene sheeting	oil	A	whorl
2	white copy paper	acid	C	whorl
3	semigloss cardboard box	oil + acid	B	whorl

Summary Comments

Each sample pack contained three items of evidence to be processed for latent prints: a piece of black polyethylene sheeting (Item 1), a white copy paper notice (Item 2), and part of a semigloss cardboard box (Item 3). Each item was divided into four sections, which were labeled with the letters A-D. Participants were asked to determine in which of the four sections of each evidence item a latent print was contained. (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 187 responding participants, 151 (81%) were able to successfully recover a print in the expected section for all three items, and a consensus threshold was reached on each individual item. For Item 1, all of the participants reported section "A" (100%). For Item 2, 154 of 187 responding participants (82%) were successful in locating the print in section "C". Twenty-three participants reported "None." Outliers in this group included two participants who reported a different section ("B") and seven participants who gave responses incongruent with the requested reporting method ("-", "N/A"). One participant did not respond for this item. For Item 3, 181 of 187 responding participants (97%) located the print in section "B". Three participants reported "None." Outliers in this group included two participants who reported a different section ("C"). One participant did not respond for this item.

Summary statistics for the reported development and preservation methods were calculated for each item at the end of each methods table. The techniques included in the summaries are the preloaded options from the CTS web portal, and do not necessarily reflect every answer provided by participants. The summary totals are cumulative for each item; therefore, if a participant listed the same technique multiple times for one item, each occurrence is added into the final total. Additionally, the summary statistics only include those methods that are explicitly identified as the generic methodology found in the dropdown menu. That is to say, a Development Method entry of "Dye Stain" will be tabulated while "Rhodamine 6G" will not.

A majority of participants began their analysis with some type of nondestructive visual examination and/or alternate light source analysis prior to conducting 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, dependent upon the surface.

For print development on the polyethylene sheet (Item 1), participants primarily utilized Cyanoacrylate Fuming (reported 166 times). This was commonly followed by the use of some type of dye stain (96) or powder dusting (50) to enhance developed ridge detail. For processing the copy paper (Item 2), participants used mostly porous development methods to recover the latent print; this included predominantly Ninhydrin (reported 158 times), as well as 1,2-Indanedione (49), DFO (44), and Physical Developer (18). These methods were often used sequentially to increase likelihood of fingerprint recovery. For development of prints on the semigloss cardboard box (Item 3), participants performed powder dusting (reported 139 times) and cyanoacrylate fuming (133) in near equal measure; while some elected to powder dust alone, others used it following the cyanoacrylate treatment. Due to the semiporous nature of the material, some participants used porous methods such as ninhydrin (63), 1,2-Indanedione (26), and DFO (23), commonly in conjunction with nonporous methods.

The section on First Level Detail Findings was updated in 2019 to better reflect the reporting style for those participants

Summary Comments, continued

who perform pattern analysis. Participants are able to call more than one pattern as a possibility based on the ridge detail developed. Some participants do not perform print pattern analysis in their routine casework and 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 – Whorl; Item 2 – Whorl; Item 3 – Whorl. The most frequent response for each item corresponds to the expected results for pattern reporting.

In an ongoing effort to ensure participants are successful in the recovery of ridge detail on all items, CTS will be making production schedule changes. Additionally, item packaging alternatives are being researched to reduce environmental effects on the latent prints, the first efforts of which were contained in this test set (Item 2). These adjustments are made following several cycles of testing where many participants were unable to recover ridge detail of value on porous materials.

Print Location

TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
264W7G	A	6NU2KX	A	992Q4J	A
2CNYDJ	A	6V6DFX	A	994CUH	A
2HUKE8	A	6XDPXY	A	9J7PTX	A
2JKBAV	A	6XYIBA	A	9KZEFZ	A
2QMZ2Q	A	6Z22YP	A	9YKTJY	A
2ULCXQ	A	6Z23QN	A	A2JGFM	A
2XNXYW	A	76BEFN	A	A3RVQM	A
2YLAMX	A	78KETV	A	A8Q7XV	A
32LYDK	A	79DFGL	A	AH9KZX	A
3AJDJ6	A	7GJK6V	A	AMEH6V	A
3KBH6W	A	7MCDD4	A	AP3VYK	A
3VG3RY	A	7MD6RY	A	B4MUEZ	A
3XKT2Y	A	7Y7RG7	A	BE76ZX	A
4CJ9FD	A	8278GG	A	BFGZLQ	A
4NAUTU	A	84DNLT	A	BK7TFR	A
4NUJ33	A	88EECR	A	BMT7AG	A
4RRDKQ	A	8K2Z3E	A	BW2XKW	A
6L337Z	A	8TC3NF	A	BYQZQK	A
6NRDWT	A	948TGD	A	CA7GMB	A

TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
CDNEE8	A	GLYLTA	A	JXN6BZ	A
CG7TRT	A	GNVXXP	A	JXQVHH	A
D7YBWG	A	GRM7WQ	A	KEA38X	A
DFN8LB	A	GY6MFE	A	KJ6YNC	A
DHTUBL	A	GY8AV8	A	KKYKJN	A
DJ9UKQ	A	H8EA2N	A	KLC3P2	A
DTZAGU	A	H8JQ4T	A	KM3BTN	A
DZW4GD	A	H9RZ4P	A	KNXVFN	A
EK3YQV	A	HEJ3CW	A	KTRXFG	A
EWA6GN	A	HPHZWB	A	KTTL3M	A
F7VDP6	A	HXEQLR	A	KVHYK6	A
FER68J	A	HY42DK	A	L2VEH8	A
FKE3PF	A	J9AAKK	A	L7EK7U	A
FNTTYG	A	JGX6HE	A	LP7GNB	A
FZ9MCV	A	JJ7HZG	A	LUK4GT	A
G6WM7G	A	JPEGX2	A	M9TJV9	A
G83BBK	A	JPUZHY	A	MAU8HE	A
GAT7CL	A	JPWPNG	A	MQU8DM	A
GGAVUG	A	JRJAPE	A	MYUJQH	A
GJDK2W	A	JUNUHK	A	N447UK	A

TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
N98CZB	A	QPU6BZ	A	UT6AGK	A
N98DY3	A	QWTVHJ	A	UU9H4X	A
NBXCD2	A	R3FWCF	A	UZFN4A	A
NCA4F4	A	R6Y77D	A	VKXFHW	A
NG6XEP	A	RB4VRE	A	VQPE9X	A
NPJM4D	A	RM4LKM	A	WKDX43	A
NR7FWK	A	RM6BTQ	A	WYEM49	A
NV4MKP	A	RP9XF3	A	WYHAJ2	A
NZYNGB	A	RW8GRL	A	X249HH	A
P7YKHA	A	RZLBG4	A	X2FWRW	A
PBV6NE	A	TFDDM2	A	X3QXKW	A
PEWZMU	A	TL7FRL	A	X94RG8	A
PWARBJ	A	TLLWUF	A	X9HZT3	A
PZYX3F	A	TTKEBC	A	XENZM6	A
Q26VQG	A	U6AH4W	A	XFHMHG	A
QE9BN7	A	U9WAB7	A	FXXA9	A
QGETM2	A	UG7PYF	A	XH7V24	A
QL9NJU	A	UGHNR4	A	XNB29U	A
QP8YFU	A	UHE2EW	A	XQGCDB	A
QPQLCQ	A	UM9X22	A	XVCY9J	A

TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
Y6WRY7	A				
YAV4V7	A				
YITQV7	A				
YYVDCJ	A				
Z778NE	A				
Z84CGE	A				
ZBY9QT	A				
ZEVZW6	A				
ZXC2VD	A				
ZZCBRL	A				

Response Summary		Total Participants: 187
Location	Total	

A	187
B	0
C	0
D	0
None	0

TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
264W7G	C	6V6DFX	C	9KZEFZ	C
2CNYDJ	C	6XDPXY	C	9YKTJY	C
2HUKE8	C	6XYIBA	C	A2JGFM	C
2JKBAV	N/A	6Z22YP	B	A3RVQM	C
2QMZ2Q	C	6Z23QN	C	A8Q7XV	C
2ULCXQ	None	76BEFN	C	AH9KZX	C
2XNXYW	None	78KETV	C	AMEH6V	C
2YLAMX	C	79DFGL	None	AP3VYK	C
32LYDK	C	7GJK6V	C	B4MUEZ	C
3AJDJ6	C	7MCDD4	C	BE76ZX	C
3KBH6W	C	7MD6RY	C	BFGZLQ	B
3VG3RY	C	7Y7RG7	C	BK7TFR	C
3XKT2Y	C	8278GG	C	BMT7AG	C
4CJ9FD	C	84DNLT	C	BW2XKW	None
4NAUTU	C	8K2Z3E	C	BYQZQK	C
4NUJ33	None	8TC3NF	C	CA7GMB	C
4RRDKQ	C	948TGD	C	CDNEE8	C
6L337Z	C	992Q4J	C	CG7TRT	C
6NRDWT	C	994CUH	None	D7YBWG	C
6NU2KX	C	9J7PTX	N/A	DFN8LB	C

TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
DHTUBL	C	GY8AV8	C	KKYKJN	C
DJ9UKQ	C	H8EA2N	None	KLC3P2	C
DTZAGU	C	H8JQ4T	-	KM3BTN	C
DZW4GD	C	H9RZ4P	None	KNXVFN	C
EK3YQV	None	HEJ3CW	C	KTRXFG	None
EWA6GN	C	HPHZWB	C	KTTL3M	C
F7VDP6	None	HXEQLR	C	KVHYK6	C
FER68J	C	HY42DK	C	L2VEH8	C
FKE3PF	C	J9AAKK	None	L7EK7U	C
FNTTYG	C	JGX6HE	C	LP7GNB	C
FZ9MCV	C	JJ7HZG	C	LUK4GT	C
G6WM7G	C	JPEGX2	N/A	M9TJV9	C
G83BBK	C	JPUZHY	C	MAU8HE	C
GAT7CL	None	JPWPNG	C	MQU8DM	C
GGAVUG	C	JRJAPE	C	MYUJQH	C
GJDK2W	-	JUNUHK	C	N447UK	C
GLYLTA	C	JXN6BZ	C	N98CZB	C
GNVXXP	None	JXQVHH	C	N98DY3	C
GRM7WQ	C	KEA38X	C	NBXCD2	C
GY6MFE	C	KJ6YNC	C	NCA4F4	C

TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
NG6XEP	C	RB4VRE	C	VQPE9X	N/A
NPJM4D	C	RM4LKM	C	WKDX43	C
NR7FWK	C	RM6BTQ	C	WYEM49	C
NV4MKP	C	RP9XF3	None	WYHAJ2	C
NZYNGB	C	RW8GRL	C	X249HH	C
P7YKHA	C	RZLBG4	C	X2FWRW	C
PBV6NE	C	TFDDM2	C	X3QXKW	C
PEWZMU	C	TL7FRL	C	X94RG8	C
PWARBJ	C	TLLWUF	C	X9HJT3	C
PZYX3F	None	TTKEBC	C	XENZM6	None
Q26VQG	None	U6AH4W	C	XFHMHG	C
QE9BN7	C	U9WAB7	C	FXXA9	None
QGETM2	C	UG7PYF	C	XH7V24	C
QL9NJU	None	UGHNR4	C	XNB29U	C
QP8YFU	C	UHE2EW	C	XQGCDB	C
QPQLCQ	C	UM9X22	C	XVCY9J	C
QPU6BZ	N/A	UT6AGK	C	Y6WRY7	C
QWTVHJ	C	UU9H4X	None	YAV4V7	C
R3FWCF	None	UZFN4A	None	YYTQV7	C
R6Y77D	C	VKXFHW	C	YYVDCJ	C

TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
Z778NE	C				
Z84CGE	C				
ZBY9QT	C				
ZEVZW6	C				
ZXC2VD	C				
ZZCBRL	C				

Response Summary		Total Participants: 187
Location	Total	

A	0
B	2
C	154
D	0
None	23

TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
264W7G	B	6V6DFX	B	9KZEFZ	B
2CNYDJ	B	6XDPXY	B	9YKTJY	B
2HUKE8	B	6XYIBA	B	A2JGFM	B
2JKBAV	B	6Z22YP	C	A3RVQM	B
2QMZ2Q	B	6Z23QN	B	A8Q7XV	B
2ULCXQ	B	76BEFN	B	AH9KZX	B
2XNXYW	B	78KETV	B	AMEH6V	B
2YLAMX	B	79DFGL	B	AP3VYK	B
32LYDK	B	7GJK6V	B	B4MUEZ	B
3AJDJ6	B	7MCDD4	None	BE76ZX	B
3KBH6W	B	7MD6RY	B	BFGZLQ	C
3VG3RY	B	7Y7RG7	B	BK7TFR	B
3XKT2Y	B	8278GG	B	BMT7AG	B
4CJ9FD	B	84DNLT	B	BW2XKW	B
4NAUTU	B	8K2Z3E	B	BYQZQK	B
4NUJ33	B	8TC3NF	B	CA7GMB	B
4RRDKQ	B	948TGD	B	CDNEE8	B
6L337Z	B	992Q4J	B	CG7TRT	B
6NRDWT	B	994CUH	B	D7YBWG	B
6NU2KX	B	9J7PTX	B	DFN8LB	B

TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
DHTUBL	B	GY8AV8	B	KKYKJN	B
DJ9UKQ	B	H8EA2N	B	KLC3P2	B
DTZAGU	B	H8JQ4T	B	KM3BTN	B
DZW4GD	B	H9RZ4P	B	KNXVFN	B
EK3YQV	B	HEJ3CW	B	KTRXFG	B
EWA6GN	B	HPHZWB	B	KTTL3M	B
F7VDP6	B	HXEQLR	B	KVHYK6	B
FER68J	B	HY42DK	B	L2VEH8	B
FKE3PF	B	J9AAKK	B	L7EK7U	B
FNTTYG	B	JGX6HE	B	LP7GNB	B
FZ9MCV	B	JJ7HZG	B	LUK4GT	B
G6WM7G	B	JPEGX2	B	M9TJV9	B
G83BBK	B	JPUZHY	None	MAU8HE	B
GAT7CL	B	JPWPNG	B	MQU8DM	B
GGAVUG	B	JRJAPE	B	MYUJQH	B
GJDK2W	B	JUNUHK	B	N447UK	B
GLYLTA	B	JXN6BZ	B	N98CZB	B
GNVXXP	B	JXQVHH	B	N98DY3	B
GRM7WQ	B	KEA38X	B	NBXCD2	None
GY6MFE	B	KJ6YNC	B	NCA4F4	B

TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
NG6XEP	B	RB4VRE	B	VQPE9X	B
NPJM4D	B	RM4LKM	B	WKDX43	B
NR7FWK	B	RM6BTQ	B	WYEM49	B
NV4MKP	B	RP9XF3	B	WYHAJ2	B
NZYNGB	B	RW8GRL	B	X249HH	B
P7YKHA	B	RZLBG4	B	X2FWRW	B
PBV6NE	B	TFDDM2	B	X3QXKW	B
PEWZMU	B	TL7FRL	B	X94RG8	B
PWARBJ	B	TLLWUF	B	X9HJT3	B
PZYX3F	B	TTKEBC	B	XENZM6	B
Q26VQG	B	U6AH4W	B	XFHMHG	B
QE9BN7	B	U9WAB7	B	FXXA9	B
QGETM2	B	UG7PYF	B	XH7V24	B
QL9NJU	B	UGHNR4	B	XNB29U	B
QP8YFU	B	UHE2EW	B	XQGCDB	B
QPQLCQ	B	UM9X22	B	XVCY9J	B
QPU6BZ	B	UT6AGK	B	Y6WRY7	B
QWTVHJ	B	UU9H4X	B	YAV4V7	B
R3FWCF	B	UZFN4A	B	YYTQV7	B
R6Y77D	B	VKXFHW	B	YYVDCJ	B

TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
Z778NE	B				
Z84CGE	B				
ZBY9QT	B				
ZEVZW6	B				
ZXC2VD	B				
ZZCBRL	B				

Response Summary		Total Participants: 187
Location	Total	

A	0
B	181
C	2
D	0
None	3

Development Methods

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
264W7G	Cyanoacrylate Fuming	MVC3000: 2,12gram Cyanoacrylaat, 120C, 80%, 15min Cyclus
2CNYDJ	Cyanoacrylate Fuming	Chamber: Foster Freeman MVC3000. Processing time 15 minutes, humidity 80%, 12 drops cyanoacrylate, CyanoBloom. temperature 120 C.
	Dye Stain	BasicYellow 40 (ethanol based).
2HUK8	Visual Examination	Visually observed
	Alternate Light Source	blue light wavelength (420-470 nm) with a yellow filter
	Cyanoacrylate Fuming	Humidity cycle-80% RH 15 mins, Glue cycle- 80%RH 120 degrees Celcius 25 mins, Purge Cycle- <80% RH ~20 min
	Powder Dusting	Bichromatic powder and brush
2JKBAV	Visual Examination	12/04/2019 at 1:18 pm Visual exam yielded insufficient details.
	Alternate Light Source	12/04/2019 at 1:20 pm Alternate light source using an Ultra Violet flash light yielded insufficient results.
	Cyanoacrylate Fuming	12/04/2019 at 1:25 pm Cyanoacrylate fuming chamber was used to enhance development of any possible ridge detail. dime size amount in tin foil containers for 12-15 minutes
	Visual Examination	12/04/2019 at 1:50 pm Visual exam yielded insufficient details.
	Dye Stain	12/04/2019 at 1:51 pm Item was placed in fume hood in a glass tray and processed using Rhodamine 6G for 2-5 minutes then rinsed using Rhodamine 6G rinse.
	Visual Examination	12/04/2019 at 2:04 pm a visual exam was performed and ridge detail was present.
2QMZ2Q	Cyanoacrylate Fuming	10 minute processing in cyanoacrylate chamber. Print visible in section A of item.
2ULCXQ	Powder Dusting	used black magnetic powder, ridge detail developed in block labeled A.
2XNXYW	Visual Examination	white light
	Cyanoacrylate Fuming	Humidity in cabinet: 80% rh. Heat on glueplate: 120 degrees Celcius. Process time: 10 minutes
2YLAMX	Visual Examination	Examined in the white light and daylight.
	Alternate Light Source	Examined at 320-405 nm, 450 nm, 470 nm, 490 nm, 505 nm, 530 nm wavelength.
	Cyanoacrylate Fuming	Fuming - 15 min, t - 120 C, RH - 80 percent. Examined in the white light.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
32LYDK	Visual Examination	
	Cyanoacrylate Fuming	40 Min glue cycle
	Dye Stain	Rhodamine 6G, water rinse and dry
3AJDJ6	Visual Examination	Use of oblique and direct lighting to visually examine item.
	Cyanoacrylate Fuming	Fume in chamber for 10 minutes at 70% humidity / purge for an additional 10 minutes.
	Dye Stain	Spray with Rhodamine 6G (methanol) / methanol rinse
3KBH6W	Visual Examination	
	Powder Dusting	silver powder - 5 minutes
3VG3RY	Visual Examination	White light, Reflected UV light
	Cyanoacrylate Fuming	Tank #2 - 12 minutes
	Dye Stain	Rhodamine 6G (methanol)
3XKT2Y	Visual Examination	
	Alternate Light Source	365nm, 450nm, and 532nm
	Cyanoacrylate Fuming	visual exam and 254nm RUVIS
	Dye Stain	RAM followed by ALS (365nm, 450nm, and 532nm)
4CJ9FD	Visual Examination	Ambient light and oblique light examination.
	Cyanoacrylate Fuming	Foster & Freeman Chamber MVC3000 chamber. Relative humidity 80%, 20 minute autocycle.
	RAM	RAM with blue/green alternate light source with orange filter.
4NAUTU	Visual Examination	fingermark was visible 350 nm
	Cyanoacrylate Fuming	Fume chamber
	Dye Stain	Basic Yellow 40
4NUJ33	Visual Examination	Processing Time: < 1 minute
	Cyanoacrylate Fuming	Processing Time: 51 minutes. Humidity cycle: 15 minutes @ 80%. Glue cycle: 16 minutes @ 120 degrees Celsius 80%. Purge cycle: 20 minutes at <80%
	Powder Dusting	Processing Time: ~ 1 min. Magnetic powder
4RRDKQ	Visual Examination	High Intensity Light Source exam - Crime Lites (White, Green, Blue UV)
	Cyanoacrylate Fuming	15 Mins Glue Time
	Dye Stain	Basic Yellow 40 Stain

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
6L337Z	Visual Examination	Viewed with direct magnified light. No visible prints found.
	Cyanoacrylate Fuming	Placed in controlled atmospheric CA fuming chamber for 13 minutes with test print. Visually examined post fuming and photographed developed glue print and test print.
	Powder Dusting	Applied grey contrast powder with a brush to further enhance contrast of developed print. Then photographed again.
6NRDWT	Visual Examination	Various angles of white light from LED flashlight and general ambient light used.
	Cyanoacrylate Fuming	65% humidity; approximately 1g of liquid cyanoacrylate; fumed for approximately 8 minutes; vented for approximately 20 minutes; concurrent control = passed.
6NU2KX	Visual Examination	
	Cyanoacrylate Fuming	MASON VACTRON - MVC5000. 30 MINUTES TO 1 HOUR CYCLE
	Powder Dusting	MAGNETIC POWDER
	Powder Dusting	BLACK POWDER
6V6DFX	Cyanoacrylate Fuming	120° C /80% Rh, 8 min, 1.5 g glue
	Dye Stain	2 g BY40/1 96% ethanol
6XDPXY	Cyanoacrylate Fuming	
	Dye Stain	Basic Yellow 40
6XYIBA	Visual Examination	angular lighting
	Alternate Light Source	
	Cyanoacrylate Fuming	Temperature of the heating plate: 100 C. Humidity: 80%. Time: 35 minutes
	ARDROX	
6Z22YP	Visual Examination	in natural light and light from forensic illuminator, print was observed in section A
	Cyanoacrylate Fuming	time - 15 min., RH - 80 %, glue - 2 g, developed fingerprint did not become better
	Dye Stain	Basic Yellow 40 - to achieve even better contrast - positive result
6Z23QN	Cyanoacrylate Fuming	CA in Vacuum chamber. Time: 25min
	Dye Stain	Basic Yellow
	Alternate Light Source	Photoluminescence mode: Light Source: 450nm led light. Filter: 495nm long pass filter

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
76BEFN	Visual Examination	under white light
	Alternate Light Source	fluorescence examination (350 nm - 650 nm under appropriate colour barrier filters)
	Cyanoacrylate Fuming	in the fuming chamber with a humidity 80% for 10 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 colour barrier filters)
78KETV	Visual Examination	
	Cyanoacrylate Fuming	
	Dye Stain	MRM-10
79DFGL	Cyanoacrylate Fuming	The evidence was exposed to cyanoacrylate vapor for 5 minutes at room temperature and humidity condition as per LPPM, R5 procedures.
7GJK6V	Cyanoacrylate Fuming	Foster Freeman MVC3000 8 min 1.5 g glue
	Dye Stain	Basic Yellow 40
7MCDD4	Visual Examination	
	Cyanoacrylate Fuming	MVC Fuming chamber for 8 minutes
	Dye Stain	RAM
	Alternate Light Source	Screening with ML2: 445nm-510nm w/OG550 AG filter.
7MD6RY	Visual Examination	Lighting: Crimelite and TracER laser
	Cyanoacrylate Fuming	Lighting: Crimelite and Incandescent light. Equipment: F+F MVC 5000 cabinet for approximately 70 minutes. Control: plastic -> positive
	Dye Stain	Rhodamine 6G. Lighting: TracER laser with a curved filter. Control: plastic -> positive
	Powder Dusting	White powder dusting. Lighting: incandescent
7Y7RG7	Visual Examination	
	Cyanoacrylate Fuming	approximately 15 minutes
	Dye Stain	MRM-10
8278GG	Cyanoacrylate Fuming	CA fumed for approximately 15 minutes
	Dye Stain	MRM-10, viewed under ALS blue light with orange filter
84DNLT	Cyanoacrylate Fuming	15 min fuming, 15 drops of cyanoacrylate
88EECR	Visual Examination	Oblique lighting
	Powder Dusting	Dual-surface powder

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
8K2Z3E	Visual Examination	lighting and magnification
	Cyanoacrylate Fuming	SafeFume chamber; 20 minutes; ~80% humidity; ~71.7F
8TC3NF	Cyanoacrylate Fuming	
	Dye Stain	MRM-10 used as dye stain
948TGD	Visual Examination	
	Cyanoacrylate Fuming	
992Q4J	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Dye Stain	Ardrox, 415 nm, yellow filter
994CUH	Cyanoacrylate Fuming	Processed in the superglue chamber for 40 minutes, starting at 0836hrs.
9J7PTX	Powder Dusting	Magnetic powder used
	Visual Examination	Visual processing (before powder was applied)
9KZEFZ	Cyanoacrylate Fuming	10/24/19 CAE (valid) to the piece of black polyethylene sheeting (item 1). I put the evidence in a CAE chamber with heat, humidity and a fan for about 20 minutes.
	Powder Dusting	10/30/19 MP (valid) to the piece of black polyethylene sheeting. I used black mag power to process the evidence.
9YKTJY	Visual Examination	
	Cyanoacrylate Fuming	
	Dye Stain	Rhodamine 6G
	Powder Dusting	White powder, Lifting attempted
A2JGFM	Cyanoacrylate Fuming	Superglue fuming (80% RH) + Basic Yellow 40 (Excitation wavelength 415 nm/Viewing filter: yellow)
A3RVQM	Cyanoacrylate Fuming	Used MVC3000, control +, blank -
	Dye Stain	Rhodamine R6G, control +, blank -, TracER laser
A8Q7XV	Visual Examination	Fingerprint could be seen in section A.
	Cyanoacrylate Fuming	Fingerprint developed further, section A.
	Dye Stain	Basic Yellow 40. Fingerprint developed further, section A.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
AH9KZX	Visual Examination	
	Alternate Light Source	Laser, Blue light, and UV
	Cyanoacrylate Fuming	Microburst method
	Dye Stain	RAM
AMEH6V	Visual Examination	Examined with a white light source.
	Cyanoacrylate Fuming	3.12g cyanoacrylate batch 092815 was placed into MVC5000 cabinet 4, along with item 1 and a control sample. Humidity was raised to 80% and then the superglue heated to 120°C for 15 minutes. Cabinet was purged for 45 minutes before the cabinet was opened. Control sample positive.
	Dye Stain	Item 1 and the control sample were placed in ethanol based basic yellow dye solution batch 15AS874 in tank 1 and then rinsed with tap water, then allowed to dry before examination. Control sample positive.
AP3VYK	Cyanoacrylate Fuming	Fumed the item for an hour, with the vacuum chamber at 37 degrees Celsius and the vapor pressure at eighty two degrees Celsius using payton scientific super glue. The item was dyestained, dried, and view under forensic laser.
B4MUEZ	Cyanoacrylate Fuming	Method for developing latent fingerprints on non-porous surfaces
BE76ZX	Visual Examination	using ambient lighting and flashlight
	Cyanoacrylate Fuming	generated humidity for about 20 minutes and fumed for about 10 minutes at 72 degrees F and relative humidity of 71%
	Dye Stain	R6G (MeOH) and viewed under green laser at 532 nm with orange filter
BFGZLQ	Alternate Light Source	RUVIS
BK7TFR	Visual Examination	One usable patent print located in quadrant A. Photographed using direct reflective lighting.
	Alternate Light Source	Laser examination. No prints observed.
	Cyanoacrylate Fuming	Patent print in quadrant A enhanced. Photographed.
	Dye Stain	Rhodamine 6G applied. No improvement observed.
	Alternate Light Source	Laser examination, print in quadrant A enhanced. Photographed under laser illumination.
BMT7AG	Cyanoacrylate Fuming	Portable Chamber, 20 minutes
BW2XKW	Visual Examination	Visual examination using oblique lighting
	Cyanoacrylate Fuming	Cyanoacrylate Fuming using a Mason Vactron MVC5000
	Dye Stain	Dye staining using Rhodamine 6G, viewed with a Polilight at 505nm with orange goggles.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
BYQZQK	Visual Examination	could very lightly see ridge detail, not enough to photograph
	Alternate Light Source	420-470 nm, possible ridge detail Section A
	Cyanoacrylate Fuming	2 drops of cyanoacrylate, possible ridge detail Section A
	Powder Dusting	Fluorescent powder; ALS used 420-470 nm, possible ridge detail Section A
CA7GMB	Visual Examination	1) Observation with the naked eye of the surface of the piece of black polyethylene sheeting under different inclinations. No trace detected.
	Alternate Light Source	2) Light shaving with Crimescope MCS-400 and wearing glasses of appropriate colors. A fingerprint is visible in case "A" with white light, not visible with the others wavelengths.
	Cyanoacrylate Fuming	3) In view of unporous support, autocycle for 1g of solution of Lumicyano 5% during 40 minutes. A control trace is placed in the tank. The ridges of the fingerprint are visible with naked eye.
	Alternate Light Source	4) The fingerprint is even more visibly illuminated with white light or in CSS or 535nm of the Crimescope.
	Powder Dusting	5) Graphic white powder deposited with a brush, revelation, a few seconds by rotating movement. The powder is tested on a control beforehand.
	Alternate Light Source	6) The fingerprint is illuminated with white light and under different wavelengths of the Crimescope to get the best contrast.
CDNEE8	Visual Examination	fingerprint is visible, so it was photographed using DCS-5
	Cyanoacrylate Fuming	item was put in POLYCYANO chamber for 25 minutes with humidity around 80% and the fingerprint became clearer than before
	Alternate Light Source	viewing under UV and the fingerprint was photographed using DCS-5.
CG7TRT	Visual Examination	Print visible in section A pre-treatment
	Alternate Light Source	DCS-5 (camera/software package) - Reflective U.V.
	Cyanoacrylate Fuming	20 minutes fuming, left for curing for 24 hours prior to dye staining
	Visual Examination	
	Alternate Light Source	DCS-5 (camera/software package) - Reflective U.V.
	Dye Stain	Basic Yellow 40 (Panacryl), no additional prints developed post treatments
	Alternate Light Source	Polilight

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
D7YBWG	Visual Examination	Visual examination - approx. 15 mins of processing time. Was not able to see any latent prints.
	UV	UV examination - visualized latent print under UV and photographed - approx. 30 mins- total time combined. latent print was visualized in section A - latent print was determined to be of value for source identification.
	Cyanoacrylate Fuming	CA fuming for approx. 15 minutes, faintly visualized latent print after CA fuming.
	Dye Stain	R6G dye stain with methanol as the carrier was applied and allowed to dry. Visualized latent print utilizing a forensic light source (laser)- latent print was visualized in section A - latent print appeared in better contrast - again photographed latent and determined that was suitable for source identification.
	Alternate Light Source	Alternate light source (laser) was utilized to visualized latent print dye stained with R6G. Photographed latent print- suitable for source identification
DFN8LB	Cyanoacrylate Fuming	Item # 1 was processed using Cyanoacrylate Fuming.
	Powder Dusting	Item # 1 was then dusted with fluorescent latent powder
DHTUBL	Visual Examination	The plastic was examined using ambient light.
	Cyanoacrylate Fuming	The plastic was fumed for 13 minutes with a control.
DJ9UKQ	Visual Examination	
	Cyanoacrylate Fuming	Gluetime 10 minutes, Glue temp 120 degrees, 80% humidity.
	Dye Stain	Basic Yellow 40. Examined in forensic light 430-470nm.
DTZAGU	Visual Examination	white light and magnifier
	Cyanoacrylate Fuming	1LP1 observed in Quadrant A
	Dye Stain	MBD, 1LP1_1 re-photographed at dye stain
DZW4GD	Cyanoacrylate Fuming	Polymerization standard is use to test that the chemicals are working properly. Item is place in the fuming tank with, humidity source and cyanoacrylate. Tank is enclosed and allowed to process for approximately 10 mins. The control is monitored for development.
EK3YQV	Visual Examination	
	Powder Dusting	Coinbox powder Volcano
EWA6GN	Cyanoacrylate Fuming	Processing time 9 min
	Dye Stain	BY40
F7VDP6	Cyanoacrylate Fuming	75% HUMIFICATION (20 MINUTES) AND 20 MIN PURGE, 20 MIN FUMIGATION.
	MAGNETIC POWDER-WITH	IMMEDIATELY

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
FER68J	Cyanoacrylate Fuming	30 Minute fume time in CA-6000 at 65% relative humidity, no further processing
FKE3PF	Visual Examination	Visual Examinations and Documentation- Black Polyethylene Sheet
	Alternate Light Source	ALS & Oblique lighting technique
	Cyanoacrylate Fuming	Cyanoacrylate Fuming Chamber (lot #201904100-5/2020)
	Alternate Light Source	ALS and Visual Examination. Visual: block "A"
	Powder Dusting	Magnetic Powder. Visual: block "A"
FNTTYG	Visual Examination	
	Cyanoacrylate Fuming	
FZ9MCV	Visual Examination	
	Powder Dusting	White magnetic powder
G6WM7G	Visual Examination	White, low angle light -- print visible in quadrant "A".
	Alternate Light Source	Multiple filters used -- print visible in quadrant "A".
	Cyanoacrylate Fuming	30 minute fume time at 75% humidity. Print visible in quadrant "A".
	Dye Stain	MBD dye stain applied after fuming. Print visible in quadrant "A" with ALS set at 455nm and viewed through an orange barrier filter.
G83BBK	Visual Examination	Conducted visual examination under white light and magnification.
	Alternate Light Source	Used 365nm UV, 450nm Blue Light, and 532nm Laser.
	Cyanoacrylate Fuming	Followed by visual exam and 254nm UV light with RUVIS.
	Dye Stain	Applied RAM dye stain (Rhodamine, Ardrex, MBD) and allowed to dry. Then used 365nm UV, 450nm Blue Light, and 532nm Laser.
GAT7CL	Visual Examination	Used oblique light to examine piece of plastic.
	Powder Dusting	Applied black magnetic powder to piece of plastic.
GGAVUG	Visual Examination	White light
	Cyanoacrylate Fuming	Humidity in cabinet: 80% rh. Heat on glueplate: 120 degrees Celcius. Process time: 10 minutes
	Dye Stain	Basic Yellow 40
	Alternate Light Source	420-470 nm
GJDK2W	Cyanoacrylate Fuming	Visual examination and photography then cyanoacrylate fuming in Foster Freemans MVC1000 cabinet. 4-5 drops of clue 15minutes time. Then Basic Yellow 40 threatment.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
GLYLTA	Visual Examination	ambient lighting
	Alternate Light Source	Crime-Lite ML2; Orange/Red/Yellow filters at 480nm-560nm OG 590. Orange/Red/Yellow filters at 420nm-470nm GG 495. Crime Scope CS-16-500; 445nm to 515nm orange filter
	Cyanoacrylate Fuming	Misonix CA-6000 chamber at 65% relative humidity with 30 minutes exposure
GNVXXP	Visual Examination	Examination under ambient and oblique lighting. An apparent latent print was observed under these lighting conditions in Section A of the black polyethylene sheeting.
	Powder Dusting	Used bichromatic fingerprint powder. An apparent fingerprint developed in Section A of the black polyethylene sheeting. No apparent fingerprints were observed in Sections B,C, or D.
GRM7WQ	Visual Examination	
	Cyanoacrylate Fuming	10 minutes
	Powder Dusting	Magnetic
GY6MFE	Visual Examination	Weak print.
	Cyanoacrylate Fuming	Weak, good visibility in glare.
GY8AV8	Visual Examination	White light
	Alternate Light Source	Polilight, Foster+Freeman Crime-lite ML2 - all available wavelengths
	Cyanoacrylate Fuming	Processing time 15 min
	Dye Stain	Basic Yellow 40
H8EA2N	Visual Examination	Examined with a white light source.
	Cyanoacrylate Fuming	3.23g of cyanoacrylate batch 092815 - placed into MVC5000 cab#4, along with this item and a control sample. Cabinet was set to auto cycle, raised to 80% humidity and 120degrees C. The cabinet was purged for 45 minutes before the cabinet was opened. The control sample was positive.
	Dye Stain	Item 1 and the control sample dipped in an ethanol based basic yellow dye solution batch 15as874, dye tank#2. Rinsed with tap water and allowed to dry naturally. Control sample positive.
H8JQ4T	Cyanoacrylate Fuming	Visual examination and photography. Fuming in Foster Freeman MVC100 cabinet. 4-5 drops of cyanoacrylate clue in 15 minutes time. After that Basic Yellow 40 threatment.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
H9RZ4P	Visual Examination	Ridge detail of a fingerprint was seen in quadrant "A" upon visual exam with a flashlight. I photographed that latent prior to moving on with processing.
	Cyanoacrylate Fuming	Fumed for 16 min in Air Science Chamber. Ridge detail was seen after CA fuming.
	Dye Stain	Rhodamine 6G was used.
	Alternate Light Source	Laser. Ridge detail was seen after dye stain and laser were applied. ** A test strip was used to ensure that the reagents worked properly. The test strip passed all chemical tests. **
HEJ3CW	Cyanoacrylate Fuming	12 minutes
	Dye Stain	MRM-10
HPHZWB	Cyanoacrylate Fuming	A CYAT chamber was used for the processing of Item #1. Cyanoacrylate was placed inside of a aluminum tin and the placed in a heating element within the chamber. The evidence and a control/standard was placed inside the chamber and the chamber was run for 40 minutes with a 5 minute purge time.
	Powder Dusting	After the cyanoacrylate processing, Item #1 was found to have a developed print inside section A. The item of evidence was then processed with black magnetic powder to further enhance the fingerprint.
HXEQLR	Visual Examination	Positive with ambient light
	Lumicyano	0.135g powder mixed with 2.7g solution; fumed for 17 minutes in CApture-BT chamber; Improved with green light and orange filter
HY42DK	Visual Examination	Visual examination under natural light.
	Cyanoacrylate Fuming	Cyanoacrylate - Lot #[Number], Exp. 4/20 - Positive control. Fuming chamber - Humidity cycle raised humidity to 70%, Fuming cycle for 10 minutes, and Purge cycle for 10 minutes.
	Dye Stain	RAM Dyestain - Lot #[Number], Exp. 09/2020 - Positive control. Sprayed on item and rinsed with water. Allowed to air dry.
	Alternate Light Source	Yellow filter with alternate light source at 445nm produced best visualization.
	Powder Dusting	(After ALS & photography) Magnetic powder
J9AAKK	Visual Examination	Viewed Item 1 from all angles, to include a magnifying light.
	Alternate Light Source	Viewed Item 1 under 365nm, 450nm, and 532nm
	Cyanoacrylate Fuming	Placed Item 1 in a SGF chamber, waited for humidity to reach 70%, added 2g of cyanoacrylate, fume and purge. Viewed item visually and with RUVIS following SGF.
	Dye Stain	Processed Item 1 with RAM. Viewed under 365nm, 450nm and 532nm.
JGX6HE	Powder Dusting	Visual examination was negative. Dusted with silver black fingerprint powder and latent appeared in quadrant A.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
JJ7HZG	Visual Examination Powder Dusting	No results on visual examination. Applied Magnetic powder. Print appeared in quadrant A.
JPEGX2	MAGNETIC GRAY	PROCEDURE FOR THE PROCESSING OF LOPHOSCOPIC INDICES
JPUZHY	Cyanoacrylate Fuming	120°C, humidity 60 - 90%, processing time 15 min
JPWPNG	Visual Examination Alternate Light Source Cyanoacrylate Fuming Dye Stain	Used oblique lighting and bright white light. Three light sources - blue light (450nm), UV light (365nm) and laser (532nm). Used a superglue chamber and examined the item using a bright white light, oblique lighting and the RUVIS (254nm). Processed with RAM and examined with a 365nm UV light, a 450nm blue light and a 532nm laser.
JRJAPE	Visual Examination Cyanoacrylate Fuming Dye Stain	White ambient light. Print detected with good results. Improvement of the detected print. Basic Yellow 40. After treatment the item was examined with alternate light source (blue, 420-470 nm). No improvement of the detected print.
JUNUHK	Visual Examination Cyanoacrylate Fuming Dye Stain	12 min. R6G
JXN6BZ	Cyanoacrylate Fuming	
JXQVHH	Visual Examination Alternate Light Source Cyanoacrylate Fuming Dye Stain	Visually looked at the item for any prints Used 532nm Laser, 450nm Blue light, and 365nm UV performed a visual examination and then used the RUVIS (254nm) Used RAM on the item and used the 532nm Laser, 450nm blue light, and 365nm UV to visualize
KEA38X	Visual Examination Lumicyano Fuming	UV, Ambient, Green, Blue-green CApture-BT chamber, 75% humidity, 17 minutes
KJ6YNC	Visual Examination Alternate Light Source Cyanoacrylate Fuming Dye Stain	Negative results. Negative results. Ridge detail observed in Section A Ridge detail observed in Section A

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
KKYKJN	Visual Examination	visual examination and item photographed
	Cyanoacrylate Fuming	Fumed for 10 minutes at 80% Relative Humidity, 5 minutes vapor purge cycle
	Powder Dusting	white magnetic powder applied to surface with magnetic wand. latent print now visible
KLC3P2	Cyanoacrylate Fuming	10min, RH 80%, 120C
	Dye Stain	Basic Yellow 40 ethanol based 100%
KM3BTN	Visual Examination	diffused reflective lighting
	Lumicyano Fuming	Pre-set Cycle 3 on CAPture-BT fuming chamber
KNXVFN	Visual Examination	Visually examined the item for any possible visible latent prints - none observed.
	Cyanoacrylate Fuming	Cyanoacrylate Fuming Chamber - Humidity Cycle @ 80% for 15 minutes, Glue Cycle @ 120 deg C for 10 minutes, Purge Cycle for 20 minutes. Cyanoacrylate - Lot #201906326
	Visual Examination	Visual Examination after Cyanoacrylate Fuming to locate any developed latent prints - latent ridge detail development observed.
	Dye Stain	MBD Dye Stain - Lot #092319-01. Applied with pipette
	Alternate Light Source	Examined with an alternate light source - Blue Light (420-470 nm), Yellow Filter (GG495 AG, 476 nm) to locate any developed latent prints- latent print observed to fluoresce
	Powder Dusting	Black Magnetic Powder - Lot #201504053-04. Applied with magnetic wand (brush) until latent ridge detail is observed to develop - process until adequate development is achieved.
KTRXFG	Cyanoacrylate Fuming	Fumed in an automatic fuming chamber for 15 minutes.
	MBD	treated with 7-P-methoxybenzylamino-4-nitrobenz-2-oxa-1-3-diazole and viewed under alternate light source at 450nm.
KTTL3M	Visual Examination	Visual Examination using white light (Crime Lite) and an ALS (Tracer Laser)
	Cyanoacrylate Fuming	Cyanoacrylate fuming using Foster & Freeman MVC5000 (approx. 70 minutes)
	Dye Stain	Used Rhodamine 6G
	Powder Dusting	White powder dusting
KVHYK6	Cyanoacrylate Fuming	Cyanoacrylate fuming processing time 12 minutes. Magnetic powder used on surface. Positive result in Section "A" on Item #1.
L2VEH8	Cyanoacrylate Fuming	Fumed for 20 minutes

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
L7EK7U	Visual Examination	
	Alternate Light Source	350 nm and 515 nm on Crime Scope were used to examine this item
	Cyanoacrylate Fuming	
	Dye Stain	Rhodamine in Methanol
	Dye Stain	Ardrox in Methanol
LP7GNB	Cyanoacrylate Fuming	1- Visual Examination: The Item was photographed before examination. 2- Examination in white light (Polilight flare 2 "ROFIN"). No Latents Visible. 3- Alternate Light Source : Examined with at 430nm - 550nm (Polilight flare 2 "ROFIN") and goggles. No Latent Visible. 4- Cyanoacrylate Fuming :-The cabinet (Scenesafe) settings was: 1 g Superglue "Air Science" , 85 % humidity and the hot plate was set on 120 degrees. Processing time 8-10 minutes. A visible print was seen in section A. *Prints deposited on a piece of black polyethylene sheeting the day before, by human fingerprints (control sample), developed good quality prints. 5-fingerprint was photographed with white light and macro camera lens (Nikon D 3300). 6-Powder Dusting (to improve the quality of latent print): White magnetic powder, Enhanced ridges of latent print. Fingerprint was photographed with white light and macro camera lens (Nikon D 3300).
LUK4GT	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	Basic Yellow 40
M9TJV9	Visual Examination	Nothing observed.
	Alternate Light Source	Nothing observed.
	Cyanoacrylate Fuming	Observed ridge detail in Section A.
	Dye Stain	Observed ridge detail in Section A.
MAU8HE	Visual Examination	I visually examined the square piece of trash bag and I did not collect prints at this time
	Cyanoacrylate Fuming	I placed the item into the superglue chamber. I placed a dime size amount of superglue into the dish and placed it on the heating plate. I filled the water chamber to add humidity to the chamber. The entire process inside the chamber takes approximately 1 hour and 40 minutes to go through the entire cycle. I did not collect prints at this time.
	Powder Dusting	I dusted the trash bag for prints using magnetic powder. I collected the print that developed in box labeled "A" and I collected it using a tape lift and placed the print on a latent print card and filled in the information that is needed.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
MQU8DM	Visual Examination	
	Alternate Light Source	532nm laser, 450nm forensic blue light, 365nm UV
	Cyanoacrylate Fuming	Visual + 254nm RUVIS
	Dye Stain	RAM + 532nm laser, 450nm forensic blue light, 365nm UV
MYUJQH	Visual Examination	Crimelite and TracER Laser
	Cyanoacrylate Fuming	70 minutes in F+F MVC 5000 chamber.
	Dye Stain	Rhodamine 6G
	Powder Dusting	black powder
N447UK	Visual Examination	ambient room light, flashlight
	Cyanoacrylate Fuming	72 degrees F and 65% relative humidity in chamber, approximately 10 minutes fume time
	Dye Stain	rhodamine 6G, 532nm laser, orange filter
N98CZB	Visual Examination	Item was visually examined after opening package.
	Alternate Light Source	Krimesite scope with ultraviolet light utilized.
	Cyanoacrylate Fuming	Item placed in fuming chamber with 80% humidity for 20 minutes, and a purging cycle of the chamber for 20 minutes. Latent impression was visible in Section A.
	Visual Examination	Latent impression was visible in Section A.
	Dye Stain	Rhodamine 6g Dye Stain (Lot #: 110013019) applied through spray to item, and allowed to dry for 1 hour. Latent impression was visible in Section A.
	Alternate Light Source	Item examined through alternative light source of 515 nm and utilizing orange beta blocker visors. Latent impression was visible in Section A.
	Powder Dusting	Item was processed with silver metallic powder.
	Visual Examination	Latent impression was visible in Section A.
N98DY3	Visual Examination	1. visual examination - light UV 350 nm, and light 415 nm - 590 nm - fingerprint trace revealed. 2. cyanoacrylate - white light. 3. Basic Yellow 40 - light UV 350 nm, and light 415 nm, 450 nm
NBXCD2	Visual Examination	Visual Examination with following ways: 1. Naked eye. 2. Blue Light (440 nm). 3. Green Light (550 nm). No mark found.
	Cyanoacrylate Fuming	Processing Time: 20 mins, which includes Humidifying, Fuming and Purging. After 20 mins, Mark search was done using white light. Mark found on Section A.
	Dye Stain	After Dying with BY40, kept to dry for 20 mins in fumehood. After 20 mins, Mark search was done using 440nm light (blue light). No Additional marks found. But the one found after Cyanoacrylate fuming got better.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
NCA4F4	Visual Examination	Visual exam under ambient/white light -> no FRD observed
	Alternate Light Source	Visual exam under Crimescope at 350 - 495 nm wavelengths using yellow and orange filters -> no FRD observed in quadrants B-D, "print shaped residue" not suitable for capture observed in quadrant A
	Cyanoacrylate Fuming	Placed in CA-6000 at 65% relative humidity for ~20 minutes
	Visual Examination	Visual exam under ambient/white light -> FRD observed in quadrant A - prepped for capture, no FRD observed in quadrants B-D
	Dye Stain	Processed RAM, sprayed and hung to dry ~1 minute
	Alternate Light Source	Visual exam under Crimescope at CSS wavelength using orange filter -> no enhancement or additional FRD observed
NG6XEP	Cyanoacrylate Fuming	12 minutes
	Dye Stain	MRM-10
	Alternate Light Source	CSS
NPJM4D	Visual Examination	Looked at the item under bright white light at different angles.
	Alternate Light Source	Looked at item under LASER 532nm, Blue light 450nm, and UV 365nm. No new development was seen.
	Cyanoacrylate Fuming	I used 2g of cyanoacrylate in a MYSTAIRES fuming chamber at 70% and 300 degrees Celsius to develop prints. I visually examined the item and did not see any new development. I used FSIS 254nm (Full Spectrum Imaging System) and RUVIS 254nm (Reflective Ultraviolet Imaging System) to visualize ridge detail but saw no new detail.
	Dye Stain	I used the dye stain RAM (Rhodamine, Ardrex and MBD) on the item. Then to visualize a print I used Laser 532nm, Blue light 450nm, and UV 365nm. No new development was seen.
NR7FWK	Powder Dusting	Magnetic Black Powder
NV4MKP	Alternate Light Source	Visual examination with lights (range 390-850nm). Crime-Lite 82S UV light (range 350-380nm).
NZYNGB	Powder Dusting	Magnetic Powder
P7YKHA	Visual Examination	Oblique white light
	Cyanoacrylate Fuming	2 hours 15 minutes, Rhodamine 6G

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
PBV6NE	Visual Examination	White light examination of exhibit as received using ambient laboratory lighting and 'Tiablo' High Power LED Flashlight at varying angles. Ridge detail was present and the mark was photographed.
	Alternate Light Source	Sequential initial High Intensity Light Source (HILS) examination carried out, following dark adaptation, using Green Crime Lite 490nm-560nm with 571 nm viewing filter followed by Blue Crime Lite 420nm-470nm with 476nm viewing filter and UV Crime Lite 350nm- 380nm with 408nm viewing filter. Magnifying eyeglass used where required. Ridge detail was present and the mark was photographed. QA adhered to and control test piece passed.
	Cyanoacrylate Fuming	Carried out as per CAST validated/internally verified procedure (Foster & Freeman MVC5000 Cabinet, Relative Humidity 80%, Glue time 13 minutes & 3g of superglue used). Following treatment, examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass used where required. Ridge detail was present and the mark was photographed. QA adhered to and control test piece passed.
	Powder Dusting	Carried out as per CAST validated/ internally verified procedure, Aluminium Powder used with Zephyr brush. Following treatment, examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass where required. Ridge detail was present and the mark was photographed. QA adhered to and control test piece passed.
	Dye Stain	Ethanol-Based BY40 dye used, carried out as per CAST validated/ internally verified procedure. BY40 dye applied to both sides of the item for ~15 seconds. Rinsed with water and left to dry. Examined when dry using blue Crime Lite 420-470nm with 476nm viewing filter, following dark adaptation, and magnifying eyeglass used where required. Ridge detail was present and the mark was photographed. QA adhered to and control test piece passed.
	Wet Powder Suspension	Titanium Dioxide (White) powder suspension used, carried out as per CAST validated/internally verified procedure. Both sides of the item treated. Pre-rinsed non-adhesive side with water. Powder Suspension applied to item with soft squirrel hair brush and left for ~10-20 seconds. Powder Suspension rinsed off using gently running water until maximum contrast obtained and then allowed to dry. When dry, examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass used where required. QA adhered to and control test piece passed. Ridge detail was present and the mark was photographed. QA adhered to and control test piece passed.
PEWZMU	Visual Examination	Ambient lighting, UV, and Tracer used -- visible with all
	Cyanoacrylate Fuming	Misonix - fumed for 13 minutes, visual with oblique lighting
	Dye Stain	Basic Yellow - blue light, yellow filter

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
PWARBJ	Visual Examination	
	Alternate Light Source	3 Forensic Light Sources (FLS; LASER 532nm, Blue Light 450nm & UV 365nm)
	Cyanoacrylate Fuming	Includes examining the item visually & with a light source (RUVIS 254nm)
	Dye Stain	RAM; Includes examining the item visually & with 3 light sources (LASER 532nm, Blue Light 450nm & UV 365nm)
PZYX3F	Visual Examination	Visually inspected under ambient light.
	Cyanoacrylate Fuming	Approx. 20 drops of arrowhead forensics cyanoacrylate, +control (lot [Number], exp 04/2020). Used Mystaire CA-6000 chamber: 70% humidity, 10 mins fuming, 10 mins purging
	Dye Stain	Applied RAY (spray method), rinsed w/water, and air dried in secured locker.
	Alternate Light Source	Crimescope CS-16 ALS at 475nm
Q26VQG	Visual Examination	Ambient light (approximately 2 mins)
	Cyanoacrylate Fuming	F&F 3000 fuming chamber- auto cycle (approximately 1 hour total)
	Powder Dusting	Bichromatic powder and brush (Approximately 2 mins)
	Visual Examination	ambient light (Approximately 2 mins)
QE9BN7	Visual Examination	Visual examination prior to processing
	Cyanoacrylate Fuming	1 hour in Foster Freeman MVC3000
	Dye Stain	Rhodamine-6-G
QGETM2	Cyanoacrylate Fuming	
	Dye Stain	Item 1 was photographed and processed for latent prints using Krimesite, Superglue fuming, Basic Yellow 40 dye-stain, white light and the forensic light source.
	Alternate Light Source	
QL9NJU	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	Test print good
	Alternate Light Source	
QP8YFU	CNA/BY40	Ethanol base BY40. A captured by image team.
QPQLCQ	Cyanoacrylate Fuming	
QPU6BZ	Cyanoacrylate Fuming	Processing time: 25 minutes. No dye stain used.
	Powder Dusting	Black Magnetic fingerprint powder

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
QWTVHJ	Visual Examination	Performed VIS utilizing oblique lighting. Visualized print.
	Alternate Light Source	Utilized 532nm Laser, 450nm blue light and 365nm UV.
	Cyanoacrylate Fuming	Performed VIS then utilized RUVIS and 254nm.
	Dye Stain	Applied RAM then utilized 532nm Laser, 450nm blue light and 365nm UV.
R3FWCF	Visual Examination	
	Cyanoacrylate Fuming	Humidity Cycle (80% humidity, approx. 15 mins), Glue Cycle (80% humidity, approx. 20 mins), Purge Cycle (<80% humidity, approx. 20 min)
	Powder Dusting	Bichromatic powder
R6Y77D	Visual Examination	Examined using Crimelite flashlight.
	Alternate Light Source	Examined using ALS at 530nm.
	Cyanoacrylate Fuming	Foster & Freeman MVC 500 fuming chamber for 70 minutes.
	Dye Stain	Rhodamine 6G dye stain applied, dried and observed under LASER at 532nm.
	Powder Dusting	Dusted with white fingerprint powder.
RB4VRE	Visual Examination	
	Alternate Light Source	532nm, 450nm, and 365nm
	Cyanoacrylate Fuming	
	Alternate Light Source	RUVIS (254nm)
	Dye Stain	RAM - Rhodamine 6G, Ardrox, and MBD
	Alternate Light Source	532nm, 450nm, and 365nm
RM4LKM	Cyanoacrylate Fuming	12 minutes super glue chamber, RAM, ALS
RM6BTQ	Visual Examination	UV light
	Cyanoacrylate Fuming	Fumed for 7 minutes in Misonix fuming chamber
	Dye Stain	Basic Yellow 40
RP9XF3	Visual Examination	Sample was observed before processing, ridge detail apparent in section A.
	Alternate Light Source	Sample observed under 254 nm light source with 254 filter, ridge detail apparent in section A, test prints on similar material positive.
	Cyanoacrylate Fuming	Sample Fumed in Cy-Vac chamber for approximately 40 minutes, test prints positive.
	Rhodamine 6G applied	Rhodamine 6G applied to sample and observed under Tracer Laser

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
RW8GRL	Visual Examination	Normal procedure we use is syanoacrylate clue in fuming cabinet. In this case fingerprint could be seen in visual examination in normal white lamplight.
RZLBG4	Visual Examination	Oblique lighting
	Cyanoacrylate Fuming	
	Powder Dusting	Bichromatic powder- Dusti ident
TFDDM2	Cyanoacrylate Fuming	15 minutes, 80% humidity
TL7FRL	Visual/Superglue/Rhodamine 6G	Item 1 = Positive with Visual A. Positive with Cyanocrylate ester fuming A. 1. Place the evidence within the chamber. 2. Add cold tap water to the humidifier to facilitate the CA polymerization. This humidifies the evidence prior to exposure to CA fumes and improves recovery results. 3. Place an aluminum dish on the heating element with liquid CA (10 drops. 4. Turn the system on and depress the operation button. Took 28 minutes. (Test Print positive.) Rhodamine 6G Positive A. Method: 1. After a non-porous item has been treated with CA fuming, R6G is applied (under a fume hood) by spraying or submerging the item in the R6G. 2. Allow the item to dry. 3. Examine using the TracER Laser or an ALS (excitation range 450 – 480nm)utilizing appropriate goggles (see below for further details). A CA-fumed control print is to be tested at the time of use to ensure the R6G is working properly.(test print positive). Any latent prints suitable for recovery developed or enhanced by R6G will be photographed. Utilize the proper orange colored camera lens barrier filter for the ALS. Utilize the proper orange argon camera lens barrier filter for the Coherent TracER Laser.
TLLWUF	Visual Examination	
	Cyanoacrylate Fuming	A test print was placed in the Foster Freeman MVC 3000.
	Dye Stain	Basic Yellow 40 was sprayed utilizing a Preval sprayer on the sheeting. I waited one minute and rinsed the sheeting lightly with tap water. I hung the sheeting in a vent hood to dry.
TTKEBC	Cyanoacrylate Fuming	10 minutes in fuming chamber with hot plate
	Dye Stain	MRM-10
	Alternate Light Source	
U6AH4W	Visual Examination	
	Cyanoacrylate Fuming	
	Visual Examination	

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
U9WAB7	Visual Examination	Fluorescent lighting
	Cyanoacrylate Fuming	Safe Fume CA tank: 80% RH, 30 mins. fuming time, LOT# CA190820
	Powder Dusting	Contrasting powder
	Dye Stain	Ardrox; LOT#ARD191008; Viewed under UV light
UG7PYF	Visual Examination	
	Alternate Light Source	532nm, 450nm, 365nm
	Cyanoacrylate Fuming	plus RUVIS
	Dye Stain	RAM (532nm, 450nm, 365nm)
UGHNR4	Visual Examination	Examination with an alternate forensic light source with appropriate filters (light source – POLILIGHT PL 500)
	Cyanoacrylate Fuming	20 min exposure, 120° C, 80% humidity, viewing in white light and with POLILIGHT PL 500 in 505-530 nm range + appropriate filters
	Dye Stain	Spraying item with BASIC YELLOW 40 working solution, after 1 min the excess of reagent was rinsed under running tap water, viewing with POLILIGHT PL 500 in 415-495 nm range + appropriate filters
UHE2EW	Visual Examination	
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Dye Stain	R.A.M., 350 nm
UM9X22	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	humidity - 80%, temperature of the heating plate - 100 degrees Celsius, time - 35 minute
	Basic Yellow 40	
UT6AGK	Cyanoacrylate Fuming	MVC-3000
	Dye Stain	Rhodamine 6G
UU9H4X	Visual Examination	
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Dye Stain	Ardrox, 415 nm, yellow filter

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
UZFN4A	Visual Examination	
	Alternate Light Source	all wavelengths up to 555nm
	Cyanoacrylate Fuming	15minutes in superglue tank, 80% humidity
	Dye Stain	rhodamine
	Alternate Light Source	505nm, orange goggles
VKXFHW	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Dye Stain	R.A.M., CSS source, orange filter
VQPE9X	Cyanoacrylate Fuming	Processed for 10 mins with Cyanoacrylate fuming
	Powder Dusting	processed with magnetic powder and wand, twice
WKDX43	Visual Examination	3 minutes
	Light source (white light) LED	5 minutes
	Cyanoacrylate Fuming	liquid superglue for 50 minutes
	Ardrox	cyanoacrylate dye for 30 minutes
	Laser (UV) light	10 minutes
	Black powder	5 minutes
WYEM49	Visual Examination	White light. Coaxial light. Luminescence (from 315nm to 570nm)
	Lumicyanoacrylate	10% of Lumicyano powder in Lumicyano solution. RH : 80%. Temperature : 120°C. Time : 60min. Observation in UV
	Dye Stain	BY40 : Immersion and observation at 415nm
WYHAJ2	Visual Examination	white light visual examination, no RD was observed
	Cyanoacrylate Fuming	Chamber @80°C and 70% RH for 15 minutes. RD was observed in Quadrant A, quadrant identified so suspended processing at this point, would have followed up with R6G dye stain and LASER exam if a LP had not been recovered
X249HH	Visual Examination	5 Minutes
	Cyanoacrylate Fuming	15 Minutes in fuming cabinet
	Dye Stain	10 Minutes
	Alternate Light Source	10 minutes, R6G
X2FWRW	Cyanoacrylate Fuming	Portable fuming chamber for 20 minutes

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
X3QXKW	Visual Examination	
	Alternate Light Source	Using Polylight 500 from 350-600nm
	Cyanoacrylate Fuming	Processing time approx 1 hour 80%Rh, glue heated to 120Celsius
X94RG8	Cyanoacrylate Fuming	Visual examination (000-495nm); photography; basic yellow; humidity 81.4%; temperature 130°C
X9HZT3	Visual Examination	
	Alternate Light Source	LASER (532 nm), blue light (450 nm), and long wave UV (365 nm)
	Cyanoacrylate Fuming	visual and RUVIS (254 nm)
	Dye Stain	RAM, used LASER (532 nm), blue light (450 nm), and long wave UV (365 nm)
XENZM6	Powder Dusting	
XFHMHG	Cyanoacrylate Fuming	Visual, CA Fuming, Magnetic powder. No times recorded
XFXXA9	Visual Examination	No visible staining observed.
	Cyanoacrylate Fuming	Processing time: 51 Min. Humidity: 15 min @ 80%. Glue Cycle: 16 Min @ 80%, Temp 120 C. Purge Cycle: 20 Min @ 80%
	Powder Dusting	Bichromatic
XH7V24	Visual Examination	Using ALS (CrimeScope) detail marked as P1 was found at 415nm using a yellow filter.
	Cyanoacrylate Fuming	Processed using a Misonix CA-6000. 10 minutes at 80% humidity
	Dye Stain	Rhodamine 6g (Methanol based) was used. A Coherent TracER 532nm LASER was used combined with an orange filter to view item.
XNB29U	Visual Examination	
	Cyanoacrylate Fuming	
	Dye Stain	MBD
XQGcdb	Visual Examination	Naked eye, oblique lighting
	Cyanoacrylate Fuming	Auto cycle programmed parameters: Humidity 80% RH ~15 mins. Glue 80% RH 120 degree C ~15 mins. Purge <80% RH ~20 mins
	Powder Dusting	Fiberglass brush used to apply bichromatic powder till adequate development observed
XVCY9J	Visual Examination	UV light with yellow filter
	Cyanoacrylate Fuming	Misonix chamber used. Fuming time: 7 minutes
	Dye Stain	Basic Yellow 40. Blue light with yellow filter

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
Y6WRY7	Visual Examination	High intensity white light and LASER ALS
	Cyanoacrylate Fuming	Foster and Freeman MVC500 Auto cycle (~70 minute run time)
	Dye Stain	Rhodamine 6 G
	Powder Dusting	White fingerprint powder
YAV4V7	Visual Examination	incandescent, crime lite, and ALS
	Cyanoacrylate Fuming	
	Dye Stain	R6G
	Powder Dusting	White powder
YYTQV7	Cyanoacrylate Fuming	8 minute processing time
	Dye Stain	MRM-10
	Alternate Light Source	
YYVDCJ	Visual Examination	Using Ambient light and Coherent Tracer (532nm w/ orange goggles)
	Cyanoacrylate Fuming	Fumed in Misonix at 80% humidity and viewed with UV and ambient light.
	Dye Stain	Stained with Basic Yellow 40 and viewed with blue light and yellow goggles.
Z778NE	Visual Examination	A visual exam using a flashlight and oblique lighting was used to visualize a print in box A. The print was then photographed comparatively with a scale.
	Cyanoacrylate Fuming	CA fuming was conducted to enhance the print in box A. The print was then photographed comparatively with a scale.
	Dye Stain	R6G was used in conjunction with an ALS (TracER laser) to visualize and comparatively photograph the same print.
	Powder Dusting	Fingerprint powder was then applied to the print and fingerprint tape was placed on top. It was photographed in place, lifted, and placed on a white latent print card.
Z84CGE	Cyanoacrylate Fuming	fumed for 12 minutes
	Dye Stain	RAM
ZBY9QT	Visual Examination	a trace was observed in section A
	Cyanoacrylate Fuming	temp. 21°C, time 15 min, humidity 80%
	Basic Yellow	light 350-505 nm

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
ZEVZW6	Alternate Light Source	white light, 340-587nm, UV, coaxially reflected
	Cyanoacrylate Fuming	humidity 80%: humidity cycle 15 min, glue cycle 15 min, purge cycle 40 min.
	Alternate Light Source	white light source
	Dye Stain	Staining with Rhodamine 6G
	Alternate Light Source	fluorescence examination with polylight (491nm-548nm)
ZXC2VD	Wet Powder Suspension	Visual examination with lights (range 390-850nm). White wet powder
ZZCBRL	Cyanoacrylate Fuming	Approximately five minutes with heat and low humidity.
	Dye Stain	MRM-10 with ALS.

Response Summary	Participants: 187
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Methods Utilized			
Alternate Light Source	72	Physical Developer	0
Cyanoacrylate Fuming	166	Powder Dusting	50
DFO	0	Visual Examination	136
Dye Stain	96	Wet Powder Suspension	2
Ninhydrin	0	1,2-Indanedione	0

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

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
264W7G	1,2-Indanedione	IND-Zinkchloride HFE7100. Attestor NINcha S31: 80C, 62%, 5 min
	Ninhydrin	Ninhydrine oplossing (petroleumether). Attestor NINcha S31: 80C, 62%, 5 min
2CNYDJ	1,2-Indanedione	Chamber: Labrum Klimat. Temperature 65 C, humidity 65 %, processing time 30 minutes.
2HUKE8	Visual Examination	Visually observed
	Alternate Light Source	blue light wavelength (420-470 nm) with a yellow filter
	Ninhydrin	Special formula Ninhydrin sprayed, steam iron used, allowed to air dry overnight, special formula Ninhydrin sprayed again, steam iron used
	1,2-Indanedione	Item submerged in 1,2 indanedione solution, steam iron used
2JKBAV	Alternate Light Source	green light wavelength (500-560 nm) with orange filter glasses used
	Visual Examination	12/05/2019 at 1:30 pm Visual exam yielded negative results.
	Alternate Light Source	12/05/2019 at 1:31 pm Alternate light source using an Ultra Violet flash light yielded negative.
	Ninhydrin	12/05/2019 at 1:31 pm Item was placed in fume hood in a glass tray and processed using Ninhydrin pre-mix spray.
	Visual Examination	12/05/2019 at 1:35 pm Visual exam yielded negative results.
	Heating Oven	12/05/2019 at 1:38 pm Heating Oven was used for 5 minutes at 32 degrees Celsius
2QMZ2Q	Visual Examination	12/05/2019 at 1:42 pm Visual exam yielded negative results.
	Alternate Light Source	12/05/2019 at 1:48 pm Alternate light source using an Ultra Violet flash light yielded negative.
2QMZ2Q	Ninhydrin	Soaked paper with ninhydrin solution. Exposed paper to heat and humidity with steam iron for approximately 5 minutes. Print developed in section C of paper.
2ULCXQ	Ninhydrin	Item appeared to be porous. Used control and item processed with liquid ninhydrin. After air dried, exhibit was placed into a humidity chamber for 45 minutes. No latent ridges developed. Repackaged item under temporary seal. Reexamined on 11/7/2019 and no ridge was present. Repackaged.
2XNXYW	Visual Examination	white light
2YLAMX	Visual Examination	Examined in the white light and daylight.
	Alternate Light Source	Examined at 320-405 nm, 450 nm, 470 nm, 490 nm, 505 nm, 530 nm wavelength.
	Ninhydrin	Solution: Ethanol based. The item was processed in the DFO/Ninhydrin chamber for 15 min., t - 80 C, RH - 65 percent. Examined in the white light.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
32LYDK	Visual Examination	
	DFO	DFO 100 DEGREES C, oven, 10 mins
	Ninhydrin	steam iron, placed in plastic ziplock baggie, viewed the following day to check for further development
3AJDJ6	Visual Examination	No ridge detail visible.
	Ninhydrin	Spray with Ninhydrin and processed in a controlled humidity chamber at 70% humidity and 70 degree heat for 20 minutes. Faint friction ridge detail developed. Resprayed item with Ninhydrin and re-processed in controlled humidity chamber at 70% humidity and 70 degree heat for another 20 minutes.
3KBH6W	Visual Examination	
	Ninhydrin	3 days
3VG3RY	Visual Examination	White light. ALS.
	DFO	Plus heat: 100 degrees for 20 minutes.
	Ninhydrin	Plus heat/humidity: 80 degrees at 65% RH
3XKT2Y	Visual Examination	
	Alternate Light Source	365nm, 450nm, and 532nm
	1,2-Indanedione	w/532nm - LASER
	Ninhydrin	
	Physical Developer (PD)	
4CJ9FD	Visual Examination	Ambient light.
	1,2-Indanedione	Caron 6105 Fingerprint chamber. 20 minutes.
	Ninhydrin	Caron 6115 Heat/Humidity chamber. 20 minutes.
4NAUTU	Visual Examination	
	DFO	
	Ninhydrin	
4NUJ33	Visual Examination	Processing Time: 1 minute
	Ninhydrin	Processing Time: ~30 minutes for each spraying. Item sprayed with special formula Ninhydrin (twice). Air dried after each time sprayed
	Steam iron	Applied heat using a steam iron on the highest setting after each air drying
	1,2-Indanedione	Processing Time:~ Item submerged in solution ~10 seconds. Dried in DFC200A Development Chamber @ 200 degrees F for 30 minutes. Item submerged a second time in solution ~10 seconds and air dried. Applied heat using a steam iron

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
4RRDKQ	Visual Examination	High Intensity Light Source - Crime Lites (White, Green, Blue UV)
	DFO	100 degrees Celsius for 20 mins
	Ninhydrin	80 Degrees Celsius at 62% RH (+/- 5%) for 5 mins
6L337Z	Visual Examination	Viewed under direct magnified light. No visible prints found.
	1,2-Indanedione	Applied to test print and determined suitable for use. Photographed test print. Applied to paper flyer, dried, applied dry heat.
	Alternate Light Source	Visualized developed print under alternate light sources at 505 nm with an orange filter, then under 532 nm with orange filter and orange/FF1 filter combination for best contrast result. Photographed.
	Iodine Fuming	Applied Iodine crystal fumes to test print and photographed. Applied Iodine crystal fumes to paper flyer. No development occurred.
	Ninhydrin	Applied Ninhydrin to test print and photographed. Applied Ninhydrin to paper flyer. No development occurred.
6NRDWT	Visual Examination	ambient light and LED flashlight used
	1,2-Indanedione	working solution Lot # LP053030419JH; controls = passed; applied by pouring onto paper and letting dry for approximately 5 minutes; heat press used at approximately 160 degrees for 10 seconds
	Alternate Light Source	Laser @ 532nm with orange barrier filter
6NU2KX	Visual Examination	
	Ninhydrin	HEPTANE NINHYDRIN
	CARON FINGERPRINT CHAMBER	10 MINUTES
6V6DFX	Ninhydrin	80° C / 65% 10 min
6XDPXY	Ninhydrin	
6XYBA	Visual Examination	
	Alternate Light Source	
	DFO	Temperature: 100C. Time: 10 minutes
	Ninhydrin	Temperature: 80C. Humidity: 60%. Time: 10 minutes

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
6Z22YP	Visual Examination	in natural light and light from forensic illuminator, print was observed in section B
	Cyanoacrylate Fuming	time - 15 min., RH - 80 %, glue - 2 g, developed fingerprint did not became better
	Powder Dusting	black fingerprint powder applied with brush, developed fingerprint did not became any better
	DFO	time - 20min., temp. 100 C, developed fingerprint did not became any better
	Ninhydrin	time 20 min., temp. 70 C, RH - 62%, developed fingerprint did not became any better
6Z23QN	1,2-Indanedione	heat: 180°C, 3min
	Alternate Light Source	Photoluminescence mode: Light Source: 505nm LED. Filter: 550nm Longpass Filter
76BEFN	Visual Examination	under white light
	Alternate Light Source	fluorescence examination (350 nm - 650 nm under appropriate colour barrier filters)
	DFO	baked in the chamber DFO at approximately 100°C (212°F) for 10 minutes; fluorescence examination in alternate light source (505 nm - 530 nm under orange barrier filter)
	Ninhydrin	in the chamber with a humidity 65% and temperature 50°C for 10 minutes; visual examination under white light
78KETV	Visual Examination	
	Ninhydrin	Steam ironed. Latent developed.
	Oil Red O	
79DFGL	Ninhydrin	The entire paper was sprayed with the solution from approx. 8 inches away. Then, it was left to air dry for 24 hours at temperature and humidity room conditions.
7GJK6V	Ninhydrin	10 min 80 C 65 % humidity
7MCDD4	Visual Examination	No ridge detail
	DFO	Heat
	Alternate Light Source	Screened: 480-560nm/OG590 AG
	Ninhydrin	Heat and humidity
7MD6RY	Visual Examination	Lighting: Crimelite and TracEr laser, no filter
	DFO	Lighting: TracER laser with a curved filter. Equipment: Sanyo Gallankamp oven for approximately 20 minutes. Control: L-Alanine test strip-> positive
	Ninhydrin	Lighting: incandescent. Equipment: Sanyo Gallankamp oven for approximately 6 minutes. Control: L-Alanine test strip -> positive

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
7Y7RG7	Visual Examination Ninhydrin	Heat/humidity chamber used - 80C/65% humidity for approximately 10 minutes
8278GG	Ninhydrin	oven at 80 degrees and 65 percent humidity
84DNLT	Ninhydrin	65 degrees, 65 % humidity, 30 min.
88EECR	[No Methods Reported.]	Qualified for non-porous examinations only
8K2Z3E	Visual Examination Powder Dusting Ninhydrin	lighting and magnification Black magnetic powder (lightly dusted) Ninhydrin in acetone (spray); heated in oven at 55C for 20 minutes
8TC3NF	Ninhydrin	15 minutes at 80 degrees C and 65% humidity
948TGD	Alternate Light Source DFO Ninhydrin	
992Q4J	Visual Examination Alternate Light Source Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
994CUH	Ninhydrin	Dipped in Ninhydrin for about 10 seconds at 0827hrs. Allowed to dry for 2 hours.
9J7PTX	Visual Examination	Visual processing
9KZEFZ	Ninhydrin	10/24/19 Ninhydrin (lot 19.3) to the white copy paper flier (Item 2). I put the evidence in the Ninhydrin chamber with heat and humidity for about 20 minutes.
9YKTJY	Visual Examination DFO Ninhydrin	
A2JGFM	1,2-Indanedione	1,2 Indanedione (100°C/10'/Excitation wavelength 495 nm/Viewing filter: orange) + Ninhydrin (RH62%-80°C-5')
A3RVQM	Ninhydrin	Caron chamber, small humidifier for approx. 50 mins, 72 hr processing. amino acid reference pad, control +, blank -

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
A8Q7XV	Visual Examination	Nothing could be seen.
	DFO	Processing time: 20 minutes. Fingerprint developed in section C
	Ninhydrin	Processing time: 7 minutes. Fingerprint developed in section C
AH9KZX	Visual Examination	
	Alternate Light Source	Laser, blue, and UV
	1,2-Indanedione	
	Physical Developer (PD)	
AMEH6V	Ninhydrin	Item 2 and a control sample were drawn through the ninhydrin working solution, batch 143121 and then after drying in the fume cabinet, were placed in Gallencamp oven 3 for 6 minutes set at 80.0°C temperature and 62% humidity. Control sample positive.
AP3VYK	DFO	Paper was treated with DFO, dried and heater in a 100 degrees Celsius oven for 20 minutes and viewed under laser.
B4MUEZ	Ninhydrin	Method for developing latent fingerprints on porous surfaces
BE76ZX	Visual Examination	using ambient lighting and flashlight
	1,2-Indanedione	used heat press for about 10 sec and viewed under green laser at 532 nm and orange filter
BFGZLQ	Alternate Light Source	RUVIS
BK7TFR	Visual Examination	No prints observed.
	Alternate Light Source	Laser examination, no prints observed.
	Ninhydrin	Ninhydrin in petroleum ether formula. (Proceeded with Heat & Humidity, once item was dry.)
	Heat & humidity	Heat & humidity applied via humidity chamber. Usable latent developed in quadrant C. Photographed and scanned on flatbed scanner.
	Visual Examination	Re-examined one day after processing was performed. No improvement observed.
BMT7AG	Ninhydrin	Ninhydrin - methanol base. Fingerprint development chamber, 20 minutes dip method, 80C/65% humidity 20 minutes

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
BW2XKW	Visual Examination	Visual examination viewing the paper and different angles.
	Ninhydrin	Petroleum Ether based Ninhydrin. Soaked the item until saturated, let dry in fume hood and used a steam iron to accelerate the processing. No latent prints visible. Re-soaked until saturated, let dry in fume hood and used a steam iron to accelerate the processing. No latent prints visible. Scanned item using an Epson scanner. Enhanced the digital image in Photoshop using channel A of Lab Color mode. Possible latent print in quadrant C. No discernible pattern type or ridge flow. Let item sit over night. Viewed item approximately 20 hours later. Re-scanned item using an Epson scanner. Enhanced the digital image in Photoshop using channel A of Lab Color mode. Possible latent print in quadrant C. No discernible pattern type or ridge flow. Enhance the original second scan digital image in Photoshop using Black and White, dropping all color channels except red and magenta. Possible latent print in quadrant C. No discernible pattern type or ridge flow.
BYQZQK	Visual Examination	no ridge detail
	Alternate Light Source	no ridge detail
	Ninhydrin	Item was processed in ninhydrin chamber for over 12 minutes. Ninhydrin was applied to item twice, possible ridge detail in Section C; very faint
CA7GMB	Visual Examination	1) Inclination of the white copy paper flier and observation with naked eye. No trace detected.
	Alternate Light Source	2) Light shaving with Crimescope MCS-400 under different wavelengths and wearing glasses of appropriate colors. No trace detected.
	1,2-Indanedione	3) In view of porous support, vaporisation of a solution 1,2-Indanedione on the white copy paper flier, waiting 2 minutes for evaporation of the solution. then the object is placed under a heating press at 165°C during 10 seconds. The solution is tested on a control beforehand. No trace is detected.
	Alternate Light Source	4) Crimescope MCS-400 at CSS filter and orange filter glasses for observation. The trace is observed in case "C". The trace is not complete, the basal part is not very marked but the center of the figure is visible to determine "first level".
	Ninhydrin	5) Vaporization ninhydrine on the white copy paper flier, waiting 2 minutes for evaporation of the solution. Then the object is placed in a tank in the dark at room temperature with a beaker of water for 24 to 48 hours for a slow reaction. The object is checked regularly with naked eyes to verify a fingerprint with purple crests is revealed. Slightly visible ridges but not enough to determine the "first level".

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
CDNEE8	Visual Examination	No fingerprint was detected
	Alternate Light Source	Checking under UV, No fingerprint was detected
	Ninhydrin	Fingerprint was detected and it was photographed using DCS-5. then it was put in an oven for 5 minutes at 100 degrees and humidity is 65%.
	ZnCl2	Fingerprint ridges clarity was improved.
CG7TRT	Visual Examination	No prints visible pre-treatment
	Iodine fuming	No prints developed with iodine fuming
	1,2-Indanedione	Post indanedione treatment, heated at 100 deg celcius for 20mins
	Alternate Light Source	Print developed post indanedione treatment - visible at 505nm
	Ninhydrin	No additional prints developed, original print better post indanedione (before ninhydrin treatment)
	Visual Examination	Green light used
D7YBWG	Visual Examination	Visual examination was performed on Item 2, approx. 5 mins - no latent prints were observed
	1,2-Indanedione	Indanedione was applied to Item 2 utilizing the spray method, allowed to dry and then was placed in oven at 100 degrees for approx. 5 minutes.
	Alternate Light Source	Alternate Light Source (laser) was utilized to visualize latent print. Latent print was developed in section C of Item 2. Latent print was determined to be suitable for source identification.
	Ninhydrin	Ninhydrin was applied to item 2 after the application of Indanedione. Ninhydrin was applied utilizing the spray method, allowed to dry and then place in a humidity chamber at 99 degrees and 80% humidity. No latent print was observed.
DFN8LB	Ninhydrin	Item # 2 was processed using Ninhydrin
DHTUBL	Ninhydrin	The paper was treated with Ninprint and was allowed to dry in a fume hood. A control was used.
	Steam heat	Steam heat was applied to the item, and an impression developed.
DJ9UKQ	Visual Examination	
	DFO	100 degrees, 20 minutes. Examined in forensic light 515nm.
	Ninhydrin	62 % humidity, 80 degrees, 5 minutes.
DTZAGU	Visual Examination	white light, magnification
	1,2-Indanedione	placed in heated chamber for 30 minutes. 2LP1 - Quadrant C
DZW4GD	Ninhydrin	PLAP standard is use to test that the chemicals are working properly. Item is immersed in ninhydrin for approximately 10 seconds. The items is then exposed to relative humidity.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
EK3YQV	Visual Examination	As part of Crime Scene Unit, this item would only be visually processed. The item would be submitted to the latent print processing unit because there have more equipment to handle different surfaces.
EWA6GN	DFO Ninhydrin Physical Developer (PD)	
F7VDP6	Ninhydrin	THE ITEM WAS SPRYED WHITH NINHIDRIN, THEN IT WAS IN THE CHAMBER FOR UP TO 9 HOURS.
FER68J	Ninhydrin	Ninhydrin Petroleum Ether, dipped item in solution, air dried, 30 min exposure in FDC060 environmental chamber at 80 degrees Celsius and 65% relative humidity. No further processing.
FKE3PF	Visual Examination Alternate Light Source Iodine Ninhydrin	Visual Examination and Documentation- White Paper (Flier) ALS, UV, and Oblique lighting Iodine crystal Ampules Fuming (+ test print) Ninhydrin Fuming Chamber (lot #s 0000213042, SHBL0134, 18B206504- 08/14/2020), (+ test print). Visual: block "C"
FNTTYG	Visual Examination 1,2-Indanedione	
FZ9MCV	Visual Examination DFO Ninhydrin	Heated in oven at ~100 degrees C for 20 minutes. Visualized with ALS at 555 with Red goggles. Ninhydrin applied on 10/23/19. Item heated in humidified oven at ~70 degree C for more than 25 minutes. First visual exam on 10/23/19. Second visual exam on 10/25/19.
G6WM7G	Visual Examination Alternate Light Source DFO Ninhydrin	White, low angle light -- results negative. Multiple filters applied (400nm-555nm) -- results negative. Item was dipped in DFO and allowed to air dry. Item was placed in a 200F DFO oven for 25 minutes. Item was then viewed under an ALS (400nm-555nm) and an orange barrier filter(goggles) -- print visible in quadrant "C". Item was dipped in ninhydrin and allowed to air dry. Item was then placed in a sealed chamber and a beaker of distilled water was added to the chamber. Item was allowed 36 hours of development time -- print visible in quadrant "C".

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
G83BBK	Visual Examination	Conducted visual examination under white light and magnification.
	Alternate Light Source	Used 365nm UV, 450nm Blue Light, and 532nm Laser.
	1,2-Indanedione	Placed in 100 degree Celsius oven for 20 minutes, followed by visual exam and viewed under 532nm Laser.
	Ninhydrin	Placed in humidity cabinet set at 76% humidity and 76 degrees for 15 minutes. Visual exam performed after item cooled.
	Physical Developer (PD)	Soaked in Maleic Acid solution for 15 minutes, placed in Redox working solution for 15 minutes, placed in distilled water for rinse, then final rinse in sink. Item dried using a flat dryer. Then a visual exam was performed.
GAT7CL	Visual Examination	Used oblique lighting to examine the paper flier.
GGAVUG	Visual Examination	white light
	Ninhydrin	Heat in cabinet: 80 degrees Celcius. Humidity in cabinet: 65% rh. Process time: 5 minutes
GJDK2W	[No Methods Reported.]	No methods for this kind of materials in [Laboratory]
GLYLTA	Visual Examination	ambient lighting
	Alternate Light Source	Crime-Lite ML2; Orange/Red/Yellow filters at 480nm-560nm OG 590. Orange/Red/Yellow filters at 420nm-470nm GG 495. Crime Scope CS-16-500; 445nm to 515nm with orange filter
	Ninhydrin	Acetone in-lab preparation; 1.2% concentration. Environmental chamber incubation; 80 degrees C at 65% relative humidity; 20 minutes exposure. NOTE: the chamber developed a water leak at 20 minutes and the incubation was halted at that time to address the mechanical failure of the chamber.
GNVXP	Visual Examination	Examination under ambient and oblique lighting. No apparent fingerprints were observed in Sections A, B, C, or D under both lighting conditions. No additional latent print processing was attempted on Item 2 because the laboratory does not have a procedure for processing latent prints on porous materials.
GRM7WQ	Visual Examination	
	Ninhydrin	Heptane Based - 10 minutes at 70 degrees Celsius and 65% Humidity
GY6MFE	Visual Examination	Nothing
	Ninhydrin	Weak print

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
GY8AV8	Visual Examination	White light
	Alternate Light Source	Polilight, Foster+Freeman Crime-lite ML2 - all available wavelengths
	DFO	100° C, 0% RH. Processing time 10 min
	Ninhydrin	80° C, 65% RH. Processing time 5 min
H8EA2N	Ninhydrin	The item and a control were drawn through the Ninhydrin solution, batch 143121, left to dry thoroughly in the fume cabinet. The item and control sample were placed in Gallencamp oven 3 for 6minutes. Temperature set at 80degrees and humidity at 62%. Control sample was positive
H8JQ4T	[No Methods Reported.]	Not possible to examine in [Laboratory].
H9RZ4P	Visual Examination	No ridge detail was seen during visual examination.
	1,2-Indanedione	Applied 1, 2 indanedione to item 2.
	Alternate Light Source	A laser was used after indanedione. No ridge detail was developed on item 2.
	Ninhydrin	Applied NIN to item 2. No ridge detail was developed on item 2.
	Powder Dusting	Magnetic powder was used to attempt to develop any ridge detail on the piece of paper. No ridge detail was developed. ** A test strip was used to ensure that the the reagents worked properly. The test strip passed all chemical tests.**
HEJ3CW	Ninhydrin	heat/humidity chamber 20 mins
HPHZWB	Ninhydrin	Ninhydrin was used to process Item #2 and a control/standard. The items were placed inside of a container and the liquid ninhydrin was streamed over the papers. The evidence and the control/standard was hung to dry.
HXEQLR	Visual Examination	Negative with ambient, Tracer, and UV light
	DFO	100 degrees C for 20 minutes in Caron chamber; positive with green light and orange filter
	Ninhydrin	80 degrees C with ambient humidity for 30 minutes and then 2 minutes after 65% RH achieved in Caron chamber; not improved with ambient light
HY42DK	Visual Examination	Visual examination.
	Alternate Light Source	Different combinations of wavelengths and filters yielded no results.
	Ninhydrin	Ninhydrin - Lot #[Number], Exp. 10/8/20 - Positive control. Item sprayed with ninhydrin and exposed to steam for approximately 30 minutes. Item secured in locker to develop for at least 24 hours. Yielded very faint result.
	Powder Dusting	(After photography of faint ninhydrin development). Magnetic powder yielded no results.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
J9AAKK	Visual Examination	Item 2 was examined visually from all angles.
	Alternate Light Source	Item 2 was examined with 365nm, 450nm and 532nm.
	1,2-Indanedione	Item 2 was squirted with IND, allowed to dry and placed in the oven due to the humidity in the room. When the humidity is greater than 23%, the oven is used. Below 23% requires the humidity chamber. The humidity was 26% at the time of processing. Item 2 was placed in the oven for 20 minutes.
	Alternate Light Source	Item 2 was viewed VIS and under 532nm following processing.
	Ninhydrin	Item 2 was squirted with Ninhydrin, allowed to dry and placed in the humidity chamber for 15 minutes.
	Visual Examination	Item 2 was viewed VIS following processing with Ninhydrin.
	Physical Developer (PD)	Item 2 was processed with PD. A working solution was made from the available stock solutions within the lab. The working solution was mixed and sat on an orbital shaker for 5 minutes. A test strip tested satisfactory. Item 2 was placed in a maleic acid bath on an orbital shaker for 15 minutes. It was then placed in a redox working solution for 15 minutes, removed and rinsed. The initial rinse was followed by a second rinse. The item was dried using the available flat dryer and examined for prints.
JGX6HE	1,2-Indanedione	Visual examination with negative results. Applied Indanedione and heat. Examined with alternate light source and print appeared in quadrant C.
JJ7HZG	Visual Examination	No results on visual examination.
	Ninhydrin	Sprayed with Ninhydrin and applied wet heat and viewed under Crime Scope. Print appeared in quadrant C.
JPEGX2	MAGNETIC RED	PROCEDURE FOR THE PROCESSING OF LOPHOSCOPIC INDICES
JPUZHY	1,2-Indanedione	50°C, humidity 40%, processing time 3 h
	Ninhydrin	room temperature, humidity 65%, processing time 48h
JPWPNG	Visual Examination	Used oblique lighting and bright white light.
	Alternate Light Source	Three light sources - blue light (450nm), UV light (365nm) and laser (532nm).
	1,2-Indanedione	Processed with 1,2-indanedione (IND). Item dried and was placed in the 100 degree Celsius oven for 20 minutes. Visually examined the item using a bright white light and a 532nm laser.
	Ninhydrin	Processed with Ninhydrin (NIN). Item dried and was placed them in the 76% humidity chamber for approximately 15 minutes. Visually examined the item using a bright white light.
	Physical Developer (PD)	Processed with physical developer. Placed item in a maleic acid bath for 15 minutes, then placed the item in the Redox Working Solution for 15 minutes, next it was placed in a distilled water rinse followed by a second water rinse. Item dried. Visually examined the item using a bright white light.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
JRJAPE	Visual Examination	White ambient light. No print detected.
	DFO	Use of alternate light source (green, 500-550 nm). Print detected with good results.
	Ninhydrin	No print detected.
JUNUHK	Visual Examination	
	DFO	
	Ninhydrin	
JXN6BZ	1,2-Indanedione	
JXQVHH	Visual Examination	Visually looked at the item
	Alternate Light Source	Used 532nm Laser, 450nm Blue light, and 365nm UV
	1,2-Indanedione	used Indanedione and placed the item in the oven for 20 minutes, afterwards used the 532nm Laser
	Ninhydrin	used Ninhydrin and then placed the item in the humidity cabinet for 15 minutes and then performed a visual examination
	Physical Developer (PD)	used physical developer on the item and then performed a visual examination
KEA38X	Visual Examination	UV, Ambient, Green, Blue-green
	DFO	CARON chamber 100 degrees C
	Ninhydrin	CARON chamber, 80 degrees C, 65% humidity
KJ6YNC	Visual Examination	Negative results.
	Alternate Light Source	Negative results.
	DFO	Ridge detail observed in Section C
	Ninhydrin	Ridge detail observed in Section C
KKYKJN	Visual Examination	visual examination and item photographed
	Ninhydrin	item was submerged in Freon based ninhydrin solution and allowed to dry. faint latent print detail visible after ninhydrin. heat and humidity though the use of a clothes iron on steam setting used to further enhance latent print.
KLC3P2	DFO	20min, 100C
	Ninhydrin	5min, RH 65%, 81C
KM3BTN	Alternate Light Source	Tracer Laser
	DFO	Caron Environmental Chamber; 100 Cel. for 20 minutes
	Ninhydrin	Caron Environmental Chamber, 85 Cel. for 20 minutes, then added humidity up to 65% RH, held for 2 minutes (processed simultaneously with box from item 3)

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
KNXVFN	Visual Examination	Visual examination of the item for any possible visible latent prints - none observed.
	Ninhydrin	Ninhydrin Lot # 091619-01. Item dipped in tray of Ninhydrin for 10-20 seconds - air dry in the ambient - Item placed in Fingerprint Chamber (Ninhydrin Chamber)@ 75 deg C and 80% humidity for 5 minutes.
	Visual Examination	Visually examined the item to locate any developed latent ridge detail.
KTRXFG	Ninhydrin	Treated with ninhydrin and placed in a humidity chamber to accelerate process.
KTTL3M	Visual Examination	White light (Crimelite) and ALS (Tracer Laser)
	DFO	DFO + dry oven (0% humidity for 20 minutes at 100 degrees)
	Ninhydrin	Ninhydrin + humid oven (70% humidity, 80 degrees for 5 minutes)
KVHYK6	Ninhydrin	Prior to processing, item placed into clear protective sleeve and photocopied. Ninhydrin used with approximate processing time of 15 minutes. Iron used to add humidity to the paper. Positive result in section "C".
L2VEH8	Ninhydrin	Ninhydrin (methanol base). Used dip method, dried evidence, humidity chamber for 20 mins 80C/65% humidity
L7EK7U	Visual Examination	
	Alternate Light Source	350 nm and 515 nm on Crime Scope
	Ninhydrin	Processed with Ninhydrin and placed in heat and humidity chamber on 10/29/19 and again on 10/30/19
	Oil Red O	Processed in Oil Red O for 90 minutes on 11/8/19
LP7GNB	Ninhydrin	1- Visual Examination: Examined with natural light. No Latents Visible. Item was photographed. 2- Alternate Light Source: Examined with at 430nm - 550nm (Polilight flare 2 "ROFIN")and goggles. No Latent Visible. 3- Ninhydrin/ Petroleum Ether Solution: Item was dipped, dried and placed in chamber "NINcha S31" (temp. range 65°C, relative humidity 65 %) for aprox. 15min, examine visually, stored in dark location for 72 hours, * Prints deposited on a piece of paper the day before, by human fingerprints (control sample), developed good quality prints. 4- Visual Reexamination/ white light: A weak fingerprint (slight impression) was developed in quadrant C. 5- Fingerprint was photographed with green light (orange goggles) and macro camera lens (Nikon D 3300).
LUK4GT	Visual Examination	
	Alternate Light Source	
	1,2-Indanedione	
	Ninhydrin	

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
M9TJV9	Visual Examination	Nothing observed.
	Alternate Light Source	Nothing observed.
	DFO	Observed ridge detail in Section C.
	Ninhydrin	Faint ridge detail.
MAU8HE	Visual Examination	I visually examined the newspaper ad and I did not collect prints at this time
	Ninhydrin	I applied ninhydrin to the entire surface of the newspaper ad. I allowed the liquid to dry completely. I placed the newspaper ad in the Caron chamber. I waited until the chamber reached the desired temperature of 80 degrees and the humidity inside the chamber reached 65 percent. I allowed the newspaper ad to develop inside the chamber for approximately 5 minutes once I noticed the print being fully developed I pulled it from the chamber.
MQU8DM	Visual Examination	
	Alternate Light Source	532nm laser, 450nm forensic blue light, 365nm UV
	1,2-Indanedione	532nm laser
	Ninhydrin	
	Physical Developer (PD)	
MYUJQH	Visual Examination	Crimelite and TracER Laser
	DFO	100 degrees Celsius for 20 minutes
	Ninhydrin	70 degrees Celsius (wet bulb) and 80 degrees (dry bulb) for 6 minutes
N447UK	Visual Examination	ambient room light, flashlight
	1,2-Indanedione	+ zinc chloride, heat press, 532nm laser and orange filter
N98CZB	Visual Examination	Item was visually examined after opening package.
	Alternate Light Source	Krimesite scope with ultraviolet light utilized.
	Iodine Fuming	Iodine fuming was utilized. No latent impressions observed.
	Visual Examination	No ridge detail was observed after iodine fuming.
	Ninhydrin	Item was dipped in Ninhydrin (Lot 1425081519) and placed in heating chamber for 3 hours with water in petri dish for humidity. Faint ridge development was noted on Item in Section C. Item was then placed in evidence room to allow further Ninhydrin development. Item removed Dec 2, 2019 to be examined. No further latent print development observed. Item exposed to heat/steam from iron for latent print development. No further latent print development.
	Visual Examination	Faint ridge detail development was observe on in Section C of the item.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
N98DY3	DFO	1. visual examination - light UV 350 nm, and light 415 nm - 590 nm - no traces were revealed. 2. DFO - light 515 - 590 nm - fingerprint trace revealed. 3. Ninhydrin - light white, and light uv 350 - 590 nm
NBXCD2	Visual Examination	Visual Examination with following ways: 1. Naked eye. 2. Blue Light (440 nm). 3. Green Light (550 nm). No Mark found.
	1,2-Indanedione	Sprayed with 1,2 Indanedione, kept in Oven for 20 mins to dry at 100C temperature, with 0% humidity. After 20 mins, Mark search was done by using 515nm light (green), mark found on Section C.
	Ninhydrin	Sprayed with Ninhydrin, kept in Oven for 20 mins to dry at 80C temperature, with 65% humidity. After 20 mins, Mark search was done by using Naked eye and White light, no additional mark found.
NCA4F4	Visual Examination	Visual exam under ambient/white light -> no FRD observed
	Alternate Light Source	Visual exam under Crimescope at 350 - 495 nm wavelengths using yellow and orange filters -> no FRD observed
	Ninhydrin	Process Ninhydrin, dipped and hung to dry ~1 minute, placed in Weiss Gallenkamp Chamber at 65% relative humidity, 80 degrees C for ~20 minutes
	Visual Examination	Visual exam under ambient/white light -> no FRD observed in quadrants A, B, and D, FRD observed in Quadrant C-prepped for capture
NG6XEP	Ninhydrin	20 minutes in humidity chamber
NPJM4D	Visual Examination	Looked at the item under bright white light at different angles.
	Alternate Light Source	Looked at item under LASER 532nm, Blue light 450nm, and UV 365nm. No new development was seen.
	1,2-Indanedione	I used 1,2-Indanedione on the item. Let it dry under the hood then placed it in the oven for 20 minutes at 100 degrees celcius. I used LASER 532nm to visualize any ridge detail. Detail was seen using LASER.
	Ninhydrin	I used ninhydrin on the item. Let it dry under the hood then placed it in the humidity chamber for 15 minutes at 76% humidity. I performed a visual exam to see if any ridge detail developed. No new development was seen.
	Physical Developer (PD)	I placed the item in a tray for 15 minutes with maleic acid. Next I placed the item in a tray with redox working solution for 10 minutes. I then performed a DI water rinse followed by a tap water rinse. I dried the items on a dry iron. I performed a visual exam to see if any ridge detail developed. No new development was seen.
NR7FWK	Ninhydrin	Ninhydrin application and then 20 minutes in a humidity chamber

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
NV4MKP	1,2-Indanedione	Visual examination with lights (range 390-850nm). LABRUM KLIMATE Forensic Climate Cabinet FKC-2. Processing time 15 min. Temperature 90 celsius. Humidity 65%.
NZYNGB	Ninhydrin	Submerged evidence in Ninhydrin, allowed evidence to dry, placed in heat (80 degree) with humidity (65%) chamber for 20 minutes.
P7YKHA	Visual Examination 1,2-Indanedione-Zinc	Oblique white light The test item was treated with 1,2-Indanedione-Zinc solution, air dried and was pressed with pre-heated dry iron for 10 second after covering the item with plain white paper sheets.
PBV6NE	Visual Examination Alternate Light Source DFO Ninhydrin Physical Developer (PD)	White light examination of exhibit as received using ambient laboratory lighting and 'Tiablo' High Power LED Flashlight at varying angles. No useful marks were developed. Sequential initial High Intensity Light Source (HILS) examination carried out, following dark adaptation, using Green Crime Lite 490nm-560nm with 571 nm viewing filter followed by Blue Crime Lite 420nm-470nm with 476nm viewing filter and UV Crime Lite 350nm- 380nm with 408nm viewing filter. Magnifying eyeglass used where required. No useful marks were developed. QA adhered to and control test piece passed. Carried out as per CAST validated/internally verified procedure. Treated with DFO, allowed to dry, and then placed in oven for 20 minutes at 100°C. Following dark adaptation, examined using Green Crime Lite 82S 490-560nm with 571 nm viewing filter and magnifying eyeglass where required. Ridge detail was seen and the mark was photographed. QA adhered to throughout and control test piece passed. Carried out as per CAST validated/internally verified procedure. Treated with Ninhydrin and allowed to dry. Treated in oven set at 62%RH & 80°C for 6 minutes. Examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass where required. Ridge detail was seen and the mark was photographed. QA adhered to and control test piece passed. Carried out as per CAST validated/internally verified procedure. Ensured all solutions and room temperature > 17°C. Pre-treated with Maleic Acid for 10 minutes, treated with Physical Developer Working Solution for 20 minutes followed by 3 x water rinses as per procedure. All treatment stages carried out on rockers so exhibit was constantly agitated throughout. When dry, item was examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass where required. No useful marks were developed. QA adhered to and control test piece passed.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
PEWZMU	Visual Examination	Ambient lighting, UV, and Tracer used
	DFO	Caron - 20 min, 100 degrees Celsius, visual with Tracer (green light with orange filter)
	Ninhydrin	Caron - 2 min, 80 degrees Celsius, 65% relative humidity, visual with ambient lighting
	Physical Developer (PD)	5:90 ratio of Solution A:Solution B, in PD for 15 min, visual with ambient lighting
PWARBJ	Visual Examination	
	Alternate Light Source	3 Forensic Light Sources (FLS; LASER 532nm, Blue Light 450nm & UV 365nm)
	1,2-Indanedione	Includes examining the item visually & with a light source (LASER 532nm)
	Physical Developer (PD)	
PZYX3F	Visual Examination	Visually inspected under ambient light.
	Ninhydrin	ninhydrin +control (lot [Number], exp 10/08/2020); used steam iron; secured in locker over the weekend (approx. 39h30m)
Q26VQG	Visual Examination	11/18/19: Ambient light (Approximately 2 mins)
	Ninhydrin	11/18/19: Special formula spray followed with a steam iron on its highest setting (Approximately 20 mins total) and allowed to sit overnight
	Visual Examination	11/19/19: ambient light (approximately 2 mins)
	1,2-Indanedione	11/19/19: Indanedione powder mixed with ethyl acetate then HFE7100 solutions. item submerged in Indandione solution for approximately 30 seconds. followed with a steam iron on its highest setting (Approximately 20 mins) and allowed to sit overnight.
	Alternate Light Source	11/20/19: Crimelite 82S and Minicrime scope used, green wavelength and orange goggles used (Approximately 2 mins)
QE9BN7	Ninhydrin	Hexane based, humidity added for approximately 1 hour, allowed ridge detail to continue to develop over several days
	Visual Examination	Prior to processing
QGETM2	Ninhydrin	Items 2 was photographed and processed for latent prints using Ninhydrin and white light.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
QL9NJU	Visual Examination	
	Alternate Light Source	
	Iodine Fume	Iodine crystals in plastic bag ("shake and bake"). Test print good
	Ninhydrin	Test print good. Used steam iron to develop
	Alternate Light Source	
	Ninhydrin	Test print good
	Alternate Light Source	
	1,2-Indanedione	Test print good. Used dry iron to develop
	Alternate Light Source	
	Physical Developer (PD)	Test print good
	Alternate Light Source	
QP8YFU	Ind-Nin	'C' dev by indandione - captured by imaging. No further marks by nin treatment.
QPQLCQ	Ninhydrin	first Treatment on 11 November ==> very faint, second Treatment on 15 November ==> still faint
QPU6BZ	Ninhydrin	Chemical Treatment
	Iron	Iron used to apply heat. No reaction.
	Ninhydrin	Chemical Treatment
	Air dry	Air dry in hood for 2 minutes
	Iron	Iron used to apply heat. No reaction.
	Ninhydrin	Chemical Treatment
	Air Dry	Allowed to air dry for 3 days. No reaction.
	Visual Examination	No Reaction.
QWTVHJ	Visual Examination	Performed VIS utilizing oblique lighting.
	Alternate Light Source	Utilized 532nm Laser, 450nm blue light and 365nm UV.
	1,2-Indanedione	Placed in oven for 20 minutes then utilized 532nm Laser. Visualized print.
	Ninhydrin	Placed in humidity chamber for 15 minutes then performed visual exam.
	Physical Developer (PD)	Placed evidence in Maleic Acid for 10-15 minutes. Placed evidence in Redox working solution for 10-15 minutes. Rinsed with water.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
R3FWCF	Visual Examination	
	Ninhydrin	11/27/19 Ninhydrin Special Formula applied, allowed to dry overnight (2 nights), steam iron applied. No Results Observed. Positive control worked. 11/29/19 Ninhydrin Special formula applied second time, allowed to dry, steam iron applied. No Results observed. Positive control worked.
	1,2-Indanedione	12/2/19 1,2-Indanedione applied, allowed to dry. Placed in oven @ approx. 200 degrees Fahrenheit for 20 minutes. Steam iron applied. No results observed. Positive control worked.
R6Y77D	Visual Examination	Examined using Crimelite flashlight.
	Alternate Light Source	Examined using Crimelite flashlight.
	Indented writing	Performed with an electrostatic detection apparatus.
	DFO	Applied once, let dry, applied a second time, let dry. Placed in dry heat chamber for 20 minutes.
	Ninhydrin	Applied once, let dry, applied a second time, let dry. Placed in humidity chamber for 6 minutes.
RB4VRE	Visual Examination	
	Alternate Light Source	532nm, 450nm, and 365nm
	Indanedione	Once dry, placed in dry oven for 20 minutes at 100°C
	Alternate Light Source	532nm
	Ninhydrin	Once dry, placed in humidity cabinet at 76°C/76% RH for 15 minutes
	Physical Developer (PD)	15 minutes in both maleic acid solution and redox solution
RM4LKM	Ninhydrin	1 hour in heat press-Ninhydrin
RM6BTQ	Visual Examination	Ambient light, UV light, Tracer with orange goggles
	DFO	Processed for 20 minutes in Caron environmental chamber at 100 degrees Celsius
	Ninhydrin	Processed for 2 minutes in Caron environmental chamber at 80 degrees Celsius and 65% humidity
RP9XF3	Visual Examination	No ridge detail observed.
	Alternate Light Source	Sample observed under 254 nm light source with 254 nm filter, no ridge detail observed, test prints on similar material positive.
	1,2-Indanedione	1-2-Indanedione with HFE applied to sample, allowed to dry and sat at room temperature and humidity for approximately 1 hour, observed under Tracer Laser, test print positive.
	Ninhydrin	Ninhydrin applied to sample and placed in humidity chamber for approximately 1 hour, test prints positive, sample allowed to develop at room temperature/humidity over weekend.
RW8GRL	1,2-Indanedione	Indanedione in NinCha 31 cabinet temperature 65C, humidity 65%, 30 minutes time.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
RZLBG4	Visual Examination Ninhydrin	Oblique lighting Ninhydrin applied with transfer pipette and hung to dry completely before applying moist heat via our Ninhydrin chamber (3min). Print was very faint, so I repeated above process.
TFDDM2	Ninhydrin	3 minutes at 80 degrees C.
TL7FRL	Visual/Indanedione	Item 2 = Visual- negative. Indanedione/Laser = positive C. Method: 1. Working in a fume hood, thoroughly coat (spray, pipette, etc., but do NOT submerge) the evidence with IND and allow evidence to dry. It is best to coat and dry the item a second time. 2. A control print is to be tested at the time of use to ensure the IND is working properly. 3. Place item(s) in an environmental chamber at 65% humidity and 80° Celsius for approximately 10 - 20 minutes. 4. Alternatively, you may apply an iron using the steam setting. Any latent prints suitable for recovery developed or enhanced by IND will be photographed.
TLLWUF	Visual Examination Ninhydrin	Test print was confirmed prior to processing evidence with Ninhydrin. I submerged the sheet of paper in a Pyrex dish containing Ninhydrin. I hung the paper in a vent hood overnight. The next day a latent print of value was present in section C. I utilized a steam iron on the paper to darken the print.
TTKEBC	Ninhydrin	Petroleum ether formula, spray wash bottle, Caron Fingerprint Development - 80 degrees Celsius, 65% humidity, 20 minutes
U6AH4W	Ninhydrin	took two days for print to fully develop
U9WAB7	Visual Examination Ninhydrin Physical Developer (PD)	fluorescent lighting HFENIN Lot #HFENIN191024; Steam iron PD3; Lot #PD191113; MAP Lot#190909
UG7PYF	Visual Examination Alternate Light Source 1,2-Indanedione Ninhydrin Physical Developer (PD)	532nm, 450nm, 365nm plus 532nm

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
UGHNR4	Visual Examination	Examination with an alternate forensic light source with appropriate filters (light source – POLILIGHT PL 500)
	DFO	Spraying item with DFO working solution, after drying – heating the item for 10 min in 95° C, viewing with POLILIGHT PL 500 alternate forensic light source in ~515 nm range + appropriate filters
	Ninhydrin	Spraying item with ninhydrin aerosol spray, after drying – heating the item for 90 min in 40 °C, 80% humidity, viewing in a daylight and with POLILIGHT PL 500 alternate forensic light source in white light and in ~515 nm range + appropriate filters, viewing again after few days
UHE2EW	Visual Examination	
	Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
UM9X22	Visual Examination	
	Alternate Light Source	
	DFO	temperature - 100 degrees Celsius, time - 10 minute
	Ninhydrin	humidity - 62%, temperature - 80 degrees Celsius, time - 10 minute
UT6AGK	DFO	dry oven; +20 minutes
	Ninhydrin	humidity cabinet followed by steam iron
UU9H4X	Visual Examination	
	Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
UZFN4A	Visual Examination	
	Alternate Light Source	all wavelengths up to 555nm
	Ninhydrin	steam applied
VKXFHW	Visual Examination	
	Alternate Light Source	
	DFO	(200°F +/- 5°, ambient relative humidity)
	Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
VQPE9X	Ninhydrin	Processed with liquid ninhydrin. allowed to dry in chemical hood. Steamed with iron.
WKDX43	Visual Examination	3 minutes
	LED light	10 minutes
	Ninhydrin	30 minutes , temperature (80 C) with humidity.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
WYEM49	Visual Examination	White light. Luminescence (from 315nm to 570nm)
	1,2-Indanedione	Immersion. Heat press at 165°C while 10 secondes. Observation at 532nm
	Ninhydrin	Immersion. Waiting 48h. Observation with white light
WYHAJ2	Visual Examination	white light visual examination, no RD was observed, scanned the sheet prior to processing in order to preserve the printing on paper regarding 'Found Dog!'
	1,2-Indanedione	saturated the sheet with working solution of 1,2-IND-ZnCl ₂ , dried, Heat Press @~160°C for ~10 sec
	Alternate Light Source	LASER Exam at 532 nm, RD was observed in Quadrant C, quadrant identified so suspended processing at this point, would have followed up with ninhydrin and physical developer if a LP had not been recovered
X249HH	Visual Examination	5 Min
	Ninhydrin	2 Hours in humidity cabinet. 5 Minutes of utilizing a steam iron
X2FWRW	Ninhydrin	Methanol-based formula, 80C/65% humidity
X3QXKW	Visual Examination	
	Alternate Light Source	PI500 emission from 350-600nm
	DFO	PI500 emission 505-530nm
X94RG8	DFO	Visual examination (000-495nm); photography; temperature 100°C
X9HZT3	Visual Examination	
	Alternate Light Source	LASER (532 nm), blue light (450 nm), and long wave UV (365 nm)
	1,2-Indanedione	LASER (532 nm)
	Ninhydrin	
	Physical Developer (PD)	
XENZM6	Powder Dusting	Under normal cirumstances, I would not powder process paper. I would submit the item to the Laboratory for chemical processing.
XFHMHG	Ninhydrin	Visual, Ninhydrin. No times recorded

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
XFXA9	Visual Examination	No visible staining, photocopied were done before and after both methods
	Ninhydrin	Special Formula sprayed on paper air dried for 20 mins.
	Steam Iron	Steam Iron at highest setting. Processing tim: 10-15 mins to developed. Same method used for 1,2 Indanedione
	1,2-Indanedione	The paper was dipped into the prepared solution, taken out and air dried under the fumimg hood for 30 min. Steam iron was placed over the item. A slight pink color was observed thoughout the item.
	Alternate Light Source	Results: No ridge detail was observed when a green light wave length (500-560nm) light source was used.
XH7V24	Visual Examination	A visual exam was done with white light, a CrimeScope ALS and a Coherent TracER 532nm Laser with appropriate colored goggles.
	1,2-Indanedione	Processed with 1,2 Indandeione and placed in an oven at 100 degrees C for approximately 20 minutes.
	Ninhydrin	Item was sprayed with Ninhydrin and a steam iron was used for development
XNB29U	Visual Examination	
	Ninhydrin	
XQGCDB	Visual Examination	Naked eye, oblique lighting
	Ninhydrin	Special Formula used. Saturated by spraying, air dried, heat/humidity applied using steam iron. Repeated a second time
XVCY9J	Visual Examination	Ambient lighting, Tracer laser (532nm), and UV light
	DFO	Caron chamber used. Temperature: 100 degrees Celsius. Processing time: 20 minutes. Tracer laser (532nm) with orange filter
	Ninhydrin	Caron chamber used. Temperature: 80 degrees Celsius. Humidity: 65%. RH Time: 2 minutes
Y6WRY7	Visual Examination	High intensity white light, LASER ALS
	DFO	Dip application (twice), 20 minutes in oven at 100 C
	Ninhydrin	Spray application (twice), 6 minutes in humidified oven at 80 C
YAV4V7	Visual Examination	incandescent, crimelite, ALS
	DFO	20 minutes
	Ninhydrin	6 minutes
YYTQV7	Ninhydrin	Petroleum ether formulation

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
YYVDCJ	Visual Examination	Viewed using ambient light and Coherent Tracer (532nm w/ orange goggles).
	DFO	Treated with DFO and heated in environmental chamber to 100 degC for 20 min.
	Ninhydrin	Treated with NIN and kept for 2 min. in environmental chamber at 80 degC and 65% humidity.
Z778NE	Visual Examination	No print was visualized.
	1,2-Indanedione	IND was applied using a spray bottle, allowed to dry, then applied again, and allowed to dry once more. The paper was placed in the environmental chamber to develop.
	Alternate Light Source	An ALS (TracER laser) was then used to visualize the print in box C. The print was then photographed comparatively with a scale.
	Ninhydrin	NIN was applied using a spray bottle to the paper and then it was placed in the environmental chamber with negative results.
	Oil Red O	ORO was applied to the paper followed by a post wash. No further development was noted.
Z84CGE	Ninhydrin	Developed in humidity chamber
ZBY9QT	Visual Examination	
	1,2-Indanedione	temp. 90oC, time 15 min, humidity 5%. a trace was observed in section C
	Ninhydrin	temp. 21oC, time 30 min, humidity 80%
ZEVZW6	Alternate Light Source	white light, 340-587nm, UV
	DFO	100° Celsius during 20 min
	Alternate Light Source	fluorescence examination with polylight (491nm-548nm)
	Ninhydrin	development in the dark for 24 to 48 hours in an ambient temperature with humidity
	Alternate Light Source	white light source
ZXC2VD	Ninhydrin	Visual examination with lights (range 390-850nm). Humidity 65, temperature 72, time 6 min
ZZCBRL	Ninhydrin	80 degrees Celsius with 65% humidity

Response Summary

Participants: 187

Methods Utilized

Alternate Light Source	68	Physical Developer	18
Cyanoacrylate Fuming	1	Powder Dusting	6
DFO	44	Visual Examination	129
Dye Stain	0	Wet Powder Suspension	0
Ninhydrin	158	1,2-Indanedione	49

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

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
264W7G	Cyanoacrylate Fuming	MVC3000: 2,12gram Cyanoacrylaat, 120C, 80%, 15min Cyclus
	Physical Developer (PD)	Magnetic black powder
2CNYDJ	Cyanoacrylate Fuming	Chamber: Foster Freeman MVC3000. Processing time 15 minutes, humidity 80%, 12 drops cyanoacrylate, CyanoBloom. temperature 120 C.
	Powder Dusting	Swedish Soot Mix Black (BVDA)
2HUKE8	Visual Examination	visually observed
	Alternate Light Source	blue light wavelength (420-470 nm) with a yellow filter
	Cyanoacrylate Fuming	Humidity cycle- 80% RH 15 mins, Glue cycle- 80%RH 120 degrees Celcius 25 mins, Purge Cycle- <80% RH ~20 min
	Powder Dusting	Bichromatic powder and brush
2JKBAV	Visual Examination	12/05/2019 at 1:45 pm Visual exam yielded negtive results.
	Alternate Light Source	12/05/2019 at 1:45 pm Alternate light source using an Ultra Violet flash light yielded negative results.
	Cyanoacrylate Fuming	12/05/2019 at 1:48 pm Cyanoacrylate fuming chamber was used to enhance development of any possible ridge detail. dime size amount in tin foil containers for 12-15 minutes
	Visual Examination	12/05/2019 at 2:05 pm Visual exam yielded negative results.
	Ninhydrin	12/05/2019 at 2:10 pm Item was placed in fume hood in a glass tray and processed using Ninhydrin pre-mix spray.
	Visual Examination	12/05/2019 at 2:15 pm Visual exam yielded positive results (ridge detail present).
	Alternate Light Source	12/05/2019 at 2:20 pm Alternate light source using an Ultra Violet flash light yielded positive results (ridge detail present).
2QMZ2Q	Cyanoacrylate Fuming	Item placed in cyanoacrylate chamber for 10 minutes. Print visible in section B of box.
2ULCXQ	Powder Dusting	Used black fingerprint powder. Ridge detail developed in box labeled B.
2XNXYW	Visual Examination	white light
	Cyanoacrylate Fuming	Humidity in cabinet: 80% rh. Heat on glueplate: 120 degrees Celcius. Process time: 10 minutes
	Powder Dusting	

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
2YLAMX	Visual Examination	Examined in the white light and daylight.
	Alternate Light Source	Examined at 320-405 nm, 450 nm, 470 nm, 490 nm, 505 nm, 530 nm wavelength
	Cyanoacrylate Fuming	Fuming - 15 min, t - 120 C, RH - 80 percent. Examined in the white light.
	Dye Stain	Basic Yellow 40 (Ethanol based), exposure time - 5 sec. Dry item examined at 450 nm wavelength.
	Wet Powder Suspension	Exposed to the Suspension for 15 sec. and washed with tap water. Dry item examined in the white light.
32LYDK	Visual Examination	
	Cyanoacrylate Fuming	40 MIN GLUE CYCLE
	Powder Dusting	BLACK MAGNETIC
3AJDJ6	Visual Examination	no ridge detail visible.
	Powder Dusting	Processed with magnetic powder.
3KBH6W	Visual Examination	
	Powder Dusting	black powder - 5 minutes
3VG3RY	Visual Examination	White light, Reflected UV with Baader
	Cyanoacrylate Fuming	Tank #2 - 12 minutes
	Powder Dusting	Black powder and magnetic powder
3XKT2Y	Visual Examination	
	Alternate Light Source	365nm, 450nm, and 532nm
	Cyanoacrylate Fuming	Visual exam and 254nm RUVIS
	Powder Dusting	Black Magnetic Powder
	1,2-Indanedione	visualized w/532nm LASER
	Ninhydrin	
	Dye Stain	RAM followed by ALS (365nm, 450nm, and 532nm)
	Physical Developer (PD)	
4CJ9FD	Visual Examination	Ambient light and oblique light.
	Arrowhead FSIS	Arrowhead Forensics Full Spectrum Imaging System with short wave UV.
	Cyanoacrylate Fuming	Foster & Freeman MVC 3000 chamber. Relative humidity 80% and 20 minutes autocycle.
	Powder Dusting	Fluorescent Nano Powder with blue/green alternate light source with orange filter.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
4NAUTU	Visual Examination	Fingermark was visible 350-490 nm
	Cyanoacrylate Fuming	
	Powder Dusting	Black Ruby
4NUJ33	Visual Examination	Processing Time: 1 minute
	Cyanoacrylate Fuming	Processing Time: 51 minutes. Humidity cycle: 15 minutes @ 80%. Glue cycle: 16 minutes @ 120 degrees Celsius @80%. Purge cycle: 20 minutes at <80%
	Powder Dusting	Processing Time: 2 minutes. Processed using magnetic powder (very faint ridge detail)
	Ninhydrin	Processing Time: ~30 minutes for each time sprayed. Item sprayed with acetone ninhydrin (twice). Air dried after each time sprayed
	Steam iron	Applied heat using a steam iron on the highest setting after each air drying
	Vacuum Metal Deposition	1st process gold/zinc. 2nd process silver/zinc
4RRDKQ	Visual Examination	High intensity Light source exam - Crime Lites (white, green, blue UV)
	Cyanoacrylate Fuming	15 mins glue time
	DFO	100 degrees Celsius for 20 min
	Ninhydrin	80 degrees celsius /62% RH (+/- 5%) for 5 mins
6L337Z	Visual Examination	Viewed under direct magnified light. No visible prints found.
	Cyanoacrylate Fuming	Placed in controlled atmospheric CA fuming chamber for 13 minutes. Visually examined post fuming and no visible print was seen. (Test print was completed with Item 001-1)
	Powder Dusting	Applied black magnetic powder with wand and print was developed with good contrast and photographed.
6NRDWT	Visual Examination	ambient light and various angles of white light from LED flashlight
	Cyanoacrylate Fuming	approximately 65% humidity; approximately 1g of liquid cyanoacrylate; fumed for approximately 8 minutes; vented for approximately 20 minutes; concurrent control = pass
	Powder Dusting	black powder used
6NU2KX	Visual Examination	
	Cyanoacrylate Fuming	MASON VACTRON - MVC5000. 30 MINUTES TO 1 HOUR CYCLE
	Powder Dusting	MAGNETIC POWDER
	Powder Dusting	BLACK POWDER

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
6V6DFX	Cyanoacrylate Fuming	120° C /80% Rh, 8 min, 1.5 g glue
	Powder Dusting	"Swedish black" carbon powder, squirrel hair brush
6XDPXY	Cyanoacrylate Fuming	
	Powder Dusting	
6XYIBA	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	Temperature of the heating plate: 100 C. Humidity: 80%. Time: 35 minutes
	Powder Dusting	Magnetic powder application
6Z22YP	Visual Examination	in natural light and light from forensic illuminator, no prints
	DFO	time - 20min., temp. 100 C, print was observed in section C
	Ninhydrin	time 20 min., temp. 70 C, RH - 62%, developed fingerprint did not become any better
6Z23QN	1,2-Indanedione	heat: 180°C, 3min
	Alternate Light Source	Photoluminescence mode: Light Source: 505nm LED. Filter: 550nm Longpass Filter
76BEFN	Visual Examination	under white light
	Alternate Light Source	fluorescence examination (350 nm - 650 nm under appropriate colour barrier filters)
	Cyanoacrylate Fuming	in the fuming chamber with a humidity 80% for 10 minutes; visual examination under white light and fluorescence examination in alternate light source (350 nm - 650 nm)
	Powder Dusting	magnetic powder Bi-Chromatic; visual examination under white light
78KETV	Visual Examination	
	Powder Dusting	Black magna powder. 1 lift.
	Dye Stain	MRM-10
	Dye Stain	Red-drox
79DFGL	Cyanoacrylate Fuming	Cyanocrylate Fuming and Black Powder- The evidence was exposed to cyanoacrylate vapor for approx. 5 minutes at room and humidity room conditions. Method: LPPMR5
7GJK6V	Cyanoacrylate Fuming	Foster Freeman MVC3000 8 min 1.5 g glue
	Powder Dusting	Magna Jet Black

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
7MCDD4	Visual Examination	
	Cyanoacrylate Fuming	MVC Fuming chamber for 8 minutes
	Powder Dusting	Black magnetic powder
	DFO	Heat
	Alternate Light Source	Screening with ML2: 480-560nm/OG590 AG
	Ninhydrin	Heat and humidity
7MD6RY	Visual Examination	Lighting: Crimelite and TracER laser with a curved filter
	Cyanoacrylate Fuming	Lighting: Crimelite. Equipment: F+F MVC 5000 cabinet for approximately 70 minutes. Control: semi-glossy card -> positive
	Powder Dusting	Black powder dusting. Lighting: incandescent
	DFO	Lighting: TracER laser with a curved filter. Equipment: Sanyo Gallankamp oven for approximately 20 minutes. Control: L-Alanine test strip -> positive
	Ninhydrin	Lighting: incandescent. Equipment: Sanyo Gallankamp oven for approximately 6 minutes. Control: L-Alanine test strip -> positive
7Y7RG7	Visual Examination	
	Cyanoacrylate Fuming	approximately 15 minutes
	Powder Dusting	Black magnetic powder
8278GG	Cyanoacrylate Fuming	CA fumed for approximately 15 minutes
	Dye Stain	MRM-10, viewed under ALS blue light with orange filter
	Powder Dusting	black magnetic powder
84DNLT	Cyanoacrylate Fuming	15 min, 15 drops of cyanoacrylate
	Powder Dusting	Carbon powder
88EECR	[No Methods Reported.]	Qualified for non-porous examinations only
8K2Z3E	Visual Examination	lighting and magnification
	Cyanoacrylate Fuming	SafeFume chamber; 20 minutes; ~80% humidity; ~71.7F
	Powder Dusting	Black magnetic powder
8TC3NF	Cyanoacrylate Fuming	
	Powder Dusting	magnetic powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
948TGD	Alternate Light Source DFO Ninhydrin Physical Developer (PD)	
992Q4J	Visual Examination Alternate Light Source Cyanoacrylate Fuming Ninhydrin Dye Stain	415 nm, yellow filter (120°C ± 5°, 75% Relative Humidity ± 15%) (80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.) Ardrox
994CUH	Powder Dusting	Processed with black powder.
9J7PTX	Visual Examination Powder Dusting	Visual processing (before powder was applied) Magnetic powder used
9KZEFZ	Powder Dusting Ninhydrin	10/24/19 Black mag powder (valid) to the semi-gloss side of the business card box (item 3). 10/24/19 Ninhydrin (lot 19.3) to semigloss business card box (item 3). I put the evidence in the Ninhydrin chamber with heat and humidity for about 20 minutes for the cardboard (non-porous side) of the box.
9YKTJY	Visual Examination Cyanoacrylate Fuming Powder Dusting	Black powder, lifting attempted
A2JGFM	Cyanoacrylate Fuming	Cyanoacrylate fuming (80%RH) + powder dusting
A3RVQM	Cyanoacrylate Fuming Powder Dusting Ninhydrin	MVC3000, control +, blank - Magnetic powder, test strip control +, blank - Caron chamber, small humidifier for approx. 50 mins, 72 hr. processing amino acid reference pad test strip control +, blank -
A8Q7XV	Visual Examination Cyanoacrylate Fuming Powder Dusting	Nothing could be seen. Magna Jet Black. Fingerprint developed in section B

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
AH9KZX	Visual Examination	
	Alternate Light Source	Laser, blue, and UV
	Cyanoacrylate Fuming	Microburst
	Magnetic Powder	
	1,2-Indanedione	
	Dye Stain	RAM
	Physical Developer (PD)	
AMEH6V	Cyanoacrylate Fuming	3.12g cyanoacrylate batch 092815 was placed into MVC cabinet 4, along with item 3 and a control sample. Humidity was raised to 80% and then the superglue heated to 120°C for 15 minutes. MVC cabinet was purged for 45 minutes before the cabinet was opened. Control sample positive.
	Powder Dusting	Black magnetic powder was used to enhance the cardboard. Control sample positive.
AP3VYK	DFO	Paper was treated with DFO, dried and heater in a 100 degrees Celsius oven for 20 minutes and viewed under laser.
B4MUEZ	Ninhydrin	Method for developing latent fingerprints on porous surfaces
BE76ZX	Visual Examination	using ambient lighting and flashlight
	Cyanoacrylate Fuming	generated humidity for about 20 minutes and fumed for about 10 minutes at 72 degrees F and relative humidity of 71%
	Dye Stain	R6G (MeOH) and viewed under green laser at 532 nm with orange filter
	1,2-Indanedione	used heat press for about 10 sec and viewed under green laser at 532 nm and orange filter
	Ninhydrin	used steam iron for about 15 seconds and viewed under ambient lighting
BFGZLQ	1,2-Indanedione	
BK7TFR	Visual Examination	No prints observed.
	Alternate Light Source	Laser examination found usable latent print in quadrant B. Photographed under laser illumination.
	Alternate Light Source	ALS examination ("Crime Scope" on "CSS" setting). Enhancement of latent observed. Photographed under ALS illumination.
	Powder Dusting	Magna powder applied. Photographed.
	Ninhydrin	Ninhydrin in petroleum ether formula. (Proceeded with Heat & Humidity, once item was dry.)
	Heat & humidity.	Heat & humidity applied via humidity chamber. Photographed.
BMT7AG	Powder Dusting	Magnetic powder - black, swirling brush strokes

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
BW2XKW	Visual Examination	Visual examination using oblique lighting
	Cyanoacrylate Fuming	Cyanoacrylate Fuming using a Mason Vactron MVC5000
	Powder Dusting	Powder processing using magnetic power and magnetic wand.
BYQZQK	Visual Examination	no ridge detail
	Alternate Light Source	could very lightly visualize ridge detail in Section B, not enough to photograph; 420 to 470 nm
	Cyanoacrylate Fuming	2 drops of cyanoacrylate, could very lightly visualize ridge detail in Section B, not enough to photograph
	Powder Dusting	black powder used, possible ridge detail in Section B
CA7GMB	Visual Examination	1) Inclination of the objet and observation with naked eye. No trace detected.
	Alternate Light Source	2) Light shaving with Crimescope MCS-400 under different wavelengths and wearing glasses of appropriate colors. No trace detected.
	Cyanoacrylate Fuming	3) In view of the part of a white semigloss business card box, atocycle for 1g of solution of Lumicyano 5% during 40 minutes. A control trace is placed in a tank. No trace detected.
	Alternate Light Source	4) Light shaving with Crimescope MCS-400 under different wavelengths and wearing glasses fo appropriate colors. A complet fingerprint is visible in case "B" in CSS with orange filter and glasses appropriated.
	Powder Dusting	5) Graphic black powder deposited with a brush, revelation a few seconds by rotating movement. The powder is tested on a control beforehand. The trace est visible with naked eye.
	Alternate Light Source	6) Light Shaving with Crimescope MSC-400 with white light and different wavelengths to get the best contrast of the trace.
CDNEE8	Visual Examination	No fingerprint was detected
	Alternate Light Source	Checking under UV, fingerprint was detected and it was photographed using DCS-5.
	Cyanoacrylate Fuming	item was put in POLYCYANO chamber for 25 minutes with humidity around 80%.
	Powder Dusting	Using black powder, fingerprint was detected and it was photographed using DCS-5.
CG7TRT	Visual Examination	No prints visible pre-treatment
	Iodine fuming	Print developed
	Cyanoacrylate Fuming	20 minutes fuming, left for curing for 24 hours prior to dye staining
	Alternate Light Source	DCS-5 (camera/software package), reflective U.V. setting
	Powder Dusting	Black magna powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
D7YBWG	Visual Examination	Visual examination was performed on Item 3 for approx. 10 mins. Did not observe any latent prints.
	UV	UV was utilized to visualize the latent print in section B of Item 3- Latent print was captured, total time combined in visualizing and capturing latent print with UV was approx. 30 mins. Latent print was determined to be of value for source identification.
	Cyanoacrylate Fuming	CA fuming was applied to Item 3 for approx. 15 mins. processing time- still was not able to visualize the latent print.
	Dye Stain	R6G (using water as carrier) was applied to Item 3 utilizing the spray method, allowed to dry, approx. 15 mins processing time
	Alternate Light Source	Alternate light source (laser) was utilized to examine Item 3 after the application of the dye stain - No latent print was visualized during this process
	Powder Dusting	Black Powder was applied to Item 3 under a powder hood- latent print was visualized in section B. Latent print was captured utilizing digital imaging photography and determined to be of value for source identification.
DFN8LB	Cyanoacrylate Fuming	Item # 3 was processed by cyanoacrylate fuming
	Powder Dusting	Item # 3 was then dusted with magnetic powder
DHTUBL	Cyanoacrylate Fuming	The box was fumed for 13 minutes with a control.
	Powder Dusting	Black powder was applied to the item, and an impression was developed.
DJ9UKQ	Visual Examination	
	Cyanoacrylate Fuming	Glue time 10 minutes, Glue temp 120 degrees, 80% humidity.
	Powder Dusting	BVDA Magnetic Jet Black
	DFO	100 degrees, 20 minutes. Examined in forensic light 515nm.
	Ninhydrin	62 % humidity, 80 degrees, 5 minutes.
DTZAGU	Visual Examination	white light and magnification
	Cyanoacrylate Fuming	No ridge detail observed
	Dye Stain	MBD - 3LP1 Quadrant B (faint print)
	Powder Dusting	Magnetic Black. Only small amount of ridge detail observed; nothing additional to 3LP1.
	1,2-Indanedione	placed in heated chamber for 30 minutes. Re-photographed as 3LP1_1 (faint print)
DZW4GD	Powder Dusting	Magnetic fingerprint powder swirled over item. When print develop latent print tape used to collect.
EK3YQV	Visual Examination	
	Powder Dusting	Coinbox powder black

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
EWA6GN	Cyanoacrylate Fuming Powder Dusting DFO Ninhydrin Physical Developer (PD)	Processing time 9 min
F7VDP6	MAGNTIC POWDER-BLACK Ninhydrin	IMMEDIATELY THE ITEM WAS SPRYED WHITH NINHIDRIN, THEN IT WAS IN THE CHAMBER FOR UP TO 9 HOURS.
FER68J	Ninhydrin	Ninhydrin Petroleum Ether, dipped item, air dried, 30 min exposure in FDC060 environmental chamber at 80 degrees Celsius at 65% relative humidity. No further processing.
FKE3PF	Visual Examination Alternate Light Source Powder Dusting	Visual Examinations & Documentation- White semi-porous glossy cardboard ALS Lighting. Visual: Block "B" Magnetic Powder Development
FNTTYG	Visual Examination Cyanoacrylate Fuming Powder Dusting	Black Magnetic
FZ9MCV	Visual Examination Powder Dusting DFO Ninhydrin	Black magnetic powder Heated in oven at ~100 degrees C for 20 minutes. Visualized with ALS at 555 with Red goggles. Item heated in humidified oven at ~70 degree C for more than 25 minutes.
G6WM7G	Visual Examination Alternate Light Source Cyanoacrylate Fuming Powder Dusting	White, low angle light -- results negative. Multiple filters used -- print visible in quadrant "B" at 455nm viewed through an orange barrier filter (goggles). 30 minute fume time at 75% humidity. Print visible in quadrant "B" using an ALS at 455 nm viewed through an orange barrier filter (goggles). Powder applied. Print visible in quadrant "B".

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
G83BBK	Visual Examination	Conducted visual examination under white light and magnification.
	Alternate Light Source	Used 365nm UV, 450nm Blue Light, and 532nm Laser.
	Cyanoacrylate Fuming	Followed by visual exam and 254nm UV light with RUVIS.
	Powder Dusting	Used black Magnetic Powder and visual exam after powder.
	1,2-Indanedione	Placed in 100 degree Celsius oven for 20 minutes, followed by visual exam and viewed under 532nm Laser.
	Ninhydrin	Placed in humidity cabinet set at 76% humidity and 76 degrees for 15 minutes. Visual exam performed after item cooled.
	Dye Stain	Applied RAM dye stain (Rhodamine, Ardrex, MBD) and allowed to dry. Then used 365nm UV, 450nm Blue Light, and 532nm Laser.
	Physical Developer (PD)	Soaked in Maleic Acid solution for 15 minutes, placed in Redox working solution for 15 minutes, placed in distilled water for rinse, then final rinse in sink. Item dried using a flat dryer. Then a visual exam was performed.
GAT7CL	Visual Examination	Used oblique light to examine the glossy/coated cardboard.
	Powder Dusting	Applied black magnetic powder to the glossy/coated cardboard.
GGAVUG	Visual Examination	white light
	Cyanoacrylate Fuming	Humidity in cabinet: 80% rh. Heat on glueplate: 120 degrees Celcius. Process time: 10 minutes
	Powder Dusting	Magnetic powder
GJDK2W	Powder Dusting	Magnetic Jet Black (BVDA)
GLYLTA	Visual Examination	ambient lighting
	Alternate Light Source	Crime Scope CS-16-500; 415nm to 515nm with orange filter. 415nm to 455nm with yellow filter. 475nm to 555nm with red filter
	Ninhydrin	Acetone in-lab preparation; 1.2% concentration. Environmental chamber incubation; 80 degrees C at 65% relative humidity; 20 minutes exposure. NOTE: the chamber developed a water leak at 20 minutes and the incubation was halted at that time to address the mechanical failure of the chamber.
GNVXP	Visual Examination	Examination under ambient and oblique lighting. No apparent fingerprints were detected in Sections A, B, C, or D under these lighting conditions.
	Powder Dusting	Used black fingerprint powder and a faint apparent fingerprint developed in Section B of the white semigloss business card box. Then used magnetic fingerprint powder to achieve better contrast of the apparent fingerprint. No apparent fingerprints were detected in Sections A, C, or D after processing with fingerprint powder.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
GRM7WQ	Visual Examination	
	Ninhydrin	Heptane Based - 10 minutes at 70 degrees Celsius and 65% Humidity
GY6MFE	Visual Examination	Nothing
	Cyanoacrylate Fuming	Nothing
	Powder Dusting	Magna jet, detected print.
GY8AV8	Visual Examination	White light
	Alternate Light Source	Polilight, Foster+Freeman Crime-lite ML2 - all available wavelengths
	Cyanoacrylate Fuming	Processing time 15 min
	Powder Dusting	Black magnetic powder
H8EA2N	Cyanoacrylate Fuming	3.55g of cyanoacrylate batch 092815 - placed into MVC5000 cab#4, along with this item and a control sample. Cabinet set to auto cycle, raised to 80% humidity and 120degrees C. The cabinet was purged for 45 minutes before the cabinet was opened. The control sample was positive.
	Powder Dusting	Black Magnetic Powder used to further enhancement the visible mark. Control Sample positive.
H8JQ4T	Powder Dusting	Softblending (dark grey BVDA) dusting.
H9RZ4P	Visual Examination	No ridge detail was seen during visual exam.
	Cyanoacrylate Fuming	Fumed for 16 min in an Air science chamber. No ridge detail was developed after CA fuming.
	1,2-Indanedione	I then processed item 3 with 1, 2 Indanedione.
	Alternate Light Source	Laser. The test strip worked, however, no ridge detail was developed on Item 3 after 1, 2 Indanedione.
	Ninhydrin	No ridge detail was developed on item 3 after NIN.
	Powder Dusting	Black powder was used as the final process and a latent was developed in quadrant "B". ** A test strip was used to ensure that the reagents worked properly. The test strip passed all chemical tests.**
HEJ3CW	Cyanoacrylate Fuming	12 mins
	Powder Dusting	black powder (print visible)
	Ninhydrin	heat/humidity chamber 20 mins (no additional ridge information present)
HPHZWB	Powder Dusting	Black magnetic powder was used to process Item #3. A fingerprint was found in section B.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
HXEQLR	Visual Examination	Positive with ambient light
	Lumicyano	0.135g powder mixed with 2.7g solution; fumed for 17 minutes in CApture-BT chamber; Improved with UV light and deep yellow filter
	DFO	100 degrees C for 20 minutes in Caron chamber; not improved with green light and orange filter
	Ninhydrin	80 degrees C with ambient humidity for 30 minutes and then 2 minutes after 65% RH achieved in Caron chamber; not improved with ambient light
HY42DK	Visual Examination	Visual examination.
	Alternate Light Source	Orange filter with alternate light source at 505nm produced best visualization.
	Ninhydrin	(After ALS and photography). Ninhydrin - Lot #[Number], Exp. 10/8/20 - Positive control. Item sprayed with ninhydrin and exposed to steam for approximately 30 minutes. Item secured in locker to develop for at least 24 hours. Yielded no development.
	Powder Dusting	Magnetic powder
J9AAKK	Visual Examination	Item 3 was examined visually from all angles.
	Alternate Light Source	Item 3 was examined with 365nm, 450nm and 532nm.
	Cyanoacrylate Fuming	Placed Item 3 in a SGF chamber, waited for humidity to reach 70%, added 2g of cyanoacrylate, fumed and purged. Viewed item visually and with RUVIS following SGF.
	Magnetic powder	Applied black magnetic powder to Item 3 using a magnetic wand. Following application of powder, excess powder was removed using the wand's magnets. Item viewed visually following application.
	1,2-Indanedione	Item 3 was squirted with IND, allowed to dry and placed in the oven due to the humidity in the room. When the humidity is greater than 23%, the oven is used. Below 23% requires the humidity chamber. The humidity was 26% at the time of processing. Item 3 was placed in the oven for 20 minutes.
	Alternate Light Source	Item 3 was viewed VIS and under 532nm following IND processing.
	Ninhydrin	Item 3 was squirted with Ninhydrin, allowed to dry and placed in the humidity chamber for 15 minutes.
	Visual Examination	Item 3 was examined VIS following Ninhydrin processing.
	Dye Stain	Processed Item 3 with RAM and viewed under 365nm, 450nm and 532nm.
	Physical Developer (PD)	Item 3 was processed with PD. A working solution was made from the available stock solutions within the lab. The working solution was mixed and sat on an orbital shaker for 5 minutes. A test strip tested satisfactory. Item 3 was placed in a maleic acid bath on an orbital shaker for 15 minutes. It was then placed in a redox working solution for 15 minutes, removed and rinsed. The initial rinse was followed by a second rinse. The item was dried using the available flat dryer and examined for prints.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
JGX6HE	Powder Dusting	Visual examination with negative results. Applied magnetic finger print powder and latent appeared in quadrant B.
JJ7HZG	Visual Examination	No results on visual examination.
	Powder Dusting	Dusted with silver black powder. Print appeared in quadrant B.
JPEGX2	MAGNETIC BLACK	PROCEDURE FOR THE PROCESSING OF LOPHOSCOPIIC INDICES
JPUZHY	Cyanoacrylate Fuming	120°C, humidity 60-90%, processing time 15 min
	1,2-Indanedione	50°C, humidity 40%, processing time 3h
	Ninhydrin	room temperature, humidity 65%, processing time 48 min
JPWPNG	Visual Examination	Used oblique lighting and bright white light.
	Alternate Light Source	Three light sources - blue light (450nm), UV light (365nm) and laser (532nm).
	Cyanoacrylate Fuming	Used a superglue chamber and examined the item using a bright white light, oblique lighting and the RUVIS (254nm).
	Magnetic Powder	Processed with magnetic powder. Lightly brushed magnetic powder onto the item. Visually examined item 3 using a bright white light.
	1,2-Indanedione	Processed with 1,2-indanedione (IND). Once dry, the item was placed within the 100 degree Celsius oven for 20 minutes. Visually examined the item using a bright white light and a 532nm laser.
	Ninhydrin	Processed with Ninhydrin (NIN). Placed item in the 76% humidity chamber for approximately 15 minutes. Visually examined the item using a bright white light.
	Dye Stain	Processed with RAM. Examined item 3 with a 365nm UV light, a 450nm blue light and a 532nm laser.
	Physical Developer (PD)	Processed with physical developer. Placed item in a maleic acid bath for 15 minutes, then placed the item in the Redox Working Solution for 15 minutes, next it was placed in a distilled water rinse followed by a second water rinse. Item dried. Visually examined the item using a bright white light.
JRJAPE	Visual Examination	White ambient light. Print detected with very poor results.
	Cyanoacrylate Fuming	No improvement of the detected print.
	Powder Dusting	Black powder. Massive improvement of the detected print.
	DFO	Use of alternate light source (green, 500-550 nm). No improvement of the detected print.
	Ninhydrin	No improvement of the detected print.
JUNUHK	Visual Examination	
	Cyanoacrylate Fuming	CAE: 12 min.
	Powder Dusting	Black Magnetic Powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
JXN6BZ	Cyanoacrylate Fuming 1,2-Indanedione	
JXQVHH	Visual Examination Alternate Light Source Cyanoacrylate Fuming Powder Dusting 1,2-Indanedione Ninhydrin Dye Stain Physical Developer (PD)	Visually looked at the item Used 532nm Laser, 450nm Blue light, and 365nm UV performed a visual examination and then used the RUVIS (254nm) used the black magnetic powder to try and visualize anything used Indanedione and placed the item in the oven for 20 minutes, afterwards used the 532nm Laser used Ninhydrin and then placed the item in the humidity cabinet for 15 minutes and then performed a visual examination Used RAM on the item and used the 532nm Laser, 450nm blue light, and 365nm UV to visualize used physical developer on the item and then performed a visual examination
KEA38X	Visual Examination Lumicyano Fuming	UV, Ambient, Green, Blue-green CApture-BT chamber, 75% humidity, 17 minutes
KJ6YNC	Visual Examination Alternate Light Source Cyanoacrylate Fuming Powder Dusting	Negative results. Negative results. Negative results. Ridge detail observed in Section B.
KKYKJN	Visual Examination Cyanoacrylate Fuming Powder Dusting	visual examination and item photographed Fumed for 10 minutes at 80% Relative Humidity, 5 minutes vapor purge cycle black magnetic powder applied to surface with magnetic wand. latent print now visible
KLC3P2	Cyanoacrylate Fuming Powder Dusting	10min, RH 80%, 120C Black onyx
KM3BTN	Alternate Light Source Lumicyano Fuming DFO Ninhydrin	Tracer Laser Pre-set Cycle 3 on CApture-BT fuming chamber Caron Environmental Chamber; 100 Cel. for 20 minutes Caron Environmental Chamber, 85 Cel. for 20 minutes, then added humidity up to 65% RH, held for 2 minutes

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
KNXVFN	Visual Examination	Visually examine the item for any possible visible latent prints - none observed.
	Powder Dusting	Black Magnetic Powder - Lot# 201504053-04. Applied with magnetic wand (brush) until adequate development of latent print ridge detail is achieved.
	Visual Examination	Visually examined the item to locate the latent print after powder processing - latent print development observed.
KTRXFG	Visual Examination	Visual exam using Krimesite scope and UV light.
	Cyanoacrylate Fuming	Fumed in an automatic fuming chamber for 15 minutes.
	MBD	Treated with 7-P-methoxybenzylamino-4-nitrobenz-2-oxa-1-3-diazole and viewed under alternate light source at 450nm.
	Ninhydrin	Treated with ninhydrin and placed in a humidity chamber to accelerate process.
KTTL3M	Visual Examination	White light (Crimelite), ALS (Tracer Laser)
	Cyanoacrylate Fuming	Cyanoacrylate fuming using Foster & Freeman MVC5000 (approx. 70 minutes)
	Powder Dusting	Black magnetic powder
	DFO	DFO + dry oven (100 degrees for 20 minutes)
	Ninhydrin	Ninhydrin + humid oven (70% humidity, 80 degrees for 5 minutes)
KVHYK6	Powder Dusting	Magnetic powder used to surface of item #3. Section "B" shows positive result.
L2VEH8	Powder Dusting	Magnetic powder - brushed magnetic powder on surface of item
L7EK7U	Visual Examination	
	Alternate Light Source	350 nm and 515 nm on Crime Scope
	Cyanoacrylate Fuming	
	Powder Dusting	Black Magnetic powder
	Dye Stain	Aqueous Rhodamine
	Dye Stain	Aqueous Ardrex

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
LP7GNB	Cyanoacrylate Fuming	1- Visual Examination: The Item was photographed before examination. 2- Examination in white light (Polilight flare 2 "ROFIN"). No Latents Visible. 3- Alternate Light Source : Examined with at 430nm - 550nm (Polilight flare 2 "ROFIN") and goggles. No Latent Visible. 4- Cyanoacrylate Fuming : The cabinet (Scenesafe) settings was: 1 g Superglue "Air Science" , 85 % humidity and the hot plate was set on 120 degrees. Processing time 8-10 minutes. A visible print was seen in section A. * Prints deposited on a similar part of a white semigloss business card box the day before, by human fingerprints (control sample), developed good quality prints. 5-fingerprint was photographed with white light and macro camera lens (Nikon D 3300). 6-Powder Dusting (to improve the quality of latent print): Black magnetic powder, Enhanced ridges of latent print. Fingerprint was photographed with white light and macro camera lens (Nikon D 3300).
LUK4GT	Visual Examination Alternate Light Source Cyanoacrylate Fuming Powder Dusting	
M9TJV9	Visual Examination Alternate Light Source Cyanoacrylate Fuming Powder Dusting	Nothing observed. Observed ridge detail in Section B. Nothing observed. Observed ridge detail in Section B.
MAU8HE	Visual Examination Cyanoacrylate Fuming Powder Dusting	I visually examined the square piece of trash bag and I did not collect prints at this time I placed the item into the superglue chamber. I placed a dime size amount of superglue into the dish and placed it on the heating plate. I filled the water chamber to add humidity to the chamber. The entire process inside the chamber takes approximately 1 hour and 40 minutes to go through the entire cycle. I did not collect prints at this time. I dusted the glossy cardboard for prints using magnetic powder. I collected the print that developed in box labeled "B" and I collected it using a tape lift and placed the print on a latent print card and filled in the information that is needed.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
MQU8DM	Visual Examination	
	Alternate Light Source	532nm laser, 450nm forensic blue light, 365nm UV
	Cyanoacrylate Fuming	Visual + 254nm RUVIS
	Powder Dusting	Magnetic
	1,2-Indanedione	532nm laser
	Ninhydrin	
	Dye Stain	RAM + 532nm laser, 450nm forensic blue light, 365nm UV
	Physical Developer (PD)	
MYUJQH	Visual Examination	Crimelite and TracER Laser
	Cyanoacrylate Fuming	70 minutes in F+F MVC 5000 chamber
	Powder Dusting	magnetic powder
	DFO	100 degrees Celsius for 20 minutes
	Ninhydrin	70 degrees Celsius (wet bulb) and 80 degrees (dry bulb) for 6 minutes
N447UK	Visual Examination	ambient room light, flashlight
	Cyanoacrylate Fuming	72 degrees F and 65% relative humidity in chamber, approximately 10 minutes fume time
	Powder Dusting	black magnetic powder
	Ninhydrin	Caron heat/humidity chamber
N98CZB	Visual Examination	Item was visually examined after opening package.
	Alternate Light Source	Krimesite scope with ultraviolet light utilized. Latent impression was visible in Section B.
	Powder Dusting	Item was processed with black magnetic powder.
	Visual Examination	Latent impression was visible in Section B.
N98DY3	Visual Examination	1. visual examination - light UV 350 nm, and light 415 nm - 590 nm - fingerprint trace revealed. 2. Black magnetic powder - white light
NBXCD2	Visual Examination	Visual Examination with following ways: 1. Naked eye. 2. Blue Light (440 nm). 3. Green Light (550 nm). No mark found.
	Cyanoacrylate Fuming	Processing Time: 20 mins, which includes Humidifying, Fuming and Purging. No
	Powder Dusting	Evidence was dusted with Black Magnetic Powder. No mark found.
	Ninhydrin	Sprayed with Ninhydrin, kept in Oven for 20 mins to dry at 80C temperature, with 65% humidity. After 20 mins, Mark search was done by using Naked eye and White light, no mark found.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
NCA4F4	Visual Examination	Visual exam under ambient/white light -> no FRD observed
	Alternate Light Source	Visual exam under Crimescope at 350 - 495 nm wavelengths using yellow and orange filters -> no FRD observed in quadrants A, C-D, FRD observed in quadrant B - prepped for capture
	Cyanoacrylate Fuming	Placed in CA-6000 at 65% relative humidity for ~20 minutes
	Visual Examination	Visual exam under ambient/white light -> no enhancement or additional FRD observed
	Powder Dusting	Processed using black magnetic powder with magnetic wand
	Visual Examination	Visual exam under ambient/white light -> no enhancement or additional FRD observed
	Ninhydrin	Processed Ninhydrin, painted on and hung to dry ~1 minute, placed in Weiss Gallenkamp Chamber at 65% relative humidity, 80 degrees C for ~20 minutes
	Visual Examination	Visual exam under ambient/white light -> no enhancement or additional FRD observed
NG6XEP	Cyanoacrylate Fuming	12 minutes
	Powder Dusting	Black powder
NPJM4D	Visual Examination	Looked at the item under bright white light at different angles.
	Alternate Light Source	Looked at item under LASER 532nm, Blue light 450nm, and UV 365nm. I saw ridge detail best under 365nm.
	Cyanoacrylate Fuming	I used 2g of cyanoacrylate in a MYSTAIRE fuming chamber at 70% and 300 degrees Celsius to develop prints. I visually examined the item and did not see any new development. I used FSIS 254nm (Full Spectrum Imaging System) and RUVIS 254nm (Reflective Ultraviolet Imaging System) to visualize ridge detail but saw no new detail.
	Powder Dusting	Black magnetic powder was used on the item. A visual exam was performed and no new development seen.
	1,2-Indanedione	I used 1,2-Indanedione on the item. Let it dry under the hood then placed it in the oven for 20 minutes at 100 degrees Celsius. I used LASER 532nm to visualize any ridge detail. No new development was seen.
	Ninhydrin	I used ninhydrin on the item. Let it dry under the hood then placed it in the humidity chamber for 15 minutes at 76% humidity. I performed a visual exam to see if any ridge detail developed. No new development was seen.
	Dye Stain	I used the dye stain RAM (Rhodamine, Ardrex and MBD) on the item. Then to visualize a print I used Laser 532nm, Blue light 450nm, and UV 365nm. No new development was seen.
	Physical Developer (PD)	I placed the item in a tray for 15 minutes with maleic acid. Next I placed the item in a tray with redox working solution for 10 minutes. I then performed a DI water rinse followed by a tap water rinse. I dried the items on a dry iron. I performed a visual exam to see if any ridge detail developed. No new development was seen.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
NR7FWK	Powder Dusting	Magnetic Black Powder
NV4MKP	Alternate Light Source	Visual examination with lights (range 390-850nm). Crime-Lite 82S UV light (range 350-380nm).
NZYNGB	Ninhydrin	Submerged evidence in Ninhydrin, allowed evidence to dry, placed in heat (80 degree) with humidity (65%) chamber for 20 minutes.
P7YKHA	Visual Examination	Oblique white light
	Powder Dusting	Regular black magnetic powder was applied with magnetic applicator
	1,2-Indanedione-Zinc	The test item was treated with 1,2-Indanedione-Zinc solution, air dried and was pressed with pre-heated dry iron for 10 second after covering the item with plain white paper sheets.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
PBV6NE	Visual Examination	White light examination of exhibit as received using ambient laboratory lighting and 'Tiablo' High Power LED Flashlight at varying angles. No useful marks were developed.
	Alternate Light Source	Sequential initial High Intensity Light Source (HILS) examination carried out, following dark adaptation, using Green Crime Lite 490nm-560nm with 571 nm viewing filter followed by Blue Crime Lite 420nm-470nm with 476nm viewing filter and UV Crime Lite 350nm- 380nm with 408nm viewing filter. Magnifying eyeglass used where required. Ridge detail was seen and a mark was photographed. QA adhered to and control test piece passed.
	Cyanoacrylate Fuming	Carried out as per CAST validated/internally verified procedure (Foster & Freeman MVC5000 Cabinet, Relative Humidity 80%, Glue time 13 minutes & 3g of superglue used). Following treatment, examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass used where required. No useful mark was developed. QA adhered to and control test piece passed.
	Powder Dusting	Carried out as per CAST validated/ internally verified procedure, Jet Black Magnetic Powder used with Magnetic wand 'brush'. Following treatment, examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass where required. Ridge detail was present and the mark was photographed. QA adhered to and control test piece passed.
	DFO	Carried out as per CAST validated/internally verified procedure. Treated with DFO, allowed to dry, and then placed in oven for 20 minutes at 100°C. Following dark adaptation, examined using Green Crime Lite 82S 490-560nm with 571 nm viewing filter and magnifying eyeglass where required. No useful marks were developed. QA adhered to throughout and control test piece passed.
	Ninhydrin	Carried out as per CAST validated/internally verified procedure. Treated with Ninhydrin and allowed to dry. Treated in oven set at 62%RH & 80°C for 6 minutes. Examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass where required. No useful marks were developed. QA adhered to and control test piece passed.
	Physical Developer (PD)	Carried out as per CAST validated/internally verified procedure. Ensured all solutions and room temperature > 17°C. Pre-treated with Maleic Acid for 10 minutes, treated with Physical Developer Working Solution for 20 minutes followed by 3 x water rinses as per procedure. All treatment stages carried out on rockers so exhibit was constantly agitated throughout. When dry, item was examined using 'Tiablo' High Power LED Flashlight (white light) at varying angles and magnifying eyeglass where required. No useful marks were developed. QA adhered to and control test piece passed.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
PEWZMU	Visual Examination	Ambient lighting, UV, and Tracer used -- visible with UV
	Lumicyano	CApture-BT - 0.135 g powder mixed with 2.7 g solution, fumed for 17 min, visual with Tracer / UV with yellow filter / 490 nm with orange filter
	DFO	Caron - 20 min, 100 degrees Celsius, visual with Tracer (green light with orange filter)
	Ninhydrin	Caron - 2 min, 80 degrees Celsius, 65% relative humidity, visual with ambient lighting
PWARBJ	Visual Examination	
	Alternate Light Source	3 Forensic Light Sources (FLS; LASER 532nm, Blue Light 450nm & UV 365nm)
	Cyanoacrylate Fuming	Includes examining the item visually & with a light source (RUVIS 254nm)
	Powder Dusting	Magnetic Powder
	1,2-Indanedione	Includes examining the item visually & with a light source (LASER 532nm)
	Dye Stain	RAM; Includes examining the item visually & with 3 light sources (LASER 532nm, Blue Light 450nm & UV 365nm)
	Physical Developer (PD)	
PZYX3F	Visual Examination	Visually inspected under ambient light.
	Powder Dusting	magnetic powder
Q26VQG	Visual Examination	11/18/19: ambient light (Approximately 2 mins)
	Cyanoacrylate Fuming	11/18/19: F&F 3000 fuming chamber - auto cycle (Approximately 1 hour)
	Powder Dusting	11/18/19: bichromatic powder and brush (Approximately 10 mins)
	Visual Examination	11/19/19: ambient light (Approximately 2 mins)
	Vacuum metal deposition (VMD)	11/19/19: West technologies VMD 360, gold metal deposition followed by zinc metal deposition (Approximately 45 mins)
	Visual Examination	11/19/19: ambient light
QE9BN7	Visual Examination	Prior to processing
	Cyanoacrylate Fuming	1 hour in Foster Freeman MVC3000
	Powder Dusting	Black magnetic powder
	Ninhydrin	Hexane formula, humidity added for approximately 1 hour, allowed ridge detail to develop for several days

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
QGETM2	Cyanoacrylate Fuming Powder Dusting Alternate Light Source	Item 3 was photographed and processed for latent prints using Krimesite, Superglue fuming, Fluorescent magnetic fingerprint powder, white light and the forensic light source.
QL9NJU	Visual Examination Alternate Light Source Cyanoacrylate Fuming Alternate Light Source	
QP8YFU	LCNA-Ind-Nin	'B' dev at LCNA stage (used as semi gloss surface). No marks with Ind/Nin.
QPQLCQ	Cyanoacrylate Fuming	+ Powder Dusting with soot
QPU6BZ	Cyanoacrylate Fuming Powder Dusting	Processing time: 25 minutes. No dye stain used. Black magnetic fingerprint powder.
QWTVHJ	Visual Examination Alternate Light Source Cyanoacrylate Fuming Powder Dusting 1,2-Indanedione Ninhydrin Dye Stain Physical Developer (PD)	Performed VIS utilizing oblique lighting. Utilized 532nm Laser, 450nm blue light and 365nm UV. Visualized print. Performed VIS then utilized RUVIS and 254nm. Applied Black Magnetic Powder (MGP). Placed in oven for 20 minutes then utilized 532nm Laser. Placed in humidity chamber for 15 minutes then performed visual exam. Applied RAM then utilized 532nm Laser, 450nm blue light and 365nm UV. Placed evidence in Maleic Acid for 10-15 minutes. Placed evidence in Redox working solution for 10-15 minutes. Rinsed with water.
R3FWCF	Visual Examination Cyanoacrylate Fuming Powder Dusting	Humidity Cycle (80% humidity, approx. 15 mins), Glue Cycle (80% humidity, approx. 20 mins), Purge Cycle (<80% humidity, approx. 20 min) Magnetic Powder and brush used first. Bichromatic powder and brush used to enhance

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
R6Y77D	Visual Examination	Examined using Crimelite flashlight.
	Alternate Light Source	Examined using Crimelite flashlight.
	Cyanoacrylate Fuming	Foster & Freeman MVC 500 fuming chamber for 70 minutes.
	Powder Dusting	Dusted with black magnetic fingerprint powder.
	DFO	Applied once, let dry, applied a second time, let dry. Placed in dry heat chamber for 20 minutes.
	Ninhydrin	Applied once, let dry, applied a second time, let dry. Placed in humidity chamber for 6 minutes.
RB4VRE	Visual Examination	
	Alternate Light Source	532nm, 450nm, and 365nm
	Cyanoacrylate Fuming	
	Alternate Light Source	RUVIS (254nm)
	Powder Dusting	Black magnetic powder
	Indanedione	Once dry, placed in dry oven at 100°C for 20 minutes
	Alternate Light Source	532nm
	Ninhydrin	Once dry, placed in humidity cabinet at 76°C/76% RH for 15 minutes
	Dye Stain	RAM - Rhodamine 6G, Ardrex, and MBD
	Alternate Light Source	532nm, 450nm, and 365nm
	Physical Developer (PD)	15 minutes in both maleic acid solution and redox solution
RM4LKM	Cyanoacrylate Fuming	12 minutes in SG chamber, black powder
RM6BTQ	Visual Examination	UV light
	Lumicyano	Processed using 0.14g powder and 2.70g solution. Fumed in CAPture-BT fuming chamber for 17 minutes
	DFO	Processed for 20 minutes in Caron environmental chamber at 100 degrees Celsius
	Ninhydrin	Processed for 2 minutes in Caron environmental chamber at 80 degrees Celsius and 65% humidity
RP9XF3	Visual Examination	Sample was observed before processing, no ridge detail apparent.
	Alternate Light Source	Sample observed under 254 nm light source with 254 nm filter, ridge detail apparent in section B.
	Cyanoacrylate Fuming	Sample fumed in Cy-Vac chamber for approximately 40 minutes, test prints positive.
	Rhodamine 6G	Rhodamine 6G applied to sample and observed under Trace Laser.
RW8GRL	1,2-Indanedione	Indanedione in NinCha 31 cabinet temperature 65C, humidity 65%, 30 minutes time.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
RZLBG4	Visual Examination	Oblique lighting
	Cyanoacrylate Fuming	
	Powder Dusting	Bichromatic powder- Dusti ident
TFDDM2	Cyanoacrylate Fuming	15 minutes, 80% humidity
	Powder Dusting	Black fingerprint powder.
TL7FRL	Visual/Indanedione/Oil Red O/ Silver Nitrate	Item 3 = Visual- negative. Indanedione- negative (same method as above). Oil Red O - Negative. Method: Oil Red O Application: 1. Add enough ORO stain to a glass tray or a plastic bag to cover the piece of evidence and control print. 2. Agitate using an orbital shaker for approximately 5 minutes until the control print and any prints on the evidence are adequately visualized. This process can take up to thirty minutes but often development happens within 5 minutes. Water Post-Wash: 3. All items of evidence processed should undergo water post-wash after submersion in the ORO stain. 4. Add enough water to a glass tray or plastic bag to cover the evidence. 5. Agitate using an orbital shaker for 5 minutes and monitor results. 6. Allow evidence to air dry on butcher paper or a paper towel. Any latent prints suitable for recovery developed or enhanced by ORO will be photographed. Silver Nitrate- Positive B. 1. Working under a fume hood, thoroughly soak the item with silver nitrate and allow item to dry. A blow-dryer may also be used to speed up the drying time. Set the blow-dryer on cool and apply the air being emitted to surface of the item. 2. Do not handle with metal tongs, use plastic only. 3. Expose the evidence to a light source such as direct sunlight, photo flood lights, arc lights, or ultraviolet light. Development can happen quickly so it must be monitored closely. A control print on a porous surface is to be tested at the time of use to ensure the silver nitrate is working properly. Immediately photograph any latent prints suitable for recovery developed or enhanced by silver nitrate.
TLLWUF	Visual Examination	
	Cyanoacrylate Fuming	A test print was placed in the Foster Freeman MVC 3000.
	Powder Dusting	I used black magnetic fingerprint powder to process the box. One latent fingerprint of value, L-03, was found in section B.
TTKEBC	Cyanoacrylate Fuming	10 minutes in fuming chamber with hot plate
	Powder Dusting	Black magnetic powder
U6AH4W	Visual Examination	no ridge detail observed
	Cyanoacrylate Fuming	ridge detail observed
	Visual Examination	
	Powder Dusting	Black Powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
U9WAB7	Visual Examination	Fluorescent lighting
	Cyanoacrylate Fuming	Safe Fume CA tank: 80% RH, 30 mins. fuming time, LOT# CA190820
	Powder Dusting	Contrasting powder
	Ninhydrin	HFENIN Lot #HFENIN191024; Steam iron
UG7PYF	Visual Examination	
	Alternate Light Source	532nm, 450nm, 365nm
	Cyanoacrylate Fuming	plus RUVIS
	Powder Dusting	Magnetic powder
	1,2-Indanedione	plus 532 nm
	Ninhydrin	
	Dye Stain	RAM (532nm, 450nm, 365nm)
Physical Developer (PD)		
UGHNR4	Visual Examination	Examination with an alternate forensic light source with appropriate filters (light source – POLILIGHT PL 500)
	Cyanoacrylate Fuming	20 min exposure, 120° C, 80% humidity, viewing in white light and with POLILIGHT PL 500 in 505-530 nm range + appropriate filters
	Powder Dusting	Dusting surface with latent print powder (magnetic), viewing in a white light
UHE2EW	Visual Examination	
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
	Dye Stain	R.A.M.
	Powder Dusting	
UM9X22	Visual Examination	
	Alternate Light Source	
	Cyanoacrylate Fuming	humidity - 80%, temperature of the heating plate - 100 degrees Celsius, time - 35 minute
	Powder Dusting	magnetic powder applicator
UT6AGK	Cyanoacrylate Fuming	MVC-3000 chamber
	Powder Dusting	black magnetic powder
	Ninhydrin	humidity cabinet followed by steam iron
	Dye Stain	R6G

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WebCode	Development Methods	Method Details
UU9H4X	Visual Examination	
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
	Dye Stain	Ardrox
	Powder Dusting	
UZFN4A	Visual Examination	
	Alternate Light Source	all wavelengths up to 555nm, latent visible in quadrant B
	Cyanoacrylate Fuming	insufficient ridge detail
	Powder Dusting	magnetic powder, latent in quadrant B
VKXFHW	Visual Examination	
	Alternate Light Source	415 nm, yellow filter
	Cyanoacrylate Fuming	(120°C ± 5°, 75% Relative Humidity ± 15%)
	Ninhydrin	(80°C ± 5°, 65% Relative Humidity ± 5%, 3 min.)
	Dye Stain	R.A.M., 415 nm, yellow filter
VQPE9X	Powder Dusting	processed with magnetic powder and wand
WKDX43	Visual Examination	3 minutes
	Alternate Light Source	Inherent fluorescence
	photography	The developed latent print was preserved by digital imaging (photography) at high resolution capture
	Magnet powder	5 minutes
	Photography	The developed latent print was preserved by digital imaging (photography) at high resolution capture
WYEM49	Test of water drop	water drop on the item
	Visual Examination	White light. Luminescence (from 315nm to 570nm)
	1,2-Indanedione	Immersion. Heated press at 165°C while 10 secondes. Observation at 532nm
	Ninhydrin	Immersion. Waiting for 48h

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
WYHAJ2	Visual Examination	white light visual examination, no RD was observed
	Cyanoacrylate Fuming	Chamber @80°C and 70% RH for 15 minutes, no RD was observed
	Powder Dusting	black magnetic powder processed, no RD was observed
	Powder Dusting	black powder processed, fingerprint was observed in quadrant B, unable to discern L1D or L2D
	Alternate Light Source	Laser exam at 532 nm with OB, no improvement of fingerprint in Quadrant B
	Alternate Light Source	ALS exam at 350, 415, 445, 455, 475, 495, 515, 535 nm. No barrier filter (350 nm , 415 nm). Yellow barrier filter (350 nm , 415 nm, 445 nm, 455 nm). Orange barrier filter (445 nm, 455 nm, 475 nm , 515 nm, 535 nm). LP clearest at 350 nm with a yellow barrier filter
X249HH	Visual Examination	5 minutes
	Cyanoacrylate Fuming	15 minutes
	Black magnetic powder	10 minutes
X2FWRW	Powder Dusting	Magnetic powder - black
X3QXKW	Visual Examination	
	Alternate Light Source	PI500 emission from 350 to 600nm
	Cyanoacrylate Fuming	Processing time approx 1 hour 80%Rh, glue heated to 120Celsius
	Alternate Light Source	UV
X94RG8	DFO	Visual examination (000-495nm); photography; temperature 100°C
X9HZT3	Visual Examination	
	Alternate Light Source	LASER (532 nm), blue light (450 nm), and long wave UV (365 nm)
	Cyanoacrylate Fuming	visual and RUVIS (254 nm)
	Magnetic powder	
	1,2-Indanedione	LASER (532 nm)
	Ninhydrin	
	Dye Stain	RAM, used LASER (532 nm), blue light (450 nm), and long wave UV (365 nm)
	Physical Developer (PD)	
XENZM6	Powder Dusting	
XFHMHG	1,2-Indanedione	Visual, Indanedione, Alternate light source - Lazer. No times recorded

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
XFXA9	Visual Examination	No visible staining observed.
	Cyanoacrylate Fuming	Processing time: 51 Min. Humidity: 15 min @ 80%. Glue Cycle: 16 Min @ 80%, Temp 120 C. Purge Cycle: 20 Min @ 80%
	Powder Dusting	Bichromatic
XH7V24	Visual Examination	A visual exam using white light, a CrimeScope ALS and a 532nm Coherent TracER laser with appropriate colored goggles were used.
	Cyanoacrylate Fuming	Fumed using a Misonix CA-6000 for 10 minutes at 8-% humidity.
	1,2-Indanedione	Sprayed with 1,2 Indanedione then item was put in an oven at 100 degrees for approximately 20 minutes
	Ninhydrin	Item was sprayed with ninhydrin and then a steam iron was used to expedite development
	Dye Stain	Water based Rhodamine 6G was used.
XNB29U	Visual Examination	
	Cyanoacrylate Fuming	
	Powder Dusting	Black Powder/Magnetic Powder
XQGCDB	Visual Examination	Naked eye, oblique lighting
	Cyanoacrylate Fuming	Auto cycle programmed parameters: Humidity 80% RH ~15 mins, Glue 80% RH 120 degree C ~15 mins. Purge <80% RH ~20 mins
	Powder Dusting	Fiberglass brush used to apply bichromatic powder till adequate development observed
XVCY9J	Visual Examination	UV light with yellow filter
	Lumicyano	CApture-BT chamber used. Lumicyano powder: 0.14g. Lumicyano glue: 2.7g. Fuming time: 8 minutes
	DFO	Caron chamber used. Temperature: 100 degrees Celsius. Processing time: 20 minutes. Tracer laser (532nm) with orange filter
	Ninhydrin	Caron chamber used. Temperature: 80 degrees Celsius. Humidity: 65%. RH Time: 2 minutes
Y6WRY7	Visual Examination	High intensity white light and LASER ALS
	Cyanoacrylate Fuming	Foster and Freeman MVC500 Auto cycle (~70 minute run time)
	Powder Dusting	Black fingerprint powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
YAV4V7	Visual Examination	incandescent, crimelite, ALS
	Cyanoacrylate Fuming	
	Powder Dusting	black powder
	DFO	20 mins
	Ninhydrin	8 mins
YYTQV7	Cyanoacrylate Fuming	8 minute processing time
	Powder Dusting	Black magnetic powder
YYVDCJ	Visual Examination	Viewed with ambient light and Coherent Tracer (532nm w/ orange goggles)
	Cyanoacrylate Fuming	Fumed in Misonix at 80% humidity and viewed with UV and ambient light.
	DFO	Treated with DFO and heated in environmental chamber to 100 degC for 20 min.
	Ninhydrin	Treated with NIN and kept for 2 min. in environmental chamber at 80 degC and 65% humidity.
Z778NE	Visual Examination	No print was visualized.
	Cyanoacrylate Fuming	CA fuming was conducted with no visualization of a print.
	Ninhydrin	NIN was applied using a spray bottle to the card box and then placed in the environmental chamber for 5 minutes at 80 degrees F and 65% humidity. No visualization of a print. It was placed back into the environmental chamber for an additional 5 minutes with negative results.
	Oil Red O	ORO was applied to the card box followed by a post wash. A print was visualized in box B.
Z84CGE	Cyanoacrylate Fuming	fumed for 12 minutes
	Powder Dusting	black powder
ZBY9QT	Visual Examination	a trace was observed in section B (light UV)
	Cyanoacrylate Fuming	temp. 21 oC, time 15 min, humidity 80%
	Basic Yellow	light 350-505 nm

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
ZEVZW6	Alternate Light Source	white light, 340-587nm, UV, coaxially reflected
	Cyanoacrylate Fuming	humidity 80%: humidity cycle 15 min, glue cycle 15 min, purge cycle 40 min.
	Alternate Light Source	white light source
	DFO	100° Celsius during 20 min
	Alternate Light Source	fluorescence examination with polylight (491nm-548nm)
	Ninhydrin	development in the dark for 24 to 48 hours in an ambient temperature with humidity
	Alternate Light Source	white light source
	Dye Stain	Staining with Rhodamine 6G
	Alternate Light Source	fluorescence examination with polylight (491nm-548nm)
ZXC2VD	Powder Dusting	Visual examination with lights (range 390-850nm). Magnetic powder
ZZCBRL	Cyanoacrylate Fuming	Approximately five minutes with heat and low humidity.
	Dye Stain	MRM-10 with ALS.

Response Summary	Participants: 187
Methods Utilized	

Alternate Light Source	69	Physical Developer	17
Cyanoacrylate Fuming	133	Powder Dusting	139
DFO	23	Visual Examination	132
Dye Stain	30	Wet Powder Suspension	1
Ninhydrin	63	1,2-Indanedione	26

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

Preservation Methods

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
264W7G	Photography	Crime-Lite imager
2CNYDJ	Photography	Digital photographing with light source. Orange filter in objective.
2HUK8	Lifting	Lift tape and lift card
2JKBAV	Photography	12/04/2019 at 2:14 pm Photographed at a 90 degree angle using Crimescope CS 16-500 at 455 nm and a Nikon DS5500 camera with a Macro 1:1 lens and an orange filter with goggles (evidence photographed to scale)
2QM22Q	Submitted item to LPU	Due to delicate nature of the evidence the item was submitted to the latent print unit for comparison.
2ULCXQ	Lifting	lifted latent print and transferred to a latent print card and noted information for source where latent came from, time collected, etc.
2XNXYW	Photography	Digital photo
2YLAMX	Photography	Digital capture (Nikon D300) after Cyanoacrylate Fuming (in the white light).
32LYDK	Photography	Macro lens, TIF Format, 495 nm and orange filter
3AJDJ6	Photography	Use of oblique and direct lighting after Cyanoacrylate fuming. Then use of coherent tracer lazer and an orange filter after dye staining and rinse. All done in raw and macro photography with a scale.
3KBH6W	Lifting	
3VG3RY	Photography	DCS5 system. Reflected UV with Baader filter. R6G with blue light/orange filter.
4CJ9FD	Photography	Foster & Freeman DCS-4 with Nikon D700 camera.
4NAUTU	Photography	
4NUJ33	Lifting	Tape applied to developed print, lifted, and applied to lift card with pertinent case information on opposite side; prepared for Latent Print examiner
4RRDKQ	Photography	Photographed using Nikon D5 Camera Processed using Photoshop CC

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
6L337Z	Photography	Determine exposure and photograph with a scale in place near developed print.
6NRDWT	Photography	Digital camera. Saved to SD card then transferred to secure network.
6NU2KX	Lifting	CLEAR TAPE
6V6DFX	Photography	RAW, enhancement in Photoshop
6XDPXY	Photography	
6XYIBA	Photography	
6Z22YP	Photography	latent print was photographed with a macro camera lens and linear scale
6Z23QN	Photography	DCS5 system for photography
76BEFN	Photography	after Cyanoacrylate Fuming - under white light
	Photography	after Basic Yellow 40 - in alternate light source at 450 nm using a orange colored bandpass filter
78KETV	Photography	
79DFGL	Photography	Nikon D700 Camera and tiff format. Some photos were taken with visible and UV light.
7GJK6V	Photography	
7MCDD4	Photography	Visual: Aperture priority, f/8.0, 1/4 second exposure; f/8.0, 1/8; f8.0, 1/10. CA: Aperture priority, f/8.0, 1/8. RAM/ALS: CrimeScope: CSS/orange; f/16.0, 2 second exposure
7MD6RY	Photography	
7Y7RG7	Photography	Nikon D700; Crimescope ALS used with CSS light and orange filter
8278GG	Photography	Nikon D700 digital photograph using blue light and orange filter
84DNLT	Photography	
88EECR	Photography	Comparison quality raw digital images
	Lifting	Print was lifted and placed on white latent lift card

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
8K2Z3E	Scanning	Adobe Photoshop; 1000 dpi
8TC3NF	Photography	
948TGD	Photography	
992Q4J	Photography	
9J7PTX	Lifting	Two inch frosted tape used with standard white lift card
9KZEFZ	Photography	10/24/19 One (1) area ridge detail developed (CAE1) and photographed on the piece of black polyethylene sheeting (item 1) section A. I then enhanced the ridge detail with Photoshop, sized the image and printed out the image onto a latent print lift card with the case #, date, initials, sketch, description and lift number.
	Lifting	10/30/19 One (1) area ridge detail developed and lifted (MP1) (same as CAE 1). This was the black mag powder lift.
9YKTJY	Photography	
A2JGFM	Photography	
A3RVQM	Photography	Canon digital camera
A8Q7XV	Photography	
AMEH6V	Scanning	After cyanoacrylate fuming item 1 was examined with a white light source and ridge detail was found. This could have been captured with the DCS camera system, but decided to stain with BY40 dye for further enhancement of the mark. This was then examined with a blue light source (430-470nm) and 495nm filter goggles. This could have then be captured with the DCS camera system using this wavelength of light source.
AP3VYK	Photography	Took picture of latent print using a Nikon D800 camera, Nikon 105mm microlens, and Nikon 056 orange filter.
B4MUEZ	Photography	Method of taking pictures, storage and custody of digital images
BE76ZX	Photography	photographed latent print in Section A at visual examination with fiber optic lighting
	Photography	photographed latent print in Section A after R6G with green laser at 532 nm and orange filter
BFGZLQ	Photography	

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
BK7TFR	Photography	Photographs were taken with Nikon digital camera. All digital images stored on DVD ROM disc.
BMT7AG	Photography	Nikon camera, scale, raw
BW2XKW	Photography	Photography using a Nikon D3X camera with Control My Nikon software at f/13 with 2 second exposure (orange barrier filter) and a Polilight at 505nm.
BYQZQK	Photography	1 photograph was taken to document the ridges visualized after the alternative light source, 5 photographs were taken to document the ridges visualized after the Cyanoacrylate fuming, and 3 photographs were taken to document the ridges visualized after the powder dusting.
CA7GMB	Photography	Applying a centimeter test near the fingerprint and photographs are realized during step 2) and 4) and 6). The trace is illuminated with the Crimescope in CSS or 515nm or 535nm to get the best contrast.
CDNEE8	Photography	using DCS-5.
CG7TRT	Photography	Photos taken post each treatment using: white light, U.V. light and polilight (415nm and 450 nm)
D7YBWG	Photography	Digital imaging photograph was utilized to capture latent print developed in section A of item 1.
DFN8LB	Photography	Item # 1 was photographed using an alternate light source.
DHTUBL	Photography	The impression observed was documented with digital photography prior to the CA fuming and after the CA fuming.
DTZAGU	Photography	Captured digitally as 1LP1 and 1LP1_1
EK3YQV	Lifting	
EWA6GN	Photography	
F7VDP6	Photography	PHOTOGRAPHIES WERE SENT TO THE LATENT PRINT PROCESSING
FER68J	Photography	High resolution images taken using Camera Control Pro 2 and Nikon D810 with white light captured at greater than 1000 ppi. Image calibration and processing using Adobe Photoshop CC, one image printed 1:1 using EPSON SureColor P5000.

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
FKE3PF	Notes	Written Notes (description)
	Photography	Digital Photography before fuming
	Additional Notes	Written Notes of development of block "A" after fuming
	Photography	Additional Photography of developed print
	Lifting	Lift of latent print
FNTTYG	Photography	
FZ9MCV	Photography	One image taken of impression during visual exam; one image taken of impression after dusting with powder. One orientation image taken. Images were uploaded to [Laboratory] imaging system.
G6WM7G	Photography	Filled frame with ruler to set scale. Photos were obtained after each process in which the print was visible.
GAT7CL	Lifting	
GJDK2W	Photography	After BY 40 photography in repositment using 450nm light and orange filter in front of cameralens.
GLYLTA	Photography	Nikon D810 camera; Camera Control Pro capture software; Crime Scope CS-16-500 illumination at "CSS" wavelength with orange barrier filter. Epson Perfection V800 scanner; Reflective mode; 1200 ppi resolution; 24 bit color
GNVXP	Photography	Examination quality photographs (6 images) were taken of the apparent fingerprint detected in Section A of the black polyethylene sheeting. Photographs were taken before lifting was attempted.
	Lifting	The tape lift of the apparent fingerprint in Section A of the black polyethylene sheeting was placed on a latent card where the orientation of the apparent fingerprint was documented. The latent card was then sealed in a manila envelope.
GRM7WQ	Photography	2 Digital images, 1 Labkam image
	Lifting	1 card with 1 lift
GY6MFE	Photography	
GY8AV8	Photography	White light for CA, blue light and yellow filter for BY40
H8EA2N	Light Examination	The item was examined with a blue light source (430-470nm) and 495nm filter goggles. Ridge detail was found. This could have been captured with the DCS camera system using the same wavelength of light source and same the filter for the camera.

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
H8JQ4T	Photography	Photography with 450nm (peak) forensic light. Orange filter in front of camera lens.
H9RZ4P	Photography	Used a scale in the photo. A canon camera was used and an orange camera lens when photographing after the dye stain. The latent was photographed during visual exam and after dye stain.
HEJ3CW	Photography	Digital photography. *not used for test
HPHZWB	Lifting	After using black magnetic powder to further enhance the fingerprint on Item #1, the fingerprint was lifted using lifting tape and placed on an index card with the required pertinent information. The latent print lift was then placed inside a envelope and sealed.
HXEQLR	Photography	DCS-5-W1-53
HY42DK	Photography	Photographed with scale. Photographed in natural light. Photographed with yellow filter and with alternate light source at 445nm - Enhanced in Photoshop.
	Lifting	Tape lift after magnetic powder dusting.
J9AAKK	None	Item 1 was left protected but uncovered until it was checked for print development.
JGX6HE	Photography	Latent was photographed with scale.
JJ7HZG	Photography	Photographed with and without a scale.
	Lifting	Lifted.
JPEGX2	Lifting	PROCEDURE FOR THE PROCESSING OF LOPHOSCOPIC INDICES
JPUZHY	Photography	
JRJAPE	Photography	Photography after all used methods.
JUNUHK	Photography	CAE (with Reflected UV lighting) and R6G
JXN6BZ	Photography	
KEA38X	Photography	DCS5 system, blue-green orange filter
KJ6YNC	Photography	
KKYKJN	Scanning	scanned at 1000 dpi

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
KM3BTN	Photography	Foster+Freeman DCS-5 station used with various, method appropriate light sources/attachments
KNXVFN	Photography	Nikon D700 camera, 105 mm lens, Blue Light (430-470 nm), Yellow filter (GG495, 476 nm), with a scale, digital enhancement, calibrated, printed 1:1 (natural size)
	Lifting	2 inch clear lifting tape placed on white card
KTRXFG	Photography	Photographed and then enhanced using Photoshop
KTTL3M	Photography	Nikon D810
KVHYK6	Lifting	Latent print tape used to lift print. Print placed on latent print card
L2VEH8	Photography	Used Nikon camera and scale in photograph
L7EK7U	Photography	Latent print in section A was photographed after visual examination and again after Rhodamine.
LP7GNB	Photography	Macro camera lens (Nikon D 3300). The photo of the latent print is archived in the AFIS database of fingerprints.
LUK4GT	Photography	
M9TJV9	Photography	
MAU8HE	Lifting	I collected it using a tape lift and placed the print on a latent print card and filled in the relevant information that is needed.
MYUJQH	Photography	Raw images using fx camera
N447UK	Photography	visual step - tungsten light, cyanoacrylate step - fiber optic light, rhodamine 6G step - 532nm laser + orange filter
N98CZB	Photography	Overall photographs and latent print photographs were taken between the method of Cyanoacrylate Fuming, Dye Stain, and Powder Processing.
	Lifting	The latent print was lifted from section A and placed on a latent lift card.
N98DY3	Photography	
NBXCD2	Photography	1. Mark found on section A after Cyanoacrylate fuming. Photographed using White light. 2. Same mark photographed after Dying using 440nm light with 495nm Filter.

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
NCA4F4	Photography	One (1) area in quadrant A photographed using Nikon D810 under white light, calibrated 1:1, greater than 2000 ppi, digitally processed using Photoshop Creative Cloud, saved as Tif to T drive
NG6XEP	Photography	
NR7FWK	Lifting	
NV4MKP	Photography	Canon 5D + 90mm macro lens 1:1 and Crime-Lite 82S UV light (range 350-380nm) + Photoshop.
NZYNGB	Lifting	Tape lift onto white latent card.
P7YKHA	Photography	White flashlight, Polilight PL500 at 505nm, Orange-21 Camera Filter, FORAY ADAMS Imaging System
PBV6NE	Photography	Any suitable marks developed throughout sequential treatment were marked up and photographed 1:1 using a D810 Nikon digital camera with an AF-5 micro nikkor 105mm lens, 8x4 Crime Lite light source(s) and appropriate camera filter(s). The camera is linked to DCS5 (Digital Capture System 5) software where the images are exhibited with full audit trails and further DCS5 enhancement tools can be used to improve contrast/remove background interference where applicable. Exhibited images then submitted to the Fingerprint Bureau for pattern analysis.
PEWZMU	Photography	Nikon D5 -- DCS-5-W1-53
PZYX3F	Photography	Photographed w/orange filter, RAW image, w/scale, enhanced via Photoshop
Q26VQG	Lifting	Lift tape and lift card (Approximately 2 mins)
QE9BN7	Photography	Coherent Laser and Canon camera photography
QGETM2	Photography	Digital photography was used.
QL9NJU	Photography	Lighting ALS- UV
QP8YFU	[No Methods Reported.]	Item packaged for imaging to protect dev. ridge detail.
QPQLCQ	Photography	
QPU6BZ	Lifting	Lifted using standard latent lift tape. Secured to latent lift card.
R3FWCF	Lifting	Lift tape & lift card

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
R6Y77D	Photography Lifting	Photographed whole item upon opening, the print area after each development method and the whole item at the end. Attempted to lift, but there was no visual improvement.
RM4LKM	Photography	Nikon camera
RM6BTQ	Photography	Captured using UV light after visual examination. Captured using blue light with yellow filter after Basic Yellow 40
RP9XF3	Photography	Photograph of print in section A taken during UV light analysis with label and ruler in place in TIF format.
RW8GRL	Photography	Photography in reprofotosystem with white light set upwards via Silver reflector.
RZLBG4	Photography Lifting	DCS4 Lift tape on white card
TFDDM2	Photography	1:1 macro with and without scale.
TL7FRL	Photography	ISO 100, f/16 or higher, RAW format
TLLWUF	Photography	Using orange filter goggles, I viewed the sheeting with a Rofin PL500 @450nm. I located one (1) latent of value in section A. I attached an orange filter on the camera lens, placed a ruler next to the latent and photographed the latent, marked L-01, using a Nikon D800 camera. The image was opened in Adobe Photoshop and saved to a photographic reproduction sheet as an original and processed image.
TTKEBC	Photography	Nikon D700, ALS with orange filter, Foray Digital Workplace
U6AH4W	Photography	
U9WAB7	Photography	Photography; Nikon D5200, Photoshop CS6 for enhancements
UGHNR4	Photography	NIKON D7100
UHE2EW	Photography	
UM9X22	Photography	
UT6AGK	Photography	B&W; 1:1
UU9H4X	Photography	

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
UZFN4A	Photography	1 photo, A quadrant
VKXFHW	Photography	
VQPE9X	Lifting	Used fingerprint tape and attached to [Form]. twice
WKDX43	Photography	The developed latent print was preserved by digital imaging (photography) at high resolution capture.
WYEM49	Photography	
WYHAJ2	Photography	photographed with white side lighting, saved image to a secure image drive
X249HH	Photography	DCS5
X2FWRW	Photography	Raw format
X3QXKW	Photography	
X94RG8	Photography	
XENZM6	Lifting	
XFHMHG	Lifting	Photography after CA processing, then lift after powder processing.
XFXXA9	Lifting	Tape was used to lift the ridge detail observed onto a lift card.
XH7V24	Photography	For the ALS Image: Nikon D800, F/11, Shutter speed 8 seconds. For the superglue image: A Blue ALS (475nm) was used with no filter. Nikon D800, F/11 shutter speed of 1/400 sec. For the Rhodamine image a 532nm laser with an orange filter was used. Nikon D800, F/11. Shutter speed 4 seconds
XNB29U	Photography	
XQGCDB	Lifting	Tape used to lift fingerprint and secured on lift card
XVCY9J	Photography	DCS-5-W1-53 used
Y6WRY7	Photography	
YAV4V7	Photography	Photographed and uploaded into a secure database
YYTQV7	Photography	Orange filter

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
YYVDCJ	Photography	Photographed using DCS-5 system on Nikon D5 camera.
Z778NE	Photography Lifting	Photographs were taken at each stage of development and visualization using comparative settings (ISO 100, RAW, F22, 34mm). Lifting was performed as the final step in the process after fingerprint powder was applied.
Z84CGE	Photography	
ZBY9QT	Photography	
ZEVZW6	Photography	Digital Capturing System (DCS-4). Cyanoacrylate: white light source. Dye stain (Rhodamine 6G): blue/green (460-510nm) with filter OG-550
ZXC2VD	Photography	Canon EOS 760D + 100mm macro lens and Polilight white light + Photoshop.
ZZCBRL	Photography	Entered into ADAMS.

Response Summary	Participants: 170
Methods Utilized	

Lifting	34
Photography	144
Scanning	3

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

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
264W7G	Photography	Canon EOS 6D
2CNYDJ	Photography	Digital photographing, red filter, light source.
2HUK8	Scanning Photography	Before and after each method photography request completed
2QMZ2Q	Scanning	Print preserved by scanning and submitted to LPU for comparison.
2ULCXQ	[No Methods Reported.]	Package properly for submission to our Latent Print Unit if this was an actual criminal case.
2YLAMX	Photography	Digital capture (Nikon D300) after Ninhydrin (in the white light).
32LYDK	Photography	Marco lens, TIF Format, 495 nm and orange filter (DFO)
3AJDJ6	Photography	Raw and macro photography with a scale.
3KBH6W	Scanning	
3VG3RY	Photography	DCS5. Green with red filter (DFO). White light (NIN)
4CJ9FD	Photography	Foster & Freeman DCS-4 with Nikon D700 camera
4NAUTU	Photography	
4NUJ33	No ridge detail observed	No ridge detail was observed therefore no preservation was required
4RRDKQ	Photography	Nikon D5 Camera and processed using photoshop CC
6L337Z	Photography	Determine exposure and photograph with a scale in place near developed print.
6NRDWT	Photography	digital camera using laser @ 532nm with orange barrier filter; images saved to SD card then transferred to secure image network
6NU2KX	Scanning	RESOLUTION - 1000 DPI
6V6DFX	Photography	RAW, enhancement in Photoshop
6XDPXY	Photography	

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
6XYBA	Photography	
6Z22YP	Photography	fingerprint was photographed with a macro camera lens and linear scale
6Z23QN	Photography	DCS5 system for photography
76BEFN	Photography	after DFO - in alternate light source at 505 nm using a orange colored bandpass filter
78KETV	Scanning	
7GJK6V	Photography	
7MCDD4	Photography	DFO/ALS: CrimeScope 515nm/orange; aperture priority, f/16, 10/13 second exposure
7MD6RY	Photography	
7Y7RG7	Scanning	Epson V700 1200 ppi
8278GG	Photography	Nikon D700 digital photograph
	Scanning	One scanned image with Epson Perfection V700
84DNLT	Photography	
8K2Z3E	Scanning	Adobe Photoshop; 1000 dpi
8TC3NF	Scanning	
948TGD	Photography	
992Q4J	Photography	
9J7PTX	[No Methods Reported.]	I work in the Crime Scene Unit and the evidence would have been submitted to the Latent Print Unit for further analysis

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
9KZEFZ	Photography	10/24/19 One (1) area ridge detail (N1) developed and photographed on the front of the white copy paper flier (item 2) Section #C. I then used Photoshop to enhance and size the image. I then enhanced the ridge detail with Photoshop, sized the image and printed out the image onto a latent print lift card with the case #, date, initials, sketch, description and lift number.
	Scanning	10/24/19 One (1) area ridge detail (N1) developed and scanned on the front of the white copy paper flier (item 2) Section #C. I then enhanced the ridge detail with Photoshop, sized the image and printed out the image onto a latent print lift card with the case #, date, initials, sketch, description and lift number.
9YKTJY	Photography	
A2JGFM	Photography	
A3RVQM	Photography	Canon digital camera
A8Q7XV	Photography	
AMEH6V	Scanning	I examined item 2 in normal white light and a mark was seen in box C. Under normal lab conditions, I would have marked this up with a fingerprint label and then proceeded to capture the mark with a DCS camera and send to the fingerprint bureau for identification.
AP3VYK	Photography	Took latent print picture using a Nikon D800 camera and Nikon 105mm Micro lens.
B4MUEZ	Photography	Method of taking pictures, storage and custody of digital images
BE76ZX	Photography	photographed latent print in Section C after IND-ZnCl ₂ using green laser at 532 nm and orange filter
BFGZLQ	Photography	
BK7TFR	Photography	Photographs were taken with Nikon digital camera. All digital images stored on DVD ROM disc.
	Scanning	Flatbed scanner. All scanned/digital images stored on DVD ROM disc.
BMT7AG	Photography	Nikon camera, scale, raw
BW2XKW	Scanning	Scanning using an Epson scanner.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
BYQZQK	Scanning	3 scans were taken of the ridges visualized after the application of ninhydrin.
CA7GMB	Photography	Applying a centimeter test near the fingerprint and photographs are realise during step 4). Orange filter is fixed on the camera when the trace is illuminated with the Crimescope in CSS or different wavelengths to get the best contrast.
CDNEE8	Photography	it was photographed using DCS-5
CG7TRT	Photography	Photographed using DCS-5 camera/software package, filters and 505nm light, post indanedione treatment
D7YBWG	Photography	Digital imaging photography was used to capture latent print in section C of Item 2.
DFN8LB	Photography	Results from item # 2 were photographed
DHTUBL	Photography	The impression observed was documented with digital photography.
DTZAGU	Photography	digitally captured as 2LP1
EWA6GN	Photography	
F7VDP6	Photography	PHOTOGRAPHIES WERE SENT TO THE LATENT PRINT PROCESSING LAB
FER68J	Scanning	High resolution images using Espon Perfection V800 scanner, captured at greater than 1000 ppi. One processed image using Adobe Photoshop CC and printed 1:1 using EPSON SureColor P5000.
FKE3PF	Notes	Written Notes (description)
	Photography	Digital Photography of Item #2 as received.
	Additional Notes	Notes of developed print, block "C"
	Photography	Digital photography of developed latent print.
FNTTYG	Photography	
FZ9MCV	Photography	One exam quality image taken after DFO. Image was taken with ALS set at 495 using an orange filter. One orientation image taken under white light.
G6WM7G	Photography	Filled frame with ruler to set scale. Photos were obtained after each process in which the print was visible.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
GLYLTA	Scanning	Epson V800 Photo scanner; reflective mode; 1200 ppi resolution; 24 bit color
GRM7WQ	Photography	6 Digital images
GY6MFE	Photography	
GY8AV8	Photography	for DFO blue-green light and orange filter
	Scanning	for ninhydrin
H8EA2N	Light Examination	I examined the item with both white light and in natural light, no ridge detail was noted in any of the boxes.
H9RZ4P	Photography	I photographed each quadrant to show no ridge detail development. I also did overall photographs of item 2 with the laser and orange lens.
HEJ3CW	Scanning	Scan/Digital image. *not used for test
HPHZWB	Collection	Item #2 was found to have a developed print in section C. The paper was then placed inside of an envelope and sealed.
HXEQLR	Photography	DCS-5-W1-53
HY42DK	Photography	Photographed with natural light with scale. Enhanced in Photoshop.
J9AAKK	None	No prints were visible in any quadrant of Item 2. The item was allowed to dry additionally overnight and viewed the following day. Still, no prints were detected on Item 2.
JGX6HE	Photography	Latent print photographed under an alternate light source with appropriate filters.
JJ7HZG	Photography	Photographed with and without a scale.
JPEGX2	Photography	PROCEDURE FOR THE PROCESSING OF LOPHOSCOPIC INDICES
JPUZHY	Photography	
JRJAPE	Photography	Photography after DFO.
JUNUHK	Photography	
JXN6BZ	Photography	

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
KEA38X	Photography	DCS5 system, blue-green orange filter
KJ6YNC	Photography	
KKYKJN	Scanning	scanned at 1000 dpi
KM3BTN	Photography	Foster+Freeman DCS-5 station used with various, method appropriate light sources/attachments
KNXVFN	Photography	Nikon D700 camera, 105 mm lens, White Light (400-700 nm), Green filter, with a scale, digital enhancement, calibrated, printed 1:1 (natural size)
KTTL3M	Photography	Nikon D810
KVHYK6	Placed back into original packaging to be submitted to latent print unit	Once positive result appeared, item placed back into original packaging and resealed. To be submitted to latent print unit for further examination.
L2VEH8	Photography	Used Nikon camera with scale in the photograph
L7EK7U	Scanning	Latent print was scanned after Ninhydrin
LP7GNB	Photography	Macro camera lens (Nikon D 3300). The photo of the latent print is archived in the AFIS database of fingerprints.
LUK4GT	Photography	
M9TJV9	Photography	
MAU8HE	Photography	I took 3 photographs of the print that developed in the square labeled "C" and burnt them onto a Master and Working copy CD-R.
MYUJQH	Photography	Raw images using fx camera
N447UK	Photography	532nm laser and orange filter
N98CZB	Photography	Overall photographs and latent print photographs were taken after each method of Iodine Fuming and Ninhydrin.
N98DY3	Photography	
NBXCD2	Photography	Mark found on section C after 1,2-Indanedione. Photographed using 515nm light (green light) and camera filter 550nm.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
NCA4F4	Scanning	One (1) area of FRD in quadrant C scanned in at 1200 ppi using Epson 11000XL, digitally processed using Photoshop Creative Cloud, saved as Tif in T drive.
NG6XEP	Scanning	
NPJM4D	None	
NR7FWK	Scanning	
NV4MKP	Photography	Canon 5D + 90mm macro lens 1:1 and Light source: Rofin 505nm + orange filter + Photoshop.
NZYNGB	Scanning	Labeled ridge detail N1 and scanned. Enhanced detail via Adobe Photoshop and printed on photo paper. Attached to latent card.
P7YKHA	Photography	Polilight PL500 at 505nm, Orange 21 Camera Filter, FORAY ADAMS Imaging System
PBV6NE	Photography	Any suitable marks developed throughout sequential treatment were marked up and photographed 1:1 using a D810 Nikon digital camera with an AF-5 micro nikkor 105mm lens, 8x4 Crime Lite light source(s) and appropriate camera filter(s). The camera is linked to DCS5 (Digital Capture System 5) software where the images are exhibited with full audit trails and further DCS5 enhancement tools can be used to improve contrast/remove background interference where applicable. Exhibited images then submitted to the Fingerprint Bureau for pattern analysis.
PEWZMU	Photography	Nikon D5 -- DCS-5-W1-53
PZYX3F	Photography	appeared to be a rxn, but no ridge details; photographed rxn in RAW
Q26VQG	None	No ridge detail observed. xerox copies created before ninhydrin treatment, after ninhydrin treatment, and after Indanedione treatment for documentation purposes.
QE9BN7	Photography	Canon camera photography
QGETM2	Photography	Digital photography was used.
QL9NJU	Photography Scanning	
QP8YFU	[No Results Reported.]	As for Item 1

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
QPQLCQ	Photography	
R3FWCF	Scanning	Photocopy made of item 2 and positive control after 1,2-indanedione, oven and steam iron treatments
R6Y77D	Photography	Photographed whole item upon opening, the print area after each development method and the whole item at the end.
RM4LKM	Scanning	Scanner
RM6BTQ	Photography	Captured using green light with orange filter after DFO
RW8GRL	Photography	Photography in Foster Freemans Green 520nm(peak)light. Using OG 590 AG Foster Freeman filter in front of cameralens.
RZLBG4	Photography	DCS4
TFDDM2	Photography	1:1 macro with and without scale.
TL7FRL	Photography	ISO 100,f/16 or higher, RAW format
TLLWUF	Scanning	An Epson V800 scanner was utilized at 1200dpi to capture the latent fingerprint of value, L-02. The image was opened in Adobe Photoshop and saved to a photographic reproduction sheet as an original and processed image.
TTKEBC	Scanning	Epson Perfection V700 Photo flatbed scanner, 1200 dpi, Foray Digital Workplace, Photoshop CS6 used to enhance to determine pattern type - pattern was undiscernible
U6AH4W	Photography	
U9WAB7	Scanning	Photoshop CS6 used for enhancements; Epson V37 #8; 1200 DPI
UGHNR4	Photography	NIKON D7100
UHE2EW	Photography	
UM9X22	Photography	
VKXFHW	Photography	
WKDX43	Photography	The developed latent print was preserved by digital imaging at high resolution capturing.
	Scanning	The latent print was preserved by digital scanning at high resolution.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
WYEM49	Photography	
WYHAJ2	Scanning	scanned the sheet prior to processing in order to preserve the printing on paper regarding 'Found Dog!', saved image to a secure image drive
	Photography	photographed at 532 nm and orange barrier filter, saved image to a secure image drive
X249HH	Photography	DCS 5
X2FWRW	Photography	Raw format
X3QXKW	Photography	
X94RG8	Photography	
X9HZT3	None	
XENZM6	No latents developed	
XFHMHG	Photography	
XFXA9	[No Methods Reported.]	No ridge detail observed x2
XH7V24	Photography	Friction ridge detail was seen after processing with 1,2 Indanedione. a 532nm Laser with an orange filter was used for photography. Nikon D800 was used, f/11 with a shutter speed of 4 seconds
XNB29U	Scanning	
XQGCDB	Scanning	Using Xerox copier and changing settings for optimum visualization
XVCY9J	Photography	DCS-5-W1-53
Y6WRY7	Photography	
YAV4V7	Photography	photographs uploaded into a secure database
YTTQV7	Photography	Enhanced using Photoshop for pattern type determination
YYVDCJ	Photography	Photographed using DCS-5 system on Nikon D5 camera.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
Z778NE	Photography	Photographs were taken while using the ALS to visualize the print using comparative settings (ISO 100, RAW, F22, 34mm) after IND was applied.
Z84CGE	Photography	
ZBY9QT	Photography	
ZEVZW6	Photography	Digital Capturing System (DCS-4). DFO: blue/green (460-510nm) with filter OG-550. Ninhydrine: White light source
ZXC2VD	Photography	Canon EOS 760D + 100mm macro lens and Polilight white light + Photoshop.
ZZCBRL	Scanning	Entered into ADAMS.

Response Summary	Participants: 156
Methods Utilized	

Lifting	0
Photography	117
Scanning	35

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

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
264W7G	Lifting	Canon EOS 6D
2CNYDJ	Photography	Digital photographing, white light, no filter.
2HUK8	Lifting	Lift tape and lift card
2JKBAV	Photography	12/05/2019 at 2:22 pm Photographed at a 90 degree angle using Crimescope CS 16-500 at 455 nm and a Nikon DS5500 camera with a Macro 1:1 lens and an orange filter with goggles (evidence photographed to scale)
2QMZ2Q	Lifting	Print dusted with magnetic black powder. Lifted with tape and placed on [Form] latent lift card. Submitted to LPU for comparison.
2ULCXQ	Lifting	Lifting carefully from carbon paper and transferred to a latent print lift card. Card was marked with pertinent information.
2XNXYW	Photography	digital photo
2YLAMX	Photography	Digital capture (Nikon D300) after Basic Yellow 40 (at 450 nm).
32LYDK	Photography Lifting	Macro lens, TIF Format
3AJDJ6	Photography	Raw and macro photography with a scale.
3KBH6W	Lifting	
3VG3RY	Photography Lifting	DCS5 for reflected UV. Frosted Tape
4CJ9FD	Photography	Foster & Freeman DCS-4 with Nikon D700 camera.
4NAUTU	Photography	
4NUJ33	Scanning	Color photo copier (Item would have been forwarded to photography in real casework). After VMD process no additional enhancement observed after faint ridge detail observed from Ninhydrin process
4RRDKQ	Photography	Nikon D5 camera and processed using photoshop CC
6L337Z	Photography	Determine exposure and photograph with a scale in place near developed print.

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
6NRDWT	Photography	digital camera with white light; image saved to SD card then transferred to secure image drive
6NU2KX	Lifting	CLEAR TAPE
6V6DFX	Photography	RAW, enhancement in Photoshop
6XDPXY	Photography	
6XYIBA	Photography	
6Z22YP	Photography	latent print was photographed with a macro camera lens and linear scale
6Z23QN	Photography	DCS5 system for photography
76BEFN	Photography Photography	after Cyanoacrylate Fuming - under white light after Bi-Chromatic - under white light
78KETV	Lifting Photography	
79DFGL	Photography	Nikon D700 camera and tiff format. The photos were taken after the use of cyanoacrylate and step-by-step black powder process.
7GJK6V	Photography	
7MCDD4	[No Methods Reported.]	No ridge detail developed.
7MD6RY	Photography	
7Y7RG7	Photography	Nikon D700 white light
8278GG	Photography	Nikon D700 digital image
84DNLT	Photography	
8K2Z3E	Scanning	Adobe Photoshop; 1000 dpi
8TC3NF	Photography	
948TGD	Photography	

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
992Q4J	Photography	
994CUH	[No Methods Reported.]	Left lifting tape over the print, but did not actually lift.
9J7PTX	Lifting	Two inch frosted tape used with standard white lift card
9KZEFZ	Lifting Negative results with Ninhydrin, therefore nothing further done.	10/24/19 One (1) area ridge detail developed and lifted (MP1) on the exterior semigloss business card box (item 3) Section B. 10/24/19 Negative results with Ninhydrin.
9YKTJY	Photography	
A2JGFM	Photography	
A3RVQM	Photography	Canon digital camera
A8Q7XV	Photography Lifting	
AMEH6V	Scanning	After cyanoacrylate fuming item 3 was examined with a white light source and no ridge detail was seen. Therefore I decided to powder to locate the mark. This was then examined with a white light source. This could have then be captured with the DCS camera system.
AP3VYK	Photography	Took latent print picture using a Nikon D800 camera and Nikon 105mm MicroLens.
B4MUEZ	Photography	Method of taking pictures, storage and custody of digital images
BE76ZX	Photography	photographed ridge detail in Section B after IND-ZnCl2 using green laser at 532 nm and orange filter
BK7TFR	Photography	Photographs were taken with Nikon digital camera. All digital images stored on DVD ROM disc.
BMT7AG	Photography	Nikon camera, scale, raw
BW2XKW	Photography	Photographed the latent print using a Canon EOS Rebel XS camera.
BYQZQK	Photography	5 photographs taken to document the ridges visualized after the powder dusting

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
CA7GMB	Photography	Applying a centimeter test near the fingerprint and photographs are realized during step 4) and 6). Orange filter is fixed on the camera when the trace is illuminated with the Crimescope in CSS or different wavelengths, and no filter is fixed on the camera when the trace is illuminated with the Crimescope in white light.
CDNEE8	Photography	using DCS-5.
CG7TRT	Photography Lifting	DCS-5 (camera/software package) Powdered print lifted
D7YBWG	Photography	Digital imaging photography was utilized to capture the latent print developed in section B of Item 3.
DFN8LB	Lifting	Results from item # 3 were lifted using latent lifting tape
DHTUBL	Photography	The impression observed was documented with digital photography.
DTZAGU	Photography	Captured digitally as 3LP1 and 3LP1_1
EK3YQV	Lifting	
EWA6GN	Photography	
F7VDP6	Photography	PHOTOGRAPHIES WERE SENT TO THE LATENT PRINT PROCESSING LAB
FER68J	Photography	High resolution photos using Camera Control Pro 2, Nikon D810 and CrimeScope CS-16-500, CCS Wavelength, and orange filter. Captured at greater than 1000 ppi. One calibrated and processed image printed 1:1 using Adobe Photoshop CC and EPSON SureColor P5000.
FKE3PF	Notes Photography Lifting	Written Notes Digital Photography of develop latent print Lift of latent print w/ notes
FNTTYG	Photography	
FZ9MCV	Photography	One exam quality image taken after dusting with black magnetic powder. One orientation image taken.
G6WM7G	Photography Lifting	Filled frame with ruler to set scale. Photos were obtained after each process in which the print was visible. Lift obtained after powder processing.

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
GAT7CL	Lifting	
GJDK2W	Photography	Photography in repositment with white light set in 45 degree angle
GLYLTA	Photography	Nikon D810 camera; Camera Control Pro capture software; Crime Scope CS-16-500 illumination at 415nm with yellow barrier filter.
GNVXP	Photography	Examination quality photographs (4 images) were taken of the apparent fingerprint detected in Section B of the white semigloss business card box. Photographs were taken before lifting was attempted.
	Lifting	The tape lift of the apparent fingerprint in Section B of the white semigloss business card was placed on a latent card where the orientation of the apparent fingerprint was documented. The latent card was then sealed in a manila envelope.
GRM7WQ	Photography	4 Digital Images
GY6MFE	Photography	
GY8AV8	Photography	UV light before CA, white light for powdered print
H8EA2N	Light Examination	I examined the item with both white light and in natural daylight, visible ridge detail seen in box B. This could have been captured with the DCS camera system.
H8JQ4T	Photography	Photography with white light in repositment set about 45 degree angle above print.
H9RZ4P	Photography	Used a scale in the photo. A canon camera was used.
HEJ3CW	Photography	Digital photography. *not used for test
HPHZWB	Lifting	The fingerprint was section B was lifted using lifting tape and then placed on an index card. The card was placed in an envelope and sealed.
HXEQLR	Photography	DCS-5-W1-53
HY42DK	Photography	Photographed with scale. Photographed in natural light. Photographed with orange filter and with alternate light source at 505nm. Enhanced in Photoshop.
	Lifting	Tape lift after magnetic powder dusting.

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
J9AAKK	None	A print was detected in quadrant B following ALS exams. The print was checked. During the continuation of processing, the item was not pressed against other items in order to protect the surface.
JGX6HE	Photography	Latent was photographed. Latent was also covered with fingerprint tape to preserve it.
JJ7HZG	Photography Lifting	With and without scale. Lifted print.
JPEGX2	Lifting	PROCEDURE FOR THE PROCESSING OF LOPHOSCOPIC INDICES
JRJAPE	Photography	Photography after powder dusting.
JUNUHK	Photography Lifting	
JXN6BZ	Photography	
KEA38X	Photography	DCS5 system - UV light
KJ6YNC	Photography Lifting	
KKYKJN	Scanning	scanned at 1000 dpi
KM3BTN	Photography	Foster+Freeman DCS-5 station used with various, method appropriate light sources/attachments
KNXVFN	Photography Lifting	Nikon D700 camera, 105 mm lens, White Light (400-700 nm), Polariser filter, with a scale, digital enhancement, calibrated, printed 1:1 (natural size) 2 inch clear lifting tape placed on white card
KTRXFG	Photography	Photographed with IR camera and UV light after visual exam, then re-photographed after ninhydrin treatment. Images were enhanced using Photoshop.
KTTL3M	Photography	Nikon D810
KVHYK6	Lifting	Latent print tape used to lift print. Print placed on latent print card
L2VEH8	Photography	Used Nikon camera with scale in the photograph

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
L7EK7U	Scanning	Photographed after ALS examination under 350 nm and again after Aqueous Ardrox
LP7GNB	Photography	Macro camera lens (Nikon D 3300). The photo of the latent print is archived in the AFIS database of fingerprints.
LUK4GT	Photography	
M9TJV9	Photography Lifting	
MAU8HE	Lifting	I collected it using a tape lift and placed the print on a latent print card and filled in the information that is needed.
MYUJQH	Photography	Raw images using fx camera
N447UK	Photography	powder step - tungsten light
N98CZB	Photography Lifting	Overall photographs and latent print photographs were taken after each method of Krimesite Scope and Powder Processing. The latent print was lifted from section B and placed on a latent lift card.
N98DY3	Photography	
NCA4F4	Photography	One (1) area in quadrant B photographed using Nikon D810 under 445 nm wavelength with orange filter, calibrated 1:1, greater than 2000 ppi, digitally processed using Photoshop Creative Cloud, saved as Tif to T drive
NG6XEP	Scanning	
NR7FWK	Lifting	
NV4MKP	Photography	Canon 5D + 90mm macro lens 1:1 and Crime-Lite 82S UV light (range 350-380nm) + Photoshop.
NZYNGB	Scanning	Labeled ridge detail N2 and scanned. Enhance detail via Adobe Photoshop and printed on photo paper. Attached to latent card.
P7YKHA	Photography Lifting	FORAY ADAMS Imaging System in White Light Tape Lifting

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
PBV6NE	Photography	Any suitable marks developed throughout sequential treatment were marked up and photographed 1:1 using a D810 Nikon digital camera with an AF-5 micro nikkor 105mm lens, 8x4 Crime Lite light source(s) and appropriate camera filter(s). The camera is linked to DCS5 (Digital Capture System 5) software where the images are exhibited with full audit trails and further DCS5 enhancement tools can be used to improve contrast/remove background interference where applicable. Exhibited images then submitted to the Fingerprint Bureau for pattern analysis.
PEWZMU	Photography	Nikon D5 -- DCS-5-W1-53
PZYX3F	Lifting	
Q26VQG	Lifting	11/18/19: lift tape and lift card. attempted to lift ridge detail twice
	Scanning	11/19/19: xerox created for documentation purposes
	Photography	11/19/19: sent to photography unit
QE9BN7	Photography	Canon photography of powder print
QGETM2	Photography	Digital photography was used.
QL9NJU	Photography	Photographed with ALS- UV and orange filter
QP8YFU	[No Methods Reported.]	LCNA use as a dry treatment due to substrate type.
QPQLCQ	Photography	
QPU6BZ	Lifting	Lifted using standard latent print lifting tape. Secured to latent print card.
R3FWCF	Scanning	photocopy made prior to lifting
	Lifting	Lift tape and lift card
R6Y77D	Photography	Photographed whole item upon opening, the area of ridge detail after each development method and the whole item at the end.
RM4LKM	Scanning	scanner
RM6BTQ	Photography	Captured using UV light after visual examination
RP9XF3	Photography	Photograph of print in section B taken during UV light analysis with label and ruler in place in TIF format.

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
RW8GRL	Photography	Photography in Foster Freemans Green 520nm (peak) light. Using OG 590 AG Foster Freeman filter in front of cameralens.
RZLBG4	Lifting Photography	Lift tape onto white card DCS4
TFDDM2	Photography	1:1 macro with and without scale.
TL7FRL	Photography	ISO 100,f/16 or higher, RAW format
TLLWUF	Scanning	An Epson V800 scanner was utilized at 1200dpi to capture the latent fingerprint of value, L-03. The image was opened in Adobe Photoshop and saved to a photographic reproduction sheet as an original and processed image.
TTKEBC	Photography	Nikon D700, white lighting, Foray Digital Workplace
U6AH4W	Photography Lifting	
U9WAB7	Scanning	Photoshop CS6 used for enhancements; Epson V37 #8; 1200 DPI
UGHNR4	Photography	NIKON D7100
UHE2EW	Photography	
UM9X22	Photography	
UT6AGK	Photography	B&W; 1:1
UU9H4X	Photography	
UZFN4A	Photography Lifting	L1 photo at ALS method step magnetic powder, L1 latent lift card in quadrant B
VKXFHW	Photography	
VQPE9X	Lifting	lifted with fingerprint tape and attached to [Form]
WKDX43	Photography	The developed latent print was preserved by digital imaging (photography) at high resolution capture
WYEM49	Photography	

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
WYHAJ2	Photography	photographed at 350 nm and yellow barrier filter, saved to a secure image drive
X249HH	Photography	DCS5
X2FWRW	Photography	Raw format
X3QXKW	Photography	
X94RG8	Photography	
X9HZT3	None	
XENZM6	Lifting	
XFMMHG	Photography	
XFXXA9	Lifting	Tape was used to lift the ridge detail observed onto a lift card.
XH7V24	Photography	For the initial visual ALS Photography: CrimeScope ALS at 415nm with yellow filter. A Nikon D800 was used at f/11 with a shutter speed of 2 seconds. For photography after superglue processing: CrimeScope ALS at 415nm with yellow filter. Nikon D800 with f/11 and shutter speed of 1 second. For Indanedione photography: A Coherent TracER 532nm laser was used with an orange filter: Nikon D800, f/11 with shutter speed of 2 seconds.
XNB29U	Photography	
XQGCDB	Lifting	Tape used to lift fingerprint and secured on lift card
XVCY9J	Photography	DCS-5-W1-53
Y6WRY7	Photography	
YAV4V7	Photography	photographs uploaded into a secure database
YYTQV7	Photography	
YYVDCJ	Photography	Photographed using DCS-5 system on Nikon D5 camera.
Z778NE	Photography	The visualized print in box B was photographed using comparative settings (ISO 100, RAW, F22, 34mm).
Z84CGE	Photography	

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
ZBY9QT	Photography	
ZEVZW6	Photography	Digital Capturing System (DCS-4). Cyanoacrylate: white light source. DFO: blue/green (460-510nm) with filter OG-550. Ninhydrine: White light source. Dye stain (Rhodamine 6G): blue/green (460-510nm) with filter OG-550
ZXC2VD	Photography	Canon EOS 760D + 100mm macro lens and Polilight white light + Photoshop.
ZZCBRL	Photography	Entered into ADAMS.

Response Summary	Participants: 168
Methods Utilized	

Lifting	43
Photography	130
Scanning	12

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

First-Level Detail Findings

TABLE 4 - Item 1

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
264W7G	N/A				79DFGL	N/A			
2CNYDJ			✓		7GJK6V				✓
2HUK8	N/A				7MCDD4				✓
2JKBAV	N/A				7MD6RY	N/A			
2QMZ2Q	N/A				7Y7RG7				✓
2ULCXQ	N/A				8278GG				✓
2XNXYW	Not Suitable				84DNLT	N/A			
2YLAMX				✓	88EECR	N/A			
32LYDK	N/A				8K2Z3E				✓
3AJDJ6				✓	8TC3NF				✓
3KBH6W				✓	948TGD				✓
3VG3RY				✓	992Q4J				✓
3XKT2Y				✓	994CUH	N/A			
4CJ9FD				✓	9J7PTX	N/A			
4NAUTU				✓	9KZEFZ				✓
4NUJ33	N/A				9YKTJY	N/A			
4RRDKQ				✓	A2JGFM			✓	
6L337Z				✓	A3RVQM				✓
6NRDWT				✓	A8Q7XV				✓
6NU2KX	N/A				AH9KZX				✓
6V6DFX	N/A				AMEH6V	N/A			
6XDPXY	N/A				AP3VYK	N/A			
6XYBA				✓	B4MUEZ				✓
6Z22YP				✓	BE76ZX	N/A			
6Z23QN				✓	BFGZLQ				✓
76BEFN				✓	BK7TFR				✓
78KETV	N/A				BMT7AG				✓

TABLE 4 - Item 1

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
BW2XKW				✓	H8EA2N	N/A			
BYQZQK				✓	H8JQ4T		✓	✓	
CA7GMB				✓	H9RZ4P				✓
CDNEE8				✓	HEJ3CW				✓
CG7TRT				✓	HPHZWB	N/A			
D7YBWG				✓	HXEQLR				✓
DFN8LB	N/A				HY42DK	N/A			
DHTUBL				✓	J9AAKK				✓
DJ9UKQ	N/A				JGX6HE	N/A			
DTZAGU				✓	JJ7HZG				✓
DZW4GD	N/A				JPEGX2				✓
EK3YQV	N/A				JPUZHY			✓	
EWA6GN				✓	JPWPNG				✓
F7VDP6	N/A				JRJAPE	N/A			
FER68J				✓	JUNUHK				✓
FKE3PF				✓	JXN6BZ				✓
FNTTYG				✓	JXQVHH				✓
FZ9MCV				✓	KEA38X				✓
G6WM7G				✓	KJ6YNC				✓
G83BBK				✓	KKYKJN				✓
GAT7CL				✓	KLC3P2	N/A			
GGAVUG	N/A				KM3BTN				✓
GJDK2W		✓	✓		KNXVFN	N/A			
GLYLTA				✓	KTRXFG				✓
GNVXP	N/A				KTTL3M	N/A			
GRM7WQ	N/A				KVHYK6				✓
GY6MFE				✓	L2VEH8				✓
GY8AV8				✓	L7EK7U				✓

TABLE 4 - Item 1

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
LP7GNB				✓	R3FWCF	N/A			
LUK4GT				✓	R6Y77D	N/A			
M9TJV9				✓	RB4VRE				✓
MAU8HE	N/A				RM4LKM				✓
MQU8DM				✓	RM6BTQ				✓
MYUJQH	N/A				RP9XF3	N/A			
N447UK	N/A				RW8GRL		✓	✓	
N98CZB	N/A				RZLBG4	N/A			
N98DY3				✓	TFDDM2			✓	
NBXCD2				✓	TL7FRL	N/A			
NCA4F4				✓	TLLWUF				✓
NG6XEP				✓	TTKEBC				✓
NPJM4D				✓	U6AH4W				✓
NV4MKP	N/A				U9WAB7	N/A			
NZYNGB	N/A				UG7PYF				✓
P7YKHA				✓	UGHNR4				✓
PBV6NE				✓	UHE2EW				✓
PEWZMU				✓	UM9X22				✓
PWARBJ				✓	UT6AGK				✓
PZYX3F	N/A				UU9H4X				✓
Q26VQG	N/A				UZFN4A	N/A			
QE9BN7				✓	VKXFHW				✓
QGETM2				✓	VQPE9X	N/A			
QL9NJU				✓	WKDX43				✓
QP8YFU				✓	WYEM49				✓
QPQLCQ				✓	WYHAJ2				✓
QPU6BZ	N/A				X249HH				✓
QWTVHJ				✓	X2FWRW				✓

TABLE 4 - Item 1

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
X3QXKW				✓					
X94RG8				✓					
X9HZT3				✓					
XENZM6				✓					
XFHMHG				✓					
FXXA9	N/A								
XH7V24				✓					
XNB29U				✓					
XQGCDB	N/A								
XVCY9J				✓					
Y6WRY7	N/A								
YAV4V7	N/A								
YYTQV7				✓					
YYVDCJ				✓					
Z778NE	N/A								
Z84CGE				✓					
ZBY9QT				✓					
ZEVZW6				✓					
ZXC2VD					✓				
ZZCBRL				✓					

Findings Summary				Total Participants: 187	
1st Level	Arch	Loop	Whorl	Not Suitable	N/A
Total	3	10	116	1	59

**NOTE: These numbers may not add up to the total # of participants, as a participant may have selected more than one pattern option.*

TABLE 4 - Item 2

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
264W7G	N/A				7GJK6V	Not Suitable			
2CNYDJ	Not Suitable				7MCDD4				✓
2HUK8	N/A				7MD6RY	N/A			
2JKBAV	N/A				7Y7RG7			✓	✓
2QMZ2Q	N/A				8278GG			✓	✓
2ULCXQ	N/A				84DNLT	N/A			
2XNXYW	N/A				88EECR	N/A			
2YLAMX				✓	8K2Z3E			✓	✓
32LYDK	N/A				8TC3NF				✓
3AJDJ6	Not Suitable				948TGD				✓
3KBH6W				✓	992Q4J	Not Suitable			
3VG3RY				✓	994CUH	N/A			
3XKT2Y				✓	9J7PTX	N/A			
4CJ9FD				✓	9KZEFZ				✓
4NAUTU				✓	9YKTJY	N/A			
4NUJ33	N/A				A2JGFM				✓
4RRDKQ				✓	A3RVQM			✓	✓
6L337Z				✓	A8Q7XV	Not Suitable			
6NRDWT				✓	AH9KZX				✓
6NU2KX	N/A				AMEH6V	N/A			
6V6DFX	N/A				AP3VYK	N/A			
6XDPXY	N/A				B4MUEZ				✓
6XYIBA				✓	BE76ZX	N/A			
6Z22YP				✓	BFGZLQ				✓
6Z23QN				✓	BK7TFR				✓
76BEFN				✓	BMT7AG	Not Suitable			
78KETV	N/A				BW2XKW	Not Suitable			
79DFGL	N/A				BYQZQK				✓

TABLE 4 - Item 2

WebCode	First Level Pattern(s)?			WebCode	First Level Pattern(s)?		
	Arch	Loop	Whorl		Arch	Loop	Whorl
CA7GMB			✓	HPHZWB	N/A		
CDNEE8			✓	HXEQLR			✓
CG7TRT			✓	HY42DK	N/A		
D7YBWG			✓	J9AAKK	Not Suitable		
DFN8LB	N/A			JGX6HE	N/A		
DHTUBL			✓	JJ7HZG	Not Suitable		
DJ9UKQ	Not Suitable			JPEGX2	N/A		
DTZAGU			✓	JPUZHY			✓
DZW4GD	N/A			JPWPNG			✓
EK3YQV	N/A			JRJAPE	N/A		
EWA6GN			✓	JUNUHK			✓
F7VDP6	N/A			JXN6BZ			✓
FER68J			✓	JXQVHH			✓
FKE3PF	Not Suitable			KEA38X			✓
FNTTYG			✓	KJ6YNC			✓
FZ9MCV		✓	✓	KKYKJN	Not Suitable		
G6WM7G			✓	KLC3P2	N/A		
G83BBK			✓	KM3BTN			✓
GAT7CL	N/A			KNXFVN	N/A		
GGAVUG	N/A			KTTL3M	N/A		
GLYLTA			✓	KVHYK6	Not Suitable		
GNVXXP	N/A			L2VEH8	Not Suitable		
GRM7WQ	N/A			L7EK7U		✓	✓
GY6MFE			✓	LP7GNB			✓
GY8AV8			✓	LUK4GT			✓
H8EA2N	N/A			M9TJV9			✓
H9RZ4P	Not Suitable			MAU8HE	N/A		
HEJ3CW		✓	✓	MQU8DM			✓

TABLE 4 - Item 2

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
MYUJQH	N/A				RW8GRL		✓	✓	
N447UK	N/A				RZLBG4	N/A			
N98CZB	N/A				TFDDM2	Not Suitable			
N98DY3				✓	TL7FRL	N/A			
NBXCD2			✓	✓	TLLWUF			✓	
NCA4F4				✓	TTKEBC	Not Suitable			
NG6XEP				✓	U6AH4W		✓	✓	
NPJM4D				✓	U9WAB7	N/A			
NV4MKP	N/A				UG7PYF			✓	
NZYNGB	N/A				UGHNR4			✓	
P7YKHA				✓	UHE2EW	Not Suitable			
PBV6NE				✓	UM9X22			✓	
PEWZMU				✓	UT6AGK	Not Suitable			
PWARBJ				✓	UZFN4A	Not Suitable			
PZYX3F	N/A				VKXFHW			✓	
Q26VQG	N/A				VQPE9X	N/A			
QE9BN7			✓	✓	WKDX43			✓	
QGETM2	Not Suitable				WYEM49			✓	
QP8YFU				✓	WYHAJ2			✓	
QPQLCQ	Not Suitable				X249HH			✓	
QPU6BZ	N/A				X2FWRW	Not Suitable			
QWTVHJ				✓	X3QXKW			✓	
R3FWCF	N/A				X94RG8			✓	
R6Y77D	N/A				X9HZT3			✓	
RB4VRE				✓	XENZM6	Not Suitable			
RM4LKM				✓	XFHMHG	Not Suitable			
RM6BTQ				✓	XFXA9	N/A			
RP9XF3	N/A				XH7V24			✓	

TABLE 4 - Item 2

WebCode	First Level Pattern(s)?			WebCode	First Level Pattern(s)?		
	Arch	Loop	Whorl		Arch	Loop	Whorl
XNB29U			✓				
XQGCDB	N/A						
XVCY9J			✓				
Y6WRY7	N/A						
YAV4V7	N/A						
YVTQV7			✓				
YYVDCJ			✓				
Z778NE	N/A						
Z84CGE		✓	✓				
ZBY9QT			✓				
ZEVZW6			✓				
ZXC2VD	Not Suitable						
ZZCBRL			✓				

Findings Summary				Total Participants: 187	
1st Level	Arch	Loop	Whorl	Not Suitable	N/A
Total	1	12	94	26	60

**NOTE: These numbers may not add up to the total # of participants, as a participant may have selected more than one pattern option.*

TABLE 4 - Item 3

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
264W7G	N/A				7GJK6V			✓	
2CNYDJ			✓		7MCDD4	Not Suitable			
2HUK8	N/A				7MD6RY	N/A			
2JKBAV	N/A				7Y7RG7			✓	
2QMZ2Q	N/A				8278GG		✓	✓	
2ULCXQ	N/A				84DNLT	N/A			
2XNXYW	N/A				88EECR	N/A			
2YLAMX				✓	8K2Z3E			✓	
32LYDK	N/A				8TC3NF			✓	
3AJDJ6				✓	948TGD			✓	
3KBH6W				✓	992Q4J	Not Suitable			
3VG3RY				✓	994CUH	N/A			
3XKT2Y				✓	9J7PTX	N/A			
4CJ9FD				✓	9KZEFZ			✓	
4NAUTU				✓	9YKTJY	N/A			
4NUJ33	N/A				A2JGFM		✓		
4RRDKQ				✓	A3RVQM			✓	
6L337Z				✓	A8Q7XV		✓		
6NRDWT				✓	AH9KZX			✓	
6NU2KX	N/A				AMEH6V	N/A			
6V6DFX	N/A				AP3VYK	N/A			
6XDPXY	N/A				B4MUEZ			✓	
6XYIBA				✓	BE76ZX	N/A			
6Z22YP				✓	BFGZLQ			✓	
6Z23QN				✓	BK7TFR			✓	
76BEFN				✓	BMT7AG			✓	
78KETV	N/A				BW2XKW			✓	
79DFGL	N/A				BYQZQK			✓	

TABLE 4 - Item 3

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
CA7GMB				✓	H9RZ4P			✓	
CDNEE8				✓	HEJ3CW			✓	
CG7TRT				✓	HPHZWB	N/A			
D7YBWG				✓	HXEQLR			✓	
DFN8LB	N/A				HY42DK	N/A			
DHTUBL				✓	J9AAKK			✓	
DJ9UKQ	N/A				JGX6HE	N/A			
DTZAGU			✓	✓	JJ7HZG			✓	
DZW4GD	N/A				JPEGX2			✓	
EK3YQV	N/A				JPWPNG			✓	
EWA6GN			✓		JRJAPE	N/A			
F7VDP6	N/A				JUNUHK			✓	
FER68J			✓		JXN6BZ		✓		
FKE3PF			✓		JXQVHH			✓	
FNTTYG			✓		KEA38X			✓	
FZ9MCV			✓		KJ6YNC			✓	
G6WM7G			✓		KKYKJN			✓	
G83BBK			✓		KLC3P2	N/A			
GAT7CL			✓		KM3BTN			✓	
GGAVUG	N/A				KNXVFN	N/A			
GJDK2W		✓	✓		KTRXFG			✓	
GLYLTA			✓		KTTL3M	N/A			
GNVXXP	N/A				KVHYK6		✓		
GRM7WQ	N/A				L2VEH8			✓	
GY6MFE			✓		L7EK7U			✓	
GY8AV8			✓		LP7GNB			✓	
H8EA2N	N/A				LUK4GT			✓	
H8JQ4T		✓	✓		M9TJV9			✓	

TABLE 4 - Item 3

WebCode		First Level Pattern(s)?			WebCode		First Level Pattern(s)?		
		Arch	Loop	Whorl			Arch	Loop	Whorl
MAU8HE	N/A				RM6BTQ				✓
MQU8DM				✓	RP9XF3	N/A			
MYUJQH	N/A				RW8GRL		✓	✓	
N447UK	N/A				RZLBG4	N/A			
N98CZB	N/A				TFDDM2			✓	
N98DY3				✓	TL7FRL	N/A			
NCA4F4				✓	TLLWUF				✓
NG6XEP				✓	TTKEBC				✓
NPJM4D				✓	U6AH4W			✓	✓
NV4MKP	N/A				U9WAB7	N/A			
NZYNGB	N/A				UG7PYF				✓
P7YKHA				✓	UGHNR4				✓
PBV6NE				✓	UHE2EW	Not Suitable			
PEWZMU				✓	UM9X22				✓
PWARBJ				✓	UT6AGK				✓
PZYX3F	N/A				UU9H4X			✓	✓
Q26VQG	N/A				UZFN4A	N/A			
QE9BN7				✓	VKXFHW				✓
QGETM2				✓	VQPE9X	N/A			
QL9NJU				✓	WKDX43				✓
QP8YFU				✓	WYEM49				✓
QPQLCQ				✓	WYHAJ2				✓
QPU6BZ	N/A				X249HH				✓
QWTVHJ				✓	X2FWRW				✓
R3FWCF	N/A				X3QXKW				✓
R6Y77D	N/A				X94RG8				✓
RB4VRE				✓	X9HZT3				✓
RM4LKM				✓	XENZM6				✓

TABLE 4 - Item 3

WebCode	First Level Pattern(s)?			WebCode	First Level Pattern(s)?		
	Arch	Loop	Whorl		Arch	Loop	Whorl
XFHMHG	Not Suitable						
XFXA9	N/A						
XH7V24			✓				
XNB29U			✓				
XQGCDB	N/A						
XVCY9J			✓				
Y6WRY7	N/A						
YAV4V7	N/A						
YYTQV7			✓				
YYVDCJ			✓				
Z778NE	N/A						
Z84CGE			✓				
ZBY9QT			✓				
ZEVZW6			✓				
ZXC2VD		✓					
ZZCBRL			✓				

Findings Summary				Total Participants: 187	
1st Level	Arch	Loop	Whorl	Not Suitable	N/A
Total	3	17	107	4	60

**NOTE: These numbers may not add up to the total # of participants, as a participant may have selected more than one pattern option.*

Additional Comments

TABLE 5

WebCode	Additional Comments
2HUKE8	All relevant samples have been retained by [Laboratory] as required by [Legislation]. This report contains conclusions based on the interpretation and opinions of the below signed author. This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation. Only methods currently approved for use by this lab were used for this test
2JKBAV	At the indicated times and dates the following items were processed using the indicated chemical methods and yielded indicated results. Item 1 was processed using Rhodamine 6G and yielded positive results for one (1) possible partial latent print. Item 2 was processed using Ninhydrin and yielded negative results. Item 3 was processed using Ninhydrin and yielded positive results for one (1) possible partial latent print. All of the above exhibits processed using chemical method Amido Black and yielded negative results for latent print development. Examiner provided no further services. Upon completion, the evidence was resealed, dated and initialed by Examiner and returned to Evidence room.
2XNXYW	The method Ninhydrin was planned to be used on Item 2, white copy paper flier, but the actual process line was temporarily out of order. Since the laboratory will be closed on December 31 the climate cabinet will not be repaired. No result to report for Item 2.
4NUJ33	All relevant samples have been retained by [Laboratory] as required by [Legislation]. This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation. This report contains conclusions based on the interpretation and opinions of the below signed author.
79DFGL	The cyanoacrylate and ninhydrin reagents were verified using a control print. The reliability of both reagents was confirmed prior to evidence processing.
8278GG	Latent print from item #2 could be right slant loop or whorl, most likely whorl. Latent print from item #3 could be right slant loop or whorl.
88EECR	Item #2 and #3 were not processed. Analyst is qualified for non-porous processing only.
9J7PTX	A Crime Scene Technician completed the processing. Items were processed in the same manner as they would be processed at any credible crime scene in the methods used by a crime scene technician on a daily basis.
9KZEFZ	The fingerprint pattern for item #1 and #3 was a double-loop whorl. There was no check box for this type of pattern.
AMEH6V	At all times PPE was worn in accordance with health and safety and organisational requirements. All equipment used is serviced on a yearly basis. During each chemical treatment carried out on all 3 items, a control sample was also treated. The controls are of a similar substrate and have a planted mark. If the control sample does not give a positive result then the test could have been repeated, or a different batch of chemicals used. At all stages throughout this test the controls were positive. Items were deemed not to have been wet prior to submission. I have treated these items in accordance with our lab policies. I have not carried out full sequential treatments as no crime type has been submitted, so I have made an assumption that the items were from a "volume" crime type. If full sequential treatment was required I would have followed the recommendations from the CAST manual. Relevant paperwork has been detailed with batch references, control outcomes etc. as in accordance with our labs ISO 17025 accreditation.
BE76ZX	N/A was chosen as the answer to the question regarding first level detail (pattern type) of the developed ridge detail on Items 1, 2, and 3 because the latent print processing workflow at our lab requires documentation of any ridge detail suitable for documentation, but a full analysis is conducted in a subsequent latent print analysis request. Complete latent print analyses were not conducted in this latent print processing request. Ridge detail was developed in Section B of Item 3; however, the ridge detail was deemed not suitable for documentation.

TABLE 5

WebCode	Additional Comments
BK7TFR	Item 2, developed latent was very light in contrast. Item 3, no tape lift performed as photo's were more than sufficient to record this developed latent.
CDNEE8	The ordering of the items in the test is not matching with the ordering in the received invoice.
DTZAGU	Item 3 did not develop well, possibly from porous cardboard being pressed tightly against the surface of the item in packaging. Item 1 also had been packaged between cardboard pieces, however the packaging was not tight like Item 3 (the size of Item 3 caused more pressure to be applied once in the envelope). Recommend using non-porous material to be used for packaging to avoid packaging material absorbing latent print residue.
EK3YQV	Item 2 was only visually processed. Based on the type of surface and as part of the Crime Scene Unit, the item would be submitted as is to be further processed in the latent print unit. The unit has more tools at their disposal for these types of surface.
GAT7CL	This test was taken using policies and procedures that would be followed by personnel at a crime scene. Methods to process plain paper such as item 2 are not carried in the field and that item would be collected for laboratory processing.
GJDK2W	It is not possible to process paper etc. materials in [Laboratory].
H8EA2N	PPE - PPE was worn in accordance with health and safety, organisation requirements and risk assessments. Control Sample - A control sample was treated alongside the items in accordance with the [Procedure]. Item assessment and Sequential Treatment - the items were deemed to not be wet upon assessment. The case has been inputted onto our system as a Burglary Dwelling which is classified as 'volume' crime and as such has 'one best treatment'. Had the case required sequential treatment I would have followed CAST manual guidelines. This is in line with our [Procedures]. Paperwork and System Updating - all relevant paperwork and systems has been updated in accordance with the [Procedures] and ISO 17025 accreditation.
H8JQ4T	There is no suitable method to process paper materials in [Laboratory]. Such materials must be sent here in [Region] (distance 190km).
H9RZ4P	Item 2 was processed in the same manner in which i normally process in the lab. The test strips for each reagent did work, however, no ridge detail was developed on item 2. A suitability review was performed by another qualified latent print examiner on all the items as per our quality manual to ensure no latents/ridge detail on these items were overlooked.
J9AAKK	As previously stated, no print was developed on Item 2. Given that the item was porous, any prints left would be absorbed into the item rather than lying on the surface. Following each process, no ridge detail was detected. There are visible smudge marks but no viable ridges.
L2VEH8	Item 2 results were very faint. Control sample used was much better quality.
L7EK7U	The latent impression developed on Item 2 after Ninhydrin was extremely faint. While the top half of the impression was visualized the lower half was not.
LP7GNB	The latent prints that developed on item 2 was very light, and relatively difficult to see first level detail. Image processing (photoshop treatment) was done to improve its quality. The visible level 1 detail showed indications of this latent print very probably being a whorl pattern, but a loop pattern can not be excluded.
N98CZB	Items #1 and #3 showed suitable latent prints developed. Item #2 displayed some ridge detail, but the development was faint.
PZYX3F	item 2 appeared to have a rxn (visually see where someone may have touched) in section C; however, no sufficient ridge details for submission (NONE).
Q26VQG	**Proficiency Test: Nothing was forwarded to the Latent Print Unit and Photo Unit; all administrative documents prepared as if casework.** All relevant samples have been retained by [Laboratory] as required by [Legislation]. This report contains conclusions based on the interpretation and opinions of the below-signed author. This test is accredited under the laboratory's ISO/IEC 17025 accreditation

TABLE 5

WebCode	Additional Comments
	issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation.
R3FWCF	Only methods currently used in this laboratory were utilized for this test. All relevant samples have been retained by [Laboratory] as required by [Legislation]. This report contains conclusions based on the interpretation and opinions of the below signed author. This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by ANSI National Accreditation Board. Refer to certificate and scope of accreditation.
RP9XF3	Friction ridge detail not sufficient for further review was present outside the boxed areas for item 2.
UT6AGK	The paper latent print was very faint after DFO, and non-existent after NIN. Poor test sample.
WYEM49	For Items 1 and 2, there were no traces with the nihydrin solution.
WYHAJ2	Processing was suspended for each item of evidence once the quadrant containing the latent print was identified.
X249HH	Ridge detail developed in Exhibit 2 is not of value for identification to a known source. However, the pattern type is distinguishable.
XENZM6	Crime Scene latent print processing testing. For item #2, I would not process paper with powder. I would submit the item to the Laboratory for chemical processing. Because that was not an option here, I powder processed the paper with no prints being developed.
XFXA9	All relevant samples have been retained by [Laboratory] as required by [Legislation]. This report contains conclusions based on the interpretation and opinions of the below signed author. This test is accredited under the laboratory's ISO/IEC 17025 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation.
XQGCDB	Only methods currently approved by this unit were used for processing. Nothing was sent to the Photography or Latent Print Units at this time. All relevant samples have been retained by [Laboratory] as required by [Legislation]. These tests are accredited under the Laboratory's ISO/IEC 17025 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation. This report contains conclusions based on the interpretation and opinions of the below signed author.
Y6WRY7	DFO/Ninhydrin processing not done for semiporous item 3 due to the designated areas being only present on the coated side of the cardboard.
YYVDCJ	Items 1A-1C were physically and chemically processed for latent prints with positive results. The developed latent prints were digitally preserved. These images will be analyzed and those results will be released in a subsequent Latent Print report.
Z84CGE	Impression on item #2 very light in places, could be whorl or loop
ZEVZW6	Tests on similar surfaces were done to make sure that the methodes were correctly realized.

**-End of Report-
(Appendix may follow)**

Collaborative Testing Services ~ Forensic Testing Program

Test No. 19-5191: Latent Print Processing

DATA MUST BE SUBMITTED BY **Dec. 9, 2019, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: NK7YG9

The Accreditation Release section can be accessed by using the "Continue to Final Submission" button above. This information can be entered at any time prior to submitting to CTS.

Scenario:

During the weeks of 18 August 2019 and 22 September 2019, three items of evidence were recovered from crime scenes. 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.

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.

Packaging and protective material is not intended to be processed.

Items Submitted (Sample Pack LAP2):

Item 1: Piece of black polyethylene sheeting, divided into sections A-D (collected 18 August 2019).

Item 2: White copy paper flier, divided into sections A-D (collected 22 September 2019).

Item 3: Part of a white semigloss business card box, divided into sections A-D (collected 18 August 2019).

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.

1.) For each item, in which section (A, B, C, D) was the latent ridge detail recovered?

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

Item 1

Item 2

Item 3

Results for Item 1:

Piece of black polyethylene sheeting, divided into sections A-D (collected 18 August 2019).

1-1.) Date Samples Received:

1-2.) Date(s) Samples Analyzed:

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

Method Used

Methodology-specific information
(ex. processing time, type of dye stain)

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

Method Used

Methodology-specific information

1-5.) What first-level pattern(s) are referenced in the recovered latent print?

If ridge detail was recovered, choose up to 2 pattern types. If ridge detail was not sufficiently recovered, please select "Not suitable for determination." If you are not trained to make pattern determinations, please select "N/A".

Arch Loop Whorl

Not suitable for determination N/A

Results for Item 2:

White copy paper flier, divided into sections A-D (collected 22 September 2019).

2-1.) Date Samples Received:

2-2.) Date(s) Samples Analyzed:

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

Method Used

**Methodology-specific information
(ex. processing time, type of dye stain)**

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

Method Used

Methodology-specific information

2-5.) What first-level pattern(s) are referenced in the recovered latent print?

If ridge detail was recovered, choose up to 2 pattern types. If ridge detail was not sufficiently recovered, please select "Not suitable for determination." If you are not trained to make pattern determinations, please select "N/A".

Arch Loop Whorl

Not suitable for determination N/A

Results for Item 3:

Part of a white semigloss business card box, divided into sections A-D (collected 18 August 2019).

3-1.) Date Samples Received:

3-2.) Date(s) Samples Analyzed:

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

Method Used

Methodology-specific information
(ex. processing time, type of dye stain)

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

Method Used

Methodology-specific information

3-5.) What first-level pattern(s) are referenced in the recovered latent print?

If ridge detail was recovered, choose up to 2 pattern types. If ridge detail was not sufficiently recovered, please select "Not suitable for determination." If you are not trained to make pattern determinations, please select "N/A".

- Arch Loop Whorl Not suitable for determination N/A

4.) Additional Comments

Please note: Any additional formatting applied in the free form space below will not transfer to the Summary Report and may cause your information to be illegible. This includes additional spacing and returns that present your responses in lists and tabular formats.

RELEASE OF DATA TO ACCREDITATION BODIES

The Accreditation Release is accessed by pressing the "Continue to Final Submission" button online and can be completed at any time prior to submission to CTS.

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and/or 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 below must be completed.)
- This participant's data is **not** intended for submission to ASCLD/LAB, ANAB, and/or A2LA.

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.

ANAB Certificate No.
(Include ASCLD/LAB Certificate here)

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety.

Authorized Contact Person and Title

Laboratory Name

Location (City/State)