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FORENSIC TESTING PROGRAM

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Latent Print Processing - Nonporous Surfaces
Test No. 23-5193 Summary Report

Each sample set contained three items of simulated crime scene evidence. Participants were asked to process each item for latent prints and report their findings. Data were returned from 63 participants and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set 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 switch plate (Item 1), a mirrored compact (Item 2), and plastic zip-top bag (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 switch plate, mirrored compact and plastic zip-top bag were cleaned with a wet paper towel and then dried before the latent print was applied. Each item was divided into sections and labeled A, B, C, and D using a chemical-safe marker. For each item, an oil enhancer was applied to the individual's finger prior to deposition to assist in the longevity of the print.

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

SAMPLE SET ASSEMBLY: Each item was packed into its pre-labeled item envelope with necessary protective materials. Each item envelope was sealed, initialed and then placed into a sample set box with bubble wrap and sealed with packaging tape.

Item Number	Test Material	Enhancer	Print Location
1	Switch plate	Oil	B
2	Mirrored compact	Oil	A
3	Plastic zip-top bag	Oil	C

Summary Comments

Each sample set contained three items of evidence to be processed for latent prints: a switch plate (Item 1), a mirrored compact (Item 2), and plastic zip-top bag (Item 3). Each item was divided into four labeled sections, which were labeled with the letters A-D. Participants were asked to determine in which of the four sections contained a latent print. During the creation of this test, latent prints were purposefully deposited in section B for Item 1, section A for Item 2, and section C for Item 3. (Refer to the Manufacturer's Information for preparation details.)

All 63 responding participants were able to successfully recover latent ridge detail in the expected section for Items 1 and 2. For Item 3, only 58 of the 63 participants tested the plastic zip-top bag. Of those participants that tested this item, 57 (98.3%) successfully removed latent ridge detail in the expected section. Participants who did not develop a print on an item were not marked as outliers.

For all three items, the majority of participants began with a visual examination of the items of evidence. The most common development method used to process the items was fingerprint powder. The second most frequently reported method used to process the items was visual examination.

The most common preservation method used for the items was photography. The second most frequently reported preservation method was lifting.

Print Location

TABLE 1 - Item 1

WebCode	Location	WebCode	Location	WebCode	Location
2BP93A	B	DDVVJW	B	RHFQ3E	B
2XEXCY	B	DTMPVM	B	TNZ9VG	B
49NAHT	B	EDPZFG	B	TVHGLY	B
4CPHL3	B	ELGBPC	B	UGVRZ2	B
4RPZYW	B	F4EXRV	B	UM8FZX	B
4TZ2KU	B	FK7VVB	B	UWAZ26	B
62AQXT	B	GXLBCF	B	VADHC6	B
6692UT	B	J3UDBG	B	W7NVU2	B
6LTTTT	B	J7Q2RN	B	WEWATW	B
6ULAYN	B	J9FHYB	B	WK9BX2	B
74ADQN	B	J9H4VQ	B	X28N73	B
78QLEM	B	JAR6JA	B	XMTMAC	B
7KB8DM	B	K6FGJD	B	XW2W4W	B
9JDUPL	B	KLLL7Q	B	YHE4RU	B
9Y9WQY	B	KUFR2C	B	YTWLK2	B
A4GYQZ	B	LDMGRF	B	Z67LUZ	B
ADKPWG	B	NJ3YZ8	B	ZM2EFX	B
AGLVBM	B	NLAFWH	B		
AGZGKP	B	P6YUB8	B		
AZGNWL	B	PCYEBG	B		
B2M7UG	B	Q4NCR2	B		
CBAQBY	B	QFRV32	B		
D6FC2H	B	QHJW74	B		

Item 1 - Location Response Summary

Location	Total	Total Participants: 63
A	0	*NOTE: Tallies may not add up to the total number of participants, if a participant did not report a response.*
B	63	
C	0	
D	0	
None	0	
Not Tested	0	

TABLE 1 - Item 2

WebCode	Location	WebCode	Location	WebCode	Location
2BP93A	A	EDPZFG	A	UGVRZ2	A
2XEXCY	A	ELGBPC	A	UM8FZX	A
49NAHT	A	F4EXRV	A	UWAZ26	A
4CPHL3	A	FK7VVB	A	VADHC6	A
4RPZYW	A	GXLBCF	A	W7NVU2	A
4TZ2KU	A	J3UDBG	A	WEWATW	A
62AQXT	A	J7Q2RN	A	WK9BX2	A
6692UT	A	J9FHYB	A	X28N73	A
6LTTTT	A	J9H4VQ	A	XMTMAC	A
6ULAYN	A	JAR6JA	A	XW2W4W	A
74ADQN	A	K6FGJD	A	YHE4RU	A
78QLEM	A	KLLL7Q	A	YTWLK2	A
7KB8DM	A	KUFR2C	A	Z67LUZ	A
9JDUPL	A	LDMGRF	A	ZM2EFX	A
9Y9WQY	A	NJ3YZ8	A		
A4GYQZ	A	NLAFWH	A		
ADKPWG	A	P6YUB8	A		
AGLVBM	A	PCYEBG	A		
AGZGKP	A	Q4NCR2	A		
AZGNWL	A	QFRV32	A		
B2M7UG	A	QHJW74	A		
CBAQBY	A	RHFQ3E	A		
D6FC2H	A	TNZ9VG	A		
DDVVJW	A	TVHGLY	A		
DTMPVM	A				

Item 2 - Location Response Summary

Location	Total	Total Participants: 63
A	63	*NOTE: Tallies may not add up to the total number of participants, if a participant did not report a response.*
B	0	
C	0	
D	0	
None	0	
Not Tested	0	

TABLE 1 - Item 3

WebCode	Location	WebCode	Location	WebCode	Location
2BP93A	Not Tested	EDPZFG	C	UGVRZ2	C
2XEXCY	C	ELGBPC	C	UM8FZX	C
49NAHT	C	F4EXRV	Not Tested	UWAZ26	C
4CPHL3	C	FK7VVB	C	VADHC6	C
4RPZYW	C	GXLBCF	C	W7NVU2	C
4TZ2KU	C	J3UDBG	C	WEWATW	C
62AQXT	C	J7Q2RN	C	WK9BX2	C
6692UT	C	J9FHYB	C	X28N73	C
6LTTTT	C	J9H4VQ	C	XMTMAC	C
6ULAYN	C	JAR6JA	C	XW2W4W	C
74ADQN	None	K6FGJD	C	YHE4RU	C
78QLEM	C	KLLL7Q	C	YTWLK2	C
7KB8DM	C	KUFR2C	C	Z67LUZ	C
9JDUPL	C	LDMGRF	C	ZM2EFX	C
9Y9WQY	C	NJ3YZ8	C		
A4GYQZ	Not Tested	NLAFWH	C		
ADKPWG	C	P6YUB8	C		
AGLVBM	C	PCYEBG	C		
AGZGKP	C	Q4NCR2	C		
AZGNWL	C	QFRV32	C		
B2M7UG	C	QHJW74	C		
CBAQBY	Not Tested	RHFQ3E	C		
D6FC2H	C	TNZ9VG	Not Tested		
DDVVJW	C	TVHGLY	C		
DTMPVM	C				

Item 3 - Location Response Summary

Location	Total
A	0
B	0
C	57
D	0
None	1
Not Tested	5

Total Participants: 63

NOTE: Tallies may not add up to the total number of participants, if a participant did not report a response.

Development Methods

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
2BP93A	Visual Examination	ambient and flashlight
	Powder Dusting	black magnetic powder
2XEXCY	Visual Examination	examined the item #1
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	RAM (Rhodamine 6-G+Ardox+MBD)
	Alternate Light Source	
	Powder Dusting	Magnetic Powder
49NAHT	Visual Examination	9/12/23 - Item 1 (switch plate), visual exam using white light. Latent print detected in section labeled B.
	Cyanoacrylate Fuming	9/14/23 - Item 1 (switch plate) processed with CAE, viewed with FSIS/UV and white light. Latent print detected in section labeled B.
	Dye Stain	9/14/23 - Item 1 (switch plate) processed with R6G, viewed with laser. Latent print detected in section labeled B.
4CPHL3	Visual Examination	Visual and side-lighting
	Alternate Light Source	Crime Lite ALS
	Cyanoacrylate Fuming	Super glue fuming wand
	Powder Dusting	Black powder
4RPZYW	Cyanoacrylate Fuming	18 minutes processing time
	Dye Stain	RAM
	Alternate Light Source	RUVIS
	Powder Dusting	black powder
4TZ2KU	Physical Developer (PD)	Black magnetic powder,
62AQXT	Powder Dusting	the item was dusted by black powder and brush.
6692UT	Visual Examination	
	Cyanoacrylate Fuming	Lot #YM27419; 10 minutes in fuming chamber
	Powder Dusting	Black powder
6LTTTT	Visual Examination	Unit first visually observed the item to determine if same was a suitable surface for further latent fingerprint processing.
	Powder Dusting	Unit utilized black magnetic powder for the processing of Item 1.
6ULAYN	Powder Dusting	biohazard suit, gloves and mask were worn. Black dusting powder and a fiberglass brush were used finding a latent fingerprint in quadrant B.
74ADQN	Powder Dusting	Black Powder

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
78QLEM	Visual Examination	Visual examination - with and without flashlight and oblique light (flashlight)
	Powder Dusting	Powder dusting - black sterile powder and sterile brush
	Photo comparison	Other - Photo comparison - overall and midrange photos and close-up comparison photos of the print
7KB8DM	Visual Examination	Item 1 was visually examined prior to processing. No friction ridge was noted.
	Cyanoacrylate Fuming	Item 1 was processed using a standup cyanoacrylate fuming chamber. Humidity was set to 80% and the run time was 35 minutes.
	Powder Dusting	Item 1 was further processed with dual contrast powder.
9JDUPL	Powder Dusting	Dusted the switch plate with black powder.
9Y9WQY	Visual Examination	
	Cyanoacrylate Fuming	80% humidity; 18 minutes fuming
	Dye Stain	BY40, rinse with DI water
A4GYQZ	Visual Examination	High intensity light, from multiple angles
	Powder Dusting	Brush with black powder
ADKPWG	Visual Examination	
	Powder Dusting	Black powder
AGLVBM	Visual Examination	
	Cyanoacrylate Fuming	MVC 1000, CA Lot 051723-02, RH 80%, 120 C, Humidify time 10 mins, Glue time 11 mins, Purge time 10 mins
	Dye Stain	Rhodamine 6G lot 3/28-05220
	Powder Dusting	Magnetic Powder lot 052423-01
AGZGKP	Cyanoacrylate Fuming	17 min @ 78% humidity
	Dye Stain	RAM
	Powder Dusting	black powder
	Alternate Light Source	RUVIS
AZGNWL	Powder Dusting	Black powder with a brush
B2M7UG	Visual Examination	Oblique Lighting
	Powder Dusting	Black Powder
CBAQBY	Visual Examination	Visual examination w/ bright and oblique lighting
	Cyanoacrylate Fuming	Fuming wand
	Powder Dusting	black powder

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
D6FC2H	Visual Examination	Visual Examination conducted using ROFIN ALS in the white, UV, and 450 wavelengths with the appropriate filters prior to processing.
	Cyanoacrylate Fuming	Processing time of approximately 15 min using the SAFEFUME Cyanoacrylate chamber. Results visualized using oblique lighting with the ROFIN ALS in the white and UV wavelength.
	Dye Stain	Rhodamine. Results visualized with laser (532nm) and an orange laser filter.
	Powder Dusting	Black fingerprint powder.
DDVVJW	Visual Examination	Used both a flashlight with oblique lighting and a Forensic Light Source to search for latent prints.
	Cyanoacrylate Fuming	Added items of evidence to a fuming chamber and fumed them for approximately 5 minutes.
	Dye Stain	Used the Rhodamine 6G dye stain to enhance the latent print.
	Powder Dusting	Black fingerprint powder
DTMPVM	Cyanoacrylate Fuming	Visual inspection of light switch showed a disturbance in section B. Photos taken. ALS used, but no ridges. CA'ed for 10 minutes. ALS used. No ridges developed.
	Dye Stain	R6G used. ALS green light orange goggles/filter. Ridges developed. Photos taken.
	Powder Dusting	black powder "Silk"
EDPZFG	Powder Dusting	Black powder
ELGBPC	Visual Examination	white light
	Powder Dusting	black powder
F4EXRV	Powder Dusting	Black magnetic powder
FK7VVB	Visual Examination	
	Powder Dusting	black
GXLBCF	Visual Examination	Visual exam conducted with white light (room lighting and flashlight) and FSIS/UV light. 1 LP observed in section B (marked 1L1).
	Cyanoacrylate Fuming	CAE exam conducted with white light (room lighting and flashlight) and FSIS/UV light.
	Dye Stain	Applied R6G to Item 1 and exam conducted with Laser (532 nm/orange barrier filter).
J3UDBG	Powder Dusting	Black Magnetic powder with magnetic applicator were used in this sample
J7Q2RN	Visual Examination	B photos. A, C, D NP
	Powder Dusting	MP A-D
J9FHYB	Powder Dusting	magnetic powder application

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
J9H4VQ	Visual Examination	A visual exam was conducted without and with oblique lighting. This method took approximately 2 minutes.
	Alternate Light Source	After completing a visual exam with oblique lighting, I used a Forensic Light Source to search for possible latent prints. This method took approximately 2 minutes.
	Cyanoacrylate Fuming	After all visual exams were completed, I processed the item in a cyanoacrylate fuming chamber. The item was placed in a chamber with a control. After the item was fumed, it was searched for possible latent prints using oblique lighting and a Forensic Light Source. One latent print image was obtained during this process. This method took approximately 10 minutes.
	Dye Stain	After the item was photographed with cyanoacrylate, the item was processed with Rhodamine 6G dye stain. A control was conducted prior to processing the item with this dye stain. The item was then searched for possible latent prints with a Forensic Light Source. One latent print image was obtained during this process (with a filter on the camera lens). This method took approximately 10 minutes.
	Powder Dusting	After all chemical processing was completed, I processed this item with black powder. One latent print lift card was obtained during this process. This method took approximately 2 minutes.
JAR6JA	Powder Dusting	black magnetic powder
K6FGJD	Powder Dusting	Black powder.
KLLL7Q	Visual Examination	ambient white light
	Alternate Light Source	ALS 350nm and 515nm
	Cyanoacrylate Fuming	fish tank, approx. 10 minutes
	Powder Dusting	black powder
KUFR2C	Visual Examination	Visual exam of the item was completed. No visible prints were located at this time.
	Cyanoacrylate Fuming	The item was then chemically processed using Cyanoacrylate Fuming (MVC 1000). The fuming process takes approximately 20-30 minutes. The humidity of the chamber is set to 80% and the glue temperature is set to 120 degrees Celsius. Approximately 8 drops of superglue was used (Lot # 051723-02). A test print (positive/negative control) is used during the fuming process as well. Once the fuming was completed, ridge detail was visible in Quadrant B.
	Powder Dusting	The item was then processed using Bichromatic powder (Lot #052223-01). Ridge detail was present in Quadrant B.
LDMGRF	Cyanoacrylate Fuming	Item 1 was photographed It was verified that the evidence matches the document. Cyanoacrylate, 25 drops, was applied in the Cyanoacrylate Fumming Chamber. As a result, a white bone-colored dyed fingerprint (loop).
	Powder Dusting	Black lightning powder (black graphite). As a result, a black-colored dyed fingerprint (ridge). The fingerprint (ridge) revealed was photographed.
NJ3YZ8	Visual Examination	Visual Exam with flashlight and coaxial lighting
	Cyanoacrylate Fuming	Fumed for 10 minutes with 2.5 g of cyanoacrylate ester, hot plate temperature 351 degrees F, 50% relative humidity

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
NLAFWH	Visual Examination	Ridge detail observed in Quadrant B during initial optical examination with white torch light and blue crimlelight (420-470 nm). Ridge detail was labelled with scale and unique identifier and digital images were collected at this stage.
	Cyanoacrylate Fuming	Item treated with 5 minutes CA fuming in MVC-1000 chamber (foster and freeman) with approximately 10 drops of Cyanobloom.
	Visual Examination	Optial examination with white light. Additional images of ridge detail collected.
	Dye Stain	Rhodamine 6G-HFE treatment of item.
	Visual Examination	Optical examination with blue green crimelight (420-470nm) with orange goggles. Additional images of ridge detail collected. Examination of item concluded at this time.
P6YUB8	Visual Examination	Pre-screening with alternate light source - laser, 450nm and UV
	Cyanoacrylate Fuming	
	Dye Stain	Rhodamine
	Powder Dusting	Magnetic Powder
PCYEBG	Alternate Light Source	Item was retrieved from packaging and photographed. Visual examination of item conducted under laboratory light conditions. Item was further examined under alternative light source using the ROFIN Polilight, with white light, 415nm, 505nm and 530nm. Nil ridge detail observed.
	Cyanoacrylate Fuming	The item was treated in the cyanoacrylate fuming chamber. Once the cycle was complete (approx 1/2 hour), the item was removed and allowed to sit overnight in a secured area to allow time for the treatment to set. Upon removal of the item from the chamber, ridge detail was observed in section B however was difficult to observe due to the white ridges being the same colour as the switch panel.
	Rhodamine (R6G)	The following day (28/09/2023), the item was removed from the secure storage area and observed under alternate light source. Ridge detail was observed in section B. The item was further treated with Rhodamine (R6G) stain which was applied with a spray bottle, and rinsed after approx 5 seconds. The item was allowed to dry in a fume hood.
	Alternate Light Source	After drying, the item was examined under 505 and 530nm light source whilst wearing orange goggles. Ridge detail was highly visible and fluoresced under the light source.
Q4NCR2	Visual Examination	White light/ambient light
	Cyanoacrylate Fuming	Fumed for approximately 13 minutes
	Dye Stain	Rhodamine 6G Aqueous - applied with rinse bottle, rinsed with de-ionized water in rinse bottle and set to dry
	Alternate Light Source	Laser light source - green and utilized orange filter
	Visual Examination	White light
	Powder Dusting	Magnetic powder
	Powder Dusting	Black powder

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
QFRV32	Visual Examination	Approximately five minutes of examination with and without oblique lighting
	Alternate Light Source	Approximately five minutes of examination
	Cyanoacrylate Fuming	Positive control on foil, lot #202305084. Approximately ten minutes of processing, five minutes of examination
	Dye Stain	Rhodamine 6G, lot #R6G-090423, positive control on foil. Approximately two minutes of processing
	Alternate Light Source	Approximately five minutes of examination with the Rhodamine 6G dye stain
	Powder Dusting	Approximately five minutes of examination, black powder used
QHJW74	Powder Dusting	black powder
RHFQ3E	Powder Dusting	Black powder and brush
TNZ9VG	Visual Examination	ambient and high intensity light, less than one minute
	Powder Dusting	black powder, less than one minute
TVHGLY	Visual Examination	
	Alternate Light Source	UV and 450 nm
	Powder Dusting	black powder
UGVRZ2	Visual Examination	Examined item for friction ridge impressions. Possible ridges visualized in section B
	Alternate Light Source	Examined item using various wavelengths and filters for friction ridge impressions. Possible ridges visualized in section B.
	Cyanoacrylate Fuming	Fumed item for approximately 10 minutes. Possible ridges developed in section B
	Powder Dusting	Dusted item using black dusting powder. Ridges developed in section B.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
UM8FZX	Visual Examination	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. HILS - Dark Adaption Protocol followed utilising Dark Adaption Glasses. HILS - Forenteq Light cube kit: White light (400 nm - 700 nm; SN 130-1650-108); UV (~365nm; SN 130-1365-131) Blue (470 nm; SN 130-1447-141); Green (530nm; SN 130-1530-082). 1 Identifiable mark was visualised in Section B with UV and Blue light and designated 'SPW02'. SPW02 captured digitally using DCS5 system provided by "foster and freeman" (PA/23/014 SN 6P71N63) SPW02 was captured under UV and blue light.
	Powder Dusting	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. Powder - "TETRA" Black Onyx Powder Product # TFP0113J Conducted in "Monmouth Circulaire T1400" Powder hood (SN 26521-001 A positive test card was also treated to ensure treatment performed correctly. SPW02 developed in Section B Exterior of hard white plastic cover. SPW02 captured digitally using DCS5 system provided by "foster and freeman" (PA/23/014 SN 6P71N63) SPW02 captured under white light.
	Cyanoacrylate Fuming	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. Superglue - "BVDA Cyanoacrylate" Batch W160900. Conducted in "MEGAfume M61" (PA/23/014 SN 160-2000-072) Glue Cabinet provided by "Attestor Forensics" and comprising of a 15 minute humidity cycle, 10 minute glue cycle, 20 minute purge cycle (temperature 120 ± degrees Celsius and humidity of 80 ± 5% RH). A positive test card was also treated to ensure treatment performed correctly. SPW02 developed in section B Exterior of hard white plastic cover. SPW02 captured digitally using DCS5 system provided by "foster + freeman" (PA/23/014 SN 6P71N63) SPW02 captured under white light and UV (Baader Lens and 408nm filter).
	Dye Stain	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. BY40 - Made in house (Expiry 18/09/24). Air Dried overnight. Further enhancement to SPW02. SPW02 captured digitally using DCS5 system provided by "foster + freeman" " (PA/23/014 SN 6P71N63) SPW02 captured under blue light (476nm filter).
UWAZ26	Powder Dusting	
VADHC6	Powder Dusting	black Magnetic powder with magnetic applicator were used in this sample
W7NVU2	Cyanoacrylate Fuming	1- Visual examination. 2- Enter the smoking chamber for 25 minutes. 3- Conventional graphite-colored powders are swept.
WEWATW	Powder Dusting	10 minutes were required to process the item. following the following procedure. 1. surface analysis 2.object visualization 3. powder application 4. transplant conventional black powder (graphite-based powder) was used
WK9BX2	Powder Dusting	Used black powder and magna powder. Two to three minutes of processing time.
X28N73	Visual Examination	Visual examination with white light and FSIS with UV light
	Cyanoacrylate Fuming	CAE in Foster and Freeman MVC 1000 chamber. Visualized with white light.
	Dye Stain	R6G with tracer laser.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details
XMTMAC	Visual Examination	Visual examination with oblique lighting. No prints observed.
	Alternate Light Source	Examination with laser light source and orange barrier filter. No prints observed
	Cyanoacrylate Fuming	Item in fuming chamber for approximately 12 minutes. Control conducted and passed. One print observed in quadrant B.
	Dye Stain	RAM dye stain. Control conducted and passed. Item sprayed with dye stain and allowed to dry. Examined with laser light source and orange barrier filter. One print observed in quadrant B .
	Powder Dusting	Black powder with fiberglass brush. One print observed in quadrant B.
XW2W4W	Visual Examination	Flashlight and room lighting. Ridge detail visible at this stage but not suitable for documentation.
	Cyanoacrylate Fuming	2.5 grams of CAE, hot plate temperature 351 degrees F, relative humidity 50%, 0 minutes of dwell time, 10 minutes of fume time in CApture BT Fuming Chamber
	Dye Stain	Rhodamine 6G (MeOH), viewed with ~532 nm laser
	Visual Examination	Performed after Cyanoacrylate Fuming. Ridge detail was again visible at this stage but not suitable for documentation.
	Visual Examination	Performed after R6G Dye Stain. Ridge detail was now visible and suitable for documentation in Quadrant B.
YHE4RU	Visual Examination	Visual examination of Item 1 with ambient room lighting and flashlight.
	Cyanoacrylate Fuming	CAE fuming using CApture BT chamber. Hot plate temperature of 351 degrees F, 50% humidity, and 10-minute fuming time.
	Visual Examination	Visual examination after CAE fuming using Coaxial lighting.
YTWLK2	Visual Examination	White light, 0 photos. RUVIS, 1 photo
	Lumicyano	17 minutes at 75% humidity. Hot plate at 250 degrees Fahrenheit. White light, 0 photos. LASER, 2 photos. RUVIS, 1 photo.
Z67LUZ	Cyanoacrylate Fuming	
	Alternate Light Source	RUVIS
	Powder Dusting	black powder
	Dye Stain	RAM
	Alternate Light Source	RUVIS again after dye stain
ZM2EFX	Alternate Light Source	Mark search was done by following ways: 1. Blue Light (445 nm) using Goggle (495 nm). 2. Green Light (532 nm) using Goggle (550 nm). No Mark found
	Cyanoacrylate Fuming	Processing Time: 45 mins, which includes Humidifying, Fuming and Purging. After 45 mins, Mark search was done using White Light. No additional mark found. Mark on Section B, enhanced
	Powder Dusting	The item was dusted with Midnight Magnetic Powder. and Mark was found on Section B.

TABLE 2 - Item 1

WebCode	Development Methods	Method Details

Item 1 - Development Response Summary

Participants: 63

Methods Utilized

Alternate Light Source	18	Physical Developer	1	***Note:*** *Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.*
Cyanoacrylate Fuming	33	Powder Dusting	52	
DFO	0	Visual Examination	43	
Dye Stain	20	Wet Powder Suspension	0	
Ninhydrin	0	1,2-Indanedione	0	

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
2BP93A	Visual Examination	ambient and flashlight
	Powder Dusting	standard black powder
2XEXCY	Visual Examination	examined Item #2
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	RAM (Rhodamine 6-G+Ardox+MBD)
	Alternate Light Source	
	Powder Dusting	Magnetic Powder
49NAHT	Visual Examination	9/12/23 - Item 2 (mirrored compact), visual exam using white light. Latent print detected in section labeled A.
	Cyanoacrylate Fuming	9/14/23 - Item 2 (mirrored compact) processed with CAE, viewed with FSIS/UV and white light. Latent print detected in section labeled A.
	Dye Stain	9/14/23 - Item 2 (mirrored compact) processed with R6G, viewed with laser. Latent print detected in section labeled A.
4CPHL3	Visual Examination	Visual including side lighting
	Alternate Light Source	Crime Lite ALS
	Cyanoacrylate Fuming	Fuming wand
	Powder Dusting	Black powder
4RPZYW	Cyanoacrylate Fuming	18 minutes
	Dye Stain	RAM
	Alternate Light Source	RUVIS
	Powder Dusting	Black powder
4TZ2KU	Physical Developer (PD)	conventional black powder
62AQXT	Powder Dusting	the item was dusted by black powder and brush.
6692UT	Visual Examination	
	Cyanoacrylate Fuming	Lot #: YM27419; 10 minutes in fuming chamber
	Powder Dusting	Black powder
6LTTTT	Visual Examination	Unit first visually processed the item to determine if same was a suitable surface for further latent fingerprint processing.
	Powder Dusting	Unit utilized black bichromatic powder on the above item due to the exterior being a metal material which would interfere with the usage of magnetic powder and the magnetic brush head.
6ULAYN	Powder Dusting	A biohazard suit, gloves and mask were worn. Black dusting powder and a fiberglass brush were used finding a latent fingerprint in quadrant A
74ADQN	Powder Dusting	Black powder

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
78QLEM	Visual Examination	Visual examination - with and without flashlight and oblique light (flashlight)
	Powder Dusting	Powder dusting - black sterile powder and sterile brush
	Photo comparison	Other - Photo comparison - overall and midrange photos and close-up comparison photos of the print.
7KB8DM	Visual Examination	Item 2 was visually examined prior to processing. Friction ridge was observed in quadrant A.
	Cyanoacrylate Fuming	Item 2 was processed using a standup cyanoacrylate fuming chamber. Humidity was set to 80% and the run time was 35 minutes.
	Powder Dusting	Item 2 was further processed with dual contrast powder.
9JDUPL	Powder Dusting	Dusted the mirrored compact with white powder.
9Y9WQY	Visual Examination	
	Cyanoacrylate Fuming	80% humidity, 18 minutes fuming time
	Dye Stain	BY40, rinse with DI water
A4GYQZ	Visual Examination	High intensity light, from multiple angles
	Powder Dusting	Brush with black powder
ADKPWG	Visual Examination	
	Powder Dusting	black powder
AGLVBM	Visual Examination	
	Cyanoacrylate Fuming	MVC 1000, CA Lot 051723-02, RH 80%, 120 C, Humidify time 10 mins, Glue time 11 mins, Purge time 10 mins
	Dye Stain	Rhodamine 6G lot 3/28-05220
	Powder Dusting	Black Powder lot 050523-01
AGZGKP	Cyanoacrylate Fuming	17 min @ 78% humidity
	Powder Dusting	black powder
	Alternate Light Source	RUVIS
	Dye Stain	RAM
AZGNWL	Powder Dusting	White powder with a brush
B2M7UG	Visual Examination	Oblique Lighting
	Powder Dusting	Black Powder
CBAQBY	Visual Examination	Visual examination w/ bright and oblique lighting
	Cyanoacrylate Fuming	fuming wand
	Powder Dusting	black powder

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
D6FC2H	Visual Examination	Visual Examination conducted using ROFIN ALS in the white, UV, and 450 wavelengths with the appropriate filters prior to processing.
	Cyanoacrylate Fuming	Processing time of approximately 15 min using the SAFEFUME Cyanoacrylate chamber. Results visualized using oblique lighting with the ROFIN ALS in the white wavelength.
	Dye Stain	Rhodamine. Results visualized with laser (532nm) and an orange laser filter.
	Powder Dusting	Black fingerprint powder.
DDVVJW	Visual Examination	Used both a flashlight with oblique lighting and a Forensic Light Source to search for latent prints.
	Cyanoacrylate Fuming	Added items of evidence to a fuming chamber and fumed them for approximately 5 minutes.
	Dye Stain	Used the Rhodamine 6G dye stain to enhance the latent print.
	Powder Dusting	Black powder
DTMPVM	Cyanoacrylate Fuming	Visual inspection of mirrored compact showed a fingerprint in section A. Photos taken. CA'ed for 10 minutes. ALS used. Photos taken.
	Dye Stain	R6G used. ALS green light orange goggles/filter. Ridges still visible. Photos taken.
	Powder Dusting	black powder "Silk". Photos taken.
EDPZFG	Powder Dusting	white powder
ELGBPC	Visual Examination	white light
	Powder Dusting	black powder
F4EXRV	Powder Dusting	Black magnetic powder
FK7VVB	Visual Examination	
	Powder Dusting	black
GXLBCF	Visual Examination	Visual exam conducted with white light (room lighting and flashlight) and FSIS/UV light. 1 LP observed in section A (marked 2L1).
	Cyanoacrylate Fuming	CAE exam conducted with white light (room lighting and flashlight) and FSIS/UV light.
	Dye Stain	Applied R6G to the interior of Item 2 and exam conducted with Laser (532 nm/orange barrier filter). 2L1 did not improve - no additional photo was captured.
J3UDBG	Powder Dusting	Black oxide powder were used with squirrel brush on the sample
J7Q2RN	Visual Examination	A photos. B-D NP
	Powder Dusting	MP A-D
J9FHYB	Powder Dusting	volcanic powder

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
J9H4VQ	Visual Examination	A visual exam was conducted without and with oblique lighting. One latent print image was obtained during this process. This method took approximately 2 minutes.
	Alternate Light Source	After completing a visual exam with oblique lighting, I used a Forensic Light Source to search for possible latent prints. This method took approximately 2 minutes.
	Cyanoacrylate Fuming	After all visual exams were completed, I processed the item in a cyanoacrylate fuming chamber. The item was placed in a chamber with a control. After the item was fumed, it was searched for possible latent prints using oblique lighting and a Forensic Light Source. One latent print image was obtained during this process. This method took approximately 10 minutes.
	Dye Stain	After the item was photographed with cyanoacrylate, the item was processed with Rhodamine 6G dye stain. A control was conducted prior to processing the item with this dye stain. The item was then searched for possible latent prints with a Forensic Light Source. One latent print image was obtained during this process (with a filter on the camera lens). This method took approximately 10 minutes.
	Powder Dusting	After all chemical processing was completed, I processed this item with black powder. One latent print lift card was obtained during this process. This method took approximately 2 minutes.
JAR6JA	Powder Dusting	biochromatic powder
K6FGJD	Physical Developer (PD)	Black powder
KLLL7Q	Visual Examination	ambient white light
	Alternate Light Source	ALS 350nm and 515nm
	Cyanoacrylate Fuming	fish tank, approx. 10 minutes
	Powder Dusting	black powder
KUFR2C	Visual Examination	Visual exam of the item was completed. No visible prints were located at this time.
	Cyanoacrylate Fuming	The item was then chemically processed using Cyanoacrylate Fuming (MVC 1000). The fuming process takes approximately 20-30 minutes. The humidity of the chamber is set to 80% and the glue temperature is set to 120 degrees Celsius. Approximately 8 drops of superglue was used (Lot # 051723-02). A test print (positive/negative control) is used during the fuming process as well. Once the fuming was completed, ridge detail was visible in Quadrant A.
	Powder Dusting	The item was then processed using Bichromatic powder (Lot #052223-01). Ridge detail was present in Quadrant A.
LDMGRF	Cyanoacrylate Fuming	Item 2 was photographed It was verified that the evidence matches the document. Cyanoacrylate, 25 drops, was applied in the Cyanoacrylate Fumming Chamber. As a result, a white bone-colored dyed ridge. It was revealed a fingerprint (arch). Cyanoacrylate, process time: 40 minutes.
	Powder Dusting	Black lightning powder (black graphite). As a result, a black-colored dyed fingerprint (arch). The fingerprint (arch) revealed was photographed.

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
NJ3YZ8	Visual Examination	Visual Exam with ambient and coaxial lighting
	Cyanoacrylate Fuming	Fumed for 10 minutes with 2.5 g of cyanoacrylate ester, hot plate temperature 351 degrees F, 50% relative humidity
NLAFWH	Visual Examination	Ridge detail detected in Quadrant A during initial visual examination with ambient light. Ridge detail was labelled with scale and exhibit number and digital images were collected at this stage. Examination of item concluded at this time.
P6YUB8	Visual Examination	Pre-screen with laser, UV and 450
	Cyanoacrylate Fuming	
	Dye Stain	Rhodamine
	Powder Dusting	Magnetic Powder
PCYEBG	Visual Examination	The yellow packaging was opened (avoiding the security seal) and item removed. A visual inspection of the item was conducted to examine the surface and decide treatment method. During the visual inspection of the item, a fingerprint was observed in section A on the inside of the mirror compact.
	Alternate Light Source	The item was further examined under alternate light source using white light, 450, 505 and 530nm. A scaled label with item details was placed adjacent to the observed print.
Q4NCR2	Visual Examination	White light/ambient light
	Cyanoacrylate Fuming	Fumed for approximately 13 minutes
	Dye Stain	Rhodamine 6G Aqueous - applied with rinse bottle, rinsed with de-ionized water in rinse bottle and set to dry
	Alternate Light Source	Laser light source - green and utilized orange filter
	Visual Examination	White light
	Visual Examination	Reflective UV light
	Powder Dusting	Black powder
QFRV32	Visual Examination	Approximately five minutes of examination with and without oblique lighting
	Alternate Light Source	Approximately five minutes of examination
	Cyanoacrylate Fuming	Positive control on foil, lot #202305084. Approximately ten minutes of processing, five minutes of examination
	Dye Stain	Rhodamine 6G, lot #R6G-090423, positive control on foil. Approximately two minutes of processing
	Alternate Light Source	Approximately five minutes of examination
	Powder Dusting	Approximately five minutes of examination, black powder and magna powder used
QHJW74	Powder Dusting	white powder
RHFQ3E	Powder Dusting	black powder and brush
TNZ9VG	Visual Examination	ambient and high intensity light, less than one minute
	Powder Dusting	black powder, less than one minute

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
TVHGLY	Visual Examination	
	Powder Dusting	black powder
UGVRZ2	Visual Examination	Examined item for friction ridge impressions. Possible ridges visualized in section A
	Alternate Light Source	Examined item using various wavelengths and filters for friction ridge impressions. Possible ridges visualized in section A
	Cyanoacrylate Fuming	Fumed item for approximately 10 minutes. Possible ridges developed in section A
	Powder Dusting	Dusted item using black dusting powder. Ridges developed in section B.
UM8FZX	Visual Examination	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. HILS - Dark Adaption Protocol followed utilising Dark Adaption Glasses. HILS - Forenteq Light cube kit: White light (400 nm - 700 nm; SN 130-1650-108); UV (~365nm; SN 130-1365-131) Blue (470 nm; SN 130-1447-141); Green (530nm; SN 130-1530-082). 1 Identifiable mark was visualised in Section A with White, UV and Blue light and designated 'SPW01'. SPW01 captured digitally using DCS5 system provided by "foster and freeman" (PA/23/014 SN. 6P71N63) SPW02 was captured under white light with polarizer, UV and blue light.
	Powder Dusting	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. Powder - "TETRA" Black Onyx Powder Product # TFP0113J Conducted in "Monmouth Circulaire T1400" Powder hood (Serial No. 26521-001 A positive test card was also treated to ensure treatment performed correctly, this was lifted onto a testcard for retained in the file. SPW01 developed in Section A. SPW01 captured digitally using DCS5 system provided by "foster and freeman" (PA/23/014 SN. 6P71N63) SPW02 captured under white light.
	Cyanoacrylate Fuming	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. Superglue - "BVDA Cyanoacrylate" Batch W160900. Conducted in "MEGAfume M61" (PA/23/014 SN. 160-2000-072) Glue Cabinet provided by "Attestor Forensics" and comprising of a 15 minute humidity cycle, 10 minute glue cycle, 20 minute purge cycle (temperature 120 ± degrees Celsius and humidity of 80 ± 5% RH). A positive test card was also treated to ensure treatment performed correctly. SPW01 developed in section A. SPW01 captured digitally using DCS5 system provided by "foster + freeman" (PA/23/014 SN. 6P71N63) SPW01 captured under white light and UV (Baader Lens and 408nm filter).
	Dye Stain	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. BY40 - Made in house (Expiry 18/09/24). Air Dried overnight. Further enhancement to SPW01. SPW01 captured digitally using DCS5 system provided by "foster + freeman" (PA/23/014 SN 6P71N63) SPW01 captured under blue light (476nm filter).
UWAZ26	Powder Dusting	
VADHC6	Powder Dusting	black oxide powder were used with squirrel brush on this sample.
W7NVU2	Cyanoacrylate Fuming	1- Visual Examination. 2- enter the cyanoacrylate chamber for 25 minutes. 3- subsequently sweep with conventional powder in graphite color

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
WEWATW	Powder Dusting	10 minutes were required to process the item. following the following procedure. 1. surface analysis 2.object visualization 3. powder application 4. transplant conventional black powder (graphite-based powder) was used
WK9BX2	Powder Dusting	Used black powder. Two to three minutes of processing time.
X28N73	Visual Examination	Visual examination with white light and FSIS with UV light
	Cyanoacrylate Fuming	CAE in Foster and Freeman MVC 1000 chamber. Visualized with white light.
	Dye Stain	R6G with tracer laser.
XMTMAC	Visual Examination	Visual examination with oblique lighting. One print observed in quadrant A.
	Alternate Light Source	Examination with laser light source and orange barrier filter. One print observed in quadrant A.
	Cyanoacrylate Fuming	Item in fuming chamber for approximately 8 minutes. Control conducted and passed. One print observed in quadrant A.
	Dye Stain	RAM dye stain. Control conducted and passed. Item sprayed with dye stain and allowed to dry. Examined with laser light source and orange barrier filter. One print observed in quadrant A.
	Powder Dusting	Black powder with fiberglass brush. One print observed in quadrant A.
XW2W4W	Visual Examination	Flashlight and room lighting. Ridge detail visible and suitable for documentation prior to processing.
	Cyanoacrylate Fuming	2.5 grams of CAE, hot plate temperature 351 degrees F, relative humidity 50%, 0 minutes of dwell time, 10 minutes of fume time in CApture BT Fuming Chamber
	Dye Stain	Rhodamine 6G (MeOH), viewed with ~532 nm laser
	Visual Examination	Performed after Cyanoacrylate Fuming. The original ridge detail had improved and was re-photographed. Additional ridge detail was present that was not suitable for documentation.
	Visual Examination	Performed after R6G Dye Stain. The original ridge detail had improved and was re-photographed. Additional ridge detail was present that was not suitable for documentation.
YHE4RU	Visual Examination	visual examination of Item 2 with ambient room lighting and flashlight
	Cyanoacrylate Fuming	CAE fuming using CApture BT chamber. Hot plate temperature of 351 degrees F, 50% humidity, and 10-minute fuming time.
	Visual Examination	Visual examination after CAE fuming using ambient lighting.
YTWLK2	Visual Examination	White light, 0 photos. RUVIS, 1 photo.
	Lumicyano	17 minutes at 75% humidity. Hot plate at 250 degrees Fahrenheit. White light, 0 photos. LASER, 2 photos. RUVIS, 1 photo.
Z67LUZ	Cyanoacrylate Fuming	
	Alternate Light Source	RUVIS
	Powder Dusting	black powder
	Dye Stain	RAM
	Alternate Light Source	RUVIS

TABLE 2 - Item 2

WebCode	Development Methods	Method Details
ZM2EFX	Alternate Light Source	Mark search was done by following ways: 1. Blue Light (445 nm) using Goggle (495 nm). 2. Green Light (532 nm) using Goggle (550 nm). Mark was found on Section A
	Cyanoacrylate Fuming	Processing Time: 45 mins, which includes Humidifying, Fuming and Purging. After 45 mins, Mark search was done using White Light. No additional mark found. Mark on Section A, enhanced
	Dye Stain	After Dying with BY40, kept to dry for 20 mins in fumehood. After 20 mins, Mark search was done using 445nm light (blue light) with goggle (495nm). No Additional marks found. But the mark on Section A, enhanced

Item 2 - Development Response Summary

Participants: 63

Methods Utilized

Alternate Light Source	16	Physical Developer	2	**Note:** *Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.*
Cyanoacrylate Fuming	31	Powder Dusting	49	
DFO	0	Visual Examination	43	
Dye Stain	20	Wet Powder Suspension	0	
Ninhydrin	0	1,2-Indanedione	0	

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
2XEXCY	Visual Examination	Examined Item #3
	Alternate Light Source	
	Cyanoacrylate Fuming	
	Dye Stain	RAM (Rhodamine 6-G+Ardox+MBD)
	Alternate Light Source	
	Powder Dusting	Magnetic powder
49NAHT	Visual Examination	9/12/23 - Item 3 (plastic zip-top bag), visual exam using white light. Latent print detected in section labeled C.
	Cyanoacrylate Fuming	9/14/23 - Item 3 (plastic zip-toe bag) processed with CAE, viewed with FSIS/UV and white light. Latent print detected in section labeled C.
	Dye Stain	9/14/23 - Item 3 (plastic zip-top bag) processed with R6G, viewed with laser. Latent print detected in section labeled C.
4CPHL3	Visual Examination	Visual including side lighting
	Alternate Light Source	Crime Lite ALS
	Cyanoacrylate Fuming	Fuming wand
	Powder Dusting	Black powder
4RPZYW	Cyanoacrylate Fuming	18 minutes
	Dye Stain	RAM
	Alternate Light Source	RUVIS
	Powder Dusting	black powder
4TZ2KU	Physical Developer (PD)	Black magnetic powder,
62AQXT	Powder Dusting	the item was dusted by black powder and brush.
6692UT	Visual Examination	
	Cyanoacrylate Fuming	Lot #: YM27419; 10 minutes in fuming chamber
	Powder Dusting	Black powder
6LTTTT	Visual Examination	Unit first visually processed the item to determine if same was a suitable surface for further latent fingerprint processing.
	Powder Dusting	Unit utilized black magnetic powder for processing the exterior of Item 3.
6ULAYN	Powder Dusting	A biohazard suit, gloves and mask were worn. Black dusting powder and a fiberglass brush were used finding a latent fingerprint in quadrant C
74ADQN	Powder Dusting	Black powder - Crime Scene Investigators are only trained in powder dusting methods. No additional enhancement methods were used to recover ridge detail.
78QLEM	Visual Examination	Visual examination - with and without flashlight and oblique light (flashlight)
	Powder Dusting	Powder dusting - black sterile powder and sterile brush
	Photo comparison	Other - Photo comparison - overall and midrange photos and close-up comparison photos of the print.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
7KB8DM	Visual Examination	Item 3 was visually examined prior to processing. No friction ridge was noted.
	Cyanoacrylate Fuming	Item 3 was processed using a standup cyanoacrylate fuming chamber. Humidity was set to 80% and the run time was 35 minutes.
	Powder Dusting	Item 3 was further processed with dual contrast powder.
9JDUPL	Powder Dusting	Dusted the plastic zip-top bag with black powder.
9Y9WQY	Visual Examination	cut bag open along seams for visualization/processing
	Cyanoacrylate Fuming	80% humidity; 18 minutes fuming time
	Dye Stain	BY40, rinse with DI water
ADKPWG	Visual Examination	
	Powder Dusting	black powder
AGLVBM	Visual Examination	
	Cyanoacrylate Fuming	MVC 1000, CA Lot 051723-02, RH 80%, 120 C, Humidify time 10 mins, Glue time 11 mins, Purge time 10 mins
	Dye Stain	Rhodamine 6G lot 3/28-05220
	Powder Dusting	Black Powder lot 050523-01
AGZGKP	Cyanoacrylate Fuming	17 min @78% humidity
	Powder Dusting	black powder
	Alternate Light Source	RUVIS
	Dye Stain	RAM
AZGNWL	Powder Dusting	Black powder with brush
B2M7UG	Visual Examination	Oblique Lighting
	Powder Dusting	Black Powder
D6FC2H	Visual Examination	Visual Examination conducted using ROFIN ALS in the white, UV, and 450 wavelengths with the appropriate filters prior to processing.
	Cyanoacrylate Fuming	Processing time of approximately 15 min using the SAFEFUME Cyanoacrylate chamber. Results visualized using oblique lighting with the ROFIN ALS in the white wavelength.
	Dye Stain	Rhodamine. Results visualized with laser (532nm) and an orange laser filter.
	Powder Dusting	Black fingerprint powder
DDVVJW	Visual Examination	Used both a flashlight with oblique lighting and a Forensic Light Source to search for latent prints.
	Cyanoacrylate Fuming	Added items of evidence to a fuming chamber and fumed them for approximately 5 minutes.
	Dye Stain	Used the Rhodamine 6G dye stain to enhance the latent print.
	Powder Dusting	Black powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
DTMPVM	Cyanoacrylate Fuming	Visual inspection of plastic bag did not reveal anything. Photos taken, ALS used, but no ridges. CA'ed for 10 minutes. ALS used. No ridges developed.
	Dye Stain	R6G used. ALS green light orange goggles/filter. Ridges visible in section C. Photos taken.
	Powder Dusting	black powder "Silk". Photos taken. Not very good.
EDPZFG	Powder Dusting	white powder
ELGBPC	Visual Examination	white light
	Powder Dusting	black powder
FK7VVB	Visual Examination	
	Powder Dusting	black
GXLBCF	Visual Examination	Visual exam conducted with white light (room lighting and flashlight) and FSIS/UV light. 1 LP observed in section C (marked 3L1).
	Cyanoacrylate Fuming	CAE exam conducted with white light (room lighting and flashlight).
	Dye Stain	Applied R6G to Item 3 and exam conducted with Laser (532 nm/orange barrier filter).
J3UDBG	Powder Dusting	Magnetic powder with magnetic applicator were used in this sample
J7Q2RN	Visual Examination	C NV. A, B, D NP
	Powder Dusting	MP C lift
J9FHYB	Powder Dusting	magnetic powder
J9H4VQ	Visual Examination	A visual exam was conducted without and with oblique lighting. This method took approximately 2 minutes.
	Alternate Light Source	After completing a visual exam with oblique lighting, I used a Forensic Light Source to search for possible latent prints. This method took approximately 2 minutes.
	Cyanoacrylate Fuming	After all visual exams were completed, I processed the item in a cyanoacrylate fuming chamber. The item was placed in a chamber with a control. After the item was fumed, it was searched for possible latent prints using oblique lighting and a Forensic Light Source. One latent print image was obtained during this process. This method took approximately 10 minutes.
	Dye Stain	After the item was photographed with cyanoacrylate, the item was processed with Rhodamine 6G dye stain. A control was conducted prior to processing the item with this dye stain. The item was then searched for possible latent prints with a Forensic Light Source. One latent print image was obtained during this process (with a filter on the camera lens). This method took approximately 10 minutes.
	Powder Dusting	After all chemical processing was completed, I processed this item with black powder. One latent print lift card was obtained during this process. This method took approximately 2 minutes.
JAR6JA	Powder Dusting	black magnetic powder
K6FGJD	Powder Dusting	Black powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
KLLL7Q	Visual Examination	ambient white light
	Alternate Light Source	ALS 350nm and 515nm
	Cyanoacrylate Fuming	fish tank, approx. 10 minutes
	Powder Dusting	black powder
KUFR2C	Visual Examination	Visual exam of the item was completed. No visible prints were located at this time.
	Cyanoacrylate Fuming	The item was then chemically processed using Cyanoacrylate Fuming (MVC 1000). The fuming process takes approximately 20-30 minutes. The humidity of the chamber is set to 80% and the glue temperature is set to 120 degrees Celsius. Approximately 8 drops of superglue was used (Lot # 051723-02). A test print (positive/negative control) is used during the fuming process as well. Once the fuming was completed, faint ridge detail was visible in Quadrant C.
	Powder Dusting	The item was then processed using Bichromatic powder (Lot #052223-01). Ridge detail was present in Quadrant C.
LDMGRF	Cyanoacrylate Fuming	Item 3 was photographed It was verified that the evidence matches the document. Cyanoacrylate, 25 drops, was applied in the Cyanoacrylate Fumming Chamber. As a result, a white bone-colored dyed fingerprint (ridge). It was revealed a fingerprint. Cyanoacrylate, process time: 40 minutes.
	Powder Dusting	Black lightning powder (black graphite). As a result, a black-colored dyed fingerprint (ridge). The fingerprint (ridge) revealed was scanned.
NJ3YZ8	Visual Examination	Visual Exam with flashlight
	Cyanoacrylate Fuming	Fumed for 10 minutes with 2.5 g of cyanoacrylate ester, hot plate temperature 351 degrees F, 50% relative humidity
NLAFWH	Visual Examination	Ridge detail detected in Quadrant C during initial visual examination with ambient light. Appropriate digital images of ridge detail could not be collected at this stage.
	Cyanoacrylate Fuming	Item treated with 5 minutes CA fuming in MVC-1000 chamber (foster and freeman) with approximately 10 drops of Cyanobloom.
	Visual Examination	Optical examination with ambient/white light. Ridge detail labelled with scale and unique identifier at this stage and digital images were collected.
	Dye Stain	Item treated with Rhodamine 6G-HFE working soltuion. Optical examination conducted with blue green 82S crimelight + orange goggles. Further digital images of ridge detail collected. Examination of item concluded at this time.
P6YUB8	Visual Examination	Pre-screen: laser, UV and 450
	Cyanoacrylate Fuming	
	Dye Stain	Rhodamine
	Powder Dusting	Magnetic Powder

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
PCYEBG	Visual Examination	The yellow packaging was opened and item removed. A visual inspection of the item was conducted to examine the surface and decide treatment method. Nil ridge detail was observed on the item.
	Alternate Light Source	The item was further examined under white light, 415nm, 505, and 550nm wavelengths using the ROFIN polilight. A faint fingerprint bearing sufficient ridge detail was observed in section C on the item. Good but faint ridge detail was observed under white light (diffused deflection), however 350nm wavelength was found to enhance the ridges further when angled over the print at approx 45 degrees. A label containing item details was attached adjacent to the fingerprint.
Q4NCR2	Visual Examination	White light/ambient light
	Cyanoacrylate Fuming	Fumed for approximately 13 minutes
	Dye Stain	Rhodamine 6G Aqueous - applied with rinse bottle, rinsed with de-ionized water in rinse bottle and set to dry
	Alternate Light Source	Laser light source - green and utilized orange filter
	Powder Dusting	Magnetic powder
	Powder Dusting	Black powder
QFRV32	Visual Examination	Approximately five minutes of examination with and without oblique lighting
	Alternate Light Source	Approximately five minutes of examination
	Cyanoacrylate Fuming	Positive control on foil, lot #202305084. Approximately ten minutes of processing, five minutes of examination
	Dye Stain	Rhodamine 6G, lot #R6G-090423, positive control on foil. Approximately two minutes of processing
	Alternate Light Source	Approximately five minutes of examination
	Powder Dusting	Approximately five minutes of examination, black powder used
QHJW74	Powder Dusting	white powder
RHFQ3E	Powder Dusting	black magnetic powder and brush
TVHGLY	Visual Examination	
	Alternate Light Source	UV and 450 nm
	Powder Dusting	black powder
UGVRZ2	Visual Examination	Examined item for friction ridge impressions. No obvious ridges noted.
	Alternate Light Source	Examined item using various wavelengths and filters for friction ridge impressions. Possible ridges visualized in section C.
	Cyanoacrylate Fuming	Fumed item for approximately 10 minutes. Possible ridges developed in section C.
	Powder Dusting	Dusted item using black dusting powder. Ridges developed in section C.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
UM8FZX	Alternate Light Source	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. HILS - Dark Adaption Protocol followed utilising Dark Adaption Glasses. HILS -Forenteq Light cube kit: White light (400 nm - 700 nm; SN 130-1650-108); UV (~365nm; SN 130-1365-131) Blue (470 nm; SN 130-1447-141); Green (530nm; SN 130-1530-082). NO Identifiable marks visualised.
	Cyanoacrylate Fuming	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. Superglue - "BVDA Cyanoacrylate" Batch W160900. Conducted in "MEGAfume M61" (PA/23/014 SN. 160-2000-072) Glue Cabinet provided by "Attestor Forensics" and comprising of a 15 minute humidity cycle, 10 minute glue cycle, 20 minute purge cycle (temperature 120 ± degrees Celsius and humidity of 80 ± 5% RH). A positive test card was also treated to ensure treatment performed correctly. SPW03 developed in section C. SPW03 captured digitally using DCS5 system provided by "foster + freeman" (PA/23/014 SN. 6P71N63) SPW01 captured under white light and UV (Baader Lens and 408nm filter).
	Dye Stain	CAST manual 1st edition January 2014 ISBN:978-1-78246-234-7 was referenced prior to all treatments performed. BY40 - Made in house (Expiry 18/09/24). Air Dried overnight. Further enhancement to SPW03. SPW03 captured digitally using DCS5 system provided by "foster + freeman" (PA/23/014 SN 6P71N63) SPW01 captured under blue light (476nm filter).
UWAZ26	Powder Dusting	
VADHC6	Powder Dusting	Black Magnetic powder with magnetic applicator were used in this sample
W7NVU2	Cyanoacrylate Fuming	1- Visual examination. 2- Enter the cyanoacrylate chamber for 25 minutes. 3- Subsequently, conventional dust sweeping is carried out in graphite color.
WEWATW	Powder Dusting	10 minutes were required to process the item. following the following procedure. 1. surface analysis 2.object visualization 3. powder application 4. transplant conventional black powder (graphite-based powder) was used
WK9BX2	Powder Dusting	Used black powder and magna powder. Two to three minutes of processing time.
X28N73	Visual Examination	Visual examination with white light and FSIS with UV light
	Cyanoacrylate Fuming	CAE in Foster and Freeman MVC 1000 chamber. Visualized with white light.
	Dye Stain	R6G with tracer laser.
XMTMAC	Visual Examination	Visual examination with oblique lighting. One print observed in quadrant C.
	Alternate Light Source	Examination with laser light source and orange barrier filter. No print observed.
	Cyanoacrylate Fuming	Item in fuming chamber for approximately 12 minutes. Control conducted and passed. One print observed in quadrant C.
	Dye Stain	RAM dye stain. Control conducted and passed. Item sprayed with dye stain and allowed to dry. Examined with laser light source and orange barrier filter. One print observed in quadrant C.
	Powder Dusting	Black powder with fiberglass brush. One print observed in quadrant C.

TABLE 2 - Item 3

WebCode	Development Methods	Method Details
XW2W4W	Visual Examination	Flashlight and room lighting. Ridge detail visible and suitable for documentation prior to processing.
	Cyanoacrylate Fuming	2.5 grams of CAE, hot plate temperature 351 degrees F, relative humidity 50%, 0 minutes of dwell time, 10 minutes of fume time in CApture BT Fuming Chamber
	Dye Stain	Rhodamine 6G (MeOH), viewed with ~532 nm laser
	Visual Examination	Performed after Cyanoacrylate Fuming. The original ridge detail had improved and was re-photographed. No additional ridge detail was present.
	Visual Examination	Performed after R6G Dye Stain. The original ridge detail had improved and was re-photographed. No additional ridge detail was present.
YHE4RU	Visual Examination	visual examination of Item 3 with ambient room lighting and flashlight.
	Cyanoacrylate Fuming	CAE fuming using CApture BT chamber. Hot plate temperature of 351 degrees F, 50% humidity, and 10-minute fuming time.
	Visual Examination	visual examination after CAE fuming using fiber optic lighting.
YTWLK2	Visual Examination	White light, 0 photos. RUVIS, 1 photo.
	Lumicyano	17 minutes at 75% humidity. Hot plate at 250 degrees Fahrenheit. White light, 0 photos. LASER, 2 photos. RUVIS, 1 photo.
Z67LUZ	Cyanoacrylate Fuming	
	Alternate Light Source	RUVIS
	Powder Dusting	black powder
	Ninhydrin	RAM
	Alternate Light Source	RUVIS
ZM2EFX	Alternate Light Source	Mark search was done by following ways: 1. Blue Light (445 nm) using Goggle (495 nm). 2. Green Light (532 nm) using Goggle (550 nm). No Mark found.
	Cyanoacrylate Fuming	Processing Time: 45 mins, which includes Humidifying, Fuming and Purging. After 45 mins, Mark search was done using White Light. No Mark found.
	Dye Stain	After Dying with BY40, kept to dry for 20 mins in fumehood. After 20 mins, Mark search was done using 445nm light (blue light) with goggle (495nm). Mark found on section C.

Item 3 - Development Response Summary

Participants: 58

Methods Utilized

Alternate Light Source	18	Physical Developer	1
Cyanoacrylate Fuming	31	Powder Dusting	45
DFO	0	Visual Examination	37
Dye Stain	20	Wet Powder Suspension	0
Ninhydrin	1	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.*

Preservation Methods

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
2BP93A	Photography	photography used after each step (i.e., visual, dusting, lifting)
	Lifting	
2XEXCY	Photography	Photographed Item #1 before any processing
	Photography	Photographed Item #1 after processing
	Lifting	latent lift card
49NAHT	Photography	1L1 Visual Photographer - [Photographer] Photography date - 9/13/23 Capture Method - photographed Lighting Filter - Axial none
	Photography	1L1 CAE Photographer - [Photographer] Photography date - 9/14/23 Capture Method - photographed Lighting Filter - Axial none
	Photography	1L1 R6G Photographer - [Photographer] Photography date - 9/22/23 Capture Method - photographed Lighting Filter - Laser/orange
4CPHL3	Lifting	Lifted with tape to white card
4RPZYW	Photography	after dye stain and RUVIS
	Lifting	after black powder
4TZ2KU	Lifting	The magnetic powder technique is applied to the surface, which is observed revealing a lophoscopic imprint in section B, which is identified as 1-B-L-1, the lifting tape is placed and transferred to the card. format, the processing is documented photographically.
6692UT	Photography	DCS-5
	Lifting	
6LTTTT	Lifting	After the lift was made visible, frosted lift tape was utilized by the Unit to lift same onto a white index cards labeled Lift #1.
6ULAYN	Photography	photography fixation of the fingerprint revealed was achieved with a Canon EO5 camera and a metric witness.
	Lifting	Lifting on clear adhesive tape was placed on the white satined card
74ADQN	Lifting	Book Tape
78QLEM	Photography	Photographed after applying black powder for comparison quality photos.
	Lifting	Lifted the print with latent lift tape and placed onto a lift card.
	Scanning	Scanned in the lift card (both sides) into the case record.
7KB8DM	Photography	A photograph was taken after cyanoacrylate fuming.
	Photography	A photograph was taken after processing with dual contrast powder.
	Lifting	A latent lift was collected after dual contrast powder from quadrant B.

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
9JDUPL	Lifting	Lifted the latent print with book tape.
9Y9WQY	Photography	one (1) photo after visual exam with ring light one (1) photo after CA fuming with ring light one (1) photo after BY40 with ALS at 450 nm and yellow filter
A4GYQZ	Photography	Photography was done post visualization and post powder dusting
	Lifting	Lift was done after photography of powder dusting
ADKPWG	Photography	
AGLVBM	Lifting	Lifted using 2" Lift tape and fingerprint card
AGZGKP	Photography	
	Lifting	
AZGNWL	Lifting	Tape onto a clear acetate sheet
B2M7UG	Lifting	Tape Lift
CBAQBY	Photography	NEF/JPEG
	Lifting	white lift card
D6FC2H	Photography	Using the Nikon D850. Digital photographs taken prior to processing, areas observed during visual examination, after Cyanoacrylate fuming, and Rhodamine processing.
	Lifting	Latent fingerprint lifted using black fingerprint powder and tape.
DDVVJW	Photography	No latent prints observed during the visual examination process. Latent prints were documented after both the cyanoacrylate fuming and the dye stain steps.
	Lifting	After using black powder, latent print was lifted and secured on a latent lift card.
DTMPVM	Photography	Photos taken before CA fuming. Photos taken after R6G ALS green light orange goggles/filter. Photos taken after black powder. Photos uploaded.
	Lifting	One (01) lift of latent print from section B. Lift cards booked.
EDPZFG	Lifting	lift with book tape
ELGBPC	Photography	photographs taken of the latent print
	Lifting	tape lift onto a white backing card
F4EXRV	Lifting	Tape lift onto transparency sheet
FK7VVB	Photography	macro
	Lifting	clear tape/white card

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
GXLBCF	Photography	Visual: 1L1 was photographed using FSIS and UV light.
	Photography	CAE: 1L1 was photographed using FSIS and UV light.
	Photography	R6G: 1L1 was photographed using Laser at 532 nm and orange barrier filter. An overall of 1L1 was captured as well.
J3UDBG	Photography	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
	Lifting	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
J7Q2RN	Photography	3 photos B
	Lifting	1 lift B
J9FHYB	Lifting	is documented brilliantly
J9H4VQ	Photography	Latent prints were documented with a digital camera (with a macro-lens) during processing. If latent print was documented with a Forensic Light Source, an orange filter was attached to the lens.
	Lifting	For the final step of lab processing, I used black powder and standard 2-inch latent print tape to lift the latent print.
JAR6JA	Lifting	frosted tape and lift card
K6FGJD	Lifting	Latent tape onto lift card.
KLLL7Q	Photography	ridge detail was photographed after black powder
KUFR2C	Lifting	The visible ridge detail present in Quadrant B was recovered using a tape lift. The latent lift card was submitted to the Latent Print Section.
LDMGRF	Photography	The fingerprints (loop and ridge) revealed were photographed.
	Lifting	Using clear adhesive tape, adhering to white support. Method: Human Identification matching latent and print from lofoscopy prints. Instructions: Revealing techniques for latent print, using techniques for nonporous materials.
NJ3YZ8	Photography	Used a Nikon camera to document the latent print developed for Item 1. Photos of 1-LP1 were captured at visual exam (flashlight and coaxial lighting), and after improvement with subsequent cyanoacrylate processing (ambient and coaxial lighting).
NLAFWH	Photography	Suitable ridge detail labelled with a scale and unique identifier and then collected via digital photography with Nikkon DSLR camera with ambient/white torch light and blue/green 82S crimelight + OG550 filter on camera.
P6YUB8	Photography	Pre-screen: photographed with laser and laser filter, UV and yellow filter, 450nm with orange filter After cyanoacrylate: photographed with UV and yellow filter and laser and laser filter After rhodamine: photographed with laser and laser filter
	Lifting	Tape Lift

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
PCYEBG	Photography	The item was photographed with a scale rule label containing item specific details which was placed along side the latent. An overall photograph was taken to show the location of the print on the item adjacent to the label. A 60mm lens was used on the camera. An orange filter lens was attached to the front of the lens and the latent was photographed at closer range under 505 nm light source which caused the ridges to fluoresce and the print to be recorded and preserved.
Q4NCR2	Photography	Photographed development during visual exam with laser light source - green, second visual exam with white light, after magnetic powder, and after black powder.
QFRV32	Photography	Used with the ALS, CA fuming, Rhodamine 6G with the ALS, and the black powder before lifting
	Lifting	Used to lift black powder
QHJW74	Lifting	Lift collected from quadrant B, placed on acetate
RHFQ3E	Lifting	lift tape on latent lift card
TNZ9VG	Photography	DSLR camera with macro lens and ambient/flashlight light source was used
	Lifting	tape lifting onto one lift card
TVHGLY	Photography	
	Lifting	
UGVRZ2	Photography	Photographed section B w/scale, image transferred to DVD
	Lifting	Impression in section B lifted using lifting tape, affixed to card.
UM8FZX	Photography	Mark was captured digitally using DCS5 system provided by "foster + freeman" (PA/21/014 SN 6P71N63). Prior to any photography the the DCS5 system was calibrated using a standard ruler provided by [Calibration Company] (PA/19/68 SN 1368114/133). Following each individual development method. As stated above alternative light sources and filters were utilised as appropriate.
UWAZ26	Lifting	
VADHC6	Photography	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
	Lifting	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
W7NVU2	Lifting	Photographic fixation and subsequently preserved on an acetate with a white background.
WEWATW	Lifting	The print was revealed, photographically fixed, and the print was lifted and transplanted onto a white satin card.
WK9BX2	Lifting	Preserved using latent lift tape.

TABLE 3 - Item 1

WebCode	Preservation Methods	Method Details
X28N73	Photography	Photographed with white light at Visual Examination step.
	Photography	Photographed with FSIS and UV light at Visual Examination step.
	Photography	Photographed with white light at CAE step.
	Photography	Photographed with laser at R6G step by the photography branch.
XMTMAC	Photography	Item was photographed upon print visualization in quadrant B after cyanoacrylate fuming and dye stain. Orange barrier filter used for photography with laser light source after dye stain.
	Lifting	Print was lifted from quadrant B after processing with black powder.
XW2W4W	Photography	Photographed after rhodamine 6G with green light (~532nm laser)+orange filter
YHE4RU	Photography	Used Nikon D7200 camera with ambient lighting to document 1-LP1 (latent print from Item 1) at visual exam. Used Coaxial lighting and Nikon D7200 camera to document 1-LP1 after CAE fuming.
YTWLK2	Photography	See above for photography. Curved orange filter used for LASER photography.
Z67LUZ	Photography	After cyanoacrylate/RUVIS
	Lifting	after black powder
	Photography	After RAM
ZM2EFX	Photography	The Mark on section B was photographed by using white light.

Item 1 - Preservation Response Summary

Participants: 62

Methods Utilized

Lifting	47
Photography	52
Scanning	1

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
2BP93A	Photography	photography used after each step (i.e., visual, dusting, lifting)
	Lifting	
2XEXCY	Photography	Photographed Item #2 before processing
	Photography	Photographed Item #2 after processing
	Lifting	Latent lift card
49NAHT	Photography	2L1 Visual Photographer - [Photographer] Photography date - 9/13/23 Capture Method - photographed Lighting Filter - Balance none
	Photography	2L1 CAE Photographer - [Photographer] Photography date - 9/14/23 Capture Method - photographed Lighting Filter - Balance none
	Photography	2L1 R6G Photographer - [Photographer] Photography date - 9/22/23 Capture Method - photographed Lighting Filter - Laser/orange
4CPHL3	Lifting	To white card
4RPZYW	Photography	after dye stain and RUVIS
	Lifting	after black powder
4TZ2KU	Lifting	The technique is applied with conventional black powder on the surface, which is observed revealing a lophoscopic imprint in section A, which is identified as 2-A-L-1, the lifting tape is placed and transferred to the card. . format, the processing is documented photographically.
6692UT	Photography	DCS-5
	Lifting	
6LTTTT	Lifting	After the lift was made visible, frosted lift tape was utilized by the Unit to lift same onto a white index cards labeled Lift #2.
6ULAYN	Photography	photography fixation of the fingerprint revealed was achieved with a Canon EO5 camera and a metric witness
	Lifting	Lifting on clear adhesive tape was placed on the white satined card
74ADQN	Lifting	Book tape
78QLEM	Photography	Photographed after applying black powder for comparison quality photos.
	Lifting	Lifted the print with latent lift tape and placed onto a lift card.
	Scanning	Scanned in the lift cards (both sides) into the case record.
7KB8DM	Photography	A photograph was taken after cyanoacrylate fuming.
	Photography	A photograph was taken after processing with dual contrast powder.
	Lifting	A latent lift was collected after dual contrast powder from quadrant A.
9JDUPL	Lifting	Lifted the latent print with book tape.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
9Y9WQY	Photography	one (1) photo after visual exam with ring light one (1) photo after CA fuming with ring light one (1) photo after BY40 with ALS at 450 nm and yellow filter
A4GYQZ	Photography	Photography was done post visualization and post powder dusting
	Lifting	Lift was done after photography of powder dusting
ADKPWG	Photography	Overall, midrange and closeup with scale
AGLVBM	Photography	DCS5 System with orange filter, enhanced and submitted.
AGZGKP	Photography	
	Lifting	
AZGNWL	Lifting	Tape onto a clear acetate sheet
B2M7UG	Lifting	Tape lift
CBAQBY	Photography	JPEG/NEF
	Lifting	white lift card
D6FC2H	Photography	Using the Nikon D850. Digital photographs taken prior to processing, areas observed during visual examination, after Cyanoacrylate fuming, and Rhodamine processing.
	Lifting	Latent fingerprint lifted using black fingerprint powder and tape.
DDVVJW	Photography	Latent prints were documented at the visual examination, the cyanoacrylate fuming, and the dye stain steps.
	Lifting	After using black powder, latent print was lifted and secured on a latent lift card.
DTMPVM	Photography	Photos taken before CA fuming. Photos taken after CA fuming, green light orange goggles/filter. Photos taken after R6G ALS green light orange goggles/filter. Photos taken after black powder. Photos uploaded.
	Lifting	One (01) lift of latent print from section A. Lift cards booked.
EDPZFG	Lifting	lifted with book tape
ELGBPC	Photography	photographs would be taken of the latent print
	Lifting	tape lift onto a white backing card
F4EXRV	Lifting	Tape lift onto a transparency sheet
FK7VVB	Photography	macro
	Lifting	clear tape/white card

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
GXLBCF	Photography	Visual: 2L1 was photographed using white oblique lighting by Forensic Photography Branch. An overall of Item 2 was captured as well.
	Photography	CAE: 2L1 was photographed using FSIS and UV light.
	Photography	R6G: An overall of the interior of 2L1 was captured using Laser at 532 nm and orange barrier filter.
J3UDBG	Photography	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
	Lifting	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted on a lifting card
J7Q2RN	Photography	3 photos A
	Lifting	1 lift A
J9FHYB	Lifting	is documented brilliantly
J9H4VQ	Photography	Latent prints were documented with a digital camera (with a macro-lens) during processing. If latent print was documented with a Forensic Light Source, an orange filter was attached to the lens.
	Lifting	For the final step of lab processing, I used black powder and standard 1-inch latent print tape to lift the latent print.
JAR6JA	Lifting	frosted tape and lift card
K6FGJD	Lifting	lift tape onto lift card
KLLL7Q	Photography	ridge detail was photographed after both visual and powder but was higher quality after powder
KUFR2C	Lifting	The visible ridge detail present in Quadrant A was recovered using a tape lift. The latent lift card was submitted to the Latent Print Section.
LDMGRF	Photography	The fingerprints (arch and ridge) revealed were photographed.
	Lifting	Using clear adhesive tape, adhering to white support. Method: Human Identification matching latent and print from lofoscopy prints. Instructions: Revealing techniques for latent print, using techniques for nonporous materials.
NJ3YZ8	Photography	Used a Nikon camera to document the latent print developed for Item 2. Photos of 2-LP1 were captured at visual exam (ambient and coaxial lighting), and after improvement with subsequent cyanoacrylate processing (ambient and coaxial lighting).
NLAFWH	Photography	Suitable ridge detail labelled with a scale and unique identifier and then collected via digital photography with Nikkon DSLR camera with ambient/white torch light and UV 82S crimelight + UV filter on camera. Mirrored compact was photographed with the camera at approximately 45 degrees when using ambient/white light. Camera was perpendicular to compact when using UV light.

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
P6YUB8	Photography	Pre-screen: photographed with coaxial lightbox, 450nm with orange filter After cyanoacrylate: photographed with coaxial lightbox After rhodamine: photographed with laser and laser filter
	Lifting	Tape Lift
PCYEBG	Photography	The print was preserved by the use of photography. A 60mm lens was used on a camera that was mounted on a stand. An overall photo of the item was taken to show the location of the print on the item. A closer photograph of the fingerprint was taken using white light only, and diffused deflection methodology (oblique lighting) which enhanced the ridges against the mirrored background almost making the mirror surface underneath appear dark and the ridges white.
Q4NCR2	Photography	Photographed during initial visual exam, viewing with laser light source - green, second visual exam with white light, third visual exam with reflective UV light, and after black powder
QFRV32	Photography	Used with visual examination, CA fuming, Rhodamine 6G with the ALS, and the powder before lifting
	Lifting	Used to lift black powder and magna powder
QHJW74	Lifting	Lift collected from quadrant A, placed on acetate
RHFQ3E	Lifting	lift tape on a latent lift card
TNZ9VG	Photography	DSLR camera with macro lens and ambient/flashlight light source was used
	Lifting	tape lift onto one lift card
TVHGLY	Photography	
	Lifting	
UGVRZ2	Photography	Photographed section A w/scale, image transferred to DVD
	Lifting	Impression in section A lifted using lifting tape, affixed to card.
UM8FZX	Photography	Mark was captured digitally using DCS5 system provided by "foster + freeman" (PA/21/014 SN 6P71N63). Prior to any photography the the DCS5 system was calibrated using a standard ruler provided by [Calibration Company] (PA/19/68 SN 1368114/133). Following each individual development method. As stated above alternative light sources and filters were utilised as appropriate.
UWAZ26	Lifting	
VADHC6	Photography	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
	Lifting	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
W7NVU2	Lifting	Photographic fixation and later preserved with transparent acetate white background

TABLE 3 - Item 2

WebCode	Preservation Methods	Method Details
WEWATW	Lifting	The print was revealed, photographically fixed, and the print was lifted and transplanted onto a white satin card.
WK9BX2	Lifting	Preserved using latent lift tape.
X28N73	Photography	Photographed with white light at Visual Examination step.
	Photography	Photographed with FSIS and UV light at Visual Examination step.
	Photography	Photographed with white light at CAE step.
	Photography	Photographed twice with laser at R6G step by the photography branch.
XMTMAC	Photography	Item was photographed upon print visualization in quadrant A after visual examination, examination with laser light source, cyanoacrylate fuming and dye stain. Orange barrier filter used for photography using laser. (ALS examination and dye stain).
	Lifting	Print was lifted from quadrant A after processing with black powder.
XW2W4W	Photography	Photographed after visual with flashlight, after cyanoacrylate with LED, and after rhodamine 6G with green light (~532nm laser)+orange filter
YHE4RU	Photography	Used Nikon D7200 camera to document 2-LP1 (latent print from item 2) with ambient lighting. Used ambient lighting and Nikon D7200 camera to document 2-LP1 after CAE fuming.
YTWLK2	Photography	See above for photography. A curved orange filter and A-FF-1 filter were used for LASER photography.
Z67LUZ	Photography	After cyanoacrylate/RUVIS
	Lifting	after black powder
	Photography	after dye stain
ZM2EFX	Photography	Mark was photographed 1) After Cyanoacrylate, by using white light. 2) After dye stain, Using 445nm light with 495nm Filter

Item 2 - Preservation Response Summary

Participants: 62

Methods Utilized

Lifting	46
Photography	53
Scanning	1

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
2XEXCY	Photography	Photographed Item #3 before processing
	Photography	Photographed Item #3 after processing
49NAHT	Photography	3L1 Visual Photographer - [Photographer] Photography date - 9/13/23 Capture Method - photographed Lighting Filter - Axial none
	Photography	3L1 CAE Photographer - [Photographer] Photography date - 9/14/23 Capture Method - photographed Lighting Filter - Balance none
	Photography	3L1 R6G Photographer - [Photographer] Photography date - 9/22/23 Capture Method - photographed Lighting Filter - Laser/orange
4CPHL3	Lifting	To white card
4RPZYW	Photography	after dye stain and RUVIS
	Lifting	after black powder
4TZ2KU	Lifting	The magnetic powder technique is applied to the surface, which is observed revealing a lophoscopic imprint in section C, which is identified as 3-C-L-1, the lifting tape is placed and transferred to the card. format, the processing is documented photographically.
6692UT	Photography	DCS-5
	Lifting	
6LTTTT	Lifting	After the lift was made visible, frosted lift tape was utilized by the Unit to lift same onto a white index cards labeled Lift #3.
6ULAYN	Photography	photography fixation of the fingerprint revealed was achieved with a Canon EO5 camera and a metric witness
	Lifting	Lifting clear adhesive tape was placed on the white satined card
78QLEM	Photography	Photographed after applying black powder for comparison quality photos.
	Lifting	Lifted the print with latent lift tape and placed onto a lift card.
	Scanning	Scanned in the lift card (both sides) into the case record.
7KB8DM	Photography	A photograph was taken after cyanoacrylate fuming.
	Photography	A photograph was taken after processing with dual contrast powder.
	Lifting	A latent lift was collected after dual contrast powder from quadrant C.
9JDUPL	Lifting	Lifted the latent print with a gel lift.
9Y9WQY	Photography	two (2) photos after visual examination--black background directly under latent with light from below and ring light used as side lighting two (2) photos after CA fuming--black background with ring light used as side lighting one (1) photo after BY40 with ALS at 450 nm and yellow filter
ADKPWG	Photography	Overall, midrange and closeup with scale

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
AGLVBM	Lifting	Lifted using 2" lift tape and fingerprint card
AGZGKP	Photography	
	Lifting	
AZGNWL	Lifting	White-colored gel lift that was placed between 2 clear acetate sheets to prevent any damage to the gel lift
B2M7UG	Lifting	Tape Lift
D6FC2H	Photography	Using the Nikon D850. Digital photographs taken prior to processing, areas observed during visual examination, after Cyanoacrylate fuming, and Rhodamine processing.
	Lifting	Latent fingerprint lifted using black fingerprint powder and tape.
DDVVJW	Photography	No latent prints observed during the visual examination process. Latent prints were documented after both the cyanoacrylate fuming and the dye stain steps.
	Lifting	Latent print was lifted and secured on a latent lift card.
DTMPVM	Photography	Photos taken before CA fuming. Photos taken after R6G ALS green light orange goggles/filter. Photos taken after black powder. Photos uploaded.
	Lifting	One (01) lift of latent print from section C. Lift cards booked.
EDPZFG	Lifting	lifted with a gel lift
ELGBPC	Photography	photographs taken of latent print
	Lifting	tape lift onto a white backing card
FK7VVB	Photography	macro
	Lifting	clear tape/white card
GXLBCF	Photography	Visual: 3L1 was photographed using FSIS and UV light.
	Photography	CAE: 3L1 was photographed using a paddle light.
	Photography	R6G: 3L1 was photographed using Laser at 532 nm and orange barrier filter. An overall of 3L1 was captured as well.
J3UDBG	Photography	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
	Lifting	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted on a lifting card
J7Q2RN	Lifting	1 lift C
J9FHYB	Photography	is documented brilliantly

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
J9H4VQ	Photography	Latent prints were documented with a digital camera (with a macro-lens) during processing. If latent print was documented with a Forensic Light Source, an orange filter was attached to the lens.
	Lifting	For the final step of lab processing, I used black powder and standard 2-inch latent print tape to lift the latent print.
JAR6JA	Lifting	frosted tape and lift card
K6FGJD	Lifting	latent tape onto lift card
KLLL7Q	Photography	ridge detail was photographed after visual and powder but was higher quality after powder
KUFR2C	Lifting	The visible ridge detail present in Quadrant C was recovered using a tape lift. The latent lift card was submitted to the Latent Print Section.
LDMGRF	Scanning	The fingerprint (ridge) revealed was scanned.
	Lifting	Using clear adhesive tape, adhering to white support. Method: Human Identification matching latent and print from lofoscopy prints. Instructions: Revealing techniques for latent print, using techniques for nonporous materials
NJ3YZ8	Photography	Used a Nikon camera to document the latent print developed for Item 3. Photos of 3-LP1 were captured at visual exam (flashlight), and after improvement with subsequent cyanoacrylate processing (flashlight and ambient lighting).
NLAFWH	Photography	Suitable ridge detail labelled with a scale and unique identifier and then collected via digital photography with Nikkon DSLR camera with ambient/white torch light and blue/green 82S crimelight + OG550 filter on camera.
P6YUB8	Photography	Pre-Screen: photographed with 450 light and orange filter After cyanoacrylate: photographed with 450 light and orange filter After rhodamine: laser and laser filter
PCYEBG	Photography	An overall photograph of the item was taken to show the position of the fingerprint in comparison to the item. A 60mm lens was used. A closer photograph of the latent was taken using white light (diffused deflection mode), which produced good ridge detail. The latent was further photographed using 350nm light wavelength which produced well defined and bold ridges for comparative purposes.
Q4NCR2	Photography	Photographed during visual exam, viewing with laser light source - green, after magnetic powder, and after black powder.
QFRV32	Photography	Used with visual examination, CA fuming, Rhodamine 6G with the ALS, and the black powder before lifting
	Lifting	Used to lift black powder
QHJW74	Lifting	Lift collected from quadrant C, placed on acetate
RHFQ3E	Lifting	lift tape on latent lift card

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
TVHGLY	Photography	
	Lifting	
UGVRZ2	Photography	Photographed section C w/scale, image transferred to DVD
	Lifting	Impression in section B lifted using lifting tape, affixed to card.
UM8FZX	Photography	Mark was captured digitally using DCS5 system provided by "foster + freeman" (PA/21/014 SN 6P71N63). Prior to any photography the the DCS5 system was calibrated using a standard ruler provided by [Calibration Company] (PA/19/68 SN 1368114/133). Following each individual development method. As stated above alternative light sources and filters were utilised as appropriate.
UWAZ26	Lifting	
VADHC6	Photography	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
	Lifting	after prints develop/detected, photography were carried out , followed by sticker tagging before the prints were lifted.
W7NVU2	Lifting	It is photographically fixed and raised on transparent acetate white background"
WEWATW	Lifting	The print was revealed, photographically fixed, and the print was lifted and transplanted onto a white satin card.
WK9BX2	Lifting	Preserved using latent lift tape.
X28N73	Photography	Photographed with white light at Visual Examination step.
	Photography	Photographed with FSIS and UV light at Visual Examination step.
	Photography	Photographed with white light at CAE step.
	Photography	Photographed with laser at R6G step by the photography branch.
XMTMAC	Photography	Item was photographed upon print visualization in quadrant C after visual examination, cyanoacrylate fuming and dye stain. Orange barrier filter used for photography using laser (dye stain).
	Lifting	Print was lifted from quadrant C after processing with black powder.
XW2W4W	Photography	Photographed after visual with flashlight and then with LED, after cyanoacrylate with flashlight and then with LED, and after rhodamine 6G with green light(~532nm laser)+orange filter
YHE4RU	Photography	Used Nikon D7200 to document 3-LP1 (latent print from Item 3) with flashlight lighting. Used fiber optic lighting and Nikon D7200 camera to document 3-LP1 after CAE fuming.
YTWLK2	Photography	See above for photography. A curved orange filter and A-FF-1 filter were used for LASER photography.
Z67LUZ	Photography	After cyanoacrylate/RUVIS
	Lifting	

TABLE 3 - Item 3

WebCode	Preservation Methods	Method Details
ZM2EFX	Photography	1. After Dye Stain, Mark photographed after Dying using 445nm light with 495nm Filter.

Item 3 - Preservation Response Summary

Participants: 56

Methods Utilized

Lifting	38
Photography	46
Scanning	2

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

Additional Comments

TABLE 4

WebCode	Additional Comments
4CPHL3	Card info contained: Location/orientation, sketch, case #, date, initials of lifter
6LTTTT	The delay in processing of items from the received date was due to high call volume for the unit at the time.
AGLVBM	Latents recovered: L1: Quadrant marked "B" of light switch cover, Item 6368-01 (Tape Lift) L2: Quadrant marked "C" of plastic bag, Item 6368-03 (Tape Lift) L3: Quadrant marked "A" of compact mirror, Item 6368-02 (Photography – Enhanced)
AZGNWL	I typically would not process a clear bag on scene. I would collect and transfer it to our Latent Prints Examiners.
CBAQBY	Additional possible apparent ridge detail (minimal) on the edge of the compact was observed. This was processed, imaged, and lifted.
DDVVJW	All items of evidence were fumed at the same time in the same fingerprint chamber.
PCYEBG	Further enhancement techniques on all items may have been applied, to develop ridge detail, however the developed latents on the items were of good quality and sufficient for comparative purposes. All OH and S laboratory guidelines were followed when treating the items, (eg wearing gloves, mask (during Rhodamine treatment), fume hood and protective goggles during light examinations. Appropriate warning label was attached to packaging where chemicals were used (Item 1)., once these were resealed. Chain of evidence was maintained and items transferred back to Quality Control Manager. A hardcopy file was created for records.
QHJW74	All lifts and items photographed.
UM8FZX	Overview images of all 3 items were captured using Nikon D5200. Photographs were saved into the specific Case folder a the secure Drive. Items 1, 2 and 3 are described as follows: Item 1: Hard white plastic cover 11.5 x 7cm marked in 4 sections with black marker: A (5.5 x 3.5cm), B (5.5 x 3.5cm), C (6 x 3.5cm) and D (6 x 3.5cm). There are 2x holes for screws with a central hole (1 x 2.5cm cut out). Item 2: Silver coloured metallic circular mirror case, (Diameter: ~6.5cm), Mirrors on inside are divided into 4 sections, A, B, C, and D. Item 3: Transparent plastic ziplock bag taped onto a small sheet of brown card. The top surface (16.5 x 14.5cm) is marked in 4 sections (~7x8cm) with black marker: A, B, C, D.
W7NVU2	The records of the processing of each Item are recorded in the laboratory worksheets as evidence of the procedure used.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 23-5193: Latent Print Processing - Nonporous Surfaces

DATA MUST BE SUBMITTED BY **Oct. 16, 2023, 11:59 p.m. EDT** TO BE INCLUDED IN THE REPORT

Participant Code: U1234E WebCode: MNZ3EL

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 week of 20 July 2023, several items of evidence were recovered from a crime scene. Police have requested that you process each item of evidence for latent prints. These items will not undergo additional testing in other departments, so you may use destructive testing if necessary.

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 LPPN):
Item 1: Switch plate, area divided into sections A-D.
Item 2: Mirrored compact, divided into sections A-D.
Item 3: Plastic zip-top bag, labeled A-D.

Please inspect your sample sets upon receipt. If the packaging of any of your individual items appears to be compromised, please contact CTS for replacement samples.

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

Please indicate only the single letter of your determined location from the dropdown menu. Further explanation may be provided in the Additional Comments. If no ridge detail was recovered, please select "None." If you do not process the type of evidence offered, please select "Not Tested". ***A selection of "Not Tested" for an item will lock the corresponding methodology tab for that item. No methodology data will be captured in the report for that item.***

1
2
3

Results for Item 1:

Switch plate, area divided into sections A-D.

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

Results for Item 2:

Mirrored compact, divided into sections A-D.

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

Results for Item 3:

Plastic zip-top bag, labeled A-D.

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

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)