LATENT PRINTS

Rhode Island State Crime Laboratory
Mark Zabinski
LATENT PRINT SERVICES AT THE RI STATE CRIME LABORATORY

Why this presentation:

- To Clear More Cases By:
  - Collecting good evidence.
    - Instead of trash collection.
  - Knowing what can be done with that evidence forensically.
  - Knowing what you can do to get good results in a timely manner.
LATENT PRINT CASE TRIAGE

- Homicides and Robbery case prioritized automatically.
- If an arrest made will be done sooner.
- If lifts or digital images or both of latent prints submitted will be done sooner.
- Items previously processed by submitting agency next.
- Last Item not processed by submitting agency.
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  - Developed by submitting agency or RISCL
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- **Identify the latent print via AFIS.**
Can also search the prints of unconscious or deceased individuals in AFIS an attempt to identify.
LATENT PRINT SERVICES
AT THE
RISCL
LATENT PRINT SERVICES

- Develop latent prints on numerous surfaces
  - Majority of latent prints developed with powders

- Use of powders
  - Black
  - Gray
  - Silver
  - White
  - Magnetic
  - Fluorescent
    - Need good photography skills
    - Cannot Lift
LATENT PRINT SERVICES

- Develop latent prints on numerous surfaces
  - Cyanoacrylate Fuming
    - Non-Porous
  - Do not place lift over cyanoacrylate developed print to preserve – will destroy print
    - No Need – Cyanoacrylate makes print very durable
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- Recommend gun be fumed ASAP to increase odds of latent print impression development
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- Develop latent prints on numerous surfaces
  - Fluorescent Dye Stains
    - Forensic Light Source (ALS)
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- Imaging latent prints on numerous surfaces
  - RUVIS
    - Reflected Ultra-Violet Imaging System

Highly sensitive to items that have been fumed with cyanoacrylate

Whatever the background color is
Photograph of a Latent Print with a RUVIS
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- Develop latent prints on porous surfaces
  - Use of Chemical Processes for paper
    - Ninhydrin
    - 1, 2, Indanedione
    - Physical Developer
Separating Duct Tape with Liquid Nitrogen
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- Enhance blood substrate latent prints on numerous surfaces
  - Amido Black
  - Hungarian Red (Acid Fusion)
    - Fluorescent dye stain
  - Coomassie Blue
  - Leuco Crystal Violet
  - Crowles Double Stain
LATENT PRINTS - SUBMISSION

- Latent Print developed by submitting agency.
  - Render an opinion if latent print impressions have sufficient value for any further comparison
Compare latent print impressions of comparative value to any submitted known impressions of suspects or victims

VERIFY YOUR CONCLUSIONS

- ACE-V Methodology
- Independent examination of the individualized latent print impression
LATENT PRINTS - SUBMISSION

- CAFIS
  - Cogent
  - Automated Fingerprint Identification System
  - Database of persons fingers and palms in RI
    - Criminals and civilian applicants
    - Participate in the Unsolved Latent Database Locally

- Extended FBI search – fingers and palms
  - Criminals, Military and Civilian
  - Participate in the Unsolved Latent Database Federally
CAFIS SERVICES

Palm Prints

Fingerprints
LATENT PRINTS - SUBMISSION

- Always best to process items for latent prints as soon as possible.
  - Time is of the essence.
  - Especially non-porous items.
  - Better results.
LATENT PRINTS - SUBMISSION

- What can be submitted to LP section
  - Items to be Processed for latent prints
  - Lifts
  - Evidence already processed for opinion
  - Photographs with known scale (and negatives).
  - Know impression if not in the database.
LATENT PRINTS - SUBMISSION

- Digital image the LP section will accept
  - Digital Images – CD Rom or Memory stick
  - Minimum resolution : 1000 pixels per inch
  - Image must include a known scale
  - Currently not accepting e-mail submission of digital images
  - No Crime Scene photos.
LATENT PRINTS - SUBMISSION

- Close-up lens
- Aperture priority – F22
- Sync – cord
- Scale
Latent Prints - Submission
All photographic and digital images of latent prints MUST include a scale.
LATENT PRINTS - SUBMISSION

50 ppi

100 ppi

200 ppi
LATENT PRINTS - SUBMISSION

Digital photos and scanned images MUST be recorded at a minimum of 1000 ppi. Pictures/photographs must be submitted with original digital files and/or photographic negatives (35 mm format minimum).

400 ppi

400 ppi

1000 ppi
LATENT PRINTS - SUBMISSION

- Only need the close-up digital images of the latent prints.
- With Scale.
- Minimum resolution of 1000 PPI.
- No crime scene photos or photos of items.
Known exemplar prints for comparison are to be treated as evidence.

Original inked impressions or Live-Scan images are preferable.

Photocopies may be submitted, however not recommended.
Known Prints – Collection and Submission
Latent Prints - Submission
Latent Prints - Submission
LATENT LIFTS – SUBMISSION

- Place case information on back of lift.
- Draw diagram of where latent lifted from.
- If you know orientation.
  - Indicate with horse shoe mark or arrow toward tip.
- If using lift cards with separate lift tape.
  - Place lift tape on glossy side of card.
  - Matte side of card for documentation.
LATENT PRINTS – SUBMISSION

- What to submit when you develop a latent print.
  - Submit original article (if possible), photo and lift. Remember each item must be packaged individually.
  - Submit lift (without original article), lift photograph and original digital file as separate items.
  - Or just the digital images.
LATENT PRINTS – PACKAGING

- **REDUCE FRICTION** for non-porous Items not processed by agency.
  - Secure large articles containing latent prints with string or plastic ties to a rigid surface to prevent shifting and/or contact with other items.
    - Suggest cyanoacrylate prior to submission.

- Known Impressions, Lifts, Digital Images on Disc and Items with Latent Prints developed on, are all separate Items.
Always best to cyanoacrylate non-porous items prior to submission.

If items have been processed prior to submission to the RISCL a notation must be placed on the evidence package and the submission request.

Be sure to package items carefully to prevent smudging or possible breakage.
1 DAY LATENT PRINT CLASS

- Documentation
- Processing different surfaces
- Using different developing techniques
- Photography
- Using different lifting techniques
- To be held in June
THANK YOU

Questions?