

COLLECTING KNOWN EXEMPLARS

Latent Print Unit
Forensic Science Division
Montana Department of Justice

WHAT YOU'LL GET OUT OF THIS PRESENTATION

Know how to record fingers and palms using ink

Understand what your LP report is requesting when it comes to asking for additional knowns

The importance in collecting elimination prints

How to submit known records to the state crime lab

WHY IS IT SO IMPORTANT TO PROPERLY RECORD FRICTION RIDGE DETAIL FROM THE BEGINNING?

Known exemplars are used to be compared against latent impressions in a case to determine if an identification or an exclusion can be made to that specific individual.

The quality of the known exemplars can play a significant role in that evaluation. If the knowns are low quality or missing areas of the fingers or palms, a complete comparison to that specific individual will not be completed and result in an inconclusive reporting until additional known exemplars are taken or retrieved. This can drag out an investigation or case for months if legible and fully rolled known exemplars are not quickly obtained and sent to the crime lab for a supplemental analysis.

Sometimes you only have one shot in retrieving knowns, especially when it comes to post-mortem impressions. It's important that you have everything recorded as legibly as possible before leaving because you may not have the opportunity to re-do it.

WHAT ARE LATENT PRINT ANALYSTS LOOKING FOR IN YOUR KNOWN EXEMPLARS?



- **There are rolled and flat impressions recorded for each finger on the fingerprint card**
- **Fingers are completely rolled from nailbed to nailbed**
- **Fingers are recorded in the correct finger block**
- **Minimum smearing and lack/excess of ink transfer**
- **All areas of the fingers and palms are recorded**

COMMON MISTAKES

Fingers not completely rolled side-to-side

Smearing/ excess or lack of ink / lack or excessive deposition pressure

Lack of recorded information in certain areas of the palms

Record the wrong finger in the wrong fingerprint block

Double tap (subtle double impression of the same finger)

Common mistake examples



4. R. RING



9. L. RING

Fingers not
fully rolled
from side to
side

Common mistake examples



3. R. MIDDLE



5. R. LITTLE

Illegible
recording –
friction ridge
detail difficult
to follow

Common mistake examples



4. R. RING



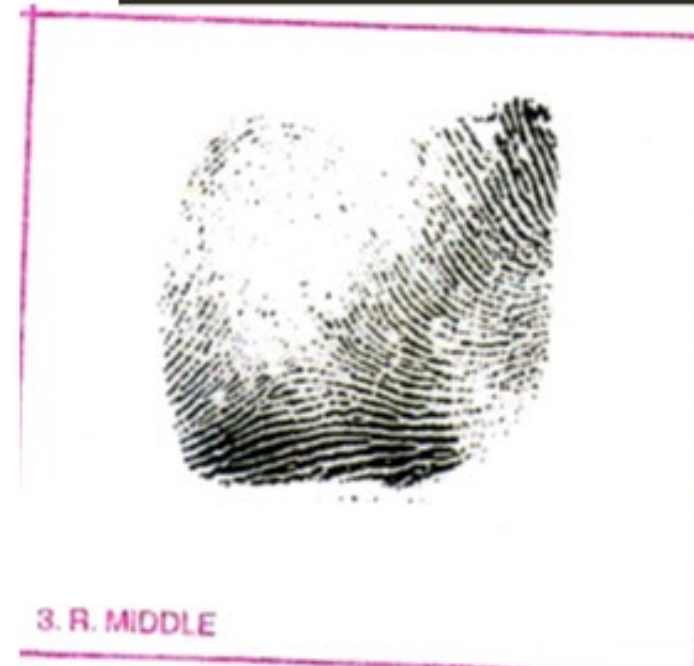
4. R. RING

Excess or
lack of
matrix/ink

Heavy or
light
deposition
pressure



Common mistake
examples



Areas of
friction
ridge
detail not
recorded

SUPPLIES NEEDED

- For recording fingers – Criminal Records FD-249, Applicant/Elimination Records FD-258 – Can order with no charge from the FBI
 - [Ordering Fingerprint Cards and Training Aids — LE \(fbi.gov\)](#)
- For recording palms – Palm Print Card FD-884 and Supplemental Fingerprint and Palm Print Card (Complete Major Case Prints) FD-884a – Can order with no charge from the FBI
- Print-over tabs – Re-printing the same finger without having to scrap the whole card
 - [Sirchie Fingerprint Tabs \(sirchie.com\)](#)
- Black Ink pad – Don't use a stamp pad from the craft store
 - [Ink Pads \(sirchie.com\)](#)
- Ink Roller – For applying ink on palms
 - [Ink Rollers \(sirchie.com\)](#)
- Palm Roller – For rolling the hand onto the palm record (can use any cylindrical item as the circumference is big enough)
 - [Palm Roller \(sirchie.com\)](#)
- Fingerprint station – Holds the fingerprint record in place to prevent it from moving during recordings
 - [Fingerprint Stations \(sirchie.com\)](#)

RECORDING FINGERS

Check subject's hands are clean

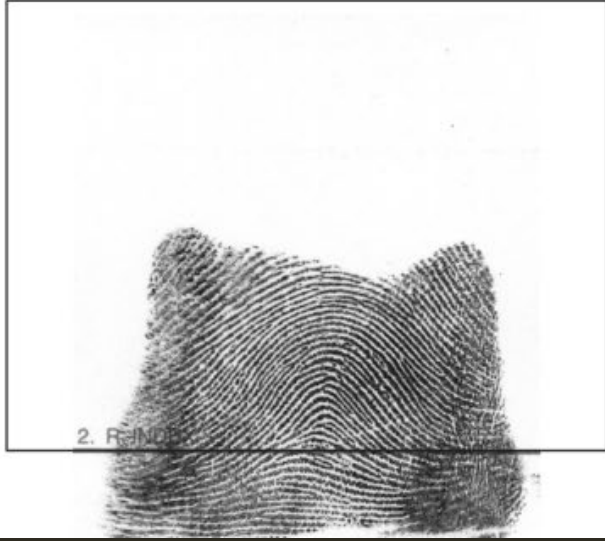
- If hands are sweaty – wipe each finger with rubbing alcohol or with a paper towel
- If hands are dry – use a small amount of hand lotion and wipe away any excess lotion

Instruct the subject to

- Stand parallel to the fingerprint station. If possible have them stand behind you like you're in line
- Try to relax their hands and not try to assist you. It's easier for them to do this if they don't watch

Direction when rolling fingers

- The thumbs should be rolled towards you (Right Thumbs are rolled right to left and Left Thumbs are rolled left to right)
- Fingers should be rolled away from you (Right Fingers are rolled left to right and Left Fingers are rolled right to left)



INCORRECT

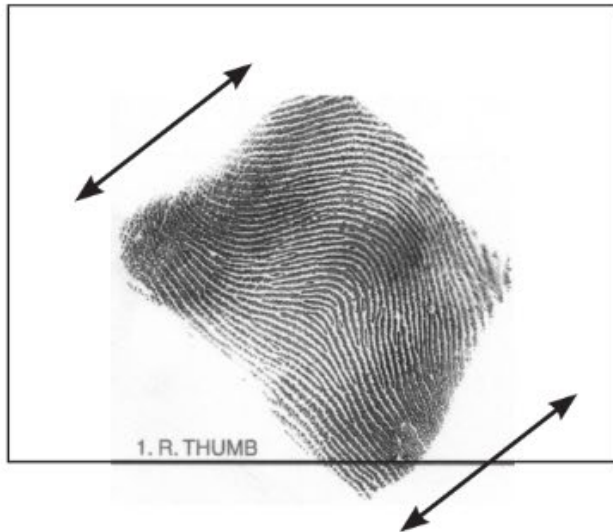
Image printed too low in block.

Image protrudes into neighboring fingerprint block.



CORRECT

Entire image printed in the center of the block.



INCORRECT

Image captured at an angle.



CORRECT

Capture image in a vertical upright position.



INCORRECT

Indicates dry, rough skin.
Fingerprint ridge detail not visible.



CORRECT

Worn ridge detail may be improved with the following:

- 1) Ridge Builder
- 2) Corn Huskers Lotion
- 3) Lotion containing Aloe Vera
- 4) Massage finger to force blood to fingertips

Loop



INCORRECT

- 1) Delta needs to be present in a Loop pattern.

Whorl



INCORRECT

- 2) Deltas need to be present in a Whorl pattern.

Loop

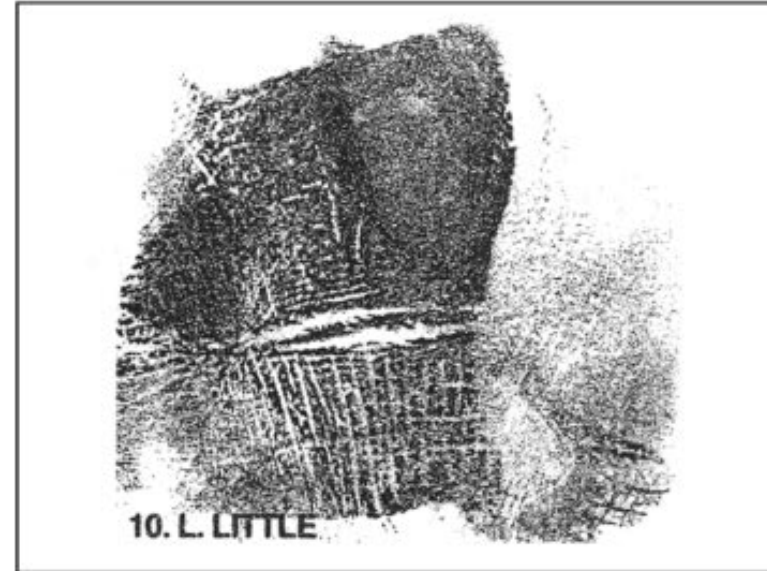


Whorl



CORRECT

- 1) Roll finger in a smooth continuous motion from nail to nail.
- 2) Roll thumbs towards subject. Roll fingers away from the subject.
- 3) Ensure entire first joint of the finger is in constant contact with the card.



- 1) Do not apply excessive ink to the fingertip.
- 2) Do not apply excessive pressure to the fingertip.
- 3) During capture, turn subject's wrist and simply guide the finger being printed.

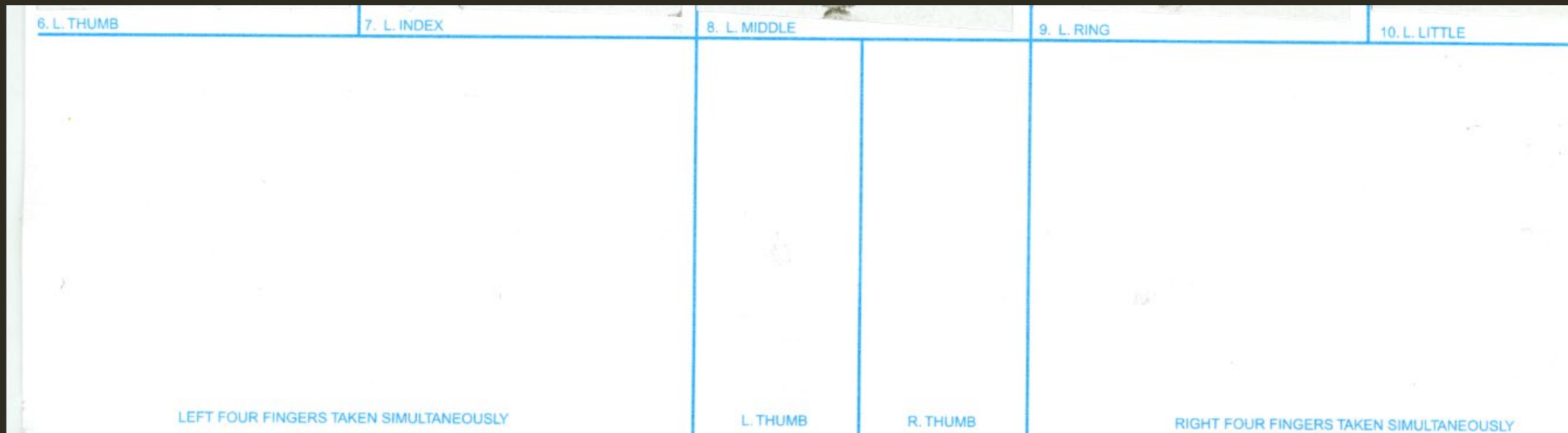
EXAMPLES



- ✓ Finger rolled from nailbed to nailbed
- ✓ Legible recording of the friction ridges
- ✓ All areas recorded
- ✓ No smearing
- ✓ Good deposition pressure
- ✓ No excess/lack of matrix



PLAIN/SLAP/FLAT IMPRESSIONS



These impressions are often referred to as plain, slap, or flat impression. The left and right fingers are taken simultaneously without rolling. This is design to capture the first and second finger joints. The Left and Right Thumb are rolled from down to up to capture more of the tip of the thumbs

9. L. RING

10. L. LITTLE



RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY

INCORRECT

9. L. RING

10. L. LITTLE



RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY

CORRECT

EXAMPLE



- ✓ Four fingers recorded simultaneously
- ✓ 1st and 2nd joints recorded
- ✓ Legible recording of the friction ridges
- ✓ No smearing
- ✓ Good deposition pressure
- ✓ No excess/lack of matrix

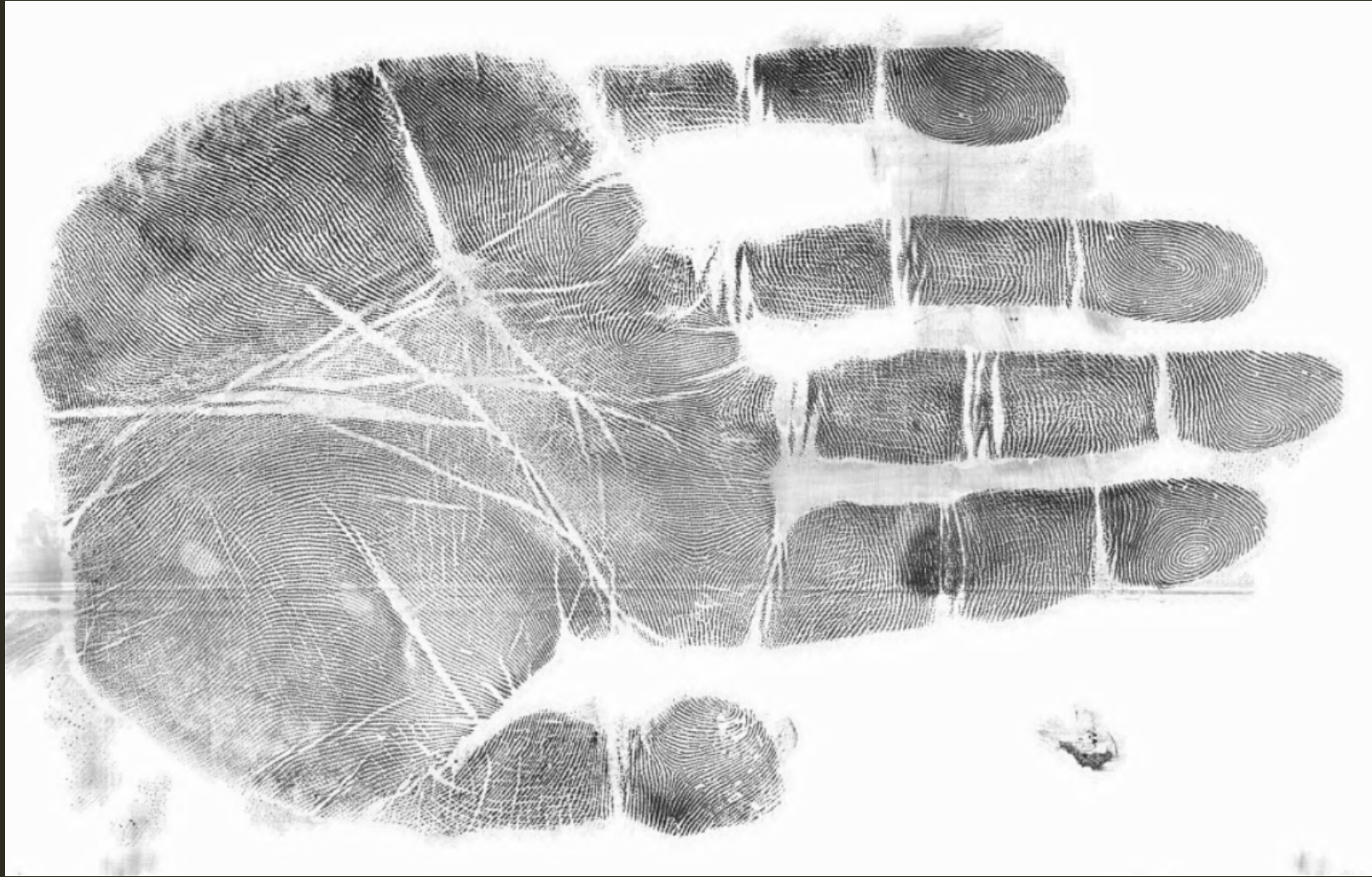
RECORDING PALMS

- Secure the known palm record or piece of paper to a large cylindrical tube-like item.
- Use an ink roller to evenly roll ink across the entire palm.
- Place the tube on a flat surface. DON'T have the subject grab the tube. Simply help roll the palm along the surface of the paper starting at the wrist bracelet and slowly roll up towards the tip of the fingers.
- Make sure the palm is flat against the paper so all areas of the palm are recorded.
- When recording the writer's palm (cushioned part of the palm that rests against the paper when you write), apply ink along the side of the palm and position the palm to be at approximately 45 degree angle and place it down on the paper
- Double check the impressions to make sure there aren't large voids (common area is the center of the palm)



Bad Example

- × Heavy pressure causing ink blots on finger joints and middle of the palm
- × Not enough ink or pressure on the side and bottom of palm
- × Inverted ridge detail in the thenar area due to heavy pressure pushing ink into the furrows and not staying on the friction ridges
- × Illegible recording of the finger joints, sides, and bottom of palm
- × Ridge detail is difficult to see



Good Example

- ✓ Legible recording of the friction ridges
- ✓ All areas recorded
- ✓ No smearing
- ✓ Good deposition pressure
- ✓ No excess/lack of matrix



Good Example

- ✓ Legible recording of the friction ridges
- ✓ All areas recorded
- ✓ No smearing
- ✓ Good deposition pressure
- ✓ No excess/lack of matrix

WHAT YOU MAY SEE IN A LATENT PRINT REPORT

Analyst may request:

- ❖ Palm impressions
- ❖ 2nd and 3rd finger joints
- ❖ Fingertips
- ❖ Side of the fingers (if available knowns aren't fully-rolled)
- ❖ Better knowns (fully-rolled and legible)

SENDING KNOWN RECORDS TO THE CRIME LAB

Known exemplars are considered evidence and must be packaged and properly sealed when submitting to the crime laboratory.

When submitting digital copies on a USB drive, scan the known record at a resolution of a 1000 dpi (dots per inch) in a PDF format. This ensures the analyst has the highest resolution copy of the known record.

If submitting additional knowns, it is encouraged to contact the analyst if you have any questions on what the analyst is requesting in their report.



FBI Collection of Postmortem palm prints video
[Postmortem Palm Printing — BioSpecs \(fbi.gov\)](#)



FBI Palm Print Capture Reference Tools
[Palm Print Services — BioSpecs \(fbi.gov\)](#)



FBI Capturing Legible Fingerprints
[Capturing Legible Fingerprints — LE \(fbi.gov\)](#)



FBI Practical Guide for Palm Print Capture
[PalmGuidance v3.0 LFSU — BioSpecs \(fbi.gov\)](#)

FOR MORE
INFORMATION
ABOUT
RECORDING
KNOWN RECORDS