



PHOTOGRAPHING LATENT IMPRESSIONS

Latent Print Unit
Forensic Science Division
Montana Department of Justice

WHAT YOU'LL GET OUT OF THIS PRESENTATION

Know what your latent print analyst is looking for in your photos

Common mistakes made with photographing latent impressions

What the proper tools are needed for photographing impressions at the scene or at your agency

Tips to how to photograph latent impressions

WHY IS IT SO IMPORTANT TO PROPERLY PHOTOGRAPH LATENT IMPRESSIONS

You are our eyes at the scene and latent print analysts rely solely on every photo you take in that case.

There may be many instances where you cannot go back and retake photos.

The quality of your photos will have a **MASSIVE** impact on the outcome of our analysis and your case. Low quality photos will make it significantly harder for latent print analyst do their job.

Helping your latent print analysts helps YOU and your investigation.



COMMON MISTAKES



No scale next to the latent impressions

Impressions that are partially out-of-focus or blurry

Impressions are not filling the frame of the photo

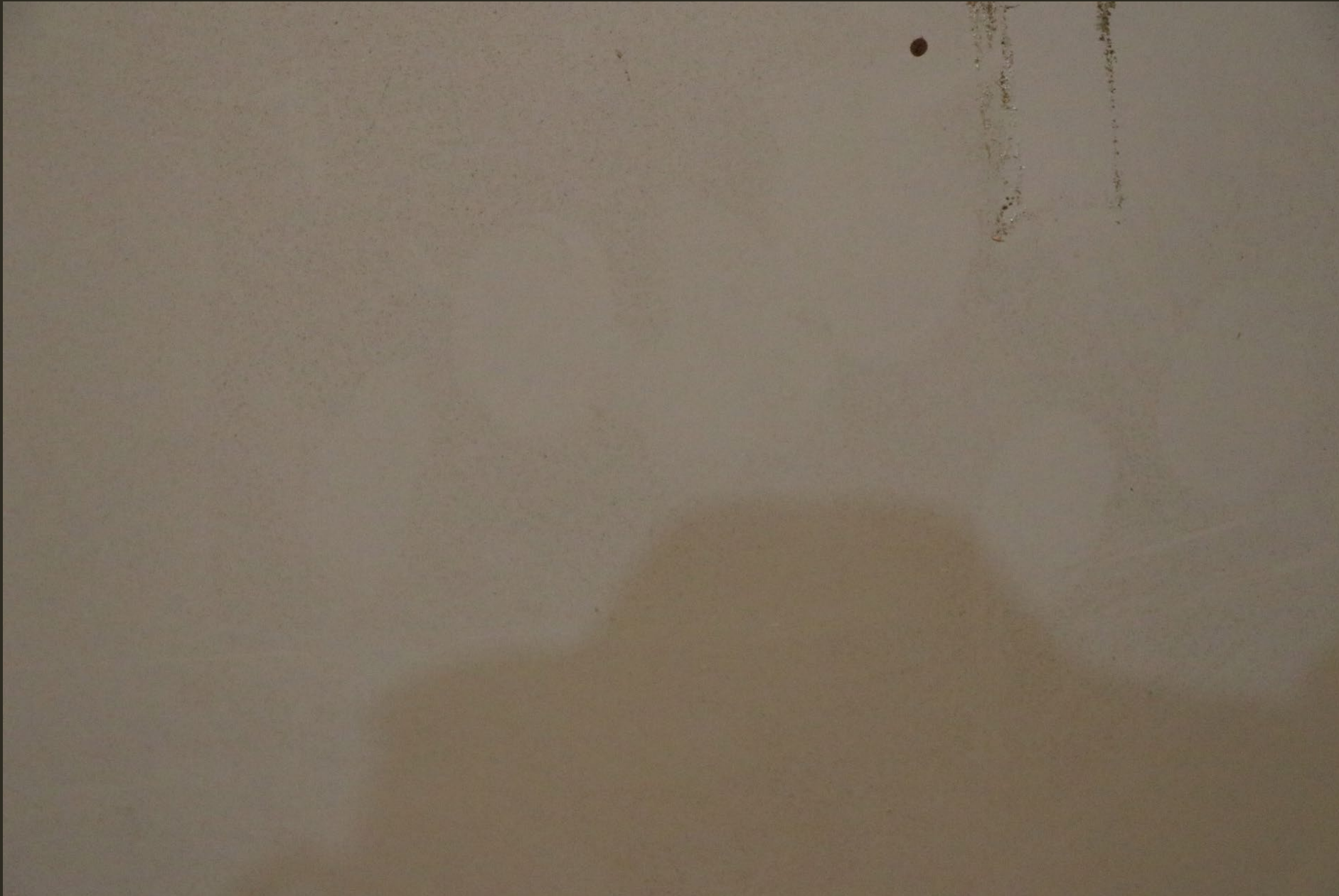
No overall photos to show where the impression is located on the surface

Poor light exposure/shadows/reflection

Using cellphone to photograph

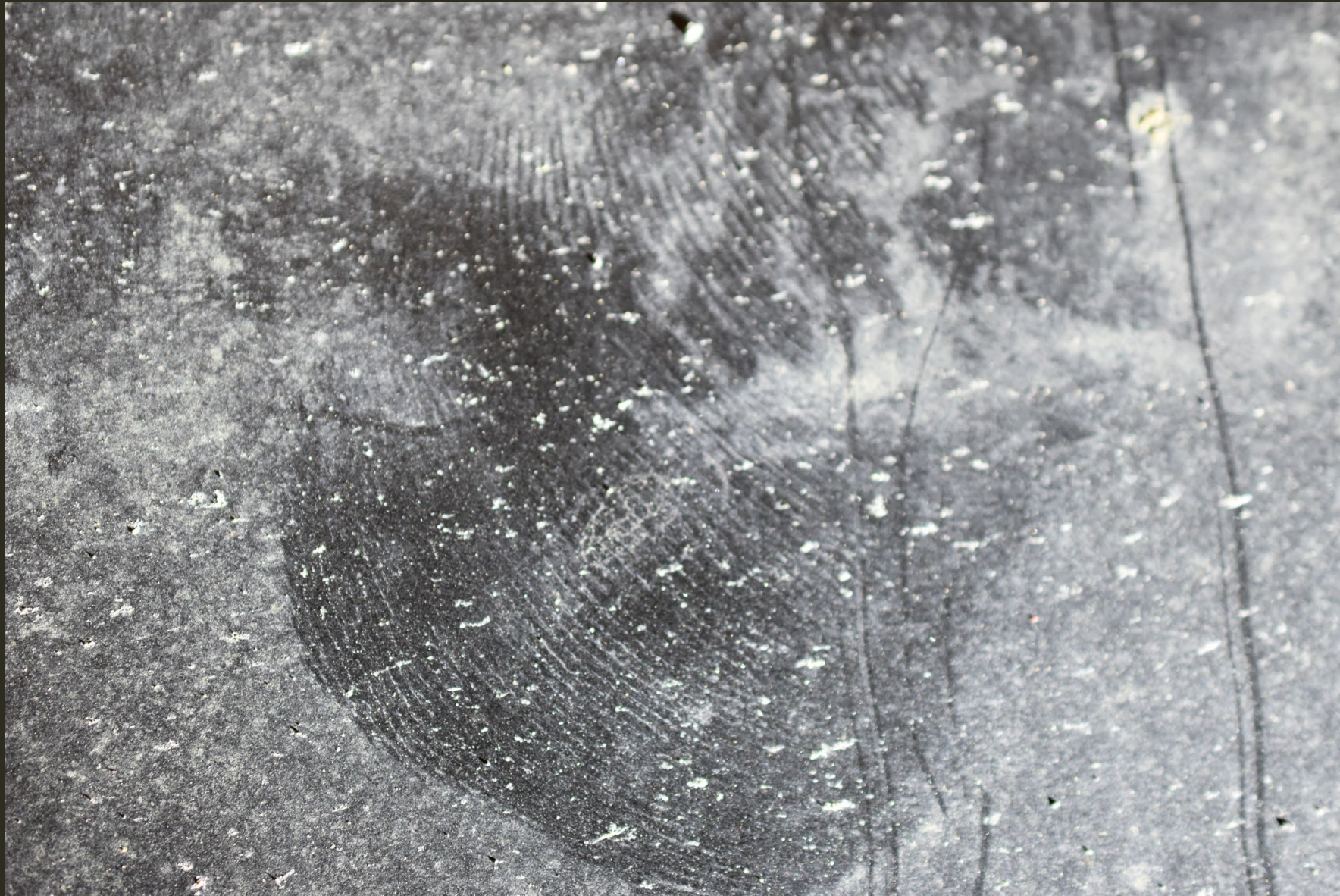
Low resolution image files

Camera not parallel to the impression



Common mistake
examples

Photo
submitted of
impressions
in dirt/dust on
a door



Common mistake examples

Photo
submitted of
palm
impression on
a vehicle

Common mistake
examples

Photo
submitted of
a ninhydrin
impression
on an
envelope

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Common
mistake
examples

Photos
submitted
of a palm
impression
on a
window



WHAT ARE LATENT PRINT ANALYSTS LOOKING FOR IN YOUR PHOTOS?

- **Scale in photo**

Scales are used by latent print analysts to re-size images for comparison purposes i.e., for automated searches

- **Entire impression in focus and fills the frame of the photo as much as possible**

Latent print analyst work with significantly small friction ridge detail. This requires impressions to be photographed as close as possible while still in focus.

- **Overall photos showing where the impression is on the surface**

Overall photos are used by latent print analysts to determine orientation, how the surface may have been touched/handled, determine if it's related to other impressions (simultaneous impression), etc. to assist in their analysis and comparisons.

SUPPLIES NEEDED

- Scale – it is recommended to use adhesive scales when photographing due to ease for photographing any type of substrate such as curved or vertical surfaces.

Where to purchase: [50 - Gray 2" Adhesive Scales | ShopEVIDENT.com](#)

[Adhesive 6" Rulers - Lynn Peavey Company](#)

- Professional camera such as Canon or Nikon – do NOT use cellphones for latent print documentation. The camera needs to be able to photograph impressions in a lossless format such as RAW or TIFF image files and allow the user to manually zoom, adjust shutter speed, f-stop, etc.
- A tri-pod – it is recommended to have one on hand for steady photography to prevent blurring and out-of-focus images.
- Good lighting – a flashlight or other lighting appliances are recommended to improve the lighting environment if needed.

DON'T DO THIS!

SCALE EDITION



❖ Photograph a latent impression without a proper scale

Scales are essential for latent print analyst to re-size images to a 1:1 scale for comparison purposes for automated searches (AFIS searching). With no scale present in the image, the analyst will have to re-size the image to the best of their ability but without a ruler, it can have a negative impact on the quality of the results from AFIS.

❖ Use random items as a scale

Pens, business cards, hands, etc. are not proper scales and does not assist the latent print analyst when it comes to re-sizing the image.

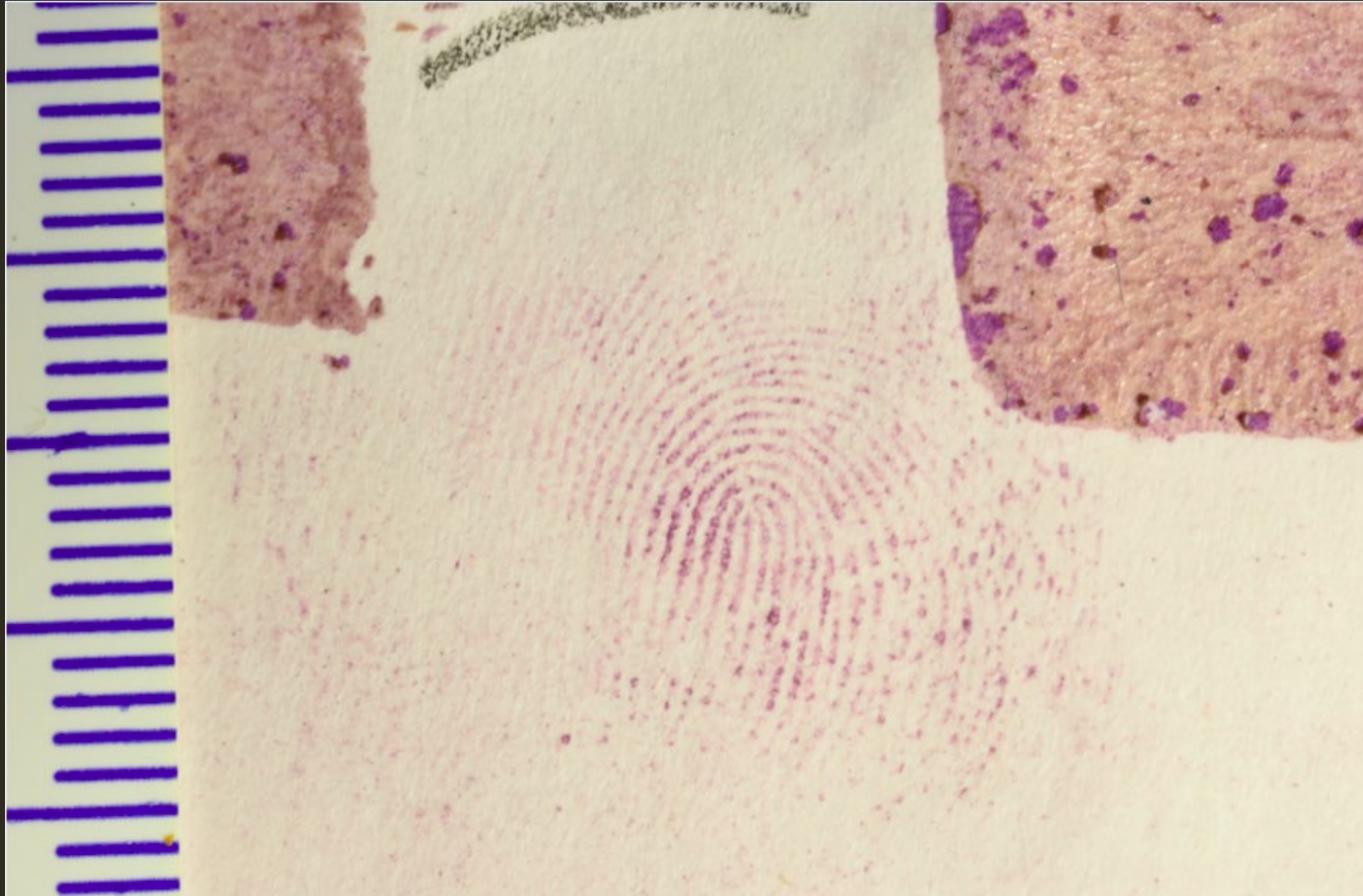
❖ Use a printed scale (ex. scale printed on a business card)

Scales needs to use standard units of measure that are traceable to a NIST or other national metrological institute standards.

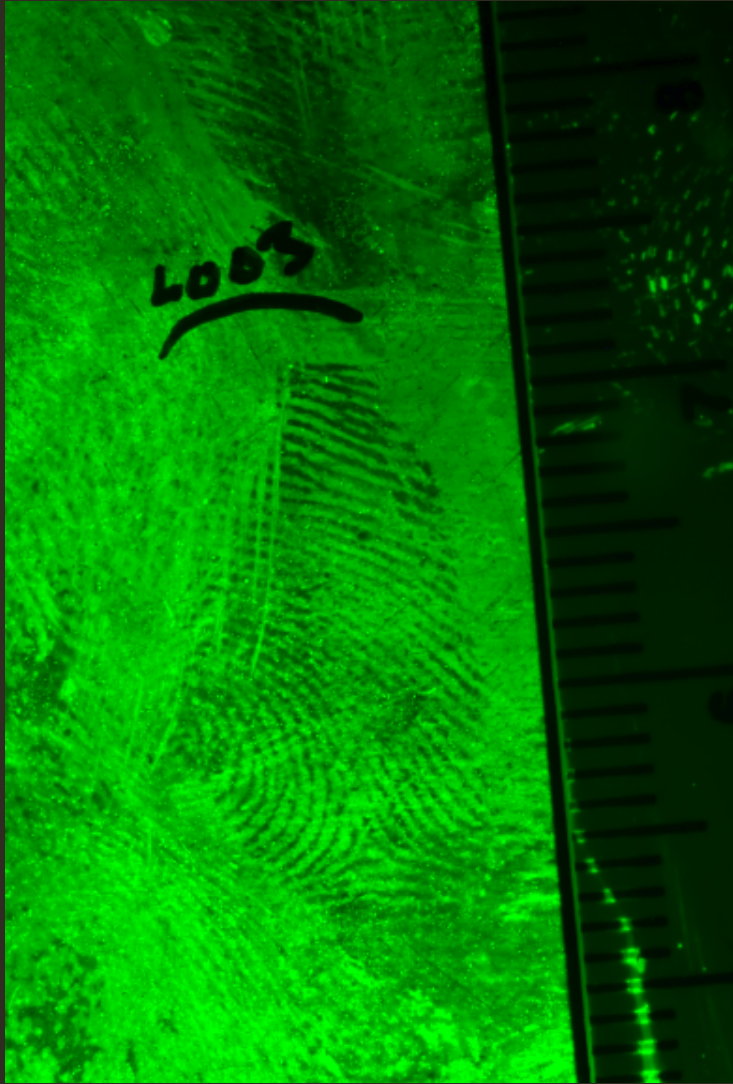
DO THIS INSTEAD!



- ❖ Have a scale next to the impression
- ❖ Use a professional camera
- ❖ Position camera parallel to the surface the impression is on as best you can (a tri-pod is helpful for this)
- ❖ Take close-up photos of impressions with adequate lighting
- ❖ The entire impression is in focus
- ❖ Take overall photos to show where the impression is on the surface or item
- ❖ Try to take a photo of one impression at a time if possible
- ❖ Save images as a TIFF image file if possible (JPEG should be last resort)



- ✓ Scale
- ✓ Camera lens parallel to impression
- ✓ Impression fills the frame
- ✓ In focus
- ✓ Sufficient lighting



- ✓ Scale
- ✓ Camera lens parallel to impression
- ✓ Impressions are taken as close as possible without sacrificing quality
- ✓ In focus
- ✓ Sufficient lighting
- ✓ One impression photographed at a time



PHOTOGRAPHING GLASS OR REFLECTIVE SURFACE



Glass and reflective surfaces are difficult to photograph and can obscure information within the impression.

When photographing a clear glass surface:

- Place a piece of paper behind the surface or item (white or colored depending how the impression was powdered or best seen)
- Use oblique lighting to remove any glare from the light source (have someone move and hold the light source around as you determine the best direction the light should come from to capture the impression)

When photographing a reflective surface:

- Use oblique lighting to remove the light bouncing back into the camera lens

PHOTOGRAPHING GLASS OR REFLECTIVE SURFACES



Before

Impressions that were magnetic powdered on a glass slate

Background clashing with the impression making it difficult to see ridge detail in some of the impressions

Catching some glare from overhead lights

PHOTOGRAPHING GLASS OR REFLECTIVE SURFACES



After

A piece of white paper was placed behind the glass to heighten the contrast of the black ridge detail and the white background

Also cuts out a lot of glare from the overhead lights

OVERALL PHOTOS

Overall photos are used by latent print analysts to determine orientation, how the surface was touched/handled, determine if it's related to other impressions (simultaneous impression), etc. to assist in their analysis and comparisons.





Submitted
photo of a
palm
impression on
a vehicle

LAST MINUTE NOTES

- ❑ Take as many photos you feel you is necessary to capture everything. This may mean only taking 2-3 photos or 50+ photos. We will look at every image you submit and pick out the best images to conduct our analysis from. We would rather you take too many photos than not enough.
- ❑ If it is an item that can be easily submitted to the state crime lab, we highly recommend just submitting it in. We have a vast amounts of collection methods and instruments to develop impressions further than just powder.
- ❑ If you have an item that seems to have impressions everywhere, don't waste your time trying to photograph everything. Just submit the item to the state crime lab and we will do the rest.



OSAC Proposed Standard: Standard Guide
for Latent Print Evidence Imaging Resolution
[OSAC Proposed Standard \(nist.gov\)](#)



SWGFAST Standard for Friction Ridge
Impression Digital Imaging (Latent/Tenprint)
[Standard Digital Imaging Final-1-4.docx
\(nist.gov\)](#)



FBI General Guidelines for Capturing
Latent Impressions Using a Digital Camera
[General Guidelines for Capturing Latent
Impressions Using a Digital Camera](#)

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