



ARCHIVED

STANDARD FOR THE DOCUMENTATION OF ANALYSIS, COMPARISON, EVALUATION, AND VERIFICATION (ACE-V) (LATENT)

Preamble

When friction ridge detail is examined using the ACE-V methodology, examiners' documentation shall be such that another qualified examiner can determine what was done and interpret the data. Documentation shall be made at or near the time of the examination and may be in the form of annotated images, narratives, worksheets, annotated legible copies, sketches, AFIS or electronic records, or any combination of these methods. This documentation will be a part of the case record. A case record consists of the administrative and technical records, whether hard copy or electronic, pertaining to a particular case. The case record may include digital or physical files of latent lifts, printed photographs, chain of custody, exemplars, case notes, requests, and reports.

Although all examinations require documentation, the extent of the documentation is related to the complexity of the examination. The friction ridge impression alone is not sufficient documentation. The impression or a legible copy shall be annotated or have accompanying notes.

It is understood that not all information may be available to the examiner. If the information is available, the relevant information shall be noted.

For the purposes of this standard, "latent print" refers to a questioned friction ridge impression and "known print" refers to exemplars of friction ridge skin. Additionally, the standard refers to the documentation of ACE-V on preserved latent prints (e.g., latent prints recovered on a lift or in a photograph). This standard does not apply to latent prints developed on evidence which are not preserved.

Agency policy should define what constitutes a latent print "of value". For example, an agency may determine that latent prints are "of value" for comparison or that latent prints are "of value" for individualization.

Standard for the Documentation of Analysis, Comparison,
Evaluation, and Verification (ACE-V) (Latent)

2/12/10 ver. 1.0

Posted: 3/10/10

1 Analysis

1.1 Latent prints of value

1.1.1 Analysis documentation of a latent print of value shall be completed prior to comparison. The quality and quantity of the information present in the latent print will dictate the extent of the documentation (Figure 1). At a minimum, the following shall be documented in the case record:

- Anatomical source (e.g., fingerprint, palmprint)
- Anatomical orientation (e.g., distal direction)
- Presence of level 1 detail
- Presence of level 2 detail

1.1.2 When known, the following shall be documented within the case record:

- Substrate
- Development medium
- Preservation method (e.g., lift, photograph, legible copy)

1.1.3 The analysis of latent prints may also include documentation of additional factors such as matrix, deposition pressure, lateral movement, rotational movement, level 3 detail, or other friction ridge skin detail (e.g., creases, scars) (Figure 1).

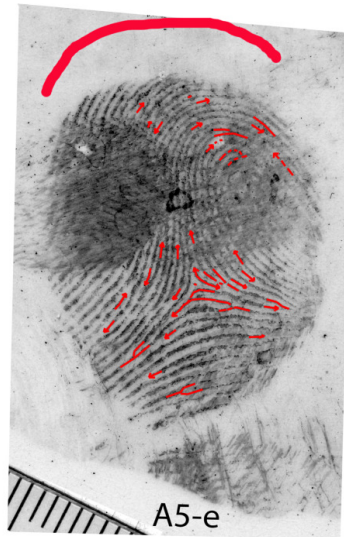
1.1.4 If the original latent print of value will not be maintained in the case record, a legible copy of the latent print shall be retained.

Discussion

- An examiner marking or noting the anatomical source and anatomical orientation of latent prints documents how he or she searched or compared, or intends to search or compare, the latent print.
- “Of value” can be indicated by symbols or markings. These symbols or markings could also denote the anatomical source, anatomical orientation, and presence of levels of detail. If used, the agency shall define each symbol and its meaning. If the anatomical source or orientation cannot be determined, this should be noted. For example, if the examiner is unsure of the anatomical source or orientation, a “?” could be placed next to the symbol marking the print.
- The substrate, development medium, or preservation method can have a significant impact on the appearance of a latent print. If the latent print or legible copy is part of the case record and contains this information, it may be considered documented. Substrate, development medium, or preservation method may be recorded in case notes.
- Additional analytical factors, particularly on complex prints, provide the basis for distortion interpretation and explanations for variation in appearance. This information may be documented via annotated images, annotated legible copies of images, notations on a worksheet, or in a narrative description.

Ex 1 Glass Beaker, Black powder, Adhesive lift

Case #
5/6/09
ary



fp/R. Loop or Whorl / Level 1,2,3/AFIS-Yes
Double touch. Horizontal smears from
core area to second touch/overlapping
impression. Diagonal smear marks in
upward direction below + to right of
delta. Vertical smear marks below
joint crease + to left (bottom left)
of latent.

Figure 1

An example of an annotated legible copy of latent print from a lift card demonstrating a more detailed documentation of the analysis.

1.2 Latent prints of no value

The presence of friction ridge impressions that are of no value shall be documented (Figure 2).

Discussion

- It is important to indicate in the case file that latent prints were analyzed and determined to be of no value. Documentation, for example, may be accomplished by making a “no value” notation (e.g., “NV”) on a lift, photograph, or legible copy retained as part of the case record. Documentation may be accomplished by indicating in case notes that “no value” impressions are present on a lift or photograph.
- Although it is permissible to retain all latent prints, original or legible copies of latent prints that are of no value do not need to be retained in the case record.

Standard for the Documentation of Analysis, Comparison,
Evaluation, and Verification (ACE-V) (Latent)

2/12/10 ver. 1.0

Posted: 3/10/10

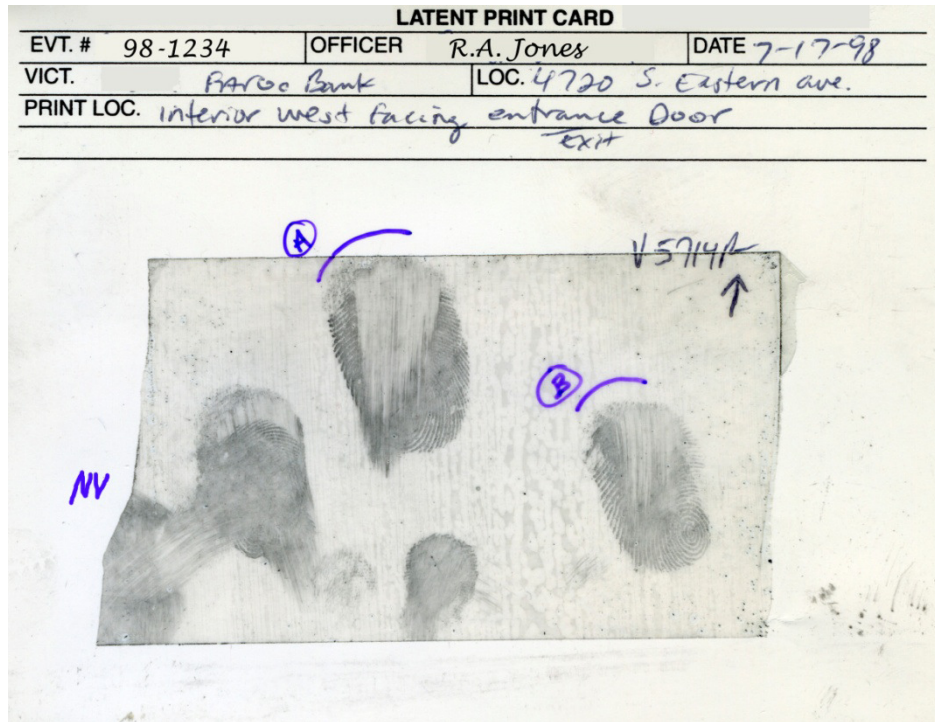


Figure 2

Copy of lift card with latent prints of value and latent prints of no value documented. There is a semicircle over the top of each latent print of value for comparison (also marked "A" and "B"). The symbol represents the anatomical source, the anatomical orientation, and the presence of level 1 and level 2 detail. The "NV" indicates that there are latent prints of no value also present on the lift card. The substrate is listed on the lift card. The preservation method (lift) and development technique (powder) are evident. In this example, the legible copy is retained as part of the case record.

2 Comparison

2.1 Documentation that records the information relied upon during comparison, shall be made for each comparison. Documentation of the comparison relies on both the latent print and known print.

2.2 A legible copy of the known prints used to effect an individualization to a latent print shall be retained in the case record. At a minimum, the following information shall be documented in the case record:

- Unique identifier of the exemplar such as name, date of birth, assigned identification number, or reference to the specific exemplars (e.g., date of arrest, date of recording)
- Anatomical source(s) represented in the exemplars (fingerprints, palmprints, or footprints)

2.3 When known, the following shall be documented within the case record:

- Medium (e.g., ink, livescan)
- Origin (e.g., printed from archive, direct submission)

Standard for the Documentation of Analysis, Comparison,
Evaluation, and Verification (ACE-V) (Latent)

2/12/10 ver. 1.0

Posted: 3/10/10

2.4 If latent prints are not individualized to the known prints, a legible copy of the known prints used for comparison shall be retained or retrievable. The information listed in Section 2.1 shall be documented.

2.5 Known prints that are deemed insufficient for comparison, or that contain any factors that adversely affect the comparison, shall be documented. The quality and quantity of the information present will dictate the extent of the documentation. These factors include:

- Incomplete recording of the friction ridge skin
- Missing anatomical sources (e.g., palms, areas of fingers)
- Unclear recording of the friction ridge skin

2.6 If re-analysis of the latent print during the comparison results in new information, supplemental notes shall be added and dated.

Discussion

- Documentation of known prints used for comparison could be accomplished by maintaining a legible copy of the known prints in the case record. A legible copy may contain all the required information listed in 2.1 and 2.2.
- Another method of documentation for exclusions and inconclusive results could be a list of the known prints with the required information in the case notes.
- It is important to document the re-analysis of the latent print when new information is observed. New information may include a significant change to the orientation of the latent print, the anatomical source, or additional ridge detail.
- If the examiner changes the “of value” decision, this shall be documented. The reason for changing the “of value” decision shall also be documented. Any conclusions reached up to the point the examiner changes the “of value” decision shall be documented.

3 Evaluation

3.1 The final conclusion of the comparison of each latent print to each individual shall be documented (Figures 3 and 4).

3.2 Documentation of an individualization shall include:

- Specific latent friction ridge impression examined
- Unique identifier of the exemplar(s) used to reach the conclusion
- Specific anatomical source (e.g., right thumb, left palm)
- Initials, signature, or equivalent (e.g., unique identifier, electronic signature) of examiner
- Date conclusion reached

3.3 Documentation of an exclusion shall include:

- Specific latent friction ridge impression examined
- Unique identifier of the exemplar(s) used to reach the conclusion
- Initials, signature, or equivalent (e.g., unique identifier, electronic signature) of examiner
- Date conclusion reached

3.4 Documentation of an inconclusive shall include:

- Specific latent friction ridge impression examined
- Unique identifier of the exemplar(s) used to reach the conclusion
- Specific anatomical source, if applicable (e.g., right thumb, left hypothenar)
- Reason (e.g., better exemplars needed, specific anatomical sources needed, insufficient friction ridge detail in agreement)
- Initials, signature, or equivalent (e.g., unique identifier, electronic signature) of examiner
- Date conclusion reached

3.5 Conclusions shall be documented prior to verification.

Discussion

- As an example, individualizations could be documented in the case notes or on a lift, photograph, or legible copy retained as part of the case record (Figures 3 and 4). A legible copy of the specific known prints used to formulate the conclusion shall be retained in the case record.
- The minimum documentation of the known prints under Section 2.2 meets the documentation requirement for the “unique identifier of the exemplar(s) used to reach the conclusion”. For example, the examiner can record his or her conclusion for each individual for each latent print in case notes.

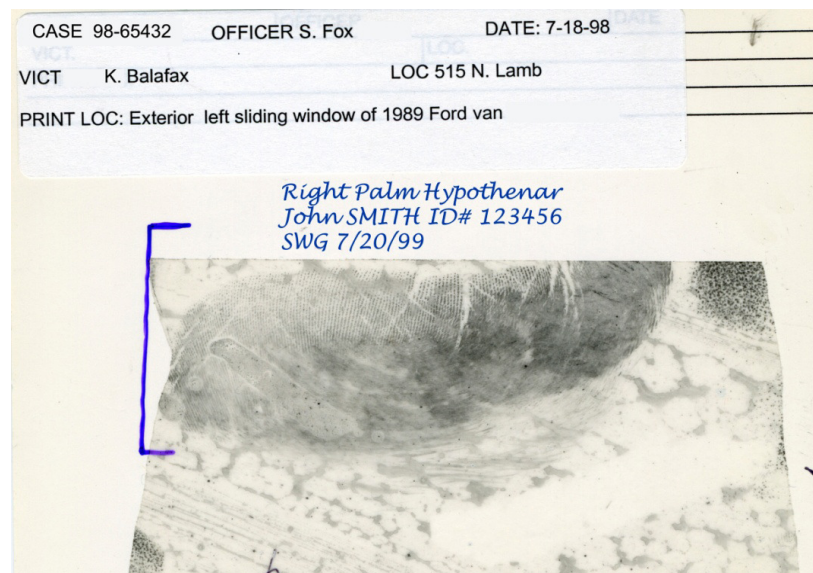


Figure 3

Legible copy of a lift card with one latent palm print of value documented with a bracket. The symbol documents the anatomical source and the presence of level 1 and level 2 detail. The bracket also indicates the anatomical orientation. The substrate is listed on the lift card. The preservation method (lift) and development technique (powder) are evident. The conclusion is documented on the legible copy of the lift card. In this example, the legible copy of the lift card is retained as part of the case record. The case file will require documentation of the known prints of John SMITH (e.g., a legible copy of the known prints).

Standard for the Documentation of Analysis, Comparison,
Evaluation, and Verification (ACE-V) (Latent)

2/12/10 ver. 1.0

Posted: 3/10/10

Pg. 4 JS 9/10/09
 CASE #: 09B-987

SUBJECT: Jones

NOTES: Lefts from ex. 1
- Glass Banker
Adhesive LIFT

ANALYSIS

Latent: 1

☒ LEVEL ONE
JB finger: Right Loop
JB palm: Hyperkeratosis
JB phalange:
JB other:

☒ LEVEL TWO
JB sufficient JB in sequence
JB other:

☒ LEVEL THREE
JB non-pertinent pertinent
JB type:

☒ PRESSURE
JB deposition JB 1 2 3 4 5 ▲
JB distortion: Wide not left side

☒ AFIS QUALITY
JB victim prints prior to search
JB suspect prints prior to search
JB other: not AFIS

☒ NOT AFIS QUALITY
JB lacks Referenceable Level I
JB lacks clear/sufficient Level II
JB no observable Core/Axis

☒ INCONCLUSIVE
JB smudged/incomplete areas
JB fingerprints requested
JB palms requested
JB other:

☒ INDIVIDUALIZATION
JB #3 Right Middle

☒ EXCLUSION
JB All Fingers: Level I Level II
JB #1RT: Level I Level II
JB #2RI: Level I Level II
JB #3RM: Level I Level II
JB #4RR: Level I Level II
JB #5RL: Level I Level II
JB #6LT: Level I Level II
JB #7LI: Level I Level II
JB #8LM: Level I Level II
JB #9LR: Level I Level II
JB #10LL: Level I Level II
JB OTHER:

Latent: 2

☒ LEVEL ONE
JB finger:
JB palm: Hyperkeratosis
JB phalange:
JB other:

☒ LEVEL TWO
JB sufficient JB in sequence
JB other:

☒ LEVEL THREE
JB non-pertinent pertinent
JB type: JB

☒ PRESSURE
JB deposition JB 1 2 3 4 5 ▲
JB distortion: Minimal

☒ AFIS QUALITY
JB victim prints prior to search
JB suspect prints prior to search
JB other:

☒ NOT AFIS QUALITY - Palm
JB lacks Referenceable Level I
JB lacks clear/sufficient Level II
JB no observable Core/Axis

☒ INCONCLUSIVE
JB smudged/incomplete areas
JB fingerprints requested
JB palms requested
JB other:

☒ INDIVIDUALIZATION

☒ EXCLUSION
JB All Fingers: Level I Level II
JB #1RT: Level I Level II
JB #2RI: Level I Level II
JB #3RM: Level I Level II
JB #4RR: Level I Level II
JB #5RL: Level I Level II
JB #6LT: Level I Level II
JB #7LI: Level I Level II
JB #8LM: Level I Level II
JB #9LR: Level I Level II
JB #10LL: Level I Level II
JB OTHER:

Latent: 3

☒ LEVEL ONE
JB finger: Unknown
JB palm:
JB phalange:
JB other:

☒ LEVEL TWO
JB sufficient JB in sequence
JB other:

☒ LEVEL THREE
JB non-pertinent pertinent
JB type:

☒ PRESSURE
JB deposition JB 1 2 3 4 5 ▲
JB distortion: Lateral - Palm

☒ AFIS QUALITY
JB victim prints prior to search
JB suspect prints prior to search
JB other:

☒ NOT AFIS QUALITY
JB lacks Referenceable Level I
JB lacks clear/sufficient Level II
JB no observable Core/Axis

☒ INCONCLUSIVE
JB smudged/incomplete areas
JB fingerprints requested
JB palms requested
JB other:

☒ INDIVIDUALIZATION

☒ EXCLUSION
JB All Fingers: Level I Level II
JB #1RT: Level I Level II
JB #2RI: Level I Level II
JB #3RM: Level I Level II
JB #4RR: Level I Level II
JB #5RL: Level I Level II
JB #6LT: Level I Level II
JB #7LI: Level I Level II
JB #8LM: Level I Level II
JB #9LR: Level I Level II
JB #10LL: Level I Level II
JB OTHER:

KNOWN EXEMPLAR
☒ Finger ☐ Palm ☐ Phalange ☐ Other
☒ Inked ☐ Archive ☐ Copy:
 Overall quality: High Average Low
☐ Smudged areas ☐ Missing areas
☒ Researched DOA: 10/28/07
☒ Other: Retained in Case File

Key: ▽ = Light ▲ = Heavy

Figure 4

This worksheet demonstrates the analysis and evaluation for three latent prints. Note, this particular worksheet records the conclusions for only one subject; additional worksheets would be needed for additional subjects. In this example, the case record would also include the lift card or legible copy that contains markings indicating which latent prints were compared and the anatomical orientation. The case record would also contain documentation of the known prints of JONES (e.g., a legible copy of the known prints).

4 Verification

Verification shall be documented and include (Figure 5):

- Specific latent friction ridge impression examined
- Unique identifier of the exemplar(s) used to reach the conclusion
- Anatomical source
- Conclusion of the verifying examiner
- Initials, signature, or equivalent (e.g., unique identifier, electronic signature) of the verifying examiner
- Date of verification

Standard for the Documentation of Analysis, Comparison,
 Evaluation, and Verification (ACE-V) (Latent)

2/12/10 ver. 1.0

Posted: 3/10/10

Discussion

- All individualizations shall be verified.
- Exclusions and inconclusive results may be verified.
- If the following information is available to the verifier, he or she would not have to separately document the specific latent friction ridge impression examined, the unique identifier of the exemplar(s), the anatomical source, and the conclusion. The verifier's initials and the date of the verification could be placed on a lift, photograph, legible copy retained as part of the case record, or in the case examiner's notes.

Case: 5423789-99

Latent #	1	2	3			
Anatomical	Finger	PALM	FINGER			
Analyst	JTS 9.16.09	JTS 9.16.09	JTS 9.16.09			
Verifier	QTH 9.16.09	QTH 9.16.09	QTH 9.16.09			
Subject (name & identifier)						
JONES SID 091753	RM#3	INC	EX			
Anatomical = Indicate finger or palm Analyst/Verifier = Initials and date Identification = Indicate anatomical location (e.g. #9 LR) Ex = Exclude Inc = Indicate incomplete exemplars or insufficient ridge detail in agreement						

Figure 5

This worksheet demonstrates the analysis, evaluation, and verification for three latent prints. In this example, the case record would also include the lift card or legible copy that contains markings indicating which latent prints were compared and the anatomical orientation. The case record would also contain documentation of the known prints of JONES (e.g., a legible copy of the known prints).

Standard for the Documentation of Analysis, Comparison,
Evaluation, and Verification (ACE-V) (Latent)

2/12/10 ver. 1.0

Posted: 3/10/10

5 Consultations

Consultations shall be documented and include:

- Specific friction ridge impression(s) reviewed
- Nature and result of the consultation (e.g., reviewed individualization)
- Initials, signature, or equivalent (e.g., unique identifier, electronic signature) of examiner(s)
- Date of consultation

Discussion

- Consultation is a significant interaction between examiners regarding one or more impressions in question [1]. Each agency shall define what constitutes a significant interaction.
- The purpose of documenting a consultation is to record information or guidance obtained as a result of the consultation. If examiners have significant interaction on a particular print, the consulted examiner shall not be used as the verifier for that particular print.

6 General References

1. SWGFAST, *Glossary*, 5/8/09, ver. 2.0.