Standard for Collection and Preservation of Document Evidence





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Foreword

This document delineates requirements and recommendations for the collection and preservation of document evidence and related items during scene investigations. The methods in this standard are intended to maintain the integrity of document evidence so that reliable, accurate, and relevant conclusions can be obtained. Proper collection and preservation of document evidence ensures that the integrity of the evidence is maintained from the point of collection, through possible forensic examination, and to the presentation of the evidence in the courtroom. This document is intended to be utilized in conjunction with departmental policies to inform or augment applicable policies.

The American Academy of Forensic Sciences established the Academy Standards Board (ASB) in 2015 with a vision of safeguarding Justice, Integrity, and Fairness through Consensus Based American National Standards. To that end, the ASB develops consensus based forensic standards within a framework accredited by the American National Standards Institute (ANSI), and provides training to support those standards. ASB values integrity, scientific rigor, openness, due process, collaboration, excellence, diversity and inclusion. ASB is dedicated to developing and making freely accessible the highest quality documentary forensic science consensus Standards, Guidelines, Best Practices, and Technical Reports in a wide range of forensic science disciplines as a service to forensic practitioners and the legal system.

This document was revised, prepared, and finalized as a standard by the Crime Scene Investigation Consensus Body of the AAFS Standards Board. The draft of this standard was developed by the Crime Scene Investigation and Reconstruction Subcommittee of the Organization of Scientific Area Committees (OSAC) for Forensic Science.

Questions, comments, and suggestions for the improvement of this document can be sent to AAFS-ASB Secretariat, asb@aafs.org or 410 N 21st Street, Colorado Springs, CO 80904.

All hyperlinks and web addresses shown in this document are current as of the publication date of this standard.

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Standard for Collection and Preservation of Document Evidence

1 Scope

This standard provides the requirements for the collection and preservation of document evidence and related items (materials and equipment used to produce questioned documents) during investigations.

2 Normative References

The following reference is a document that is indispensable for the application of the standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANSI/ASB Standard 159, Standard for Scene Investigation and Reconstruction—Foundational Principles^a

3 Terms and Definitions

For purposes of this document, the following definitions apply.

3.1

alteration

A modification made to a document by any combination of physical, chemical, or mechanical means including, but not limited to, obliterations, additions, over writings, or erasures. (ANSI/ASB Standard 035)

3.2

charred document(s)

Document(s) damaged by heat or fire. (ANSI/ASB Standard 127).

3.3

collected writing

A subset of known writing. Samples of a known person's handwriting/signatures that have been produced throughout the course of day-to-day business, are typically not related to the case at hand, and have been collected for the purposes of comparison against questioned material. Examples include letters, diaries, business records, forms, or checks. These are also known as normal course specimens, course of business specimens, or undictated writing.

3.4

contamination

Undesirable introduction of a substance to an item at any point in the forensic process.

NOTE This includes undesirable transfer of a substance within an item or between items, also referred to as cross-contamination. (ISO 21043-1)

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^a Available from: https://www.aafs.org/academy-standards-board

3.5

document

Any material containing marks, symbols, or signs visible, partially visible, or invisible (to the naked eye) that may ultimately convey meaning or a message.

3.6

document conservator

A professional who specializes in the conservation of paper documents and books.

3.7

examination

The process of observing, searching, detecting, recording, prioritizing, collecting, analyzing, measuring, comparing and/or interpreting.

3.8

exemplars

Samples of handwriting, printed text, paper, ink, etc., known (or purported) to have been produced by a particular individual, machine, or manufacturer.

3.9

forensic document examiner

FDE

A forensic service provider who addresses inquiries that arise in matters where the authenticity, genuineness, or source of a document is questioned, and does not provide personality assessment, creation of a personality profile, or analysis, or judgment of a writer's personality or character.

3.10

requested writing

A subset of known writing. Handwriting samples prepared by a particular person specifically for the purpose of comparison, usually to questioned material.

3.11

scene

A place, or object that is subject to and/or requires forensic examination. (ISO/FDIS 21403-1:2018[E])

NOTE A crime scene is a common description of a scene where a presumed crime has been committed. The scene can be a person or an animal.

3.12

scene investigation

An examination of a scene to locate, document, process, collect, and preserve items of potential evidentiary value.

3.13

scene investigator

An individual, however named, who is responsible for performing elements of scene investigation.

3.14

writing instrument

Any tool used to create handwritten markings on a substrate. Typically used to describe the use of a pen, pencil, crayon, or other marker.

4 Collection and Preservation of Document Evidence

4.1 General

- **4.1.1** Document evidence can be examined for source attribution (or association), the presence of hidden writing, latent indented writing (e.g., blank/missing pages), impressions, physical fit, preservation, restoration, or alteration detection. Proper collection, handling, and storage can preserve potential evidentiary value, maximizing the capability of forensic document analysis.
- **4.1.2** Scene investigators should collaborate with a forensic document examiner (FDE) to ensure that document evidence is properly documented and collected. An FDE can aid in the identification of probative evidence for document examination, including a document in question and additional materials or equipment that can be of use in analyzing a questioned document. Collaboration with the FDE during a scene investigation can increase the efficiency of an investigation through analysis.
- **4.1.3** The scene investigator shall comply with ANSI/ASB Standard 159, Standard for Scene Investigation and Reconstruction—Foundational Principles.
- **4.1.4** Though the requirements and recommendations listed in this document are important, some circumstances could require a scene practitioner to give greater weight to one over another. A deviation from the requirements and recommendations contained in this document shall be documented and explained.
- **4.1.5** Personnel from a variety of disciplines can, at times, perform specialized functions within the broader scope of scene investigation (e.g., FDE, medicolegal death investigation, digital forensics). When operating in such specialist capacities, these individuals are subject to distinct duties, requirements, and standards that pertain specifically to their area of expertise. Accordingly, they may have limited responsibilities outlined in this standard.
- **4.1.6** This standard is not intended to override, conflict with, or otherwise interfere with the established responsibilities or protocols governing those specialized investigative disciplines. However, in situations where a specialist serves as the sole scene investigator, the applicable elements of this standard shall be implemented.

4.2 Legal Considerations

Scene practitioners shall conduct themselves with the expectation that their work may be used in every step of the legal process, and therefore shall ensure that they comply with applicable legal standards.

4.3 Cross Contamination Considerations

Document evidence shall be handled, collected, and preserved in a manner that prevents contamination, tampering, alteration or loss.

4.4 Document Evidence Collection and Preservation

- **4.4.1** The method employed for the collection and preservation of document evidence varies based on scene context and anticipated analysis.
- **4.4.2** The original document shall be collected in its entirety, if available.
- **4.4.3** A scene investigator shall submit high-resolution copies in place of an original document only when prior authorization from an FDE or other individual with the appropriate expertise has been granted.
- **4.4.4** If original writing is on a fixed substrate (e.g., wall, floor) and cannot be collected, the questioned writing shall be preserved by uncompressed examination quality photography with the camera lens perpendicular to the sample, proper lighting (e.g., even lighting, avoidance of over exposure), and the inclusion of a scale.

NOTE In some instances it can be beneficial to remove the writing from the fixed substrate through careful extraction of the substrate.

- **4.4.5** Document evidence from different suspected sources, material types, and locations shall be collected and packaged separately in an appropriate size container to avoid damage or alteration to the document.
- **4.4.6** Document evidence shall not be unnecessarily folded, torn, marked, soiled, stamped, or written on.
- **4.4.7** Packaging shall not be marked on while it contains the document.
- **4.4.8** Document evidence requiring further analysis, such as DNA, latent prints, or trace evidence, should be placed into breathable packaging such as paper bags, envelopes, or cardboard containers.
- **4.4.9** Document evidence examination often relies on exemplars for comparison. Consideration should be made to identify potentially related materials or equipment that could aid in the examination of a document.
- **4.4.10** Storage of document evidence should avoid extreme temperature and humidity, which can cause alteration to materials or equipment.
- **4.4.11** If the collection, preservation, or transportation of document evidence is beyond the technical skills, knowledge, or resources available to the scene investigator, an FDE or other individual (e.g., document conservator) with the appropriate expertise shall be contacted for consultation or assistance.

5 Collection of Documents for Handwriting Comparison

5.1 General

Handwriting examination relies on the comparison between a questioned document and other documents with a known writer (e.g., collected writing) or a requested writing written by a person of interest under the direction of investigators. Collection of an insufficient quantity or quality of samples can have a deleterious effect on the examination of documentary evidence.

5.2 Collected Writing

- **5.2.1** Documents containing existing written text often best represent an individual's natural handwriting and depict natural variation in writing. Scene investigators shall attempt to identify and collect existing written documents during scene examinations. Existing documents that can be used in examination, include but are not limited to the following.
- a) Collected writings which could be attributed to a suspected writer(s), such as receipts, checks, business records, correspondence, applications, identification cards, or journals.
 - 1) Samples of writing produced contemporaneous to, and with similar material as, the questioned document.
 - 2) Samples of writing that are of a comparable style to the questioned document (e.g., hand printing, cursive, and signatures).
- b) Blank pages or other documents bearing writing or machine printing potentially associated with existing documents can contain decipherable indentations.
- c) Documents containing signatures that may be the source of tracings and/or simulations, or electronically reproduced onto another document.
- d) Documents containing voids in signature locations or document fragments containing only signatures, that may have been used to affix a signature to a document through physical cut and paste.
- **5.2.2** Collected writing shall not be attributed to a known writer without supporting information. The supporting information shall be documented.

5.3 Requested Writing

- **5.3.1** Requested writing samples are commonly used for comparison to a questioned document. Protocols for obtaining requested writing samples should be determined by the laboratory performing the examination.
- **5.3.2** Due to the ability of a subject to distort their natural writing when providing requested writing, every attempt should be made to obtain contemporaneous writing samples.

6 Materials and Equipment Used to Produce Questioned Documents

6.1 General

6.1.1 Document evidence can be associated with the materials or equipment used to generate the document. In these cases, possible materials/equipment such as office equipment (e.g., printers, photocopiers, shredders, typewriters) or paper products (e.g., printer paper, envelopes, labels) shall be collected for comparison purposes.

NOTE Writing instruments may be collected, but may have limited value to an FDE examination.

6.1.2 Once located, these items shall be collected in a manner that prevents damage to the item as small details or imperfections are useful for source attribution.

6.1.3 Scene investigators shall attempt to locate materials or equipment that could have been utilized to create the document in question.

6.2 Collection of Machine Evidence

- **6.2.1** When machines, components, and accessories are collected, they shall be securely packaged in a manner to protect from damage.
- **6.2.2** Machines should not be altered in any way to include removal of ink/toner cartridges, creating test prints, stamps, impressions, or typing on a typewriter, unless directed by an FDE or by laboratory policy.
- **6.2.2.1** When a machine cannot be collected, test prints shall be taken at the direction of an FDE and submitted to the laboratory. Test prints generally contain at minimum five copies from each input device (e.g., automated document feeder, glass platen, digital print).
- **6.2.3** Typewriter ribbons should not be removed from the machine.
- **6.2.4** Upon collection, the make, model, serial number, information about any ink/toner supplies and components shall be recorded. Machine repair, service history, and operator's manuals shall be collected, if available.
- **6.2.5** Documents produced contemporaneously to the questioned document can aid in an examination; other documents that could have been generated by the same machine should be collected.
- **6.2.6** Any item used to generate or alter a document can be useful in the analysis of source attribution. Additional evidence for source attribution which should be collected includes but is not limited to:
- a) paper, envelopes, or other document substrates;
- b) stamps, embossing, and seal devices (items shall not be cleaned before packaging);
- c) document-assembly items such as staplers, staples, paper clips, hole punches, tape, and glue;
- d) documents possibly used as templates for counterfeits such as identification cards, social security cards, and passports.

6.3 Collection of Ink/Toner Cartridge Evidence

- **6.3.1** Associated ink/toner cartridge evidence for printers and stamp pads shall be packaged separately from any document.
- **6.3.2** Depending on the ink/toner cartridge being collected and the handling needed (such as shipping), padding or leak-proof packaging shall be utilized to prevent breakage or leakage.
- **6.3.3** The make, model, and color of the ink/toner cartridge not contained in collected machine(s) shall be recorded. If available, the lot numbers should be recorded.

7 Items with Suspected Indented Writing

7.1 General

- **7.1.1** Indented writing, typing, or other markings can occur when two or more documents are stacked, leaving indentations on the document(s) beneath. Documents that do not contain visible marks even when using oblique lighting (e.g., pads of paper, checkbooks), can contain valuable indentation evidence and shall be collected for laboratory processing.
- **7.1.2** Documents collected for suspected indented writing examinations should be submitted to an FDE for Electrostatic Detection Device (EDD) examination prior to DNA or latent print processing. DNA and latent print processing will destroy suspected indented writing.

7.2 Collection

- **7.2.1** Hard-sided or padded packaging shall be utilized for collection and preservation.
- **7.2.2** Due to the fragile nature of indented writing, the scene investigator shall avoid the following actions: writing atop packaging after the item is within the packaging, placing heavy items atop packaging, and exposure to extreme humidity and temperature environments.

8 Charred Documents

8.1 General

- **8.1.1** Charred documents are particularly fragile and should be protected or immobilized as soon as possible to minimize damage. Any movement of the document or around the document (e.g., air circulation, doors opening, or foot traffic) can lead to damage of charred documents.
- **8.1.2** Photographs shall be taken upon discovery of the document and prior to collection of the document.

8.2 Collection

- **8.2.1** Scene investigators shall ensure charred documents are completely extinguished prior to collection. If heat, embers or smoke are present, extinguish the charred documents by suffocation with minimal manipulation (e.g., covering with fire blanket or fire-proof container) and allow the documents to cool prior to collection.
- **8.2.2** A rigid, flat box padded with sheet-cotton batting or similar material can be used to immobilize and preserve the document.
- **8.2.3** If the intent of collecting the document includes analysis for volatile substances, such as ignitable liquids, a non-breathable container shall be used (e.g., an unused paint can).
- **8.2.4** Charred documents are often found in multiple fragments. All available fragments of the charred document shall be collected.
- **8.2.5** Scene investigators shall not attempt to separate or flatten documents on scene.

8.2.6 Charred documents shall be transported in-person to the laboratory. Documents could potentially be damaged during the mailing or shipping process, therefore, to prevent damage inperson delivery is preferred. If in-person delivery to the laboratory is not possible, an FDE shall be consulted for packaging and transportation methods.

9 Liquid-Soaked Documents

9.1 General

Wet documents are fragile and shall be handled delicately. Photographs shall be taken upon discovery of the document and prior to collection of the document.

9.2 Collection

- **9.2.1** Collecting a wet document on scene should be done by sliding a clean, flat, rigid material (e.g., cardboard sheet such as the back of a notebook) underneath the item. The wet document should be transported atop the rigid surface to a location where it can be dried.
- **9.2.1.1** Once dried, documents shall be packaged in a breathable container.
- **9.2.1.2** If attempts to collect a saturated document with a flat, rigid material would result in damage, the document should be collected by adhering the exposed surface to a non-woven polyester fabric (e.g., Hollytex®b or Reemay®c) as the document is removed.
- **9.2.2** If the intent of collecting the document includes analysis for volatile substances, such as ignitable liquids, a non-breathable container shall be used (e.g., an unused lined paint can).
- **9.2.2.1** A document suspected of being saturated with a volatile substance shall not be dried.

9.3 Handling Precautions

- **9.3.1** If the document is submerged in a liquid and there are concerns with the document fragility or integrity, the investigator should collect the document submerged in the liquid in a leakproof container. After collection, the investigator should contact an FDE to get advice on whether the document should be maintained in the liquid, frozen, or otherwise preserved.
- **9.3.2** When necessary, separating or unfolding a document should be done by an FDE or under their direction to minimize further alterations or damage.

9.4 Drying

9.4.1 The scene investigator shall evaluate liquid soaked documents to determine the appropriate drying actions to take prior to drying the documents. Special considerations should be taken when drying wet, folded or multiple page documents as they can stick together.

^b This term is used as an example only, and does not constitute an endorsement of this product by the AAFS Standards Board.

^c This term is used as an example only, and does not constitute an endorsement of this product by the AAFS Standards Board.

- **9.4.1.1** An FDE should be consulted prior to drying or separating wet documents in complex circumstances (e.g., large mass of documents, presence of blood or other obscuring liquid, presence of solvent or bleaching liquid).
- **9.4.1.2** If the scene investigator will be unfolding or separating wet documents prior to drying, the documents should be preserved through photography in the event the documents are damaged during the process.
- **9.4.2** Documents shall be dried in a secure location.
- **9.4.3** To dry a wet document, place the document atop an absorbent surface (e.g., a clean paper towel, blotting paper) or a surface that provides for airflow (e.g., a clean, non-metallic window-type screen). Trace evidence shall be retained.
- **9.4.4** When documents are dried with a surface utilizing airflow, clean paper should be placed underneath the item to catch possible trace evidence. Trace evidence shall be retained.
- **9.4.5** Drying cabinets or fume hoods can be used to dry items.

9.5 Packaging

- **9.5.1** After drying, the document shall be packaged within a clean, dry, rigid, and breathable material such as cardboard.
- **9.5.2** The document should be packaged in a manner that secures or pads the document within the container.
- **9.5.3** If the original packaging used for collection is not suitable, the item shall be placed in new, clean breathable packaging and the original packaging shall be retained as evidence.

10 Torn, Cut, or Broken Documents

10.1 General

Physical fit examinations consist of the evaluation, examination, and comparison of broken, cut, torn, or otherwise separated items to determine if two or more pieces were at one time a single source. Examples of document evidence for physical fit examination can include but are not limited to shredded paper, ripped checks, or torn typewriter ribbons. Handwriting, printing, surface markings, or visible defects can continue across the separated items and can be useful for association between different fragments.

10.2 Collection

- **10.2.1** At the scene, all relevant material (e.g., torn paper and pad) shall be collected.
- **10.2.2** The scene investigator shall be mindful of fragile edges and prevent the loss, damage, or contamination of exposed ends that can be capable of fitting together. To minimize damaging the fragile edges of the pieces, no attempt shall be made to reassemble questioned evidence items prior to formal examination.

NOTE Small actions such as smoothing out wrinkled paper could dislodge critical fibers needed for an examination.

10.3 Shredded Paper

- **10.3.1** Shredded paper shall be collected with a minimum of disturbance to avoid further mixing.
- **10.3.2** Shredded paper that is found in separate locations shall not be packaged together.
- **10.3.3** When possible, the entire shredder should be collected intact.
- **10.3.3.1** When the entire shredder cannot be collected, fragments contained within the shredder blades shall be collected.
- **10.3.4** To avoid potential loss of evidence, shredded paper should be transported within the container in which it is found on scene.
- **10.3.4.1** When found within a shredder, the bag or container which collects the shredded paper should be used to collect and transport the fragments.
- **10.3.4.2** When the collection of the bag or container is not possible, the scene investigator shall ensure that commingled fragments stay together upon collection.



Annex A (informative)

Bibliography

The following bibliography is not intended to be an all-inclusive list, review, or endorsement of literature on this topic. The goal of the bibliography is to provide examples of publications addressed in the standard.

- 1] ANSI/ASB Standard 044, Standard for Examination of Documents for Indentations. 2019. 1st Ed.d
- 2] ANSI/ASB Standard 127, Standard for the Preservation and Examination of Charred Documents. 2022. 1st Ed. d
- 3] ANSI/ASB Standard 128, Standard for the Preservation and Examination of Liquid Soaked Documents. 2022. 1st Ed.c

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