

**QD SOP-8 Procedure for Examination of Handwritten  
Items**

Document ID: 2208  
Revision: 2  
Effective Date: 4/13/2016  
Status: Retired  
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*Approved by Director: Dr. Guy Vallaro*

**Purpose:** Procedure for Examination of Handwritten Items

The purpose of this procedure is to provide guidance for the examinations and comparisons involving handwritten items and related procedures. These procedures would be applicable whether the examination and comparison is of Questioned and Known evidence items or of exclusively Questioned evidence items. These procedures include evaluation of the sufficiency of the material provided (Questioned, or Known, or both) for examination. The methods used in a case will depend upon the nature of the material available for examination.

Items submitted for examination may have inherent limitations that can interfere with the methods in this procedure. These limitations should be noted and recorded on worksheet (Quality Record DOC-2). These limitations may be due to the submission of non-original documents, limited quality or quantity, or condition of the items submitted for examination. Other limitations can come from the quantity or comparability of the writing submitted, and include absent characters, dissimilarities, or limited individualizing characteristics. Consideration should be given to the possibility that various forms of simulations, imitations, and duplications of handwriting can be generated by computer and other means.

**Responsibility:**

Forensic Science Examiners assigned to the Questioned Documents Unit or performing casework in the Unit.

**Equipment:**

1. Lighting (natural, fluorescent) and alternate light sources  
Lighting may include the use of transmitted, side or vertical lighting to improve the ability to view fine details.
2. Stereomicroscopes with fiber-optic lighting
3. Scanners
4. Cameras

**Procedure:**

The Questioned Document Unit will usually be the first Unit to receive document-type evidence for analysis. In the event that another Unit examined this evidence first, it should be understood that there may be analysis methods that may limit the examination of handwriting on these documents. Prior handling, testing, or chemical processing (for example, for latent prints) or swabbing of a document may interfere with the ability of the examiner to see certain characteristics.

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1. Beginning of examination: Refer to QD SOP-3 for guidance on transferring, LIMS documentation and evidence identification.
2. All examination steps, relevant observations, and results shall be documented on QR-DOC-2 and/or case notes. If the examiner notes that the submitted evidence is of limited quality or quantity, the examiner or Case Management Unit may need to contact the submitting agency to acquire more evidence. If it is noted that the evidence received has been handled or chemically treated that limits or prevents the examination, the submitting agency may be contacted to communicate this information. (see GL20)
3. During the examination procedure, the examiner may use different types of lighting and magnification (such as stereomicroscopes) to examine the documents and the writing present on the documents. The documents may be scanned or photographed to preserve the writing and for incorporation into the case notes.
4. Determine whether the examination is a comparison of Questioned writing to Known writing or a comparison of Questioned writing to Questioned writing.
5. At various points in these procedures, if the examiner determines that a particular feature is not present or that an item is lacking in quality or comparability may indicate that the examiner should discontinue or limit the procedure(s). It is at the discretion of the examiner to discontinue the procedure at that point and report accordingly or to continue with the applicable procedures to the extent possible. The reasons for such a decision shall be documented on Quality Record DOC-2 and/or in the case notes.

Questioned Writing:

1. Determine whether the Questioned writing is original writing. If it is not original writing, request the original.

If the original documents are not available, evaluate the quality of the best available reproduction to determine whether the significant details of the writing have been reproduced with sufficient clarity for comparison purposes and proceed to the extent possible. If the writing has not been reproduced with sufficient clarity for comparison purposes, discontinue these procedures and report accordingly.

2. Determine whether the Questioned writing appears to be distorted. If it appears to be distorted, determine whether it is possible to establish that the apparently distorted writing is natural writing.

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If it is not natural writing, or if it is not possible to establish whether the apparently distorted writing is natural writing, determine whether the apparently distorted writing is suitable for comparison and proceed to the extent possible. If the available Questioned writing is not suitable for comparison, discontinue these procedures and report accordingly.

3. Evaluate the Questioned writing for the following:
  - 1) **Type of Writing**—If there is more than one type of writing within the Questioned writing, separate the Questioned writing into groups of single types of writing.
  - 2) **Internal Consistency**—If there are inconsistencies within any one of the groups created (for example, suggestive of multiple writers), divide the group(s) into subgroups, each one of which is consistent.
  - 3) Determine the natural range of variation of the writing for each group or sub-group of the Questioned writing.
  - 4) Determine presence or absence of individualizing characteristics.

Known Writing:

1. Determine whether the Known writing is original writing. If it is not original writing, request the original.

If the original documents are not available, evaluate the quality of the best available reproduction to determine whether the significant details of the writing have been reproduced with sufficient clarity for comparison purposes and proceed to the extent possible. If the writing has not been reproduced with sufficient clarity for comparison purposes, discontinue these procedures and report accordingly.

2. Determine whether the Known writing appears to be distorted. If it appears to be distorted, determine whether it is possible to establish that the apparently distorted writing is natural writing.

If it is not natural writing, or if it is not possible to establish whether the apparently distorted writing is natural writing, determine whether the apparently distorted writing is suitable for comparison and proceed to the extent possible. It should be determined whether additional Known writing would be of assistance, and if so, it should be requested. If the available Known writing is not suitable for comparison, discontinue these procedures and report accordingly.

3. Evaluate the Known writing for the following:
  - 1) **Type of Writing**—If there is more than one type of writing within the Known writing, separate the Known writing into groups of single types of writing.

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**State of Connecticut Department of Emergency Services and Public Protection  
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- 2) **Internal Consistency**—If there are unresolved inconsistencies within any of the groups (for example, suggestive of multiple writers), contact the submitter for authentication. If any inconsistencies are not resolved to the examiner's satisfaction, discontinue these procedures for the affected group(s), and report accordingly.

4. Determine the natural range of variation of the writing for each group of the Known writing
5. Determine presence or absence of individualizing characteristics

Comparison of Questioned to Known or Questioned to Questioned:

1. Evaluate the comparability of the bodies of writing {Questioned writing to Known writing (K to Q) or Questioned writing to Questioned writing (Q to Q)}.
2. If the bodies of writing are not comparable, discontinue comparison and request comparable Known writing, if appropriate or available. The submitting agency may be contacted and referred to try to get a handwriting exemplar. This exemplar form (QR – QD HE) may be sent to the agency or downloaded from the DSS website.

If comparable Known writing is made available or is comparable, continue to step 3. If comparable Known writing is not made available, discontinue examination and report accordingly.

3. Conduct a side-by-side comparison of comparable portions of the bodies of writing. Side-by-side comparisons may include the use of printed materials or use of computers and software.
4. Determine whether there are differences, absent characters, and similarities. Evaluate their significance individually and in combination.
5. Determine if there is a sufficient quantity of writing (Questioned writing, or Known writing, or both). If writing (Questioned writing, or Known writing, or both) is not sufficient in quantity for elimination or identification, continue the comparison to the extent possible. When appropriate, request more Known writing. If more Known writing is made available, evaluate the comparability of the bodies of writing and continue if appropriate.
6. Analyze, compare, and evaluate the individualizing characteristics and other potentially significant features present in the comparable portions of the bodies of writing.

Among the features to be considered are elements of the writing such as abbreviation; alignment; arrangement, formatting, and positioning; capitalization; connectedness and disconnectedness;

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cross strokes and dots, diacritics and punctuation; direction of strokes; disguise; embellishments; formation; freedom of execution; handedness; legibility; line quality; method of production; pen hold and pen position; overall pressure and patterns of pressure emphasis; proportion; simplification; size; skill; slant or slope; spacing; speed; initial, connecting, and terminal strokes; system; tremor; type of writing; and range of variation. Other features such as lifts, stops and hesitations of the writing instrument; patching and retouching; slow, drawn quality of the line; unnatural tremor; and guide lines of various forms should be evaluated when present. Potential limiting factors such as age; illness or injury; medication, drugs or alcohol (intoxication or withdrawal); awkward writing position; cold or heat; fatigue; haste or carelessness; nervousness; nature of the document, use of the unaccustomed hand; deliberate attempt at disguise or auto-forgery should be considered.

7. Evaluate the similarities, differences, and limitations. Determine their significance individually and in combination. Note all similarities, differences and limitations in the case notes.
8. Form a conclusion based on results of the above analyses, comparisons, and evaluations.

Reporting Conclusions and Opinions:

The conclusion(s) or opinion(s) resulting from the procedures in this standard may be reached once sufficient examinations have been conducted. The number and nature of the necessary examinations is dependent on the question at hand. The bases and reasons for the conclusion(s), or opinion(s), should be included in the examiner's documentation and reported as suggested in QD SOP-7.

**Sources of Error:** not applicable

**References:**

SWGDOC Terminology for Expressing Conclusions of Forensic Document Examiners  
SWGDOC Terminology Relating to the Examination of Questioned Documents  
SWGDOC Standard for Examination of Handwritten Items