

Age Determination of Documents

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Age Determination of Documents

1 INTRODUCTION

This procedure is intended to be utilized by trained personnel to ensure consistency and transparency of methods employed during the age determination of document evidence received in the Questioned Documents Unit (QDU).

2 SCOPE

These procedures will be used by a forensic document examiner to conduct examinations to determine the approximate age of a document(s), or the approximate age of the entries contained on a specific document(s).

3 EQUIPMENT

- 150-watt tungsten halogen light, or comparable equipment
- 30-watt transmitted light box, or comparable equipment
- Hand magnifier (minimum magnification, 4X)
- Stereomicroscope (minimum magnification, 6.3X), or comparable equipment
- Keyence VHX-2000E Digital Microscope, or comparable equipment
- Foster and Freeman Video Spectral Comparator VSC), or comparable equipment
- Hyperspectral imaging equipment
- Reference materials
- Flatbed scanner or equivalent

4 PROCEDURE

The following procedures need not be performed in the order given.

- A. Visually examine the document and/or its entries using lighting and magnification sufficient to allow fine detail to be distinguished. Note any physical characteristics that may assist in the determination of a manufacturing date, as necessary.
- B. Using transmitted light, analyze the document for watermarks. If no watermark is present, record the results in the case records. If a watermark is present, refer to [DOC-225 Conducting a Watermark Search](#).
- C. Using magnification and lighting, determine if mechanical impressions are present on the document. If impressions are observed, refer to [DOC-205 Checkwriter Examinations](#), [DOC-218 Stamped Impressions/Dry Seal Examinations](#), or [DOC-223 Typewriting Examinations](#), as necessary.
 1. If the impressions are typewritten, evaluate the typewritten impressions to establish the following parameters:
 - Technology of typewriting (e.g., type bar, printwheel, single element)
 - Style of type (e.g., Courier, Prestige)
 - Ribbon/correction technology (e.g., type of ribbon, correction method, and/or opaquing fluid)
 2. To determine possible dating parameters and how they relate to the age/purported age of a document in question, review reference materials to

- establish introduction dates for the typewriting characteristics observed. Refer to [DOC-223 Typewriting Examinations](#).
3. If impressions are checkwriter impressions, evaluate the checkwriter impression to establish the following parameters:
 - Technology of the checkwriter (ribbon mechanism or liquid ink)
 - The prefix, printing elements, slugs, payee perforators, and perforations utilized in the production of the checkwriter impression(s).
 - Classification of the checkwriter
 4. To determine possible dating parameters and how they relate to the age/purported age of a document in question, review reference materials to establish introduction dates for the checkwriter impressions observed. Refer to [DOC-205 Checkwriter Examinations](#).
- D. Using [DOC-209 Indented Writing Examinations](#), analyze the document for indented writing.
 - E. Visually examine the document to determine if writing mediums were utilized (refer to [DOC-230 Initial Assessment of Documentary Evidence](#), section 4.3.2). Use reference materials such as books, journals, manufacturer samples, and the internet to establish the introduction date of the particular writing medium(s) in question.
 - F. Visually examine the document to determine if any printing processes were utilized in the preparation of the document. If so, refer to [DOC-207 Graphic Arts, Photocopier, and Printer Examinations](#). Utilize reference materials such as books, journals, the internet, manufacturer samples, and QDU files to determine the introduction date of that particular printing technology.

4.1 Conclusions

- Once examinations have been completed, reports may include one or more of the following types of conclusion(s), opinion(s), and other findings, as applicable:
 - Consistent with the purported date(s)
 - This opinion is based on observations of physical/optical characteristics (e.g., optical brighteners, watermarks, printing process, typewriting) which earliest date(s) or date range of manufacture are consistent with or prior to the purported date of the document.
 - Inconclusive
 - The examiner cannot determine whether the document is or is not consistent with the purported date of the document, or the earliest date(s) or date range of manufacture cannot be determined. This is due to limitations present, such as a lack of features which would assist in an age determination. This opinion requires an explanation of limiting factors.
 - Not consistent with the purported date(s)
 - This opinion is based on observations of physical/optical characteristics which earliest date(s) or date range of manufacture

are inconsistent with, or later than, the purported date of the document.

- If there is not a purported date for the item(s) in question, then a statement regarding the earliest date(s), and/or date range of manufacture will be reported, if applicable.

4.2 Records

- The case records will include any copies of reference material, image files, printouts, photographs, or drawings/images of distinguishing characteristics observed during the examination process that support the findings or conclusions.

5 LIMITATIONS

- The following factors could affect the examination process and/or the results rendered:
 - Non-original items
 - Poor condition of the questioned and/or known items
 - Lack of a sufficient quantity of questioned and/or known items
 - The completeness of information contained in the reference materials such as books, journals, the internet and QDU files
 - Lack of features in the item(s) that would assist in age determination

6 SAFETY

Standard precautions should be followed for the handling of documents contaminated with chemical and biological materials. These documents are potentially hazardous and will be handled and processed in specifically designated areas within QDU space. QDU personnel may refer to the [FBI Laboratory Safety Manual](#) for additional guidance.

7 REVISION HISTORY

Revision	Issued	Changes
08	01/14/2022	The entire document was reformatted and edited for clarity related to the new quality document requirements.
09	06/30/2023	Updated conclusion from “No Conclusion” to “Inconclusive” and made some changes for clarity.
10	01/02/2025	Updated to remove examinations not currently offered by USSS and added additional information regarding checkwriter impressions to section 4 C.