



ATF-LS-14 Paper Examination	Published Online: March 2018
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PRINCIPLE:

To determine, if possible, whether or not a given computer and/or printer was used to make the questioned entries.

SPECIAL HANDLING:

1. Evidence containing body fluids that is received in the Document Section should be dried under a hood and then repackaged in a paper box or envelope. Items should be handled in order to prevent examiner exposure and preserve DNA, if requested by the submitter. Contents should be documented on the front of the packaging.
2. When handling a contaminated document the examiner must have on a lab coat and rubber gloves. The evidence should be opened and examined only under biohazard safety hood. After examination the document should be heat sealed. The work area should be disinfected and the lab coat placed in a biohazard bag and sent to the laundry. The gloves must be placed in a properly labeled biohazard disposal after the examination is concluded.
3. Evidence submitted requesting a latent print examination should be placed in a plastic or mylar sheet protector covering the evidence. In this case, item and examiner identifying marks should be placed on the protective sheet.

SPECIMEN(S):

1. An item containing an unknown/questioned entry.
2. Sufficient standards from a suspect printer and suspect computer, if available

SUPPLIES REQUIRED:

Paper, photocopies of evidence or photocopied or photograph enlargements of evidence

APPARATUS REQUIRED:

Stereoscopic microscope, sufficient light sources, computer, printer

CALIBRATION REQUIREMENTS:

No special calibration beyond routine maintenance is required.

PROCEDURE:

1. The evidence is marked with the appropriate item number as it appears on the Laboratory transmittal sheet, the case number, and the examiner's initials or other mark. Items on the

transmittal sheet may be amended by adding “Q” and “K” identifiers. Such amendments should be notated on a copy of the transmittal placed in the case jacket and the contributor should be notified via phone or email.

2. Make a visual examination of the paper (both with and without the microscope) for the following features:
 - a. Color, brightness and opacity
 - b. Texture or pattern on the paper
 - c. Smoothness
 - d. Web or wove sides
 - e. Watermarks
 - f. Weight and basis weight
 - g. Size and shape of the paper
 - h. How the edges were cut
 - i. Fiber direction
3. Using the VSC 2000 and/or VSC 2000HR and/or Laser, examine the paper for the presence of the following:
 - a. Fibers which fluoresce
 - b. Fluorescence of filler, starch, etc. materials
 - c. Wetting patterns

If desired by the examiner, a pH pen can be used to indicate whether the paper has been produced using an acid or basic process. It must be remembered that this may be considered a destructive process.

- a. If desired, an ESDA examination can be made of the paper.
 - b. If more information needs to be obtained from the watermark for dating purposes, attempt to locate the manufacturer and obtain any relevant dating information. Lockwood's Directory can be helpful in obtaining the manufacturer's information.
4. Formulate a conclusion based on all the evidence examined.
5. A complete technical review is conducted by another qualified examiner and documented and initialed on Technical Case File Review Form.
6. Record findings in written form and have results recorded on a formal laboratory report.
7. The bases and reasons for the conclusion(s), opinion(s), or finding(s) should be included either on the examiner's worksheet or on photocopies and may be also included in the report.

DOCUMENTATION:

Work notes consisting of photocopies of a representative sample of the significant characteristics of the evidence on which the examiner marks similarities and/or dissimilarities together with the written observations of the examiner. Measurements from any test grids should be included.

A Questioned Document Worksheet will accompany each case and should include the equipment and/or procedures used, the identifying or eliminating features, and the results of analysis.

REFERENCES:

ASTM 2331 (current edition) Standard Guide for Examination of Altered Documents

Various professional papers written on various aspects of computer printers.