



# Standard Guide for Examination of Rubber Stamp Impressions<sup>1</sup>

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## 1. Scope

1.1 This guide provides procedures that should be used by forensic document examiners (Guide E444) for examinations and comparisons involving rubber stamps and their impressions.

1.2 These procedures are applicable whether the examination(s) and comparison(s) is of questioned and known items or of exclusively questioned items.

1.3 These procedures include evaluation of the sufficiency of the material available for examination.

1.4 The particular methods employed in a given case will depend upon the nature and sufficiency of the material available for examination.

1.5 This guide may not cover all aspects of particularly unusual or uncommon examinations.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

E444 Guide for Scope of Work of Forensic Document Examiners

E1732 Terminology Relating to Forensic Science

E2195 Terminology Relating to the Examination of Questioned Documents

## 3. Terminology

3.1 *Definitions*—For definitions of terms in this guide, refer to Terminology E1732 and Terminology E2195.

3.2 *Definitions of Terms Specific to This Standard:*

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee E30 on Forensic Sciences and is the direct responsibility of Subcommittee E30.90 on Executive.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.2.1 *coincidental peripheral printing, n*—printing resulting from an impression of unintended printing areas, often on the periphery, of a stamp. This may be due to the manufacturing process or the stamping technique.

3.2.2 *rubber stamp, n*—any of a wide variety of hand printing devices made of many materials not necessarily rubber. Syn.—*hand stamp, cachet*.

## 4. Significance and Use

4.1 The procedures outlined here are grounded in the generally accepted body of knowledge and experience in the field of forensic document examination. By following these procedures, a forensic document examiner can reliably reach an opinion concerning whether two or more impressions have a common origin or if a rubber stamp impression was created by a specific rubber stamp.

## 5. Interferences

5.1 Items submitted for examination may have inherent limitations that can interfere with the procedures in this guide. Limitations should be noted and recorded.

5.2 Limitations can be due to submission of non-original documents, limited quantity or comparability, or condition of the items submitted for examination (for example, impressions made with over-inked or inadequately inked stamps, partially imprinted impressions, or variations in surface texture). Such features are taken into account in this guide.

5.3 The results of prior storage, handling, testing, or chemical processing (for example, for latent prints) can interfere with the examination of certain characteristics. Whenever possible, document examinations should be conducted prior to any chemical processing. Items should be handled appropriately to avoid compromising subsequent examinations.

5.4 Consideration should be given to the possibility that a rubber stamp can be manufactured which duplicates the impressions of another stamp, and that various forms of simulations, imitations, and duplicates of rubber stamps or rubber stamp impressions can be generated by computer and other means.

## 6. Equipment and Requirements

6.1 Appropriate light source(s) of sufficient intensity to allow fine detail to be distinguished.

NOTE 1—Natural light, incandescent or fluorescent sources, or fiber optic lighting systems are generally utilized. Transmitted illumination, side lighting, and vertical incident lighting have been found useful.

6.2 Magnification sufficient to allow fine detail to be distinguished.

6.3 A stamp pad, stamp pad ink and adequate smooth (bond) paper or other suitable substrate to collect specimens from the rubber stamp if available.

6.4 Other apparatus as appropriate.

6.5 Imaging or other equipment for recording observations as required.

6.6 Sufficient time and facilities to complete all applicable procedures.

## 7. Procedure

7.1 All procedures shall be performed when applicable and noted when appropriate. These procedures need not be performed in the order given.

7.2 Examinations performed, relevant observations, and results shall be documented.

7.3 At various points in these procedures, a determination 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.

7.4 Determine whether the submitted questioned impression(s) were produced by a rubber stamp. If not a rubber stamp impression (original or copy), discontinue examination and report accordingly.

7.5 Determine whether the examination is a comparison of questioned impressions; a comparison of a questioned impression(s) with a known impression(s); or a comparison of a questioned impression(s) with a rubber stamp(s).

7.6 Determine whether the submitted questioned impression(s) is suitable for comparison. If it is not suitable for comparison, discontinue the procedure and report accordingly. Factors that affect the suitability include clarity, detail, degree of inking or condition of the document.

NOTE 2—Examination of the original is preferable, and consideration should be given to obtaining the original, if not submitted.

NOTE 3—Limited sufficiency and comparability of the impressions can be a restrictive factor in an examination and its conclusions but does not necessarily require the discontinuation of the examination.

7.7 If no known specimen impressions or rubber stamp(s) were submitted, go to 7.13.

7.8 If a known document(s) is submitted, determine whether the known document(s) is suitable for examination, or comparison, or both. If it is not suitable, discontinue the procedure and report accordingly. Factors that affect the suitability include clarity, detail, or condition of the document.

7.9 If the original is not submitted, evaluate the quality of the best available reproduction to determine whether signifi-

cant details have been reproduced with sufficient clarity for comparison purposes and proceed to the extent possible. If the reproduction is not of sufficient clarity for comparison purposes, discontinue these procedures and report accordingly.

7.10 If a rubber stamp(s) is submitted, its condition should be noted (for example, clean, dirty, inked, worn, damaged).

7.10.1 Note, when applicable, class characteristics (for example, typeface design and size). Consideration should be given to sampling ink from the stamp prior to taking exemplars.

7.10.2 Note any visible features that reproduce on the impression.

7.10.3 Prepare appropriate specimens, as needed.

7.11 Determine if any of the known specimen impressions are suitable for comparison.

7.12 If none of the known specimen impressions are suitable for comparison and no others are obtained, discontinue these procedures and report accordingly.

7.13 Conduct a side-by-side comparison of the questioned impressions, or the questioned impression to the known impressions and/or to the rubber stamp(s).

7.13.1 Compare class characteristics (for example, size, type style, text, shape). If different, discontinue and report accordingly.

7.13.2 Compare individualizing characteristics in common such as wear and damage defects, reproducible blemishes, impression voids, improper and extraneous inking, or coincidental peripheral printing.

7.14 Evaluate similarities, differences, and limitations. Determine their significance individually and in combination.

7.15 Reach a conclusion and report accordingly.

## 8. Report

8.1 Conclusion(s), opinion(s), or findings resulting from the procedures in this guide may be reached once sufficient examinations have been conducted. The number and nature of the necessary examinations is dependent on the question at hand.

8.2 The bases and reasons for the conclusion(s), opinion(s), or finding(s) should be included in the examiner's documentation and may also appear in the report.

8.3 *Identification*—When the examination reveals no significant, inexplicable differences between two or more items, and there is agreement in all individualizing characteristics, an identification is appropriate (that is, compared impressions or compared impression and rubber stamp contain substantial significant similarities; there are no differences; and no limitations associated with absent characters; and any possibility of a duplicate rubber stamp can be eliminated).

8.4 *Elimination*—If significant, inexplicable differences between two or more items are found at any level of the analyses, an elimination is appropriate (that is, the impressions contain substantial significant, inexplicable differences). There may be similarities.

8.5 *Qualified Opinions*—When there are limiting factors and the examination reveals similarities or differences of limited significance between two or more items, the use of qualified opinions can be appropriate (that is, the impressions or observed features contain limited similarities or differences; or limitations associated with absent characters, individualizing characteristics, or distorted impressions are present; or limitations associated with the possibility of the existence of a duplicate rubber stamp; or a combination of these). This opinion requires explanation of the limiting factors.

8.6 *No Conclusion*—When there are significant limiting factors, and the examination reveals no significant differences, a report that no conclusion can be reached is appropriate (that is, the impressions or observed features contain insufficient significant similarities and insufficient differences). This opinion requires explanation of the limiting factors.

## 9. Keywords

9.1 forensic sciences; questioned documents; rubber stamp impressions; rubber stamps

## REFERENCES

- (1) Casey, M.A., “The Individuality of Rubber Stamps,” *Forensic Science International*, Vol 12, 1978.
- (2) Ellen, D., *The Scientific Examination of Documents—Methods and Techniques*, 2nd ed., Chapter 8, Taylor & Francis, Ltd., London, 1997.
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- (5) Kelly, J.S., *Forensic Examination of Rubber Stamps*, Charles C. Thomas Publishing, Springfield, IL, in press.
- (6) Levinson, J., and Perelman, B., “Examination of Cachet Impressions,” *Journal of Forensic Sciences*, Vol 28, No. 1, 1983, pp. 235–241.

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