

## IB2: Recovering Indented Writing

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### I. INTRODUCTION

All threatening correspondence, anonymous letters, altered documents and other requested items will be examined for indented writing impressions when deemed suitable or necessary by the Questioned Document Examiner. Preliminary examination may be conducted with oblique lighting; however ESDA (Electrostatic Detection Apparatus) is the standard procedure because it is more sensitive to most impressions than visual examination.

### II. INSTRUMENTATION

Magnification (i.e. Stereo Microscope, Hand Magnifier or VSC 6000/HS) with oblique lighting and ESDA (See Appendix VI).

### III. MINIMUM STANDARDS & CONTROLS

See Appendix I.

### IV. EXAMINATION PROCEDURE

#### A. Oblique Lighting

1. Examine document with strong fiber optic light at a low angle of incidence using various sources of magnification if necessary to reveal any indented writing impressions.
2. Conducting this examination in a dark room reduces the incident light and therefore usually provides the best results.
3. If this method provides a better result than ESDA processing then record the image with photography or the VSC 6000/HS.

#### B. ESDA

The operation manual provides a detailed guide to operating the equipment. The ESDA contains a high voltage transformer so care must be taken when in operation. Note: ESDA processing needs to be done prior to fingerprint processing.

1. Place the document and a known control standard in the humidity chamber for 1-5 minutes.
2. Place the document and the known control standard on the vacuum bed of the ESDA.
3. Turn the vacuum on.
4. Cover the items with the thin transparent film and cut.
5. Charge the surface using the corona unit.
6. Develop utilizing the ESDA with either the cascade or hood technique ensuring that the control document and the questioned document are developed evenly.
7. Once the image of the known control standard is adequately developed, cover the image with adhesive plastic film and lift off the vacuum bed.
8. The procedure may be repeated as necessary.
9. All ESDA lifts will be treated as evidence. The lifts will be stored with the associated evidence and noted on the corresponding property sheet.

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- C. Render conclusions based on the result of the examinations conducted in report form. If indented writing is found and decipherable then the information should be included in the report.

### REFERENCES

1. ASTM E 1658-04, *Standard Guide for Expressing Conclusions for Forensic Document Examiners*
2. ASTM E2291-03 Standard Guide for Indentation Examinations
3. Foster and Freeman, LTD., ESDA Equipment Operations Manual.
4. Foster and Freeman, LTD. VSC 6000 Video Spectral Comparator Hardware Manual
5. Foster and Freeman, LTD. VSC 6000 Video Spectral Comparator Software Manual, November 2011
6. Kelly, J. S., Lindblom, B. S., *Scientific Examination of Questioned Documents*, Taylor & Francis Group, Boca Raton, FL, Chapters 26 through 29.
7. Questioned Document Section Article Library

<u>History</u>	<u>Issue Date</u>	<u>Section(s) Revised</u>
Original Issue	11/18/99	N/A
1 <sup>st</sup> Revision	1/21/04	B6 – B9
2 <sup>nd</sup> Revision	07/13/05	A1, B4, B6, B9, C and References
3 <sup>rd</sup> Revision	4/15/11	II, 4C and References
4 <sup>th</sup> Revision	6/2/11	Added Division to Header and Issuing Authority to Footer
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### Approval

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### Issuance

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