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## **Guidelines for Report Writing in Bloodstain Pattern Analysis**

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## Guidelines for Report Writing in Bloodstain Pattern Analysis

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## Foreword

This document provides guidelines for report writing in Bloodstain Pattern Analysis (BPA). In addition, it provides guidance regarding statements to be avoided in the report. It has been prepared by the Organization of Scientific Area Committees (OSAC) Subcommittee on Bloodstain Pattern Analysis based on a document originating with the Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN).

All hyperlinks and web addresses shown in this document are current as the publication date of this standard.

DRAFT

**Keywords:** *report, case information, methods, limitations, assumptions, observations, analysis, conclusions, review*

**Abstract:** ~~The purpose of this document is to provide a guide for the report content and issuance of Bloodstain Pattern Analysis (BPA) reports. It is not intended to set forth a specific format for report writing.~~

## Table of Contents

1	Scope .....	1
2	Normative References .....	1
3	Terms and Definitions .....	1
4	Requirements .....	1
4.1	Preamble .....	1
4.2	Report Elements.....	2
4.3	Review and Issuance .....	6
4.4	Other Considerations .....	6
	Annex A (informative) Bibliography .....	8

DRAFT

# Guidelines for Report Writing in Bloodstain Pattern Analysis

## 1 Scope

This document provides guidelines for report writing in bloodstain pattern analysis (BPA). In addition, guidance is provided regarding statements to be avoided in the report.

## 2 Normative References

ASB Technical Report 033, *Terms and Definitions in Bloodstain Pattern Analysis*, First Edition, November 2017

## 3 Terms and Definitions

For purposes of this document, the following definitions apply.

### 3.1

#### **bloodstain pattern analysis terminology**

Refer to the ASB TR 033, *Terms and Definitions in Bloodstain Pattern Analysis* document for all terms specific to BPA.

### 3.2

#### **shall**

Used to indicate that a provision is mandatory.

### 3.3

#### **should**

Used to indicate that a provision is not mandatory, but recommended as good practice.

## 4 Requirements

### 4.1 Preamble

This document summarizes the elements to be contained within a written BPA report. General considerations when generating BPA reports include the following.

- The report shall be written clearly without misleading language or jargon.
- The report format shall be designed to minimize confusion.
- Reports authored by multiple parties shall identify and define the role of each contributor.
- Headings should be standardized within the agency.
- ASB TR 033 shall be used for bloodstain pattern analysis terminology, all terminology references shall be defined and referenced. This may be accomplished by the use of footnotes, an appendix or glossary, or defined within the body of the report.
- When the conclusions rely in part on the results of examinations reported by third parties (e.g., DNA, pathology, and fingerprint) a reference to these results shall be included in the BPA report.

Quotations from associated documents (e.g., witness statements) shall be clearly defined and referenced.

- Case-related experimentation and findings shall be reported.
- The page number should appear on each page of the report and the total number of pages should be defined.
- Abbreviations and acronyms not commonly recognized should be fully defined upon first use (e.g., Bloodstain Pattern Analysis [BPA]).
- ~~Any corrections or~~ additions to the original report shall be issued as a supplemental report.
- Any corrections to the original report shall be identified and issued as an amended ~~or~~ supplemental report.

## **4.2 Report Elements**

### **4.2.1 Title**

The report shall identify the subject matter of the document. For example:

- “Bloodstain Pattern Analysis Report,”
- “Report of Findings,”
- “Supplemental Report,”
- “BPA Case Experimentation Report.”

### **4.2.2 Case Identifier**

The report shall have a unique case identifier displayed on each page of the report. The requesting agency’s case identifier should be displayed on the first page.

### **4.2.3 Name and Address of Reporting Agency**

The name and address of the reporting agency shall be included.

### **4.2.4 Date of Report**

The date of the report shall be included.

### **4.2.5 Case Information**

The report should outline the background information pertinent to BPA and question(s) posed to the analyst during the course of the investigation and analysis. This should include, but is not limited to the following.

- Information supplied by submitting agency and when the information was supplied, that is, before, during or after the examination, analysis, and/or report.

- Medical/DNA information.
- Environmental conditions.
- Explanation of how the author(s) became involved in the case.
- Summary of case background and source(s) of this information.
- Name and address of the submitting agency or requesting officer.

#### 4.2.6 Items

**4.2.6.1** The report shall include a list of the items of evidence or materials reviewed during the bloodstain pattern analysis. This should include but is not limited to the following:

- unambiguous identification (e.g., item number, serial number, individual identifier(s), etc.);
- evidence examined: physical description (e.g., size, color, etc.);
- reported recovery location, if applicable;
- materials reviewed:
  - medical/autopsy reports,
  - laboratory reports,
  - investigative reports,
  - photographs.

**4.2.6.2** The extent to which the items are further described within the report may be case dependent (e.g., damp condition, moldy, soiled, fabric damage, fabric type, etc.).

**4.2.6.3** The date and manner of receipt of items ~~should~~shall be included in the report or case record.

#### 4.2.7 Location of Tests or Examinations

The report shall identify the locations where examinations took place. when not performed at the analyst's agency/laboratory. For example:

- “The scene was located at (address)...”
- “I examined the following items at (agency location) ...”

#### 4.2.8 Methods

The report should list the method(s) utilized in the examination. The extent of method description (or reference) in the report is agency and jurisdiction dependent. For example:

- “Phenolphthalin, a presumptive test for blood, was employed...”
- “An area of origin was determined utilizing a forensic software technique...”
- “Infrared photography was utilized...”

#### **4.2.9 Limitations and Assumptions**

The report shall include statements of any evidence limitations and assumptions (e.g., photographic review, evidence condition, lack of DNA testing, etc.). For example:

- “Limitations may exist when basing any conclusions on photographic evidence alone.”
- “The potential for contamination caused by multiple items packaged together limited the bloodstain pattern analysis.”
- “Numerous sampled bloodstains failed to yield DNA profiles and, as such, have restricted a more comprehensive analysis.”
- “All red brown stains are assumed to be blood.”

#### **4.2.10 Observations**

**4.2.10.1** The report shall include the observations recorded in the course of the BPA which provide the basis for the conclusions.

Each general location where observations are recorded should be addressed separately in this section. The subsections defined here will be case dependent. For example:

- crime scene divided into logical subsections (e.g., by room, areas within a room, etc.);
- victim/deceased;
- physical evidence (e.g., victim’s clothing, suspect’s clothing, etc.).

**4.2.10.2** The report should include descriptors of reported stains and stain patterns. The extent and manner of stain or pattern description is agency dependent. For example:

- “Numerous bloodstains less than “x” millimeters in size were present...”
- “Elliptical shaped bloodstains were present...”
- “A linear distribution of bloodstains was present...”

**4.2.10.3** References such as cardinal points shall be incorporated into the description of stain and pattern locations.

**4.2.10.4** Measurements—Measurements should be included in the report when needed to assist the reader in understanding observations and may be reported using the system commonly employed in that jurisdiction. Measurements utilized for calculations such as area of origin shall be included in the report or case record.

**4.2.10.5 Photographs**—Photographs should be utilized to assist in reporting of observations. If used in a report, photographs shall be identified and may be annotated. Any alteration to photographs utilized in a report shall be ~~noted~~maintained in the case record.

**4.2.10.6 Sketches**—~~If sketches, scene diagrams, or floor plans should be included if created. If are used, these as a basis for conclusions, they~~ shall be identified and referenced in the report. Sketches may be annotated.

**4.2.10.7 Absence of bloodstains**—The absence of bloodstains should be reported if relevant to the conclusions.

## **4.2.11 Analysis**

### **4.2.11.1 General**

Examinations conducted in the course of a BPA which provide a basis for the conclusions shall be included in the report.

### **4.2.11.2 Chemical applications**

The results of any chemical application (e.g., chemical enhancements, presumptive blood testing, etc.) shall be reported. For example:

- “Leuco-Crystal Violet (LCV) was applied to (location or item) and this revealed...”
- “Presumptive testing for blood was positive on the stains located on...”

### **4.2.11.3 Classification**

Any classified bloodstain patterns shall be included in the BPA report. The classification should reference the stain and pattern descriptors.

### **4.2.11.4 Collected Samples**

The location(s) of stain sample(s) collected by the analyst, if not ~~reported~~recorded elsewhere, shall be reported with reference to their unique identifier(s).

## **4.2.12 Case Conclusions**

When rendering case conclusions, the report shall include the findings drawn from the analysis and be based upon the information and observations previously presented in the report. Justification(s) shall be clearly stated in the conclusion. For example:

- “The directionality of the drip stains and flow patterns of blood observed on the clothing worn by the deceased indicated s/he was in an upright position while bleeding.”

## **4.2.13 Qualifying Statements**

A statement should be included acknowledging that, if information changes, the conclusions rendered in the original report may be affected. For example:

- “This report is based solely on the information and materials made available at this time and may be modified with the submission of new information.”
- “This statement is based on information provided to me during this investigation. If further information becomes available, (I/the analyst) may need to reappraise (my/the) findings and conclusions. If such a reappraisal were required, it would be more effective carried out in advance of any trial.”

#### **4.2.14 Signature**

Each report shall have the name and signature of the reporting analyst(s).

### **4.3 Review and Issuance**

Each report shall be subjected to a technical [peer] and administrative review prior to release. All review(s) shall be documented. All reviewer(s) and dates of review should be noted in the report. Reports should be issued prior to providing expert testimony.

### **4.4 Other Considerations**

#### **4.4.1 Unsubstantiated conclusions**

Unsubstantiated conclusions and opinions shall not be included. For example:

- “The bloodstains on the front door handle established the victim attempted to leave the residence.”
- “The victim was shot in bed while sleeping.”
- “The presence of back spatter indicated a non-jacketed round was used.”
- “Based on the extent of bloodstaining at the scene, the perpetrator would have been covered in blood.”
- “The cast-off pattern showed the assailant was right handed.”

#### **4.4.2 Omission of Information**

- Analysts shall not consciously omit information that does not support conclusion(s).

#### **4.4.3 Author’s Area of Expertise**

Statements made outside the author’s area of expertise shall not be included. For example:

- “The victim was not capable of purposeful movement due to the large volume of blood loss.”
- “The victim would not have been able to walk due to their blood alcohol level.”

#### **4.4.4 Use of Emotive or Biased Language**

Use of emotive or biased language shall not be included. For example:

- “The bloodstain patterns indicated this was a vicious attack.”
- “The presence of bloodstains on the clothing items worn by Ms. X showed she was the assailant in this brutal crime as indicated in the investigative reports.”

#### **4.4.5 Use of Unsubstantiated Data**

The use of unsubstantiated data shall not be included. For example:

- “The blood spatter on Mr. X’s clothing indicated he was less than two meters away from the victim at time of impact.”
- “Based upon the size of the bloodstain pattern on the bed, a minimum of two liters of blood was present.”
- “The presence of clotting within spatter stains showed that bleeding had commenced more than X minutes prior to impact.”

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**Annex A**  
(informative)

**Bibliography**

- 1] Scientific Working Group on Bloodstain Pattern Analysis: *Guidelines for Report Writing in Bloodstain Pattern Analysis*, issue date July 7, 2012.

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