

# **OSAC 2021-S-0011**

# **Standards for the Technical Review of Bloodstain Pattern Analysis Reporting**

Bloodstain Pattern Analysis Subcommittee  
Physics/Pattern Interpretation Scientific Area Committee (SAC)  
Organization of Scientific Area Committees (OSAC) for Forensic Science



## OSAC Proposed Standard

# OSAC 2021-S-0011

# Standards for the Technical Review of Bloodstain Pattern Analysis Reporting

Prepared by  
Bloodstain Pattern Analysis Subcommittee  
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### Disclaimer:

This OSAC Proposed Standard was written by the Bloodstain Pattern Analysis Subcommittee/Physics/Pattern Interpretation Scientific Area Committee of the Organization of Scientific Area Committees (OSAC) for Forensic Science following a process that includes an [open comment period](#). This Proposed Standard will be submitted to a standards developing organization and is subject to change.

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Any identification of commercial equipment, instruments, or materials in the Proposed Standard is not a recommendation or endorsement by the U.S. Government and does not imply that the equipment, instruments, or materials are necessarily the best available for the purpose.

To be placed on the OSAC Registry, certain types of standards first must be reviewed by a Scientific and Technical Review Panel (STRP). The STRP process is vital to OSAC's mission of generating and recognizing scientifically sound standards for producing and interpreting forensic science results. The STRP shall provide critical and knowledgeable reviews of draft standards or of proposed revisions of standards previously published by standards developing organizations (SDOs) to ensure that the published methods that practitioners employ are scientifically valid, and the resulting claims are trustworthy.

The STRP panel will consist of an independent and diverse panel, including subject matter experts, human factors scientists, quality assurance personnel, and legal experts, which will be tasked with evaluating the proposed standard based on a comprehensive list of science-based criteria.

For more information about this important process, please visit our website at: <https://www.nist.gov/topics/organization-scientific-area-committees-forensic-science/scientific-technical-review-panels>

Version No.	Issue Date	Section	Reason
2.0	April 4, 2023	--	Added to the OSAC Registry and publicly announced.
2.1	December 28, 2023	All	Format and font updates only. No content changes made.

## **Foreword**

This document provides standards for the technical review of Bloodstain Pattern Analysis (BPA) reporting.

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## Standards for the Technical Review of Bloodstain Pattern Analysis Reporting

### 1 Scope

This document is intended to be applicable to all reports containing BPA results, interpretations, or opinions. Written reports that include opinions based on professional judgment should undergo technical review.

### 2 Introduction

In addition to an administrative review, all bloodstain pattern analysis reports shall be subject to a technical review. The technical review is designed to ensure the correct application of the methodology and the appropriateness of the reported information. This review offers an opportunity to ensure there is appropriate and sufficient support for the actions, results, opinions, and interpretations which may have occurred during the analysis or in the generation of the report. In addition, the technical review provides a means of reassurance and confidence to its stakeholders that quality measures have been followed.

### 3 Normative References

ANSI/ASB Standard 031, *Standard for Report Writing in Bloodstain Pattern Analysis*. 2020. 1st. Ed.

ANSI/ASB Standard 032, *Standard for a Bloodstain Pattern Analyst's Training Program*. 2020. 1st. Ed.

### 4 Terms and Definitions

#### 4.1 Terms

The following terms are meant to convey the meanings specified.

##### 4.1.1

##### **shall**

Used to indicate a provision is mandatory (unless otherwise documented for non-compliance).

##### 4.1.2

##### **should**

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

## 4.2 Definitions

For the purpose of this document, the following definitions apply.

### 4.2.1

#### **administrative review**

An evaluation of the report and supporting documentation for consistency with a forensic science service provider's policies, and for editorial correctness.

### 4.2.2

#### **forensic science service provider (FSSP)**

A forensic science agency or forensic science practitioner providing forensic science services.

### 4.2.3

#### **technical review**

A qualified analyst's evaluation of reports, notes, data, and other documentation to ensure there is appropriate and sufficient support for the actions, results, opinions, and interpretations.

## 5 General

**5.1** Forensic Science Service Providers shall establish written policies and procedures for the technical review of BPA reporting. (Refer to ANSI/ASB Standard 031, *Standard for Report Writing in Bloodstain Pattern Analysis*. 2020. 1st. Ed.).

**5.2** The technical review shall be performed by a trained bloodstain pattern analyst. (Refer to ANSI/ASB Standard 032, *Standard for a Bloodstain Pattern Analyst's Training Program*. 2020. 1st. Ed.).

## 6 Technical Review Process

It is essential that the technical reviewer be objective. Factors that may undermine objectivity such as personal relationships and conflict of interest should be considered.

The technical reviewer should be made aware of what the original analyst was asked to do prior to conducting the technical review.

The reviewer shall evaluate supporting documentation prior to reviewing the analyst's report. Deviations from this process shall be documented. Supporting documentation reviewed may include:

**6.1** Scene/Evidence Documentation

- a) Photographic images – all photographic images that were supplied to or generated by the reporting analyst.
- b) Crime scene diagrams/documentations/scans/videos.

**6.2** Forensic/medical reports

**6.3** Analyst’s supporting documentation

**6.3.1** Documented checks of data transfers, comparison, measurements, and hand calculations.

**6.4** Other relevant documentation (e.g., police reports, court transcripts)

**6.5** Outside forensic service provider BPA report (if references are made to it in the original analyst’s report.)

**6.6** Analyst’s report

Any amendments made to the supporting materials (e.g., observations, notes, etc.) as a result of the technical review shall be documented by the analyst.

**7 Conflict Resolution**

Attempts shall be made to resolve disagreement(s) that occur during the review process.

In the event both parties cannot come to an agreement on a result, opinion, or interpretation, the disagreement shall be documented in the case record.

The following steps may be taken during the conflict resolution:

- If a disagreement occurs regarding observations/classification of a bloodstain pattern, the resolution may be to report the most specific classification that results in an agreement. For instance, this may mean reporting to a higher level of classification (*i.e., less specific*) or reporting as inconclusive/no interpretation.
  - *Example: A disagreement between the classification of a pattern as an expiration pattern vs. an impact pattern might result in the classification being reported as a spatter pattern.*
- If a disagreement occurs over an interpretation or opinion, the resolution may be to report the most specific case interpretation or opinion on which both the analyst and the reviewer agree.



- *Example: A disagreement in a case interpretation between whether a victim was kneeling or upright during an impact bloodshed event might result in the reporting of the height (area of convergence) of the impact pattern alone with no further interpretation.*

If necessary, another qualified analyst may be consulted to assist in resolving a disagreement. The consultation shall be documented in the case file.

## **8 Documentation of the Technical Review**

The technical review shall be documented and maintained in the case record of the analyst. The documentation shall include, at minimum:

- Signature (or electronic equivalent) of the reviewer(s)
- Date(s) of review
- Case file identification

The signature of the technical reviewer confirms the reviewer is in agreement with the results, opinions, and interpretations in the report and each is supported in the case file.