# Standard for Training in Forensic DNA Reporting and Review





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ASB Approved Xxxxx 20232025

ANSI Approved Xxxxxx 20232025



Academy Standards Board 410 North 21st Street Colorado Springs, CO 80904

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#### **Foreword**

This standard defines the minimum requirements forto be met in a forensic DNA analyst training program for DNA reporting and review-within the context of the laboratory's documented procedures. The aim is to provide a framework for quality training that will result resulting in consistency within a laboratory and in the forensic DNA community.

This document was revised, prepared, and finalized as a standard by the DNA Consensus Body of the AAFS Standards Board. The draft of this standard was developed by the Biological Data Interpretation and Reporting Subcommittee of the Organization of Scientific Area Committees (OSAC) for Forensic Science.

The American Academy of Forensic Sciences established the Academy Standards Board (ASB) in 2015 with a vision of safeguarding Justice, Integrity and Fairness through Consensus Based American National Standards. To that end, the ASB develops consensus based forensic standards within a framework accredited by the American National Standards Institute (ANSI), and provides training to support those standards. ASB values integrity, scientific rigor, openness, due process, collaboration, excellence, diversity and inclusion. ASB is dedicated to developing and making freely accessible the highest quality documentary forensic science consensus Standards, Guidelines, Best Practices, and Technical Reports in a wide range of forensic science disciplines as a service to forensic practitioners and the legal system.

This document was revised, prepared, and finalized as a standard by the DNA Consensus Body of the AAFS Standards Board. The draft of this standard was developed by the Biological Data Interpretation and Reporting Subcommittee of the Organization of Scientific Area Committees (OSAC) for Forensic Science.

Questions, comments, and suggestions for the improvement of this document can be sent to AAFS-ASB Secretariat, asb@aafs.org or 410 N 21st Street, Colorado Springs, CO 80904.

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**Keywords:** technical review, administrative review, reporting, DNA standard, training

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## Standard for Training in Forensic DNA Reporting and Review

## 1 Scope

This standard <u>outlinesprovides</u> the <u>minimum training</u> requirements for <u>analystsforensic DNA</u> <u>laboratory's training program</u>: 1) preparing forensic DNA reports and/or notifications; and 2) performing technical and/or administrative reviews on forensic DNA case records and reports.

#### 2 Normative References

The following reference is indispensable for the application of the standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANSI/ASB Standard 022, Standard for Forensic DNA Analysis Training Programsa.

#### 3 Terms and Definitions

For purposes of this document, the following definitions apply.

#### 3.1

#### administrative review

An evaluation of the report and supporting documentation for consistency with laboratory policies and for editorial correctness.

#### 3.2

#### case record

The documentation of procedures, controls, and instruments used; observations made; results of tests performed; and charts, graphs, photographs, bench or other handwritten notes, and other documentation generated that are used to support the analyst's conclusions. May also be referred to as "test record."

#### 3.3

#### technical review

An evaluation of reports, notes, data, and other documents to ensure there is an appropriate and sufficient basis for the scientific conclusions.

#### 4 Requirements

#### 4.1 General

ANSI/ASB Standard 022, *Standard for Forensic DNA Analysis Training Programs* shall be used in conjunction with this document because ANSI/ASB Standard 022 provides the foundational training program requirements upon which additional specific requirements, such as this document, will be based.

<sup>&</sup>lt;sup>a</sup> Available from: <u>www.aafs.org/academy-standards-board</u>.

The laboratory's training program shall include all requirements applicable to the work conducted by the laboratory and by the individual in training.

### 4.2 Knowledge-based Training

- **4.2.1** At a minimum, the knowledge-based portion of the training program shall require review of the following:
- a) the laboratory's protocols for report writing;
- b) the laboratory's protocols for case record review;
- c) the laboratory's policies on confidentiality and disclosure of information;
- d) applicable literature as assigned by the trainer;
- e) literature on the effects of cognitive bias in decision-making processes associated with forensic DNA reporting and review.
- **4.2.2** The knowledge-based training component of the laboratory's training program shall provide the trainee with basic instruction on report writing and review to include, at minimum, the following topics.
- a) Case Record Management
  - 1) case record organization including order and pagination;
  - 2) case record content.

NOTE Examples include, but are not limited to, applicable processing worksheets (e.g., extraction, quantification, capillary electrophoresis set-up worksheets), electropherograms, mixture deconvolution documentation, statistical records, table of results, and documentation requirements for interpretation (e.g., stating assumptions of contributors) and conclusions.

- b) Report Writing
  - 1) template format including the subsections of the report and what is contained in each;
  - 2) appropriately selecting reporting statements;
  - 3) report issuance including policies on providing verbal results and:
  - determining when the report is final;
  - 4)5) issuance of amended reports.
- c) Technical and Administrative Case Record and Report Review
  - 1) use of quality control checks as required by laboratory protocols;
  - 2) appropriate testing as defined by laboratory protocols;

- 3) criteria to be verified under the technical and administrative reviews:
- 4) laboratory protocol defining the timingorder for each review and;
- what, if any, results can be provided prior to a released laboratory report;
- 5)6) documentation requirements for each review, including documentation of comments and corrections, and additional reviews after corrections are made:
- 6)7) qualification of personnel responsible for each review.

#### 4.3 Practical Training

- **4.3.1** The practical component of the laboratory's training program shall provide the trainee with sufficient practical instruction for the trainee to obtain the skills for report writing and review.
- **4.3.2** At a minimum, the practical portion of the training program shall include the observation of a trained analyst performing report writing and review at least once or until clearly understood with DNA data and reports representative of those processed by the laboratory, at least once or until clearly understood.
- **4.3.3** At a minimum, the practical exercises for report writing and reviews shall be representative of the range, type, and complexity of <u>DNA data from</u> routine casework or database samples, and data, case records, technologies, methodologies and platforms in accordance with the trainee's job responsibilities and the extent to which the trainee participates in DNA data report writing and review.

## 4.4 Competency Component

#### 4.4.1 General

The competency component of the laboratory's training program shall demonstrate knowledge-based and practical competency in the application of report writing and review as used by the laboratory. The format of the test(s) and the criteria for passing the competency test(s) shall meet section 4.3 of ANSI/ASB Standard 022 Standard for Forensic Training DNA Analysis Training Programs.

#### 4.4.2 Knowledge-based Competency

As applicable to the trainee's job responsibilities, the trainee shall successfully complete (as defined by the laboratory's policy) a knowledge-based test covering the critical information obtained during the training on case record management, forensic DNA report writing, and performing technical and administrative reviews. The test(s) shall cover, at a minimum, the topics outlined in 4.2 and its subsections.

#### 4.4.3 Practical Competency

The trainee shall successfully complete <u>(as defined by the laboratory's policy)</u> a practical competency test covering each of the forensic DNA reporting and review protocol(s) for which the trainee will be independently authorized. <u>Practical competency tests shall include to perform</u>. <u>DNA</u>

data from samples representative of the range, type, and complexity typically analyzed by the laboratory, shall be included in the practical competency test(s).

## **5** Conformance

In order to demonstrate conformance with this standard, the laboratory shall meet <u>the</u> <u>requirements outlined in</u> Section 5 of <u>the</u> ANSI/ASB Std 022, *Standard for Forensic DNA Analysis Training Programs* and all the requirements set forth in this document.



## Annex A

(informative)

## **Bibliography**

The following information provides a list of the resources that may assist the DNA technical leader in defining the breadth and scope of the materials to be reviewed by the trainee. This list is not meant to be all inclusive.

- 1] ANSI/ASB Standard 022, Standard for Forensic DNA Analysis Training Programs, First Edition, 2019.b
- 2] ANSI/ASB Standard 139, Reporting DNA Conclusions, First Edition, 2023.b
- 2]3] Federal Bureau of Investigation (FBI). *Quality Assurance Standards for Forensic DNA Testing Laboratories*. 2020<sup>c</sup>.
- 3]4] Scientific Working Group on DNA (SWGDAM), *Analysis Methods Training Guidelines*. July 2020.d



<sup>&</sup>lt;sup>b</sup> Available from: www.aafs.org/academy-standards-board.

 $<sup>^{</sup>c}\ Available\ from: \underline{https://www.fbi.gov/file-repository/quality-assurance-standards-for-dna-databasing} \underline{laboratories.pdf/view.}$ 

<sup>&</sup>lt;sup>d</sup> Available from: <a href="https://lecb9588-ea6f-4feb-971a-73265dbf079c.filesusr.com/ugd/4344b0\_5e228328339443bfb197942f2d99f579.pdf">https://lecb9588-ea6f-4feb-971a-73265dbf079c.filesusr.com/ugd/4344b0\_5e228328339443bfb197942f2d99f579.pdf</a>



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