

OSAC 2022-S-0013 Standard Guide for Testimony in Seized Drugs Analysis

*Seized Drugs Subcommittee
Chemistry: Seized Drugs & Toxicology Scientific Area Committee
Organization of Scientific Area Committees (OSAC) for Forensic Science*



OSAC Proposed Standard

2022-S-0013 Standard Guide for Testimony in Seized Drugs Analysis

Prepared by
Seized Drugs Subcommittee
Version: 2.0
October 2022

Disclaimer:

This OSAC Proposed Standard was written by 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.

There may be references in an OSAC Proposed Standard to other publications under development by OSAC. The information in the Proposed Standard, and underlying concepts and methodologies, may be used by the forensic-science community before the completion of such companion publications.

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>.

Standard Guide for Testimony in Seized Drugs Analysis

1. Scope

- 1.1. This standard covers testimony in criminal, civil or regulatory proceedings by forensic science practitioners (FSPs) regarding the analysis of seized drugs.
- 1.2. This standard includes general recommendations for forensic science service providers (FSSPs) regarding testimony in the seized drugs discipline as well as parameters for testimony training, the evaluation of testimony, and testimony monitoring programs.
- 1.3. This standard is intended for use by competent forensic science practitioners with the requisite formal education, discipline-specific training (see E2917 and E2326) and demonstrated proficiency to perform forensic casework.

2. Referenced Documents

2.1. ASTM Standards:

- 2.1.1. E1732 Terminology Relating to Forensic Science
- 2.1.2. E2326 Practice for Seized-Drug Practitioner Training, Continuing Education, and Professional Development Programs
- 2.1.3. E2329 Practice for Identification of Seized Drugs
- 2.1.4. E2549 Practice for Validation of Seized-Drug Analytical Methods
- 2.1.5. E2917 Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs
- 2.1.6. E3255 Practice for Quality Assurance of Forensic Science Service Providers Performing Forensic Chemical Analysis

2.2. Other Documents:

- 2.2.1. Federal Rules of Evidence Rule 701 and 702.
- 2.2.2. National Commission on Forensic Science Views on Defining Forensic Science and Related Terms (adopted May 1, 2016). Available at <https://www.justice.gov/archives/ncfs/page/file/477836/download>
- 2.2.3. Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drugs Examinations (General Chemistry ULTR) adopted 03/13/2019. Available at <https://www.justice.gov/olp/page/file/1144921/download>.
- 2.2.4. National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* (Washington, DC: National Academies Press, 2009).
- 2.2.5. President's Council of Advisors on Science and Technology Report, "Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods," Executive Office of the President, September 2016.

2.3. Federal Case Law References:

- 2.3.1. *Williams v. Illinois*, 567 U.S. 50 (2012).
- 2.3.2. *Bullcoming v. New Mexico*, 564 U.S. 647 (2011).
- 2.3.3. *Melendez-Diaz v. Massachusetts*, 557 U.S. 305 (2009).
- 2.3.4. *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999).

- 2.3.5. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, (1993).
- 2.3.6. *Giglio v. United States*, 405 U.S. 150 (1972).
- 2.3.7. *Brady v. Maryland*, 373 U.S. 83 (1963).
- 2.3.8. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

3. Terminology

- 3.1. For definitions of terms used in this standard that are not defined below, refer to Terminology E1732.
- 3.2. Definitions of terms specific to this standard:
 - 3.2.1. *forensic science practitioner (FSP)*, *n* - an individual who (1) applies scientific or technical practices to the recognition, collection, analysis, or interpretation of evidence for criminal and civil law or regulatory issues; and (2) issues test results, provides interpretations, or opinions through reports or testimony with respect to such evidence. [NCFS Views on Defining Forensic Science and Related Terms; ASTM E3255-21]
 - 3.2.2. *forensic science service provider (FSSP)*, *n* - A forensic science agency or forensic science practitioner providing forensic science services. [NCFS Views on Defining Forensic Science and Related Terms; ASTM E3255-21]
 - 3.2.3. *mock trial*, *n* - a simulation of witness testimony and other procedures in a court setting, used as a training and assessment tool in legal or forensic science practitioner testimony training programs.
 - 3.2.4. *non-technical evaluation*, *n* - testimony evaluation limited to aspects of testimony that are neither scientific nor technical, such as the demeanor and candor of the witness and the clarity with which the witness communicates information to the trier of fact.
 - 3.2.5. *objective evidence*, *n* - data supporting the existence or verity of something. [ISO 9000:2015]
DISCUSSION: Objective evidence can be obtained through observation, measurement, test, or other means.
 - 3.2.6. *opinion*, *n* - view, judgment, belief – takes into consideration other information in addition to observations, data, calculations, and interpretations. [2019. In *OSAC Lexicon*. Retrieved April 12, 2022, from <https://lexicon.forensicosac.org>]
 - 3.2.7. *result*, *n* - The product of the forensic service provider. This term is broad and includes observations, data, calculations, interpretations, and opinions. [2019. In *OSAC Lexicon*. Retrieved April 12, 2022, from <https://lexicon.forensicosac.org>]
 - 3.2.8. *technical evaluation*, *n* - testimony evaluation of technical content conducted by a subject matter expert authorized by the FSSP who meets the competency requirements for seized drugs analysis in the methods of analysis and related interpretation that are the subject of the expert testimony.
 - 3.2.9. *testimony evaluation*, *n* - the process of observing, listening to or reading testimony by a forensic science practitioner and providing observations regarding the strengths and areas for improvement in the testimony.

- 3.2.10. *testimony monitoring, n* - program used by a forensic science service provider to regularly evaluate the quality of testimony provided by its forensic science practitioners.
- 3.2.11. *verification, n* - provision of objective evidence that a given item fulfills specified requirements. [ISO/IEC 17025:2017]
DISCUSSION: Verification is a term used for three different processes in this standard.
- (1) Method verification refers to the process of confirming through empirical testing and evaluation of objective evidence that a previously validated method performs as expected. [ASTM E2549 in preparation]
 - (2) Instrument performance verification refers to the process of evaluating equipment through testing and evaluation of objective evidence against pre-defined requirements that the equipment is operating within specifications and in compliance with quality standards. [Modified from Mettler-Toledo]
 - (3) Reference material verification refers to the process of demonstrating through testing and evaluation of objective evidence that the material is fit for the intended purpose.
- 3.2.12. *voir dire, n* - a preliminary examination by lawyers, a judge, or both to determine whether the witness is qualified to testify as an expert.

4. Significance and Use

- 4.1. This standard provides minimum recommendations for FSPs offering expert testimony regarding seized drug analysis, results, and opinions; it applies to criminal, civil or regulatory proceedings.
- 4.1.1. Expert testimony refers to testimony offered by a person qualified to testify under the applicable evidentiary rules in the jurisdiction where the testimony is offered.
 - 4.1.2. Results are the product of the FSP. This term is broad and includes observations, data, calculations, interpretations, and opinions.
 - 4.1.3. Opinion takes into consideration other information in addition to observations, data, calculations, and interpretations.
 - 4.1.4. This standard applies to all portions of testimony including, but not limited to, pretrial hearings, depositions, direct examination, cross examination, redirect, and recross.
 - 4.1.5. This standard applies to testimony and depositions provided in person, remotely, or in writing.
 - 4.1.6. This standard applies to reports issued using documented analytical procedures according to E2329.
- 4.2. This standard provides minimum recommendations for FSSPs to train and evaluate their FSPs offering expert testimony.
- 4.3. This standard provides guidance to avoid or correct statements that could constitute inappropriate or misleading responses by an FSP.
- 4.4.

5. Testimony Training

5.1. FSPs offering expert testimony in the analysis of seized drugs shall complete testimony training and be evaluated for expert testimony competency.

5.1.1. Successful completion of a seized drugs training program is required prior to providing expert testimony.

5.1.1.1. Testimony training is one component of an FSP's overall technical training program.

NOTE: See Practice E2917 and Practice E2326 for an understanding of other elements of technical and scientific training for FSPs in the seized drugs discipline.

5.2. Testimony training subject areas include, at a minimum:

5.2.1. Operation of the courtroom, such as:

- Oath,
- Sequestering of witnesses,
- Legal terminology likely to be heard during trial (*e.g.*, objections (sustained or overruled), stipulation, hearsay, and exemptions),
- Examination (qualifying questions (*voir dire*), court acceptance as qualified FSP, direct, cross, and redirect),
- Chain of custody, and
- Recognition of evidence

5.2.2. Documents that can be utilized while testifying,

5.2.3. Types of subpoenas,

5.2.4. Discovery requests,

5.2.5. Preparation of a curriculum vitae, statement of qualifications, or similar,

5.2.6. Applicable Codes of Professional Responsibility (accrediting body guiding principles, individual certification rules of professional conduct, applicable state or federal rules governing the conduct of FSPs, etc.),

5.2.7. Appropriate courtroom demeanor,

5.2.8. FSPs expectations for professional courtroom attire,

5.2.9. Courtroom presentation and the importance of clear communication,

5.2.10. Awareness of the stresses of testifying,

5.2.11. An understanding of cognitive bias and procedures for preventing or minimizing the effects of bias in seized drug analysis and testimony.

5.2.11.1. Cognitive bias refers to the class of effects by which an individual's preexisting beliefs, expectations, motives, and situational context may influence their collection, perception, or interpretation of information, or their resulting judgments, decisions, or confidence.¹

5.2.11.2. In the context of seized drug testimony, cognitive biases include potential influences of the situational context of testimony, including identification with the party calling the witness, personal or professional stake in refuting suggestions of analytical limitations or analytical flaws on cross-examination, and effects of refining or rehearsing testimony prior to presentation.

¹ Spellman, Eldridge, and Bieber (2022) Challenges to reasoning in forensic science decisions. *Forensic Sci International: Synergy*. <https://doi.org/10.1016/j.fsisy.2021.100200>

- 5.2.12. Ensuring the question is understood before responding,
- 5.2.13. An awareness of legal and policy issues which can include:
- Standards for the admissibility of scientific techniques and testimony under *Daubert* (and *Frye* for those states that choose to follow *Frye*) as well as applicable state case law,
 - The Federal Rules of Evidence and related state rules governing the admissibility of expert testimony,
 - The Federal Controlled Substances Act or state and local controlled substance laws and regulations,
 - Case law relevant to seized drugs in the applicable jurisdiction,
 - Sentencing guidelines,
 - United States Supreme Court cases including *Brady v. Maryland* and *Giglio v. United States*, as well as all applicable state statutes, case law and rules governing the obligation to disclose exculpatory, impeachment, or mitigating information, often referred to as evidence favorable to the defense,
 - The legal and professional implications of *Brady* violations and violations of related laws governing the disclosure of exculpatory, impeachment, or mitigating information,
 - Confrontation Clause as construed by the United States Supreme Court in *Melendez-Diaz v. Massachusetts*,
 - National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* (Washington, DC: National Academies Press, 2009),
 - President’s Council of Advisors on Science and Technology Report, “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods,” Executive Office of the President, September 2016, and
 - Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drugs Examinations (General Chemistry ULTR).
- 5.2.14. Testifying to technical content including:
- Qualitative analytical results for each test performed, including any limitations,
 - Selection of analytical scheme and reported results, including any limitations,
 - Method validation and method verification,
 - Quality assurance and control measures,
 - Measurement uncertainty, and
 - Error rates (false positives and false negatives).
- 5.2.15. Testifying to technical content, when applicable:
- Quantitative analytical results, including any limitations,
 - Sample selection,
 - Statistical sampling plans including the relevant statistical theory supporting how the sampling plan was derived, and
 - Chemical structural similarity, analogues, and isomers.

- 5.3. Testimony training methods can include:
 - 5.3.1. Direct observation of testimony, either in-person or virtually, when possible,
 - 5.3.2. Reviewing references in the form of published articles, and responding to study questions and practical exercises regarding technical and legal issues impacting seized drugs testimony,
 - 5.3.3. Reviewing transcripts containing examples of appropriate testimony by experts regarding the analysis of seized drugs or observing testimony (sworn or mock) in the discipline performed by a competent practitioner,
 - 5.3.4. Reviewing transcripts containing examples of inappropriate (e.g. exaggerating, inaccurate) testimony by experts in seized drugs analysis or other disciplines with analogous concepts, and discussing the reasons why the testimony was inappropriate,
 - 5.3.5. Written exercise(s) that can cover technical content the FSP could be asked to testify to, but can be different from the written competency exam for analysis,
 - 5.3.6. Verbal practical exercise(s) to strengthen the ability to communicate effectively, and
 - 5.3.7. Mock trial testimony by the trainee.
- 5.4. The trainee successfully completes at least one mock trial exercise.
 - 5.4.1. It is recommended that mock trial exercises encompass a variety of analyses, sampling approaches, instrumentation, and complexity of sample types that cover the scope of the testing conducted by the FSSP.
 - 5.4.2. It is recommended that FSSPs include a diverse group of participants (e.g., seized drugs FSPs, lawyers, and judges) in mock trial exercises, whenever possible.
 - 5.4.3. Evaluate mock trial testimony per section 10.4 and 10.5.
 - 5.4.4. Review results of testimony evaluation with the trainee.
 - 5.4.4.1. Include seized drugs experts and non-seized drugs experts so that testimony can be evaluated both for scientific accuracy as well as for understanding by legal professionals and laypersons.
 - 5.4.4.2. Recording and reviewing testimony is a helpful means for self-evaluation.

6. Trial Preparation

- 6.1. A pre-trial conference with the subpoenaing attorney is strongly recommended.
 - 6.1.1. If requested, predicate questions can be provided for the purpose of conveying scientific concepts clearly and not for the purpose of advocacy.
- 6.2. A pretrial conference with the non-subpoenaing attorney is held upon request.
 - 6.2.1. If a copy of the predicate questions is requested, direct the non-subpoenaing attorney to the subpoenaing attorney for a copy of the questions.
- 6.3. Review the case file prior to the trial or any conferences, including items such as: reports, data upon which the results rely, quality control logs, standard operating

procedures utilized, specific legal rules and statutory provisions applicable to the case, etc.

- 6.3.1. Be cognizant of any changes to laboratory procedure or applicable legal statutes that could have been updated since the case was analyzed.
- 6.4. Ensure the subpoenaing attorney is aware of any significant quality incident(s) related to the case.
- 6.5. Conduct pre-trial communication with attorneys with the clear intention of maintaining objectivity and minimizing any potential bias for the eventual testimony.
- 6.6. Maintain and make available a current curriculum vitae, statement of qualifications or similar.
- 6.7. A list of complicated terms can be provided to the court reporter (*e.g.*, spelling out GC-MS, FTIR).

7. General Testimony

- 7.1. FSPs offering expert testimony in the analysis of seized drugs:
 - 7.1.1. Maintain neutrality in verbal and non-verbal communication.
 - 7.1.2. Communicate clearly throughout testimony.
 - 7.1.3. Testify in a straightforward and objective manner and avoid phrasing testimony in an ambiguous, biased, or misleading way.
 - 7.1.3.1. Be aware of the cognitive bias that can occur when answering questions in an adversarial environment.
 - 7.1.4. Present testimony in a manner that accurately and fairly conveys the significance of the results, avoiding unexplained or undefined technical terms.
 - 7.1.4.1. Be able to explain technical concepts to laypeople. Analogies or drawings can be used for illustrative purposes but require careful selection to not oversimplify to a point that could mislead the trier of fact.
 - 7.1.5. Listen to the entire question(s) before replying. Only answer the question(s) posed, unless doing so would mislead the trier of fact.
 - 7.1.5.1. If the answer is not known, respond accordingly.
 - 7.1.5.2. If the question is not understood, request clarification or rephrasing of the question.
 - 7.1.5.3. Attempt to qualify responses while testifying when asked a question with the requirement that a simple “yes” or “no” answer be given, if answering “yes” or “no” would be misleading to the judge or the jury.
 - 7.1.5.4. If you cannot recall all the questions posed, request to repeat.
 - 7.1.6. Request permission from the judge to refer to case notes to refresh recollection if the FSP cannot recall the answer to a question.
 - 7.1.7. When the court orders an appearance without sufficient time to prepare, the FSP should make clear they will need to reference their case file.
 - 7.1.8. Attempt eye contact with all parties, including the judge and jury, during direct and cross examination.

7.1.8.1. In general, direct responses to questions toward the judge or jury.

7.1.9. Be cognizant of demeanor and mannerisms while testifying and avoid unprofessional behavior (e.g., hair twirling, poor body language, chair twisting, poor eye contact, excessive hand movements, and use of filler words).

8. Qualifications – Voir Dire

8.1. FSPs offering expert testimony in the analysis of seized drugs shall accurately represent and not embellish their:

8.1.1. Qualifications, education, training, experience, and areas of expertise,

8.1.1.1. Experience includes employment history and prior testimony experience.

8.1.2. Professional affiliation(s) and membership(s),

8.1.3. Personal certification(s),

8.1.4. Proficiency testing participation and results, and

8.1.5. FSSP's accreditation status and type of work included in scope (e.g., qualitative, quantitative, equipment).

8.1.5.1. Accreditation status does not imply scientific accuracy or reliability but provides a framework for quality.

9. Technical Testimony

9.1. When asked applicable questions during testimony, FSPs explain the following in an understandable way:

9.1.1. The FSSP standard operating procedures. For example:

- Chain of custody,
- Evidence submission, handling, and return,
- Sample preparation,
- Technical and administrative review processes, and
- Any deviation from standard operating procedures, including the rationale and process for implementing the deviation and any potential impact on analytical results.

9.1.2. Any sampling plan(s) employed during the analysis

9.1.3. The analytical scheme used during the testing process, including:

- The theoretical basis for the use of a particular analytical scheme used in reaching a result, and
- Any limitations of the analytical scheme applicable to the statute of the jurisdiction.

9.1.4. The specific instrument(s), technique(s), method(s), and any quality control measures used during analysis,

9.1.5. Calibration, maintenance, and performance verification of the equipment used,

9.1.6. Traceability of reagents, reference materials, glassware, spectral libraries,

9.1.7. Verification of reference materials and reagents,

9.1.8. Method validations and verifications,

- 9.1.9. Any quality incidents related to the case, including the root cause analysis, corrective actions (if any) and the potential impact of the issue(s) on the analytical results,
- 9.1.10. Measurement uncertainty,
- 9.1.11. Error rates (false positives and false negatives),
- 9.1.12. If applicable, analog structural similarity, isomers, including limitations, and
- 9.1.13. The results and opinions that are reported.
- 9.2. FSPs offering expert testimony regarding the analysis of seized drugs shall not:
 - 9.2.1. Testify beyond their expertise,
 - 9.2.1.1. In the event a judge requires the FSP to answer or face sanctions, the FSP clearly state the limitations of their expertise before answering,
 - 9.2.2. Make overstatements that exceed the limitations of the applicable method or analytical scheme,
 - 9.2.3. Testify on direct or redirect concerning case-specific results or opinions not contained in the report(s) issued in the case, unless in fair response to issues raised on cross-examination,
 - 9.2.4. Testify concerning results or opinions that are beyond the limits of the FSSPs protocols including documented deviations,
 - 9.2.5. Withhold information regarding limitations of reported results and opinions known to the FSP in response to questions posed,
 - NOTE: Because FSP's have no control over attorney questioning, the importance of pretrial conferences during which the FSP clearly states limitations of reported results and opinions cannot be overstated.
 - 9.2.6. Use language that suggests all methods, analytical schemes or individual experts are infallible,
 - 9.2.7. Assert that seized drug analysis is 100% accurate or has a zero error rate;
 - 9.2.8. Provide a result or opinion that includes a statistic or numerical degree of probability except when based on relevant and appropriate data,
 - 9.2.9. Cite the number of seized drug examinations performed in the FSP's career as a measure for the accuracy of a proffered conclusion,
 - NOTE: The number of examinations performed is a measure of the amount of experience, but contains no information regarding the quality or the experience or the degree to which the experience has increased the accuracy of measurements.
 - 9.2.10. Use the expressions 'reasonable degree of scientific certainty,' 'reasonable scientific certainty,' or similar assertions of reasonable certainty in testimony unless required to do so by a judge or applicable law, or
 - 9.2.11. Change a result or opinion during testimony without issuing a supplemental report, except where the change is occasioned by new information presented during testimony and not previously known by the expert.

10. Testimony Monitoring and Evaluation

- 10.1. The FSSP evaluates testimony of currently employed FSPs at least annually according to a written monitoring program.
 - 10.1.1. A testimony monitoring program describes the frequency of and criteria for the periodic evaluation of FSP testimony.
 - 10.1.2. Evaluate new practitioners at their first testimony opportunity.
 - 10.1.3. A testimony monitoring program recognizes that all FSPs benefit from regular testimony evaluation regardless of their experience level; an FSP's experience level does not necessarily equate to a higher quality of testimony.
 - 10.1.4. In the event an FSP did not have the opportunity to testify during the evaluation period, evaluate their next testimony.
- 10.2. Testimony evaluation can be technical, non-technical, or both.
 - 10.2.1. The purpose of testimony evaluation is to encourage continuous improvement and to identify strengths, areas for correction, and opportunities for development.
 - 10.2.2. Technical evaluation is completed by authorized individuals who meet the competency requirements for seized drugs analysis in the methods of analysis and related interpretation that are the subject of the expert testimony.
 - 10.2.3. Conduct non-technical testimony evaluation in addition to (not in lieu of) periodic technical testimony evaluation.
 - 10.2.3.1. Non-technical evaluations can be completed by those authorized to conduct technical evaluations or non-technical evaluators (judge, attorney, non-seized drugs discipline laboratory employees, etc.).
 - 10.2.4. Self-evaluation can be done in addition to, but not in lieu of, periodic testimony evaluation by another individual per 10.2.2. and 10.2.3.
- 10.3. Testimony evaluation and review methods can consist of the following:
 - 10.3.1. Direct observation of testimony, either in-person or virtually.
 - 10.3.2. Review of written transcript, video, or audio recording of testimony.
- 10.4. The following criteria are considered during non-technical testimony evaluation:
 - 10.4.1. Professional attire,
 - 10.4.2. Demeanor, to include communicating clearly, distinctly, and professionally,
 - 10.4.3. Ability to accurately describe qualifications and job duties,
 - 10.4.4. Ability to communicate scientific concepts clearly, effectively, and concisely to a layperson,
 - 10.4.5. Ability to remain impartial throughout testimony, and
 - 10.4.6. Ability to maintain composure throughout testimony.
- 10.5. Technical testimony evaluation includes all items from 10.4 as well as evaluating that the FSP:
 - 10.5.1. Appropriately described evidence handling and testing procedures,
 - 10.5.2. Conveyed accurate and comprehensive technical content,
 - 10.5.3. Accurately conveyed results, opinions, and interpretations within the limits of the FSP's expertise and consistent with the report, FSSP's policies and procedures,

- 10.5.4. Conveyed scientifically supported results in a straightforward manner, including limitations of the relevant methods, opinions, and interpretations, and
- 10.5.5. Described any significant quality incident(s) related to the case in a way that is understandable and addresses the impact of the incident(s) on the results.
- 10.6. The documentation of a testimony evaluation that identified erroneous testimony is retained as required by applicable law for at least the length of time the casefile is retained, or the individual is employed with the laboratory, whichever is longer.
- 10.7. The FSSP documents and discusses the testimony review with the FSP offering expert testimony.
- 10.8. The FSSP evaluates testimony for consistency and trends between FSPs, highlighting testimony strengths and identifying challenge areas for additional focus.
- 10.9. The FSSP describes the action that will be taken if the evaluation reveals any criteria in 10.4 or 10.5 were not satisfied.
 - 10.9.1. The degree of action taken is proportional to the severity of the nonconformance and its potential impact on the criminal justice system, the integrity of the FSSP, or both.
 - 10.9.2. Testimony to an inaccurate weight or result, failure to convey appropriate scientific limitations regarding results, or any other testimony that is factually incorrect or could be misleading (whether intentional or not) triggers proactive legal disclosure obligations. Once identified, any of these flaws requires prompt disclosure to all parties and their counsel in the proceeding.
 - 10.9.3. FSSPs err on the side of disclosure if there is any question regarding whether the testimony could have been misleading.
 - 10.9.4. Additional training can be an appropriate action when an FSP uses language that is accurate but could be perceived by a layperson as overly technical.

11. Testimony Continuing Education

- 11.1. The FSSP conducts ongoing testimony training.
 - 11.1.1. Ongoing training can include a review of professional responsibility and legal disclosure principles, additional mock trial or mock trial-style questioning (especially for those who need additional practice or for those who have not had the opportunity to testify in a live court proceeding during the prior year), and the discussion of challenging or complex scientific questions.
 - 11.1.2. Evaluate any changes to methodology, jurisdictional rules, or other legal issues and provide additional testimony training as needed.
 - 11.1.3. Incorporate any areas of concerns detected in the testimony monitoring program into the ongoing training.

12. Keywords

12.1. expert testimony; testimony; testimony evaluation; testimony monitoring; testimony training