

30-Aug-21  
ASB Std 154, Standard for Training on Testimony for Forensic Biology

#	Section	Type of Comment (E-Editorial, T-Technical)	Comments	Proposed Resolution	Final Resolution
17	General	??	nothing in this document seems specific to Forensic Biology and could be applied to any forensic science training program. Why is this titled only for Forensic Biology? Why are there no Forensic Biology specific statements or requirements?	make appropriate changes based on the answers to the questions (e.g., change title, add forensic biology relevant requirements)	Reject: This document is intended for forensic biology analysts.
18			I agree with many of the suggestions submitted by other consensus body members and shown below, including John Butler's comment, Charlotte Word's comments (particularly comments 11-15), and Nicolas Hughes' suggestions re: use of term exculpatory.		Reject: No resolution was proposed. Comments referenced have been addressed.
46	1. Scope	E	Use of the term 'necessary' is redundant. Also "necessary to testify" implies that if these standards aren't met, the court can't call someone to testify (which isn't the case). Suggest a reword.	Replace sentence with "This document provides minimum training program requirements for forensic biology practitioners on scientific and legal principles relevant for expert witness testimony."	Reject: The scope was appropriately written as is.
47	3. Terms and Definitions	T	The term "practitioner" is included in the Scope without a definition. Without it, these minimum requirements apply to all levels of technicians which may not be necessary due to the scope of testimony these individuals may provide	Add the definition from the OSAC Lexicon for Forensic Science practitioner to this section	Reject: A normative reference for this document, Std. 022, allows the training to be customized to anyone performing DNA duties.
33	3.3	T	This definition is very informal and it would be useful for ASB to have a standard definition for cognitive biases that applies for all forensic disciplines. For this definition, it's important to emphasize that cognitive biases are involuntary and subconscious and cannot be controlled through intention or by will, a frequent misunderstanding among criminal process stakeholders.	ASB standards should use one definition of cognitive bias and it should be rooted in a simple explanation of human information processing and its subconscious nature.	Accept with modification: Definition was changed in response to comment 60.
60	3.3	T	The definition of Cognitive Bias provided here is consistent with the current OSAC Lexicon, however the Human Factors Task Group has proposed an update and improvement of that definition, which may be adopted soon. FYI we offer the updated definition. We suggest you use the updated version, particularly if it has already been adopted by OSAC at the point when this standard is submitted for the OSAC Registry.	Change Section 3.3 to read: cognitive bias The class of effects through which an individual's preexisting beliefs, expectations, motives or situational context may influence the collection, perception, and interpretation of information or resulting judgments and decisions without the individual being consciously aware of this influence.	Accept
3	3.5	E	language too restrictive; testimony and cross examination occurs other than in trial	delete "in court" and delete "in a trial" or change to "in a legal proceeding"	Accept with modification: The definition has been updated.
34	3.5, 3.6, 3.7	E	Re-order these definitions so that they are in alignment with court proceedings.	Make "deposition" 3.5; Make "direct examination" 3.6; Make "cross-examination" 3.7	Accept with Modification: Definitions have been updated to alphabetical order.
4	3.8, now 3.7	E	language too restrictive; discovery occurs prior to hearings and depositions	change "to trial" to "a legal proceeding"	Accept with modification: The definition has been updated.
1	3.9, now 3.8	T	This is an incorrect definition of exculpatory, conflating exculpatory evidence (suggesting that the accused did not commit a crime) with impeachment evidence (undermining the value of the evidence or witness). This also fails to include mitigating evidence (even if accused committed crime, evidence that reduces the culpability or blameworthiness of the accused). All three categories are encapsulated within the term <i>Brady</i> evidence.	3.9 <i>Brady</i> evidence Evidence that is favorable to the accused, impeaches the prosecution's evidence, or mitigates the offense.	Accept with modification: The definition has been updated.
26	3.9, now 3.8	T	Definition is too narrow and has too much legalize	Evidence that is favorable to or may help the defense, evidence that may contradict or undermine the prosecution's evidence, oral or written statements that may contradict a prosecution's witness's testimony, or evidence that may call into question a prosecution's witness's truthfulness	Accept with modification: The definition has been updated.

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2	3.11	T	This is an incomplete definition of an objection - it can be to the legal propriety of the question or the answer	objection A lawyer's protest about the legal propriety of a question which has been asked of a witness by the opposing attorney or of the witness's answer to the question, with the purpose of making the trial judge decide if the question can be asked or the witness can provide the testimony subject to objection.	Accept with modification: The definition has been updated.
5	3.11	E	minor grammatical correction	insert comma before "which" or change "which" to "that"	Accept with modification: The clause was removed.
6	3.11	E	suggest adding "and answered" at the end	add "and answered" at the end of the definition	Accept
7	3.13	E	extra words unnecessary and additional language recommended	suggest 1) deleting "in order for the court" and 2) adding "in a specific court proceeding" at the end	Accept with modification: The definition was updated
27	3.13	T	Definition is too narrow	Instead of "has the necessary qualifications" use "is qualified, based on knowledge, skill, experience, training, or education"	Reject: Not all jurisdictions have the same requirements to qualify someone as an expert.
55	3.13	E	The court is assisting the court? Odd construction: "The preliminary examination of an expert witness in order for the court to assist the court in determining whether the expert has the necessary qualifications to testify about the subject-matter"	Suggest "The preliminary examination of an expert witness in order for the court to determine whether the expert has the necessary qualifications to testify about the subject-matter"	Accept with modification: The definition was updated
35	4.1	T	Forensic scientists should be able to explain their laboratory's validation studies and the boundaries of testing the laboratory can perform.	After bullet (c) add (d) which states: (d) Laboratory validation studies and an understanding of the boundaries of testing the laboratory can perform.	Reject: Outside of scope of document. Addressed in normative Standard 022.
36	4.1	T	Forensic scientists should be able to explain the limitations and the uncertainties of the testing and the interpretation of the data.	After the new bullet (d) add bullet (e) which states: e) explaining the limitations and the uncertainties of the testing and the interpretation of the data.	Accept with modification: Section 4.1.2 c4 e was modified and added "uncertainty".
37	4.1	T	Forensic scientists should be able to explain how any software program or statistics that were applied to the evidence works.	After the new bullet (d) add bullet (e) which states: (e) How any software program or statistics that were applied to the evidence works.	Reject: Outside of scope of document. This is a testimony document and does not include technical concepts.
28	4.1.2	T	The ethics section is missing critical topics	Need to add a section on the duty to preserve and a reference, Arizona v. Youngblood, the ABA Rules and the ABA DNA Standard. In addition you need a section on communications with counsel and a reference to the NCFS Code of Professional Responsibility.	Reject: Outside of scope of document. This is a testimony document.
8	4.1.2 b)	E	other individuals who may interact with the witness are missing from the list	suggest adding "court reporter" and "bailiff"	Accept with modification: Courtroom personnel added to the list.
9	4.1.2 b)	T	it is inappropriate for the witness to discuss the case with other individuals in the case	add a new requirement or modify 4.1.2 b) to include not interacting with or discussing the case with the complainant/plaintiff, family members, defendant, jurors, or any other witnesses in the case without prior permission of the attorneys or court	Reject: Already covered in 4.1.2b in behavior outside of the courtroom.
10	4.1.2 c) 1)	E	correct use of "you"	change "you" to "the witness"	Accept
38	4.1.2(c)	T	The duty to correct is very important. It would be helpful to elaborate on this and to include that there is a duty to correct misleading questions.	Edit (c)(2) to state: Duty to correct inaccurate or misleading testimony[, especially in circumstances when the question posed to the examiner is misleading or will lead a factfinder to an incorrect conclusion about the facts in a case.]	Reject: Already covered in 4.1.2c 2 and 4.
19	4.1.2(c)(3)i/ii/iii		For section 4.1.2(c)(3)i/ii/iii, it may be helpful to review general disclosure principles discussed in these cases rather than just simply citing the three court rulings. Alternatively, is there an appropriate reference or references that could be cited to help readers understand what specific knowledge should be gained from these court cases regarding general disclosure principles?		Reject: No resolution was proposed.
20	4.1.2c3-i-iii & 4.1.2c5e1-5	?	Was the intent to read all of the cases completely or have a summary provided for the trainees?		Reject: No resolution was proposed.
29	4.1.2 (c) (3)		Need to reference the duty to err on the side of disclosure	Brady rule directs prosecutors and those on the prosecution team to "resolve[e] doubtful questions in favor of disclosure." Cone v. Bell, 129 S. Ct. 1769, 1783 n.15 (2009).	Reject: No resolution was proposed.

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30	4.1.2 (c)(4)		This section is missing critical topics	<p>Section 4 This should be expanded to include the subject of Just Communication. Subsections would include: Accuracy and completeness of content.</p> <p>Use of standardized terminology. Fairness in word choice and tone. Disclosure of known limitations and error rates. Information that should be contained in a forensic science practitioner's examination notes. Information that should be contained in a forensic science practitioner's written reports.</p> <p>Communication and cooperation during pre-trial discovery.</p> <p>Some resources:</p> <p>Hsu, S. S. FBI Admits Flaws in Hair Analysis Over Decades, April 2015; available at <a href="https://www.washingtonpost.com/local/crime/fbi-overstated-forensic-hair-matches-in-nearly-allcriminal-trials-for-decades/2015/04/18/39c8d8c6-e515-11e4-b510-962fcfab310_story.html?noredirect=on&amp;utm_term=.d51e4f29d7b2">https://www.washingtonpost.com/local/crime/fbi-overstated-forensic-hair-matches-in-nearly-allcriminal-trials-for-decades/2015/04/18/39c8d8c6-e515-11e4-b510-962fcfab310_story.html?noredirect=on&amp;utm_term=.d51e4f29d7b2</a></p> <p>Thompson, W. C. Beyond Bad Apples: Analyzing the Role of Forensic Science in Wrongful Convictions. Southwestern University Law Review, 2009: 37, pp. 971-994.</p> <p>National Commission on Forensic Science, Recommendation to the Attorney General Documentation, Case Record, and Report Contents, 2016, available at <a href="https://www.justice.gov/archives/ncfs/page/file/905536/download">https://www.justice.gov/archives/ncfs/page/file/905536/download</a></p> <p>National Commission on Forensic Science, Pretrial Discovery in Forensic Evidence Cases Policy Recommendations, 2015, available at <a href="https://www.justice.gov/archives/ncfs/page/file/880241/download">https://www.justice.gov/archives/ncfs/page/file/880241/download</a></p> <p>American Statistical Association Position on Statistical Statements for Forensic Evidence Presented under the guidance of the ASA Forensic Science Advisory Committee, January 2, 2019. <a href="https://www.amstat.org/asa/files/pdfs/POL-ForensicScience.pdf">https://www.amstat.org/asa/files/pdfs/POL-ForensicScience.pdf</a></p>	Accept with modification: Uncertainty added to 4.1.2 c4. The rest of the comments are outside of the scope of the document.
31	4.1.2 (d)	T	Insufficient attention has been given to this section	<p>The following are suggested resources for developing this section: Dror, I. E. "Cognitive and Human Factors in Expert Decision Making: Six Fallacies and the Eight Sources of Bias." Anal. Chem. 2020, 92, 7998-8004; available at <a href="https://pubs.acs.org/doi/10.1021/acs.analchem.0c00704">https://pubs.acs.org/doi/10.1021/acs.analchem.0c00704</a></p> <p>National Commission on Forensic Science. Ensuring That Forensic Analysis is Based Upon Task Relevant Information, 2015; available at <a href="https://www.justice.gov/archives/ncfs/file/818196/download">https://www.justice.gov/archives/ncfs/file/818196/download</a></p> <p>Almazrouei, M. A.; Dror, I. E.; Morgan, R. M. "The Forensic Disclosure Model: What Should be Disclosed to, and by, Forensic Experts?" International Journal of Law, Crime and Justice, 2019; available at <a href="https://doi.org/10.1016/j.ijlcrj.2019.05.003">https://doi.org/10.1016/j.ijlcrj.2019.05.003</a></p> <p>Dror, I. E.; Thompson, W.C.; Meissner, C. A.; Kornfield, I.; Krane, D.; Saks, M.; Risinger, M. "Context Management Toolbox: A Linear Sequential Unmasking (LSU) Approach for Minimizing Cognitive Bias in Forensic Decision Making." J. Forensic Sci. 2015, 60(4), pp. 1111-1112.</p>	Reject: Cognitive bias is defined and adequately discussed for this testimony document. The specific references mentioned are critically important and more appropriate for the testing and analysis of DNA.

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61	4.1.2 d)	T	We suggest a more detailed statement of the information a trainee should understand about cognitive bias. We offer for your consideration some alternative language that we think is more comprehensive. In our view, the revised language will provide better guidance on the scope and content of training that is needed for a DNA examiner to have a good understanding of this issue.	Change Section 4.1.2 d) to read: The trainee shall demonstrate an understanding of the concept of cognitive bias, how a forensic DNA examiner might be influenced by cognitive bias, and steps that might be taken to mitigate such bias. Training shall at a minimum cover: 1) Types and sources of bias, and how they can affect the processes and outcomes of forensic DNA analysis; 2) Strategies for identifying potential sources of bias in casework; 3) Strategies for mitigating cognitive biases (e.g., linear sequential unmasking); 4) Why merely teaching people about the potential for bias is generally not a sufficient remedy for bias; 5) How compliance with current standards for DNA analysis helps to control or mitigate cognitive biases; 6) How to effectively describe and document sources of bias and the steps taken to mitigate cognitive biases in casework.	Accepted with modification: 4.1.2d) was re-phrased. The task group chair working on adjudicating comments for this document reached out to the OSAC Human Factors Task Group Chair and asked about cognitive bias documents being published with details suggested in this document, and never heard back. The email was sent to the person who made this comment on November 15, 2021.
39	4.1.2(d)	T	Cognitive bias can't be eliminated and examiners can only put strategies in place to insulate themselves from cognitive bias.	Edit (d) to more accurately address the issue of cognitive biases: d) Cognitive bias. The trainee shall gain an understanding of how cognitive bias might affect the analysis, interpretation, conclusions, testimony or legal proceedings and how to testify in a [manner that is] truthful and [implement strategies to minimize the risk of biased testimony]	Accept with modification: "Manner" was moved in the sentence.
25	4.1.2 g	T	This requirement may not be practicable for accredited vendor laboratories servicing multiple jurisdictions. The submitting agency or laboratory taking ownership of results would have knowledge of the jurisdiction specific case law for DNA results provided, but a private lab does not have a direct relationship to the various court systems.	Consider revising this requirement to give flexibility to labs that do not routinely report for one jurisdiction, and allow the submitting agencies to define when case law should be required training for analysts (such as Texas Forensic Science Commission licensing requirements for TX case law for TX reporting analysts).	Accept with modification: the section was revised to add "if appropriate".
48	4.1.2 (g)	T	The standard is for forensic biology which includes all biological evidence (such as body fluid identification). Suggest a reword	Replace sentence with "Jurisdiction-specific case law applicable to <b>biological evidence (to include DNA evidence).</b> "	Accept with modification: forensic biology replaced DNA
11	4.2.1	E/T	missing word in last sentence	insert appropriate missing word (e.g., include?)	Accept
40	4.2.1	E	Missing the word "include"	Add the word "include" so that the last sentence reads: At a minimum, the practical portion of the training program shall [include] the training in 4.2.2 through 4.2.4.	Accept
49	4.2.1	E	missing some words in the last sentence - suggested additions	"At a minimum, the practical portion of the training program shall <b>address</b> the training <b>elements included</b> in 4.2.2 through 4.2.4"	Accept with modification: The word 'include" was added.
50	4.2.1	T	The final sentence of 4.2.1 refers to the subsequent section contents as "shalls". 4.2.2 (c) is currently worded as a "should". Align to avoid confusion.	Determine if want to "shall" the content of 4.2.2 (c). If not, then add "unless otherwise stated" at the end of 4.2.1.	Accept
56	4.2.1	E	typo -- last "the" is wrong word. Also, it reads "the practical portion of training shall include training in...observation and review of testimony...[and] instruction and discussion... [and] oral exercises..." We actually want the training to be <b>by</b> observation, review, instruction, discussion, etc. not <b>in</b> observation, etc.	"At a minimum, the practical portion of the training program shall <b>the</b> training in 4.2.2 through 4.2.4" should read "At a minimum, the practical portion of the training program shall <b>include</b> elements 4.2.2 through 4.2.4"	Accept with modification: The word 'include" was added.
51	4.2.2	E	The structure of 4.2.2 is not aligned with the structure of 4.2.3 and 4.2.4. It includes 2 "shalls" and a "should". The final sentence of 4.2.1 refers to this section contents as "shalls".	Suggest restructuring 4.2.2 to include list like 4.2.3 and 4.2.4 OR reword the contents of 4.2.3 and 4.2.4 to include full "shall"/"should" sentences	Accept with modification: Section 4.2.1 was modified.

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57	4.2.2a, b	T	Very difficult to achieve for wildlife labs doing species identification. These cases seldom go to trial, and when they do, the fight is often not over DNA evidence. On the federal level, less than half a dozen cases a year involve DNA testimony, and we would not necessarily know when or where in the country these trials were occurring unless our lab were directly involved, so observation is not possible. Not all trials have transcripts to review, or those transcripts can be difficult to obtain (I've tried).	"Observation and/or review of testimony, if practicable"	Reject: Previous testimony can be reviewed via recordings.
21	4.2.2b	T	Can review be clarified in regards to legal proceedings? Is this something that was intended to be covered in a lecture? Or was review related to reading transcripts?		Accept with modification: Section 4.2.2 b was revised.
22	4.2.2c	T	If attending a trial, there is an opportunity to observe testimony from non-lab staff. However, due to the cost of transcripts and scheduling, trainees attending additional days of trial will be a burden on the lab in regards to travel, cost, and supervision concerns		Reject: Section is not a requirement therefore includes the word "should". Section includes review; the trainee does not have to attend in person.
12	4.2.3	T	this requirement does not include discussion and instruction on giving testimony	Suggest adding "and witness testimony" to 4.2.3	Accept with modification: Suggestion added to 4.2.5
52	4.2.3	E	The introductory sentence does not refer to the listed contents.	Replace intro sentence with "Instruction and discussion on pre-trial preparations to include the following:"	Accept
13	4.2.3 e) or elsewhere	T	additional language suggested	Suggest adding "to ensure accurate, neutral and reliable representation of the scientific data. Discussions shall include any errors or relevant laboratory corrective actions directly or potentially impacting the case, and the limitations of the testing performed and data obtained."	Accept with modification: Comments added to section 4.2.3 b)
41	4.2.3(e)	T	Cognitive biases can't be eliminated and examiners can only put strategies in place to insulate themselves from cognitive bias.	Edit to more accurately address the issue of cognitive biases: (e) effectively communicating with all parties in an unbiased and truthful manner [and implement strategies to reduce the risk of bias in communications];	Reject: This section addressed communication with parties. Cognitive bias is defined and discussed in other sections
42	4.2.3(f)	T	It is unclear from (f) whether "case record" and "case-specific discovery documentation" is limited to only materials relevant to DNA testing. There is no reason for forensic scientists to have access to police reports and other notes that may bias their analysis or testimony.	Edit (f) to state: f) case record review [of materials relevant to DNA analysis] including case specific discovery documentation.	Reject: Everything turned over for discovery during pretrial should be available open to discussion.
43	4.2.4	T	It is unclear who qualifies as an "instructor" or "designee." Make clear that this is a person from the laboratory and not an attorney.	Edit 4.2.4 to state: Oral exercise with instructor ([who is a member of the lab] or designee) to include the following:	Reject: A designee could be an attorney.
23	4.2.4c	T	Unclear if this standard is referring to learning how to present complex testimony in jury trials, bench trials, or depositions, or having the actual experience of doing all 3 in a mock setting. Our mock court is in jury setting atmosphere, we discuss presenting testimony in a bench trial, but do not provide practice on additional settings.		Reject: There were no suggested changes.
44	4.2.4(g)	T	Cognitive bias can't be eliminated and examiners can only put strategies in place to insulate themselves from cognitive bias.	Edit to more accurately address the issue of cognitive biases: g) effectively answering questions under direct and cross examination in an unbiased and [a] truthful manner [and implement strategies to reduce the risk of bias in their responses]	Reject- Cognitive bias is defined and discussed in other sections
53	4.3.1	T	The requirement to meet Section 4.3 of Standard 022 would include Section 4.3.2 Required Testing which appears to contain irrelevant content for the purposes of this proposed standard. Also, 4.3.2 (b) requires a mock trial which is not required in this proposed standard.	Specify the pertinent subsections of ASB Standard 022 Section 4.3 (4.3.1, 4.3.3, 4.3.4, 4.3.5, 4.3.6) or state "relevant" subsections of 4.3.	Reject: A mock trial is included as a requirement in Section 4.3.3.

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14	4.3.2	E	Some laboratories may not have the position entitled "technical leader" or have a DNA unit. Forensic Biology covers other tests than DNA.	add additional language to include non-US laboratories with different titles and laboratories without DNA units; perhaps "or other appropriate individual"	Accept with modification: Revised to add "or their equivalent"
15	4.3.2	E	Forensic Biology encompasses more than DNA. The DNA technical leader may not be the appropriate person to have in this role for other types of forensic biology.	Delete "DNA" and see comment above re: other appropriate individual	Accept with modification: See comment above. Revised to add "or their equivalent"
24	4.3.2	T	Based on my understanding of this standard, the trainee will need to be questioned on 4.1's requirements, which would include policies related to testimony and responding to discovery or document requests, and literature assigned to the trainees, including case law. Am i correct in reading this as it would require a test, which we currently do not have on these topics. In addition to 4.1.1a and 4.1.1c, transcripts and recordings of testimony may also be part of the material that is tested. Am I reading this requirement correctly?		Reject: There were no suggested changes.
45	4.3.3	T	It is unclear who will participate in this "mock trial." Will it be done with the assistance of prosecutors and defense attorneys?	Edit to clearly address the issue of who is should participate in these mock trials to ensure that they aren't biased.	Reject: Participation in the mock trial is up to the laboratory.
58	4.3.3	T	A mock trial would be very difficult for small labs in niche fields to do. I work for a small wildlife forensic lab. Among the 3 analysts, we have testified ~3 times in the last 20 years, and prepared for trial but not actually testified another 3-4 times. Though we do have training in expert witness testimony, & work with DOJ or GC attorneys ahead of trial, we do not have the expertise or capacity to develop a mock trial specific to our work that would also be useful in the time frame expected for trial (e.g., my mock trial training would have been about 12 years before the actual trial I testified in). Other requirements in this standard would be a stretch (4.2.2a & b), but may be achievable; I do not know how we could do a meaningful mock trial as part of routine training.	If practicable, the trainee shall successfully complete a mock trial covering elements 4.2.4 (a-h) in this document.	Reject: A mock trial exercise is a crucial part of an analyst training regardless of the size of the laboratory. How to conduct a mock trial is up to the laboratory.
59	4.3.3	E?	refers to 4.2, but I can't see how a mock trial covers observation (4.2.2) or instruction and discussion (4.2.3), or oral exercises (4.2.4), though it does apply to the sub-items in 4.2.4.	If practicable, the trainee shall successfully complete a mock trial covering elements 4.2.4 (a-h) in this document.	Accept with modification: Reference in 4.3.3 changed to 4.2.5
16	5	E	as written this statement suggests that meeting the requirements on Standard 22 fulfills the requirements of this standard	Minimally include "also"; perhaps: "...the laboratory shall fulfill the requirements 4.1-4.3 of this standard and also 5 for Standard 22..."	Accept with modification: Section 5 was deleted and Section 4.3.3 was modified
54	5	T	The requirement to meet Section 5 of Standard 022 would include Section 5 (a) which appears to contain irrelevant content for the purposes of this proposed standard.	Specify the pertinent subsections of ASB Standard 022 Section 5 (b, c, d) or state "relevant" subsections of 5.	Accept with modification: Section 5 was deleted and Section 4.3.3 was modified
32	Annex A	T	Additional resources should be added	In addition to all the resources cited above the NIST report on mixtures should be added when it is finalized.	Reject: Only published documents can be cited.