

Deadline For Public Comments: October 3, 2022

ASB Std 136, Forensic Laboratory Standards for Prevention, Monitoring, and Mitigation of DNA Contamination

#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
		(E-Editorial, T-Technical)			
39	Foreward	E	Remove 'the' between 'to' and 'evidence' (2nd paragraph, line 3)	remove unnecessary word	Accept
40	Foreward	E	Remove 'the' between 'to' and 'evidence' (2nd paragraph, line 4)	remove unnecessary word	Accept
41	Foreward	T	"Contamination can also occur when objects transfer DNA...". I believe that 'surfaces' should be added here as well. Additionally, other 'evidence' can contaminate 'evidence' (e.g., packaging evidence together) which I believe is a concept missing here.	insert 'surfaces' to 'objects' and add in concept of evidence packaging.	Accept
42	Foreward	E	Comma needed between 'personnel' and 'or' (2nd paragraph, line 2)	insert necessary comma	Accept
43	Foreward	E	Remove comma between 'searches' and 'and' (3rd paragraph, line 2)	remove unnecessary comma	Accept
44	Foreward	E	Add '(AAFS)' between 'Sciences' and 'established' (5th paragraph, line 1)	insert necessary abbreviation	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
45	Foreward	E	5th paragraph should read "safeguarding justice, integrity, and fairness through consensus-based American National Standards."	adapt wording to match what I have written in the left column	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
46	Foreward	E	consensus based' needs a hyphen (5th paragraph, line 3)	insert hyphen	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
47	Foreward	E	Comma needed between 'diversity!' and 'and' (5th paragraph, line 6)	insert necessary comma	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
48	Foreward	E	-based' needed after 'consensus' (5th paragraph, line 7)	insert necessary hyphen and word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
49	Foreward	E	Insert 'Academy' between 'AAFS' and 'Standards' (6th paragraph, line 2)	insert necessary word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
50	Foreward	E	Insert 'the' between 'to' and 'AAFS-ASB' (7th paragraph, lines 1-2)	insert necessary word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
88	Last Page	E	Remove 'Academy Standards Board' under the logo to match what was done in the front matter pages	remove unnecessary words	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
34	N/A	E	Space needed between '410' and 'North'	insert necessary space	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
35	N/A	E	Insert 'Academy' between 'AAFS' and 'Standards' (paragraph under bullets, lines 4-5)	insert necessary word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
36	N/A	E	Comma needed between 'associates' and 'and' (paragraph under bullets, line 5)	insert necessary comma	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
37	N/A	E	Insert 'Academy' between 'AAFS' and 'Standards' (sentence under paragraph mentioned above)	insert necessary word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
38	N/A	E	Insert 'Academy' between 'AAFS' and 'Standards' (last paragraph, line 3)	insert necessary word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.

51	1	E	Change 'a forensic laboratory' to 'an accredited forensic laboratory' to match language used in the Forward.	adapt wording to match what I have written in the left column	Reject. This standard can be used non-accredited forensic laboratories outside the U.S. or by universities
52	3	E	Insert 'the' between 'For' and 'Purposes'	insert necessary word	Reject. This paragraph is template language approved by the ASB Board and cannot be modified.
11	3.1	E	This definition is not used in the requirements	delete the definition for background DNA	Not applicable. There is no definition for background DNA in the standard
53	3.1	E	Change 'difference' to 'dissimilarity'	adapt wording to match what I have written in the left column	Reject. Consensus Body prefers difference, and this keeps the document in line with existing published ASB DNA standards. They are synonyms.
12	3.2	T	this definition is too limited in scope. Contamination may be introduced into the evidence by anyone on the scene after commission of the crime and prior to first responders arrival. It may also be introduced at any step during laboratory testing to the evidence item or into any of the DNA containing tubes (e.g., the DNA extract or PCR amplification or CE set up) from contaminated solutions or other direct or indirect mechanisms. It needs to encompass any DNA introduced by any means that is not directly related to what was on an evidence item at the time of the crime and any subsequent introduction to any evidence derivatives or subitems, such as extracts, etc. in the laboratory.	Substitute modification of OSAC glossary "Exogenous DNA present in a DNA sample, PCR reaction, or item of evidence; the exogenous DNA or biological material could be present before the sample is collected, or introduced during collection or testing of the sample."	Reject. The consensus body prefers the definition as written, and feels it is appropriate for how the term is used in the document. The recommended change does not provide additional clarification.
54	3.3	T	I believe 'performed as expected' is more appropriate than 'properly' as that is the intention of a control	adapt wording to match what I have written in the left column	Accept
55	3.3	E	Insert 'a' between 'of' and 'sample' (negative control definition)	insert necessary word	Reject- a sample implies a single profile while sample allows for an unknow number of profiles
56	3.3	E	Insert 'e.g.,' before the examples of negative controls	insert necessary word	Accept
57	3.3	T	"...no results are expected from a negative control." The lack of a result is still a result.	remove this part of the sentence	Reject- More consistent with the positive control definition.
13	3.4	T	evaluate for consistency with other documents in circulation regarding elimination database	Recommend having a consistent definition across various documents using this term, if feasible. If, however, the term is used differently in different documents, the definition should clearly reflect what the difference is as it relates to each specific document.	Reject- This definition is specific for this document
58	3.4	E	Remove 'and/'. 'Or' includes both 'and' as well as 'or'.	remove unnecessary word	Accept
59	3.4	E	Add 'events' between 'contamination' and 'can'.	insert necessary word	Accept
6	3.6	T	The way the definition is now it is not clear exactly what is meant by assumed. It just doesn't read right. Are you meaning that it is "interpreted" as coming from different individuals? Or "may be interpreted as coming"? Or "may have come from multiple individuals"?	"Presence of approximately 1 to 3 nonreproducible alleles in DNA data where each allele may be interpreted has coming from different individuals whereas contamination consists of multiple alleles from one or more individuals"	Accept with modification- "1 to 3" was replaced with "a low number"

14	3.6	T	some critical language seems to be missing from the definition that is present in the OSAC terminology document. It is not possible to know what is a "spurious" allele without knowing the true contributor(s) to a DNA extract. The meaning of the second sentence is unclear. We cannot know if 3 alleles are due to contamination or drop-in. Not sure that part of the definition is helpful and seems wordy.	Recommend substituting: (1) Allelic peak(s) in an electropherogram that are not reproducible across multiple independent amplification events. (2) A hypothesis/postulate for the observation of one or more allelic peaks in an electropherogram that are inconsistent with the assumed/known contributor(s) to a sample not likely to be due to the presence of DNA from an additional contributor. The number of alleles that can reasonably be assumed to be drop-in as opposed to contamination in a DNA profile can be evaluated using negative control data, which may also be used to inform probabilistic genotyping models that take this phenomenon into account.	Accept with modification- "1 to 3" was replaced with "a low number"
60	3.6	E	"...whereas contamination consists of multiple alleles from one or more individuals." This portion is not necessary to understand the definition of drop-in	remove this part of the sentence	Reject- Needed to distinguish drop-in from contamination
61	3.7	E	but not limited to' is not needed because 'including' encompasses this concept that the list following is not exhaustive.	remove these words	Accept
15	4.1	T	1) Some laboratories may not have a person designated as a "technical leader," but have personnel with other titles appropriate to fulfill the role. The roles of the technical leader are specified in the QAS document for use in the US. 2) Not sure how one would audit to this requirement as written.	Recommend: The laboratory shall develop and follow appropriate documented laboratory procedures and policies to address each of the requirements in this standard.	Accept with modification. Recommended sentence added before the existing sentence.
16	4.2.2	E	word seems to be missing	add "the" before "PCR"; "Post-PCR includes the PCR..."	Reject- Reference not found in noted section.
17	4.2.2.2	T	the deleted sentence seem to suggest a requirement to use a method appropriate to the item being moved. That requirement seems to be lost now.	Suggest adding a qualifying phrase to maintain the requirement such as: "...cleaned and decontaminated using appropriate methods"	Reject- Section does not exist in this document.
62	4.2.3	T	Why is there not a recommended way to accomplish packaging and handling of evidence items and derivatives to minimize potential DNA transfer? A recommendation for separating pre- and post-PCR areas is given so I feel tht it would be appropriate a recommendation for accomplishment is given here.	add information/subsections on best practices for packaging and handling to avoid potential DNA transfer	Accept with modification. Additional information was added to the section, and a bibliographical reference to NIST IR 7928 was added for additional information.
63	4.2.3	E	Is the word 'unwanted' truly needed here? I don't think DNA transfer is ever wanted.	remove unnecessary word	Accept
9	4.2.3, 4.3.3, 4.3.3c, 4.5.2	E	evidence derivatives	Should this be expanded to evidence derivatives and/or work product, as all need to be packaged and handled to reduce contamination. Plus, derivatives and work product are in the QAS, but neither are defined in this standard's glossary	Accept with modification- Definitions for derivatives and work product are not needed. However, work product was added to 4.2.3.
18	4.2.4 (& 4.3.3, 4.3.3 b, 4.5.2)	T	Unclear what the difference is between "evidence" and "samples" and how that relates to the requirement to be "packaged and handled."	Clarify what is evidence vs. samples so the laboratory personnel and an auditor can correctly differentiate what is needed for each separately to meet this requirement (and the others listed).	Reject- This should be defined by the laboratory and not by the standard
64	4.2.4.1	E	Comma needed between 'consumables' and 'and'	insert necessary comma	Accept
65	4.2.4.2	E	Comma needed between 'consumables' and 'and'	insert necessary comma	Accept
66	4.2.4.2	E	Insert 'separately' before between 'stored' and 'in'	insert necessary word	Accept

67	4.2.5	T	I feel as though recommendations should be given as to how to achieve arranging a working environment to mitigate potential contamination	add information/subsections on best practices for arranging the lab working environment to mitigate potential contamination	Reject with modification- This is more appropriate in a best practices document. For additional information, a weblink for DNA Analysis Process Map was added to the bibliography.
2	4.2.6	E/T?	the terms 'cleaning' 'clean' are used here, whereas in 4.2.1.2, for example, 'decontamination' is used.	Unsure - should the wording be consistent throughout? Are 'cleaning' and 'decontamination' the same definition and used the same throughout? Should they be defined in section 3?	Accept with modification- Cleaning changed to decontamination
68	4.2.6	E	Remove comma between 'scheduled' and 'cleaning'	remove unnecessary comma	Accept
19	4.2.6	E	Add "The"	The laboratory shall...	Reject- Already corrected in a previous version
21	4.2.7	E	suggestion of word with more clarity perhaps	Substitute "defined" or "established" or other appropriate word in place of "determined"; "The cleaning schedule shall be defined/established by the..."	Reject- The suggestions are synonyms (it appears this comment is on section 4.2.6)
20	4.2.7	E	words missing and extra commas that may be confusing	May have better clarity in the meaning by changing to: "...a written and regularly scheduled cleaning procedure to include the laboratory areas and items to be cleaned, and the frequency of cleaning."	Accept
22	4.2.8	E	minor editorial edits for ease of flow and aid for auditing	...follow a written and regularly scheduled DNA laboratory monitoring program. The results from the program shall be documented....	Reject with modification- The words "DNA contamination" were added for clarity (it appears this comment is on section 4.2.7)
69	4.2.8	E	Remove 'forensic' between 'the' and 'laboratory'	remove unnecessary word	Accept
70	4.2.9	E	Remove 'etc.' as this is already a given since the word 'include' is used before the start of the list showing it is not exhaustive	remove unnecessary word	Accept
23	4.2.10	E	should "for" be "from"?	...contamination from laboratory equipment...	Reject- Already corrected in a previous version
1	4.3.3	T	May not be possible to know what is high template vs. low template EVIDENCE prior to analysis; labs that perform batching at various stages could need major workflow changes that would slow production	Limit language to evidence vs. references	Reject- The language includes the word "potential". The analyst will assess the likelihood of template amount. Not all evidence samples are low template and not all reference samples are high template.
89	4.3.3		I believe the group has wrongly resolved the "space and time" comment (see 4.3.3), and that laboratories that cannot provide complete physical and temporal separation of suspected high-template and low-template samples should be entreated to maximize the physical and temporal separation of the samples.	CB Member Comment on Ballot	Reject- No proposed resolution. Space or time is an industry standard practice.
90	4.3.3		While I was not a CB member for previous discussions of this Standard, I will abstain because I believe that the places where the Standard allows for separation in "time or space," should require separation in "time and space." I also am concerned by 4.3.3(g).	CB Member Comment on Ballot	Reject- No proposed resolution. Space or time is an industry standard practice.
24	4.3.3 c), d) and e)	E	"The laboratory shall" is duplicated since it is included in 4.3.3	Delete "the laboratory shall" and modify the first word(s) appropriately for the context of 4.3.3 (e.g., The examination and extraction of...)	Accept
3	4.3.3 d, e	E	period needed at the end of these sentences		Reject with modification - all items in this section have been modified to sentence fragments and all periods have been replaced with semi colons.

25	4.3.3 e)	T	should this include the opening of only one tube containing DNA at a time? Limiting cross contamination of DNA on plates?	Expand this language to include steps during the DNA testing process, and not just limit to the initial handling of evidence	Reject- All samples are open during high throughput, robotic, or plate processing
7	4.3.3b	T	It might be interpreted if you use "single use"/sterile tools they need to be cleaned also. Not sure exactly how to get the thought across that you don't have to clean those also.	"b) The laboratory shall require the cleaning of work surfaces and examination tools that are not single use with DNA destroying reagents or processes before new evidentiary items are examined."	Accept
10	4.3.3f	clarification/edit	If working on an item that has both high template and potential touch DNA evidence, there is not a way to separate the item itself during the exam	The laboratory shall examine potential high template evidence items (e.g., blood, semen, saliva) separately in time or space and independently from potential low-template evidence when possible (e.g., epithelial cells/touch DNA). During examination of a single item, it may not be feasible to separate these two different sources of DNA, and analysts are encouraged to collect possible low-template evidence first.	Accept with modification- The words "when possible" were added and "epithelial cells/touch DNA" was revised to "trace amounts of DNA". The rest of the comment is a note not a standard.
26	4.3.4	T	It seems the intent of this is to document when evidence is received packaged together and to document how it was packaged, but the current wording seems to suggest that the laboratory needs a policy for packaging evidence together - not something typically needed by a laboratory.	Suggested edit: If evidence items are received packaged together, the laboratory casefile documentation shall include what items were packaged together and specify how they were packaged. (or detail how they were packaged)	Accept with modification- The word "received" was added.
71	4.3.4	E	Casefile' should be 'case file' to match other wording used throughout	unconjoin words	Accept with modification- all incidences of "case file" or "casefile" have been replace with "case record"
72	4.3.4	E	Add 'and which' between 'when' and 'items'	insert necessary words	Reject- And which is implicit in documenting the items together
5	4.3.6	T	"stage of contamination" - there are no defined stages in the document for contamination; I think this means which stage in the DNA process the contamination occurred, but I am not sure - it can also read that there are stages for how severe contamination is	unsure - but consider rewording for clarity	Accept
73	4.3.6	T	What is meant by 'stage of contamination'? Do you mean 'the stage during the forensic DNA analysis at which the contamination event was recognized?	add clarity to this/adapt wording as needed	Accept
74	4.3.7.1	E	utilized' should be changed to 'used'	replace word	Reject- They are synonyms.
75	4.3.7.1	E	law enrncement' is not a person but 'law enforcement personnel'	insert necessary word	Reject- Personnel is implied
76	4.3.7.3	T	What is a 'tmely manner'? Does this also depend on applicable laws and regulations?	add clarity to this/adapt wording as needed	Accept with modification- Section was clarified by changing to "defined timeframe"
4	4.3.8	T	This line does not provide a time frame, frequency, or a when the intra-batch comparisons should be conducted.		Accept with modification- Section was clarified by changing to "defined timeframe"
77	4.3.8	E	This is missing an actor to match typical recommendation X should/shall action organization.	add in the appropriate actor (the laboratory or laboratory personnel to personify it)	Accept
78	4.3.9	E	Remove '/cleaning' as was done above where is is solely said decontamination	remove unnecessary word	Reject- Cleaning and decontamination are separate and both need to be done
79	4.3.9.2	E	This is missing an actor to match typical recommendation X should/shall action organization.	add in the appropriate actor (the laboratory or laboratory personnel to personify it)	Accept
80	4.3.10	E	Remove 'and/'. 'Or' includes both 'and' as well as 'or'.	remove unnecessary word	Accept

27	4.3.10 f)	T	possible word missing at the end - unclear what "non-contributor" is being referred to. Many individuals in a case may be non-contributors to a DNA profile, but that has nothing to do with elimination databases.	add appropriate missing word(s)	Reject- Section f is not in the document.
81	4.3.10e	E	Write out 'laboratory' instead of 'lab'	adapt wording	Accept
8	4.3.11	T	Is there a difference between "case record" and "casefile"? If so, then it needs to be explained, many people use those terms interchangeably.	"When contamination is identified, a root cause analysis [12] shall be conducted and documented. The root cause analysis and supporting documentation shall be retained."	Accept with modification- The section was reworded for clarification. All instances of "casefile" have been revised to "case record". The section was split into two sections.
32	4.3.11	T	Referencing or documenting potential contamination events in the casefile is sufficient for transparency purposes. Requiring the documentation of the root cause investigation in the casefile, which may include personnel matters, may not be allowed (per HR regulations) or appropriate.	remove the added requirement to include the root cause analysis in the casefile. Requiring it to be conducting and documenting it should suffice.	Reject- The name of the staff member could be redacted or not named.
28	4.3.13 (now 4.3.14)	T	also add "clients" or other designation for individuals who submitted the evidence and are the receivers/users of the reports initially (e.g., other crime labs, law enforcement, private individuals, court); on another note, isn't this requirement outside the scope of this document since this is not preventing, monitoring or mitigating contamination	expand the list of individuals who need to be notified of any contamination event beyond attorneys or delete the requirement all together since it is outside the scope of this document	Reject- Customers include clients and others
82	4.4.1	E	Add 'event' after 'contamination'	insert necessary word	Accept
29	4.4.2	T	suspension for the whole laboratory or for an individual?	clarify what suspension is being referred to	Reject- Suspension depends on the type and severity. This is up to the laboratory.
30	4.4.2 f)	T	unclear what "post-contamination review" means and what is being reviewed	Provide more information or definition for this	Reject- Section f is not in the document.
31	4.5.2	E	flow is awkward	maybe add a ":" after "include" to prevent associating "the use of" with the later items in the list	Accept
83	4.5.2c	E	Remove 'cleaning' as was done above where is is solely said decontamination	remove unnecessary word	Reject- Cleaning and decontamination are separate and both need to be done
84	4.5.2e	E	Replace 'incidents' with 'events' as incident is never used in this document but event is	replace word	Accept
85	4.6	E	Remove 'in a Laboratory' as the scope makes it clear this standard is for accredited forensic laboratories	remove unnecessary words	Reject- This emphasizes that the standard only applies to laboratories and not police department/medical examiner rapid DNA testing.
33	4.6.2	Technical	Since the Rapid instrument runs amplification I think this statement should be modified - Rapid DNA instrumentation shall be maintained in a pre-amplification room.	Make it similar to what is said in QAS 7.1.3.1 A Rapid DNA instrument/System used for processing casework reference samples shall be maintained in rooms outside of evidence examination areas or those containing amplified DNA.	Accept
86	4.6.3	E	remove 'sample' after 'positive' and after 'negative' as this should just be a positive control and a negative control	remove unnecessary words	Accept
87	Annex A	E	Replace 'all-inclusive' with 'exhaustive'	replace word	Reject- They are synonyms.