

Deadline of Submission of Comments: 20-Mar-23

Document Number: ANSI/ASB Std 102

Document Title: Standard for Verification of Source Conclusions in Toolmark Examinations

#	Section	Type of Comment	Comments	Proposed Resolution	Final Resolution
2	3/4.1	T	<p>Comments from the previous round demonstrated different readers may read the term "source conclusion" in 4.1 and interpret the criteria for when verification is required significantly differently. Comment 19 in the original commenting period was resolved by defining source conclusion, which I believe to be valuable addition to the standard; however, I think given the lack of clarity the addition of the definition does directly relate to the requirement in 4.1 and respectfully request this comment be considered. The changed text (addition of definition) directly impacts the text in 4.1 even if the text in 4.1 was not actually revised.</p> <p>Why would a forensic service provider (FSP) not have the same ability to evaluate risk and determine the extent of verification within the organization as they would with blind verification? Reading the foreword, it states, "This document takes into consideration the current state of professional practices and scientific research on contextual bias and confirmation bias." How was the current state of professional practices determined? Much like many other commentors, this does not seem in line with current professional practices and an FSP may have a significant increase in work to be performed if they choose to adopt this standard. Is there data that demonstrates risk decreases with increased verification (e.g., including eliminations on class characteristics as many commentors identified as a concern) as opposed to focusing verification on the comparisons that are the riskiest of having differing opinions? Is there data that identifies what opinions there is most frequent disagreement on between primary examiner and verifier? This type of data may be dependent on each FSP independently and, for this reason, the FSP should determine verification criteria with consideration to the risk in their organization of when verification is mandatory.</p>	<p>Change source conclusion in such the definiton does not apply to all opinions rendered (e.g., source conclusion is an opinon of same source) in order to allow FSPs to determine other times when verification is performed OR change 4.1 to allow for FSPs to determine when verifications must be performed (e.g., same source opinion or different source opinion) and allow FSPs to evaluate risk for their resources.</p>	<p>Reject: The working group believes all source conclusions, as defined to mean opinions of same source, opinions of different source, and inconclusive opinions, should be verified; the allowed methods of verification remain flexible under the standard.</p>
4	4.1	T	<p>Extent of verification: Last time we commented that the standard as written required verification only for source conclusions, which would not be truly blind. The redline edits do not address this problem. Also it is not clear what "determination of value/ no value" is referring to. Is it suitability for comparison? Is it inconclusivity? Are the terms being used interchangeably and if so, should be consistent throughout the document. If not, then clarification as to what each term means is necessary. It is not clear what step in the analysis it correlates to. Additionally, "certain situations" is vague. This does not provide clarity as to when verification is appropriate or what the circumstances are that may give rise to a "situation" where verification is warranted. While it is commendable that the standard requires labs to have a policy, without more specifics, the standard won't help reduce interlab variability. Additionally, the verification section does not require blind verification.</p> <p>Same comment and rationale as previously submitted.</p>	<p>Change to require verification of all opinions, not just source conclusions, and refer to as opinions not conclusion.</p>	<p>Reject: the definition of source conclusion is included in section 3 of the document (3.2 specifically); this document is describing verifications of source conclusions and not determinations of value (value and no value are not terms used in this document), but nothing in this document precludes a lab from having a policy/procedure requiring verifications of value determinations; the wording of "certain situations" is not in this document; the document requires a portion of verifications be conducted in a blind manner with the FSP conducting a risk assessment to determine what portion is appropriate for their customers.</p>

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1	4.2	T	ISO/IEC 17025:2017 is not an appropriate reference for risk assessment. The phrase risk assessment is used one time in ISO/IEC 17025:2017 and it is in a note; it is not defined nor described. The note in 8.5.2 even specifies that ISO/IEC 17025 does not require any formal process for risk management. Standard documents that describe risk management include ISO 31000 and IEC 31010. I would recommend using a more generic phrasing like ISO/IEC 17025 does or changing the reference if the intent on providing a reference is to provide guidance.	Possible change to depart from the formalized language of risk assessment: The FSSP shall conduct a risk assessment[32] to determine the percentage of verification to be conducted in this manner. The FSSP shall document and retain the risk assessment record to The FSSP shall evaluate the risk associated with not conducting the verification in this manner to determine the percentage that will be verified by this method. The FSSP shall document and retain this evaluation. alternatively, provide a different reference	Reject with modification: the section information for risk assessment was added to the Bibliography; additional information about risk is incorporated within the document.
3	4.2	T	Method ("Whenever practicable, the primary examiner shall not assign their own verifier and the verifier should have no prior knowledge of the primary examiner's source conclusions.")Last time we asked: how is requiring this only when "practicable" consistent with this being a standard (as opposed to a best practice). If this is a standard, then blind verification should be required and any deviation from a blind procedure should be documented and noted in the report. The redline version merely adds a requirement that supporting data be recorded. Adding "and supporting data" does not cure the fundamental problems with this section as articulated in our prior submission. The recommendations for 4.2 (4.2 (requiring retention of risk assessment record); 4.2 ("The FSSP shall conduct a risk assessment[3] to determine the percentage of verification to be conducted in this manner. The FSSP shall document and retain the risk assessment record justifying the portion of cases requiring this level of verification."); 4.2 (same as 7)) remain unaddressed.	Delete "whenever practicable" and make clear that the verifier should also not know who the examiner is.	Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manner; it is impractical to require that a verifier not know who the primary examiner is.
5	4.2	T	(requiring retention of risk assessment record): see above	Change to "data and record"	Reject: the language of the risk assessment retention is clear.
7	4.2	T	("The FSSP shall conduct a risk assessment[3] to determine the percentage of verification to be conducted in this manner. The FSSP shall document and retain the risk assessment record justifying the portion of cases requiring this level of verification."): see above		Reject: the language of the risk assessment retention is clear.
8	4.2	T	See above; still not clear what justifies blind verification for only a portion. Wasn't this concern part of theDC firearms issues? We would remove "for a portion" and delete the highlighted portion about the risk assessment.		Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manner.
9	4.2	T	Somewhere in here it should be added that if ever if verification is non-blind in any way (i.e., knows the examiner, knows the examiner's conclusions, etc.) that information must be documented and disclosed.	Add suggested language here or elsewhere	Reject: section 4.5 requires the documentation requested in this comment, with the exception of whether the verifier knows the identity of the primary examiner; it is impractical to require that a verifier not know who the primary examiner is.

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6	4.4	T	Resolution ("The FSSP shall have a policy for the arbitration of differences in source conclusion(s) between the primary examiner and verifier that requires the arbitration information be documented in the case record."): Our previous suggestion was to change to "The FSSP shall have a policy for the arbitration of differences in source conclusion(s) between the primary examiner and verifier that requires the information be fully documented and disclosed. " The redline version adds that it "be documented," but such a critical difference requires full documentation and disclosure (that would include, for example, documentation of results, fact of the difference, resolution, and the basis for the resolution).	Change to "The FSSP shall have a policy for the arbitration of differences in source conclusion(s) between the primary examiner and verifier that requires the information be fully documented and disclosed."	Reject: The language of sections 4.4 and 4.5 is sufficient.
10	4.4	T	Resolution of conflicts: Why is this left to the FSSP entirely? Are there no suggested best practices in the literature? We would suggest asking the OSAC human factors committee for guidance on this issue. Also at a minimum this should be a written policy that requires documentation of results, resolution and the basis for the resolution and the fact of a difference should be included in any report issued.		Reject: The language of sections 4.4 and 4.5 is sufficient.
11	4.5	T	non-blind verification should not be used. If blind verification is impossible, this should be stated, as well as the reason it is impossible.	Require blind verification.	Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manner.
12	Table of Contents	T	The ambiguity as to what will be added or completed prior to publication renders the comment period meaningless. All content including TOC must be completed, and vetted during the review period. If a standard is not ready to move forward, then the subcommittee should take the time it needs to complete it so that OSAC members, affiliates and those submitting public comments know what it is they are reviewing.	Retract the standard or delete the TOC.	Reject: the TOC cannot be finalized until comment resolutions allow the remainder of the document to be finalized; the TOC is only missing page numbers.
13			Voting yes on the redline changes, as the specific subject of this ballot. I do think additional clarifications are warranted. Specifically: Section 3.3(c). A number of very important terms are used without definition (in this standard nor in the referenced document). "Correct approach...", "accepted analytical method...", and "competent analyst..." are all undefined and subject to variable interpretation. This level of ambiguity seems inappropriate for a standard. The term "verification," although it is the subject of the standard, is undefined -- though an implied definition is present in A3.4 ("verifier"). I agree with previous round comments that A4.2 could be better clarified to emphasize that FSSP determination of percentage applies only to blind verifications. Happy to discuss further		3.3c comment-Reject: the language is provided by the source referenced for the term task-relevant "verification" term comment - Reject: a specific definition of verification is unnecessary as the context of the document is sufficient to understand the term. 4.2 comment- Reject: the language is sufficient.

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14			<p>I have three major issues with this standard:(1) It continues to allow non-blind verification despite evidence that it is less likely to capture real disagreement between examiners. The one study on verification found that examiners in open verification disagreed almost 30% less than those conducting blind verification. 29.Mattijssen EJAT, Witteman CLM, Berger CEF, Stoel RD. Cognitive biases in the peer review of bullet and cartridge case comparison casework: A field study. Sci & Justice. 2022. 60(4): 337-346. doi: 10.1016/j.scijus.2020.01.005. Even if blind verification will not be used for 100% of all cases, this standard should specify when it is most appropriate and mandate it occur in those settings. That is what the friction ridge community has done in its most recent bpr on verification. For example it could be mandated in cases where no gun is available for comparison, or where it is a single bullet or cartridge case in question, or when some specified limited area alone is available to compare. Any given that essentially zero validation exists at all for toolmark examination outside firearms blind verification should be mandatory in 100% of those cases.(2) This standard simply leaves it to labs to develop a conflict resolution and documentation policy. that is not acceptable.(3) This standard cites to inappropriate and poorly designed research (kersholt) but ignores better designed and more relevant research (Matijessen cited above) in its bibliography. That is unacceptable.</p>		<p>Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manner; the working group supports conflict resolution procedures be developed by the FSSP; the working group reviewed numerous suggested literature and feels the bibliography is appropriate.</p>
15			<p>I too have the same concerns. 1) Verifications should all be blind so as to remain unbiased. 2) Staff and availability of staff should not be an acceptable reason for something not being verified. Why nothing about 100% verification? (Tech and admin reviews perhaps). 2) Good idea to have a guidance for resolution (unless this will be a separate standard?) 3) More relevant research needs to be cited. Concept is good and the need for it tremendous; just not crazy about how it is being executed in this standard.</p>		<p>Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manners; all source conclusions are required to be verified (just not all have to be blind); the working group supports conflict resolution procedures be developed by the FSSP; the working group reviewed numerous suggested literature and feels the bibliography is appropriate.</p>
16			<p>I echo the above big three concerns about this standard: 1) non-blind verification allowed without guidance as to when blind should be mandated; (2) lack of guidance in developing conflict resolution policies; and (3) failure to cite relevant literature re: impact of non-blind format on verifications in bibliography. Examples of more detailed guidance can be found in the friction ridge subcommittee's BPRs, not only for situations where blind verification is required, but also for conflict resolution processes and documentation.</p>		<p>Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manner; the working group supports conflict resolution procedures be developed by the FSSP; the working group reviewed numerous suggested literature and feels the bibliography is appropriate.</p>

Additional Comments from vote closing 8/1/2023

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17			<p>1. Apart from the traditional physical verification method, any other method of verification, including live video conferencing, needs to be first evaluated for their reliability. Without such data, treating the traditional physical verification on par with any other method of verification is unjustified.</p> <p>2. In any subjective process that does not involve quantitative criteria, 100% blind verification is the best-known safety net available and therefore in my opinion it is non-negotiable.</p> <p>3. Conflict resolution is a key part of the verification process; writing a national standard without describing this process makes the document incomplete.</p> <p>4. Writing a national standard while leaving many critical elements to the FSSP defeats the whole purpose. If and when a critic calls this a "vacuous standard", justifying in writing such a standard is difficult, if not impossible.</p>		<p>1.) Reject: The standard leaves open the possibility of alternative methods of verification by including the statement "1) the technology and process is sufficient to conduct a valid verification and 2) they satisfy the verifier and other elements of the standard"; this is sufficient to encompass the need for evaluating reliability of the alternative method of verification.</p> <p>2.) Reject: the working group supports FSSPs conducting a risk assessment to determine what amount of verifications shall be conducted in a blind manners.</p> <p>3.) Reject with modification: the working group supports conflict resolution procedures be developed by the FSSP at this time. However, the CB added the following sentence: "The arbitration information shall be descriptive enough for an outside expert to be able to follow the steps that occurred and discern all conclusions (original, intermediate, and final) reached by each examiner throughout the process."</p> <p>4) Reject: Standardization must take into account the variability of casework, agency size and staffing, and multiple types of solutions to solve the needs of the lab.</p>
18			This standard is outside my area of expertise, so I do not feel qualified to offer an opinion on its quality.		Accept