

Deadline for Public Comments: May 16, 2022

ASB Standard 162, Standard for the Forensic Examination and Documentation of Non-firearm Tools and Non-firearm Toolmarks

	Section	Type of Comment (E-Editorial, T-Technical)	Comments	Proposed Resolution	Final Resolution
16	General: whole document	T	<p>The Foreword and Scope suggest that this standard is designed to provide standards for the examination of non-firearm tools and toolmarks, and provide guidance about the procedures that should be used when examining such materials and reporting the results of those examinations. However, the document as it is currently written does not provide the information necessary for an examiner to do this without other training and/or standard operating procedures from another institution. The HFTG considers this standard to be an example of what recent critics have called "vacuous standards"(Morrison et al., 2020, Forensic Science Int'l: Synergy 2: 206-209).</p> <p>Hallmarks of a "vacuous standard" include limited guidance in the form of generic statements that do not provide any meaningful guidance on how to conduct, document, or report an examination, and could be satisfied by almost any process or procedure undertaken by an examiner. For instance, 4.7.1 lists features and information that must be documented, but does not specify how examiners should document the information. For instance, should this be done in writing only or are drawings, diagrams, and photographs permitted or encouraged? Should these records be stored electronically? How should they be organized? Furthermore the language is permissive, using "should" and only asking that this information be documented "if known" meaning that any number of these could go undocumented and the standard would still be satisfied so long as the examiner says that they didn't know that information at the time.</p> <p>The HFTG becomes concerned when these types of standards are proposed because these documents can make analysts believe they are complying with a standard and using reliable methods. In reality, the standard actually provides no specific criteria that could show the examiner or someone reviewing their work whether a particular examination was performed reliably or not. In addition, a standard with little to no concrete guidance like this will justify the use of a variety of procedures and methods, and so this type of document can exacerbate the lack of standardization between laboratories and between examiners. The HFTG would advise the subcommittee to rethink their approach to this document and think about whether there are procedures and methods they think should be performed in the same way across laboratories and between analysts. The document could then be re-drafted in a way that offers concrete guidance so that those procedures and methods could be implemented in a reasonably uniform manner simply by reading this standard document.</p> <p>This being said, we recognize that it is important that the record keeping and other requirements that are specified be met. Hence, we suggest that this standard be retitled with a new introduction that makes it clear that this is not a scientific standard but a set of procedural recommendations or requirements that do not relate to the quality of a</p>	<p>Retitle the document with a new introduction that makes it clear that this is not a scientific standard but a set of procedural recommendations or requirements that do not relate to the quality of a forensic science analyses or investigations or the reliability of analytic results. Alternatively, if the intended scope of the document is to provide a scientific standard for performing an examination, the document would need to be revised to provide specific, substantive criteria for performing an examination that can be documented in a way that a subsequent reader can determine what the examiner did and what specific observations or other factors they considered in forming any conclusions.</p>	<p>Reject with modification: 4.4 describes how to document. The "should" in sections 4.7.1 and 4.7.2 were changed to "shall". The remaining concerns are outside the scope of this document.</p>
10	all	T	<p>The Foreword and Scope suggest that this standard is designed to provide standards for the examination of non-firearm tools and toolmarks, and provide guidance about the procedures that should be used when examining such materials and reporting the results of those examinations. However, the document as it is currently written does not provide the information necessary for an examiner to do this without other training and/or standard operating procedures from another institution. Several+ members of the LTG (like the HFTG) consider this standard to be of insufficient specificity (see LTG views document on specificity).</p> <p>Hallmarks of an overly vague standard include limited guidance in the form of generic statements that do not provide any meaningful guidance on how to conduct, document, or report an examination, and could be satisfied by almost any process or procedure undertaken by an examiner. For instance, 4.7.1 lists features and information that must be documented, but does not specify how examiners should document the information. For instance, should this be done in writing only or are drawings, diagrams, and photographs permitted or encouraged? Should these records be stored electronically? How should they be organized? Furthermore the language is permissive, using "should" and only asking that this information be documented "if known" meaning that any number of these could go undocumented and the standard would still be satisfied so long as the examiner says that they didn't know that information at the time.</p> <p>These types of standards can mislead legal actors into thinking an FSP/FSSP is doing reliable work so long as they have a standard/procedure. In reality, the standard provides no specific criteria that could show the examiner or someone reviewing their work whether a particular examination was performed reliably or not. In addition, a standard with little to no concrete guidance like this will justify the use of a variety of procedures and methods, and so this type of document can exacerbate the lack of standardization between laboratories and between examiners. Like the HFTG, we would advise the subcommittee to rethink their approach to this document and think about whether there are procedures and methods they think should be performed in the same way across laboratories and between analysts. The document could then be re-drafted in a way that offers concrete guidance so that those procedures and methods could be implemented in a reasonably uniform manner simply by reading this standard document.</p>		<p>Reject with modification: 4.4 describes how to document. The "should" in sections 4.7.1 and 4.7.2 were changed to "shall". The remaining concerns are outside the scope of this document.</p>
25			<p>The documentation requirements are too vague and may lead to variation in how different labs apply the standard. For example, 4.4 could be interpreted to allow for photographs alone, rather than requiring any written documentation. Written documentation of an examiner's conclusions is essential, and this standard should specifically define what must be documented.</p>		<p>Reject: This standard is about documenting the initial examination and does not involve conclusions.</p>

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17	Foreword	T	The opening statement is not accurate: "Following these procedures, an examiner will be able to document and report the examination of non-firearm tools and non-firearm toolmarks." The document does not provide any substantive description of specific steps, methodology, or analytical procedures that would tell an examiner how to conduct an examination, or how to document and report the examination in a way that would allow a third party to understand what the examiner did, how they arrived at any conclusions, and whether the examination was carried out competently.	Draft a revised statement or section stating clearly what the document does and does not provide in terms of standards or guidance for examiners who conduct examinations for use in litigation.	Reject: This standard is about documenting the initial examination and does not involve conclusions. This standard is not intended for use outside of the FSSP and by trained personnel.
18	1 Scope	T	The current language does not accurately convey the scope of this document. The document provides needed guidance on documentation and reporting, but it does not describe the procedures for examination or interpretation of results. A revised scope would clarify the purpose of the document as well as limitations on its use.	We suggest: "This document provides suggestions and requirements for the examination, documentation and reporting of non-firearm tools and non-firearm tool marks by forensic toolmark examiners. It does not specify standards relating to the validity of the processes used or judgments reached by forensic toolmark examiners when analyzing non-firearm tools and non-firearm toolmarks. Except for requirements relating to documentation and reporting the document does not cover the microscopic comparison of toolmarks."	Reject: The scope accurately conveys the intent of this document.
1	2	E	Change , before Annex . Incorrect reference	There are no normative reference documents. Annex A, Bibliography, contains informative references.	Accept
21	4.1	T	The language of this section allows virtually unlimited variation in procedures and documentation: "Depending on the intended use of the information provided by the examination, differing levels of examination and documentation may be required. Laboratory policy may inform examiners as to which steps in the process are appropriate." Standardization requires some guidance on the appropriate factors an examiner or laboratory policy should consider in determining the appropriate type of examination and documentation needed.	Provide more specific guidance on the factors to consider in determining the type of examination and documentation needed.	Reject: Documentation requirements are covered in section 4.4.
2	4.2	T	Include 3D technologies	- stereo microscope and/or comparison microscope; - 3D measurement systems;	Accept
11	4.4	T	This "standard" provides no guidance on what is necessary to properly document an examination.	List what must be documented in each case file. See also comments re: 4.7.1 and 4.7.2	Reject: Section 4.4 provides sufficient information. See following for resolutions regarding sections 4.7.1. and 4.7.2,
22	4.6		The placement of the last line in 4.6.1 implies that the next steps in 4.6 can be skipped if going directly to examination. I suggest a light edit to solve this problem, the simplest would be retaining all the language as written but moving 4.6.1 to the end of section 4.6		Accept with modification: last sentence of section 4.6.1 has been moved to its own section 4.6.4.
3	4.6.1	E	Rephrase for clarity	... any damage observed. If severely damaged, further examination may not be possible. For items ...	Accept
7	4.6.1	T	The last sentence sounds too much like 4.6.2 and 4.6.3 are "steps" in a procedure that can be omitted if the item is suitable for examination. 4.7 already states that it is all information that should be documented if known, so this sentence adds nothing.	Delete "For items that are suitable for further examination, proceed with the steps in 4.7 that are appropriate for the item type."	Accept with modification: last sentence of section 4.6.1 has been moved to its own section 4.6.4.
12	4.6.1	T	This standard provides no guidance regarding how to determine if an item is too damaged to conduct the examination.	Describe what is meant by "severe" damage and describe how an examiner should determine that a bullet is too damaged to proceed.	Reject: The variations of tools, toolmarks, and damage are too diverse to specify.
19	4.6.1	T	Current language is vague: "4.6.1 If severely damaged, no further examination may be possible." What is "severe damage"? Who decides?	Provide guidance on the type of damage that would prevent further examination. Specify whether this is may be left to the judgment by each individual examiner or determined as an independent step in the analysis.	Reject: The variations of tools, toolmarks, and damage are too diverse to specify.
23	4.6.1		4.6.1 - 1st sentence, the word "toolmark" is missing the letter L.		Accept
20	4.6.2	T	The current language is vague: "4.6.2 The presence and location of any pertinent foreign or trace material, to include material transfer on the working surface of the tool, shall be documented. The material shall be collected and/or preserved in accordance with laboratory policy." What kinds of materials are "pertinent"? Who decides?	Add guidance to clarify appropriate factors or criteria to consider in determining what material is "pertinent" and who decides. Would any laboratory policy be sufficient to meet this standard or are there procedures that should be recommended for the preservation of such materials which may be further refined by the laboratory's SOPs?	Reject: Laboratory policy, laboratory training, and circumstances of the case may dictate what is pertinent.
4	4.7.1	E	The features to be documented may depend on the relevance of that feature to the task	... if known and relevant:	Reject: The term "relevant" is not necessary.
13	4.7.1	T	These "shoulds" should be "shalls", particularly given there is already the caveat "if known". This would help address the lack of guidance in 4.4	Change "should" to "shall"	Accept

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24	4.7.1		I believe this document should provide more guidance on what must be included, particularly for documentation. I think the items listed under 4.7.1 and 4.7.2 should be required when known ("shall"), not simply recommended ("should"). As written, an examiner could meet the requirements of this standard by documenting very very little.		Accept: The "should" was replaced by "shall".
5	4.7.2	E	The features to be documented may depend on the relevance of that feature to the task	... if known and relevant :	Reject: The term "relevant" is not necessary.
14	4.7.2	T	These "shoulds" should be "shalls", particularly given there is already the caveat "if known". This would help address the lack of guidance in 4.4. Subsections d-h are particularly important from a bias mitigation perspective. Thoroughly documenting these features of the toolmarks before microscopic comparison to a known is essential to reducing the influence of bias in toolmark comparison	Change "should" to "shall", particularly for (but not limited to) items d-h	Accept: The "should" was replaced by "shall".
15	4.8	T	This provides no guidance on what should be included in a report, what conclusions may be reached, what is the basis for the underlying conclusions.	Specify what must be included in a report and how it may be worded as well as the basis of how it may be worded and any limitations.	Reject: This standard is about documenting the initial examination and does not involve conclusions.
6	Annex A	E	AFTE Glossary stated as Version 6.120414 but footnote made reference to Version 6.110619	To tally	Accept
8	Bibliography	E	Version number of entry 1] does not agree with footnote 1.	Change "6.120414" to "6.110619"	Accept
9	Bibliography, footnote 1	E	Not strictly required, but links to archived copies of documents would extend the effective lifespan of links.	https://web.archive.org/web/20220316235355/https://afte.org/uploads/documents/AFTE_Glossary_Version_6.110619_DRAFT_.PDF	Reject: The foreword includes the following information: All hyperlinks and web addresses shown in this document are current as of the publication date of this standard.