

ASB Guide 001 Third Edition
2021

**Manual and Style Guide for ASB Standards, Guidelines,
Best Practice Recommendations, and Technical Reports**



ASB Reference Manual and Style Guide for Standards, Guidelines, Best Practice Recommendations, and Technical Reports

Approved by the Academy Standards Board for use by the AAFS Standards Board, LLC., 2021



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Foreword

The American Academy of Forensic Sciences (AAFS) established the Academy Standards Board (ASB) in 2016 with a vision of safeguarding Justice, Integrity and Fairness through Consensus Based American National Standards. To that end, the ASB develops consensus based forensic standards within a framework accredited by the American National Standards Institute (ANSI), and provides training to support those standards. ASB values integrity, scientific rigor, openness, due process, collaboration, excellence, diversity and inclusion. ASB is dedicated to developing and making freely accessible the highest quality documentary forensic science consensus Standards, Guidelines, Best Practice Recommendations, and Technical Reports in a wide range of forensic science disciplines as a service to forensic practitioners and the legal system.

ASB is accredited by the American National Standards Institute (ANSI) according to ANSI's "Essential Requirements: Due Process Requirements for American National Standards."¹ ASB documents are developed by volunteers working in Consensus Bodies (CBs) and Working Group (WGs) that conform to ANSI requirements of openness, transparency, due process, and consensus.

The Manual establishes basic requirements for the development of ASB deliverables and includes the definition of each type of document, the proper formatting of each document, a writing style guide, and Annexes with additional helpful information.

Questions, comments, and suggestions for the improvement of this document can be sent to ASB Secretariat, asb@aafs.org or 401 N 21st Street, Colorado Springs, CO 80904.

ASB procedures are publicly available, free of cost, at www.asbstandardsboard.org.

Keywords: *style, editing, layout, requirements, patents, standards, technical reports, best practice recommendations*

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ASB Reference Manual and Style Guide for Standards, Guidelines, Best Practice Recommendations, and Technical Reports

Preface

This Manual sets style and document development requirements for Standards, Guidelines, Best Practice Recommendations, and Technical Reports published by the ASB. The Manual helps ensure brand consistency and aids in readability, implementation, and quality of ASB documents.

The Manual is intended as a prime reference for ASB Consensus Body (CB) and Working Group (WG) volunteers. The Manual introduces document definitions, style, and organizational requirements along with guidance on how to choose the document type suitable for an intended purpose. The Annexes provide additional and more detailed direction and information on select topics. The *ASB Supplemental Guide (SG) 001* includes a Sample ASB Document plus a Template for creating a proposed document that can be submitted to ASB for approved development work.

The Manual is divided into three sections:

Part I ***Introduction to Document Deliverables***

- ASB document types
- Guidance on choosing which type to develop
- Document identification
- Writing style

Part II ***Document Subdivisions and Basic Formatting***

- Sectional elements
- Subsection formatting

Annexes	Annex A (normative)	<i>Terms and Definitions</i>
	Annex B (normative)	<i>Expression of Provisions</i>
	Annex C (normative)	<i>Conformity Assessment</i>
	Annex D (normative)	<i>Scope Statement</i>
	Annex E (informative)	<i>Numbers, Units of Measurement, and Equations</i>
	Annex F (normative)	<i>References and NOTES</i>
	Annex G (normative)	<i>Copyright, Patents, Commercial Terms, and Trademarks</i>
	Annex H (normative)	<i>Annexes and Bibliographies</i>
	Annex J (informative)	<i>Bibliography</i>

The Manual is partially based on requirements and guidance from ANSI² and the International Organization for Standardization (ISO)³.

² *Essential Requirements*, ANSI

³ *Directives Parts 1 & 2*, ISO/IEC

PART I – Introduction to ASB Document Deliverables

1 ASB Documents Deliverables

ASB publishes forensic science-based documents in the form of Standards, Guidelines, Best Practice Recommendations, and Technical Reports. Each document type serves a specific purpose.

1.1 Standard (S)

A standard is established by consensus and approved by a recognized body. It sets objectively verifiable requirements, provides for common and repeated use, rules or characteristics for activities or their results, and is aimed at the achievement of the optimum degree of order in a given context. A standard is written to establish objectively measurable requirements for a given topic or set of actions.

NOTE The document is the standard. It is incorrect to describe a standard as containing or providing standards. A standard provides requirements.

1.1.1 Purpose

A consensus standard reflects the level of agreement, expressed by interested parties, on what is required for a given activity, process, product, or result. Such requirements are measurable. Examples of measurable requirements might include setting specific operational procedures, specifying technical dimensions, establishing verifiable levels of scientific rigor, or setting management responsibilities.

1.1.2 Expression of Content

The requirements in a Standard are expressed as imperative sentences or stated in ‘shall’ language and can be assessed by one or more forms of conformity assessment procedures.

NOTE When writing a standard, the use of other verb forms, such as ‘should’, ‘may’, or ‘can’, are allowed only when their use is necessary to explain a secondary aspect of a requirement such as an option.

1.2 Guideline (G)

A Guideline provides information and advice on processes and activities contained in a Standard or BPR, or guides users on the implementation of a standard or series of standards. A Guideline may include recommendations but does not establish best practices.

1.2.1 Purpose

A Guideline aids in the understanding of and the application of principles, practices, and activities. A Guideline can facilitate the implementation of requirements expressed over multiple related documents such as a set of standards on a given topic.

1.2.2 Expression of Content

A Guideline is written in ‘should’ language and is informative rather than directive. A Guideline in and of itself is not appropriate for conformity assessment.

NOTE When desired, a Guideline can be included in a conformity assessment plan based on another standard or standards. For example, a forensic laboratory certified to ISO/IEC 17025 *General requirements for the competence of testing and calibration laboratories* might incorporate a relevant Guideline on certain testing procedures as part of the overall accreditation plan.

1.3 Best Practice Recommendation (BPR)

A Best Practice Recommendation identifies and sets forth the optimal way to carry out an action or actions. A BPR may include choices and the variants between them as a means of demonstrating optimal choices in different circumstances.

1.3.1 Purpose

A BPR provides practical information and recommendations on issues such as preferred technical practices, optimal variations in procedures, necessary personnel training, and the like. Unlike a Standard, a BPR does not set new requirements in a field of endeavor. Rather, the focus of a BPR is to recommend the best way to carry out activities that are already standardized through an official process or are de facto standards through common and accepted use.

1.3.2 Expression of Content

A BPR is written in 'should' language. Imperative or 'shall' language can be used in a secondary context when necessary to clarify a recommended action or approach.

NOTE BPRs can be used as part of an accreditation plan in conjunction with the standards or operation procedures included in the conformity assessment process.

1.4 Technical Report (TR)

A Technical Report is an explanatory, information-only document.

Purpose

A Technical Report provides scientific, technical, terminology, or operational information relevant to a standard, a field of activity, or a profession. A TR can also, for example, identify and discuss applications not yet standardized, and provide relevant research on emerging issues or technologies that may become suitable for standardization. Less commonly, a TR can also be the Terms and Definitions document for a series of standards.

NOTE When a TR is the set of Terms and Definitions for another document, it can be included as a normative reference or annex for that document.

1.4.1 Expression of content

Technical reports do not set requirements or recommendations and are not suitable for conformity assessment. Content is expressed in the most appropriate manner for the subject.

2 ASB Document Identification

2.1 General

Identification is standardized across the industry to facilitate the retrieval of documents and key information on a document. It helps avoid duplication of documents.

2.2 Identifiers

Title, Scope, and Publication Number are the three primary identifiers of documents in the standards development community. In ASB, consensus bodies develop the title and scope. Publication numbers are assigned by the ASB Secretariat.

2.3 Title

A Title includes foundational information about the document including the scientific or technical discipline, the specific topical area covered, and other information that directs a reader's focus regarding the content.

2.4 Scope

Each document has a unique scope that states what the document does and provides a brief summary of what content to expect so that a reader can distinguish the document from similar sounding documents. **Annex D** contains additional information on Scope statements and how to write them, along with examples.

2.5 Publication Numbers

Standards databases, including those maintained by the government and the private sector, make use of publication numbers as a key retrieval element.

In ASB, publication numbers are assigned by the ASB Secretariat.

3 ASB Document Writing Style

3.1 ASB style and writing requirements are important elements in creating useful and used documents. Plain English is the 'gold standard', so to speak. ASB's directions generally follow those from ISO⁴.

3.2 ASB writing style requirements include:

- a) use plain language to the extent possible;
- b) construct sentences in the active rather than passive voice;
- c) minimize use of the past tense as much as possible;
- d) keep sentences as short as possible while still conveying their correct meaning;

⁴ <https://www.iso.org/ISO-house-style.html>

- e) use consistent terminology, e.g., use either ‘palm print’ or ‘palmprint’ throughout the document;
- f) define acronyms at first use and include acronyms in “Terms and Definitions”;
- g) avoid vague expressions such as ‘shall not significantly impact’ or ‘will probably result in’ or other such statements;
- h) never use personal pronouns;
- i) avoid using terms and modifiers such as ‘very’, ‘like’, ‘all’, ‘every’, ‘never’, ‘excessive’, ‘slightly’, ‘nearly’, ‘significant’, ‘applicable’, ‘highly’, etc.

4 Other Common Components

4.1 References

References are common in most document and can be normative or informative. References can be made to other parts of the document or to other published documents. For a more detailed description and rules pertaining to references, see **Annex F**.

4.2 Terms and Definitions

Include a Terms and Definition section in every standard, best practice recommendation, and guideline. For a series of documents on the same topic, Terms and Definitions may be written as a separate Standard or a Technical Report for the entire series rather than developing a Terms and Definition section in each document. Most commonly, a separate Standard is developed.

4.3 Annexes and Bibliography

Annexes are either normative - necessary for the implementation of the document - or informative - providing useful information but not required for the implementation of the document. The Bibliography is informative only and lists those documents which are informative and cited in the document. The bibliography does not contain requirements or recommendations and is not meant to be an exhaustive list. See **Annex H**.

5 Less Common Components

5.1 Conformity Assessment

ASB documents only include conformity assessment requirements that are necessary to provide repeatable and reproducible conformity assessment results. See **Annex C**.

5.2 Copyrights, Trademarks, Commercial Terms, and Patents

ANSI’s *Essential Requirements* includes normative policies involving patents, copyrights, and commercial terms such as warranties and trademarks.⁵ These policies are incumbent on ASB document development and publication. See **Annex G**.

⁵ <https://ansi.org/american-national-standards/ans-introduction/essential-requirements>

PART II – Document Subdivisions and Formatting

6 General Formatting

6.1 Each ASB deliverable is organized according to the formats given in this Manual. Users of ASB documents reasonably expect consistency in format and clarity of content. ASB generally follows ANSI and ISO guides in the organization and formatting of ASB documents.

6.1.1 ASB deliverables include the following divisions. The items in bold are mandatory.

Cover page

Title page

Foreword

Table of Contents

Scope - Section 1

Normative References - Section 2

Terms and Definitions - Section 3

Requirements (or Recommendations or Information) - Section 4 (Additional requirement Sections, are allowed e.g., Section 5, 6, 7, etc.)

Section 5 - Tables - can be included in the document instead of as a separate section

Section 6 - Figures - can be included in the document instead of as a separate section

Annexes (as many normative or informative annex as needed)

NOTE Consensus bodies can request deviations from ASB format and organization. The Secretariat reviews justifications for deviations and, as appropriate, approves them.

6.1.2 Number the document sections sequentially beginning with the numeral “1” without a period following.

6.1.3 Number the document subsections sequentially beginning with the numeral of the section followed by a decimal and the beginning of a new set of sequential numbers. Each subsequent subsection adds another level of numbers starting with 1.

Example:

1 Topic

1.1 Subtopic one

1.1.1 Sub-subtopic, etc.

7 Cover Page with Document Title

7.1 For the draft document, place the ASB numerical designation in the upper right corner. Center the title on the line below the numerical designation. The final cover page formatting will be completed by the ASB Staff.

7.1.1 A Title does not contain requirements or recommendations.

7.1.2 The Title is a clear, concise description of the subject matter covered by the document. The title distinguishes the subject matter from that of other documents, without going into unnecessary detail. Details can be included in the Scope statement. Avoid details that unnecessarily limit the Scope of the document.

7.1.3 For documents dealing with test methods, use titles that begin with “Test method for...” or “Method for determination of...” or similar.

7.1.4 Do not refer to a standard as containing standards. The document itself is the standard.

Examples:

- a) *Correct:* Standard for Integrated Fire Protection and Life Safety System Testing⁶
- b) *Incorrect:* Technical Measurement Requirements for Fire Protection and Life Safety System Testing
- c) *Correct:* Toxicological Testing of Urine in Drug-Facilitated Crime Investigations
- d) *Incorrect:* Standard for the Analytical Scope and Sensitivity of Forensic Toxicological Testing of Urine in Drug-Facilitated Crime Investigations

7.2 Do not use ASB and ANSI logos on draft copies. Logos appear only on the approved, final publication.

7.3 Do not include any other logos.

8 Title Page

8.1 The title page immediately follows the cover page and contains the ASB numerical designation of the document in the upper right corner. Center the title on the line below the numerical designation. The final title page formatting will be completed by the ASB Staff. Include the following:

- a) Below the title on separate lines, center the ASB approval date, the ANSI approval date (TRs will not have an ANSI approval date), the ASB logo and the ASB name and address;
- b) On the line below ASB’s name and address, center the following statement:

“This document may be downloaded from: www.asbstandardsboard.org”
- c) A statement explaining copyright infringement of ASB’s no-cost download follows the above statement.

d) Center the following official copyright statement in italics at the bottom of the page:

This document is copyrighted® by the AAFS Standards Board, LLC, 2021. All rights are reserved. 410 North 21st Street, Colorado Springs, CO 80904, www.asbstandardsboard.org.

*The copyright year is adjusted for publication date of the standard.

8.2 As required, the Secretariat assigns the International Classification for Standards designation immediately following the copyright statements.

9 Foreword

9.1 Describe the document in overall terms. State the purpose of the document along with the intended users and intended application. If the document is part of a series, identify the series and identify any document(s) to use connection with this one. The forward must be in sync with the Scope and can address relevant material beyond the Scope.

9.1.1 If the document is a revision of a previous document, summarize the substantive changes to the previous edition.

9.1.2 Consider including a short statement of the compelling need for the document or the revision, the intended impact of the new or revised document, and other relevant information. If the document does not cover everything in its topic or field, consider explaining why certain things have been left out.

9.1.3 The foreword cannot contain requirements, i.e., “shall” statements, or recommendations, i.e., “should” statements.

9.1.4 The following shall be included in the Foreword of all ASB documents.

The American Academy of Forensic Sciences established the Academy Standards Board (ASB) in 2016 with a vision of safeguarding Justice, Integrity and Fairness through Consensus Based American National Standards. To that end, the ASB develops consensus based forensic standards within a framework accredited by the American National Standards Institute (ANSI), and provides training to support those standards. ASB values integrity, scientific rigor, openness, due process, collaboration, excellence, diversity and inclusion. ASB is dedicated to developing and making freely accessible the highest quality documentary forensic science consensus Standards, Guidelines, Best Practice Recommendations, and Technical Reports in a wide range of forensic science disciplines as a service to forensic practitioners and the legal system.

Questions, comments, and suggestions for the improvement of this document can be sent to ASB Secretariat, asb@aafs.org or 401 N 21st Street, Colorado Springs, CO 80904.

All hyperlinks and web addresses shown in this document are current as of the publication date of this standard.

ASB procedures are publicly available, free of cost, at www.asbstandardsboard.org.

9.1.5 The Foreword may include additional material in the form of explanatory scientific and operational underpinnings for requirements or recommendations laid out in the

document. Such material is limited to a brief review of principles appropriate for the scope and subject matter of the document.

NOTE More lengthy explanations and full scientific treatises are appropriate for Technical Reports.

9.1.6 If the document was drafted outside the ASB, and the CB feels an acknowledgment is appropriate, the following may also be included below the main content of the Foreword.

This document was revised, prepared, and finalized as a standard by the Friction Ridge Consensus Body of the AAFS Standards Board. The draft of this standard was developed by the Friction Ridge Subcommittee of the Organization of Scientific Area Committees (OSAC) for Forensic Science.

10 Table of Contents

Include all level 1 and level 2 headers, annexes, figures, and tables. Include a page number for each entry. (Word processors may automatically generate the page numbers.)

11 Section 1 - Scope

The Scope describes what the document does. It is a statement of facts and does not include requirements or recommendations. It does not include 'shall' or 'should' language. The scope may include a brief explanation of the application of the content, and, as appropriate, a statement about what is not included. See **Annex D**.

12 Section 2 - Normative References

12.1 Normative references are published documents or parts of published documents that are indispensable for the application of the document, i.e., the document cannot be implemented without them. Cite normative references in the main body of the document and include them in this section as a list. References not cited in the document are not considered normative. See **Annex F**.

12.2 For dated references, only the cited edition applies. For undated references, the latest edition including amendments applies.

NOTE An option is to include information on how to obtain the reference.

12.3 List normative references alphabetically. When the reference is a published standard, use the designation of the standard. List other references according to MLA directions.⁶

Examples:

ANSI/ASB Best Practice Recommendation 037, *Guidelines for Opinions and Testimony in Forensic Toxicology*, 1st ed 2019

ANSI/INCITS 398, ed 2018

⁶ *MLA Handbook, 8th edition*

13 Section 3 - Terms and Definitions

13.1 All ASB documents include a Terms and Definitions section. Terminology and nomenclature are interchangeable concepts in standards writing. The Terms and Definitions section in an ASB deliverable follows the section on normative references.

13.2 Begin this section with the phrase: ‘For purposes of this document, the following terms and definitions apply’.

13.2.1 Terms clarify certain words used in the document, especially words that pertain to a particular technical application, profession, discipline, science, or areas of study. A term is described in sentence-like structure and may consist of more than one sentence. Terms are in bold type.

Examples:

Limit of Detection

LOD

An estimate of the lowest concentration of an analyte in a sample that can be reliably differentiated from blank matrix and meets identification criteria for the analytical method.

mixed DNA sample

Any biological sample containing DNA from more than one individual.

13.2.2 Definitions are written as single phrases not as sentences. Definitions do not contain requirements or recommendations. A definition does not begin with an article (‘a’, ‘the’, etc.) and does not end with a period. If necessary, entries can be supplemented by information (including requirements) in the form of *Note to entry*. Definitions are not bolded. Include acronyms in this section and list these entries with special characters appearing first. Where a definition includes specialized terminology, include that definition in this section in bold type.

Examples:

Combined DNA Index System

CODIS

FBI program of support for criminal justice DNA databases as well as the software to run the databases

moisture content mass by volume

mass of evaporable water divided by volume of dry material

NOTE 1 to entry: The method of evaporating water from a moist material shall be stated when “moisture content mass by volume” is used.

Most Likely Number of Individuals

MLNI

quantification technique to estimate the actual number of individuals based on the number of paired and unpaired bones; a modified Lincoln Index (LI)

saponification

act, process, or result of making soap

13.2.3 Include special terminology (terms) used in the document. Define words necessary for a user to understand the document, do not define commonly understood words unless their meanings differ from common use.

Examples:

Correct. “**mass reference standard**” (plus explanation of term)

Correct. “saponification” (plus definition)

Incorrect. “shall” (“should”, “can”, “may”, etc.) Commonly understood - do not include

Incorrect. “none” Commonly understood, do not include.

13.2.4 The following apply:

- a) do not include requirements or recommendations in the Terms and Definitions Section;
- b) do not include ‘shall’, ‘should’, ‘may’, ‘can’ or their negatives in terms or definitions;
- c) number and alphabetically list all acronyms used in the standard, with special characters appearing first;
- d) list terms in bold;
- e) capitalize proper nouns, all other terms will be in lower case.

13.3 If a discipline has a separate terms and definitions document (usually a Technical Report), the Terms and Definitions section may be referenced to that document. The section may also be a hybrid of a reference to the existing terms document and pertinent terms.

14 Section 4 - Requirements or Recommendations

Section 4 is the main substantive content of a document. If needed, additional substantive sections starting with numeral 5 can be added.

NOTE The Section 4 title is optional if another heading is more appropriate.

14.1 Requirements (Standard)

14.2 Requirements are characteristic of Standards and must be stated in a manner that enables conformance assessment. In writing requirements, follow these rules:

- a) write all requirements in imperative sentences or using the word ‘shall’;
- b) include as requirements only those elements that can be confirmed;

NOTE Avoid using negative phrasing such as ‘shall not’ since confirmation can be difficult.

- c) clearly identify any options, and write them in ‘shall’ language;

NOTE In cases where there are multiple options, ‘should’ is acceptable to describe a secondary explanation under a requirement.

- d) include recommendations in Section 4 of a Standard only when necessary for clarification in order that the document can be correctly understood.

NOTE Where appropriate include recommendations for implementing the standard in an annex.

14.3 Recommendations (BPRs and Guidelines)

14.4 Recommendations for Best Practice Recommendations and Guidelines follow these rules:

- a) write recommendations as simple declarative statements to the extent possible;
- b) use 'should', 'may' or 'can' language;
- c) avoid writing negative recommendations (*e.g.*, use language such as 'avoid' in preference to 'should not');
- d) avoid lengthy didactic or background writing. (These can be included in an Informative annex if needed.)

14.5 Technical Content (Technical Reports)

Technical Reports contain research, findings, terms & definitions, emerging technologies, or techniques. They do not contain requirements or recommendations. Follow these rules:

- a) present the technical content clearly and in a well-organized manner;
- b) identify all references and resources;
- c) identify any standards associated with the Technical Report;
- d) use subsections or topic headings if the document relies on divisions for clarity or ease of reading; these can be numbered but numbering is not required;
- e) use language appropriate to the technical content.

15 Numerical Expressions

Express numbers using words or Arabic numerals. Decimal placement is appropriate to the subject. Rounding is not required. See **Annex E**.

16 Designating Subsection Divisions

16.1 As appropriate, consider using other than numerical designations for ease of reading and clarity.

Examples:

- a) Alpha designations in the form of a), b), c) can be used for multi-word lists of items, procedural steps, directions, principles, and other elements. If the list has numerous levels, the following is helpful:
 - b) list level 1 – lower case alphanumeric
 - 1) list level 2 – numbers 1), 2), 3), 4), 5) etc.
 - i) list level 3 – lowercase roman numerals i), ii), iii), iv), v), etc.

16.2 Bullet points can be used for lists of single elements and can also be used for listing a flow of action.

Example:

At a minimum, the written record shall include the following elements:

- name,
- date,
- address.

17 Tables (Section 5) and Figures (Section 6)

17.1 Figures and tables can be an essential part of a document but use them sparingly, and *do not include requirements* in figures and tables.

17.2 Call out tables and figures in the main body of the document such as Table 1 or Figure 1 and number them consecutively based on type.

17.3 For annexes, include the letter of the annex as the first designated identifier for tables or figures, e.g., Figure A.1, Table B.1.

18 Annexes

18.1 Annexes are optional and can be Normative or Informative. See **Annex H**.

18.2 Call out Annexes in the main body of the document.

18.3 The designation of an annex is centered and bolded at the top of the page under the designation of the standard.

18.4 On the line under the annex designation, centered, and in parentheses, specify the type of Annex, i.e., either (Informative) or (Normative).

18.4.1 Designate the first annex of a document with a capital 'A' and any sequential annexes in the same document with sequential lettering.

18.4.2 Designate sections and subsections of annexes by the annex letter followed by a period and a sequence of numbers.

Example:

Annex A

A.1

A.2, etc.

19 Bibliography

19.1 Bibliographies are optional but if included are always informative. See **Annex J**.

19.2 Alphabetically list:

- a) all references from which text has been cited in the standard;
- b) references helpful in understanding and implementing the standard.

19.3 Do not include all possibly relevant sources of information; the bibliography is not meant to be an exhaustive list.

Annex A (normative)

Terms and Definitions

A.1 General

ASB documents shall conform to the definitions below.

A.1.1 Terms

A.1.1.1

conformity assessment

A demonstration that specified requirements relating to a product, process, service, person, system, or body are fulfilled.

NOTE ASB documents that do not contain requirements are not intended to be used for conformity assessment.

A.1.1.2

recommendation

An expression in the content of a document, expressed in 'should' language, and conveying a suggested possible choice or course of action deemed to be particularly suitable without necessarily mentioning or excluding others.

A.1.1.3

requirement

An expression in the content of a document, expressed in 'shall' language, and conveying objectively verifiable criteria to be fulfilled and from which no deviation is permitted if compliance with the document is to be claimed.

Annex B (informative)

Expression of Provisions

B.1 Requirements

B.1.1 Table B.1 summarizes verbal forms of expressions that establish requirements necessary to achieve conformance to the document. Use equivalent forms only when the preferred verbal form cannot be used for linguistic reasons.

Table B.1—Verbal Forms to Express Requirements

Verbal Form	Equivalent Expressions for Use in Exceptional Cases
shall *	is to is required to it is required that has to only...is permitted it is necessary
shall not	is not allowed (permitted) (acceptable) (permissible) is required to be not is required that...not be is not to be
NOTE 1 Do not use “may” when “can” is meant.	
NOTE 2 Do not use “may not” when “shall not” is meant.	
* Do not use “must” as an alternative for “shall” (this will avoid any confusion between the requirements of a document and jurisdictional regulatory obligations).	

B.1.2 Avoid using vague expressions that are not truly informative and might cause the reader to make an incorrect judgment call. Words like “very,” “all,” “every,” “never,” “excessive,” “slightly,” “approximately,” “nearly,” or “significant” are not useful.

B.2 Recommendations

Table B.2 summarizes the verbal forms used to indicate:

- a) that among several possibilities one is recommended as particularly suitable, without mentioning or excluding the others;
- b) or that a certain course of action is preferred but not required;
- c) or that (in the negative form) a certain possibility or course of action is discouraged.

Table B.2—Verbal Forms to Express Recommendations

Verbal Form	Equivalent Expressions for Use in Exceptional Cases*
should	it is recommended that...or...it ought to...
should not	it is not recommended... or it ought not to...
*The equivalent expressions given the second column are used when the form given in the first column cannot be used for linguistic reasons.	

B.3 Permission

Table B.3 summarizes the verbal forms that shall be used to indicate a course of action permissible within the limits of the document. Use equivalent forms only when the preferred verbal form cannot be used for linguistic reasons.

Table B.3—Verbal Forms to Express Permission

Verbal Form	Equivalent Expressions for Use in Exceptional Cases
may	is permitted to is allowed is permissible
need not	it is not required that no...is required
Do not use “possible” or “impossible” in this context; do not use “can” instead of “may” in this context.	
NOTE “May” signifies permission expressed by the document, whereas “can” refers to the ability of a user of the document or to a possibility open to him/her.	

B.4 Possibility and Capability

Table B.4 summarizes the verbal forms that shall be used for statements of possibility and capability, whether material, physical, or causal. Use equivalent forms only when the preferred verbal form cannot be used for linguistic reasons. Also see NOTE in B.3

Table B.4—Verbal Forms to Express Possibility and Capability

Verbal Form	Equivalent Expressions for Use in Exceptional Cases
can	be able to there is a possibility of it is possible to
cannot	be unable to there is no possibility of it is not possible to

Annex C (normative)

Conformity Assessment

C.1 General Directions on Including Conformity Assessment Provisions

C.1.1 ASB documents only include conformity assessment requirements that are necessary to provide repeatable and reproducible conformity assessment results.

Examples:

“Conformance shall be determined on the following requirements contained in this standard.”

“Sampling, testing, and recording requirements contained in this standard are subject to conformance assessment.”

C.1.2 ASB documents do not:

- specify conformity assessment procedures or practices
- dictate or specify conformity assessment schemes or systems
- require any specific conformity assessment results
- identify conformity assessment providers

C.2 Neutrality Principle

C.2.1 All documents containing requirements for products, processes, services, persons, systems, and bodies are written in accordance with the “neutrality principle,” such that conformity can be assessed by a manufacturer or supplier (first party), a user or purchaser (second party), or an independent body (third party).

NOTE First-party, second-party and third-party conformity assessment activities are defined in ISO/IEC 17000:2004 *Conformity assessment - Vocabulary and general principles*.

C.2.2 Inclusion of conformance is optional, but if included, shall adhere to **C.2**.

NOTE ISO’s House Style located online at <https://www.iso.org/ISO-house-style.html> contains information on inclusion of conformity assessment in international standards development. The information may be adapted to ASB procedures when an ASB CB determines the necessity of including elements relating to conformity assessment. The CB shall consult with the ASB Secretariat or other staff before undertaking any activity associated with conformity assessment requirements.

Annex D (normative)

Scope Statements

D.1 Scope Statement

Scopes are one of the three document identifiers for any ASB document. A Scope statement is a Normative element in each ASB document and is numbered as Section I. Scope statements only include statements of fact.

D.2 Purpose of Scope

The following statement applies:

“The Scope clearly defines the subject of the document and the aspects covered, thereby indicating the limits of applicability of the document or parts of it. If necessary, the Scope should indicate subjects that might reasonably be inferred to be covered but actually are excluded from the document.”⁷

D.3 Writing a Scope Statement

In plain English, following the ASB writing style (ASB manual section 3), write a scope statement that tells what the document does. Begin the statement using forms such as the following:

- This document specifies...
- This document establishes...
- This document sets requirements for...
- This document provides guidelines for...
- This document defines terms for...

D.4 Scope complexity⁸

Write a Scope statement that is succinct and still provides the reader accurate summary information on the content the document. Introduce statements of applicability of the document with statements such as:

⁷ ISO/IEC Directives Part II Section 14 found at:

https://www.iso.org/sites/directives/current/part2/index.xhtml#_idTextAnchor169

⁸ Suggest that users of this Manual periodically refer to ASB’s Published Document section on the ASB website and to ANSI’s online *Standards Action* to see examples of Scope statements. Not all published Scope statements are of the same quality but reading through such statements alerts the reader to differences between the best and the rest.

- This document is applicable to... or for...
- This document does not apply to...
- This document does not include...

D.5 Exclusions from Scopes

D.5.1 Scope statements do not contain requirements, recommendations, background information or justifications. Write Scope statements as informative only. Scope statements do not contain ‘shall’ or ‘should’ language.

Examples:

- a) Correct: “This document provides guidance on the development and formatting of ASB documents.”
- b) Incorrect: “This document shall be used as guidance on the development and formatting of ASB document.”
- c) Correct: “This document specifies minimum requirements and test methods for rice (*Oryza sativa* L.). It is applicable to husked rice, husked parboiled rice, milled rice and milled parboiled rice, suitable for human consumption, directly or after reconditioning. It is not applicable to cooked rice products.”
- d) Incorrect: “This standard is required for DNA markers.”

D.5.2 Scopes can be changed after or during document development if the CB determines that the statement needs to be modified to reflect the actual content of the document. If a scope is significantly altered, it needs to go through the CB/ASB approval process to be resubmitted to ANSI as a PIN.

Annex E (informative)

Numbers, Units of Measurements and Equations

E.1 Use of Numbers

E.1.1 The following are general guidelines for the use of numbers in text:

- a) spell out numbers that are less than 10, not precise measurements, and not grouped with numbers over 10 (e.g., eight trials, First Edition);
- b) use numerals for numbers 10 and above, or numbers under 10 grouped with numbers 10 and above (e.g., from 6 to 12 cups of water, 20th Edition);
- c) use numerals for exact statistical measures, scores, sample sizes, and sums (e.g., multiplied by 3, 6% of the sample);
- d) use combinations of written and Arabic numerals for back-to-back numbers (e.g., five 4-point scales);
- e) use combinations of numerals and written numbers for large sums (e.g., 6 million people);
- f) use a comma in numbers that are $\geq 10,000$ (e.g., 7000 items, 11,200 units);
- g) use the percent symbol (%) only with figures (6%) not with written numbers (six percent);
- h) do not use periods within measurements (lb, ft, s) except inches (in.);

E.1.2 Use decimal configurations appropriate to the subject. Rounding is not required by ASB.

E.2 Units of Measurements

E.2.1 ASB has not established a preference for units of measurement. Measured and calculated values may be expressed in metric units (SI) and in U.S. customary units (USC). The choice of units may be dictated at any point by the general acceptance of one or the other. For example, in the U.S. most gas stations sell fuel based on gallons while soft drinks are now nearly universally sold in liters.

E.2.2 When citing units in dual units, either may be listed first with the corresponding unit listed either in parentheses in the text or on separate tables, figures, datasheets or in separate annexes. List units consistently within a document.

E.3 Equations

E.3.1 Equations should be numbered when two or more are included in the main text of the document. Designate equations with consecutive Arabic numbers beginning with 1. Number each equation in the order that it appears in the standard, regardless of the section number in which it is

referenced. Designate equations in annexes by the designation of the annex followed by consecutive numbers beginning with 1 (for example, A.1, B.4).

E.3.2 The format for a numbered equation includes the expression of the equation and a legend of the individual elements. Example:

$$S = \frac{Mc}{I} \tag{1}$$

where:

S = stress, psi, or Pa,

M = bending moment, lbf•in. or N•m,

c = distance from neutral axis to outermost fiber, in., or m, and

I = second moment of area, in.⁴ or m⁴.

Annex F (normative)

References and NOTES

F.1 References: General

References cited in the main body are either **Normative** or **Informative**. An ASB document can include both types. All references must be published and available.

F.2 Normative References

F.2.1 Normative references are cited in the main body of the document in Section 2 and are indispensable for the application or implementation of the document.

NOTE References that provide additional information but are not essential to the application of the standard are not normative.

Examples:

- 1) "This evaluation shall ensure the CRM supplier meets the competence, measurement traceability, and measurement capability requirements of ISO/IEC 17025:2005."

Here, the ISO/IEC standard is a normative reference.

- 2) "Substrate measurements shall be determined prior to treatment. Measurement types can be found in TAPPI standard T 565."

In this example, the TAPPI standard is useful but not necessary for completing the required measurement.

F.2.2 List normative references alphabetically in Section 2 of a document.

F.2.3 Do not number normative references.

F.2.4 When standards are cited as references list them completely, not in abbreviated form.

F.2.5 For dated references, only the cited edition applies. For undated references, the latest edition including amendments applies.

F.2.6 Do not place normative references of a document in an Annex.

F.3 Informative References

F.3.1 These references are suitable as background reading, research findings, guidance, or additional information relevant to the document. Informative references are not indispensable for implementation.

Examples:

“ANSI online training sessions for ‘How to Develop American National Standards’ is consistent with this ASB Manual.” The ANSI training sessions are informative.

“Substrate measurements shall be determined prior to treatment. Similar measurement types can be found in TAPPI standard T 565.” The TAPPI standard is useful but not necessary for fulfilling the required measurement.

F.3.2 Informal references cited in the text are included in the bibliography annex of a document along with other references deemed to be helpful such as background material, technical assistance, topical information and so forth. A list of informative references can be included as a separate annex, if necessary (it may be helpful if there are many such references cited in the document), in which case the informative references do not need to be included in the bibliography annex.

F.3.3 Use footnotes to reference *text copied* from another document.

F.4 NOTES

NOTES are used in the text of the document to provide additional clarity or understanding. NOTES do not have a title and they can appear in several of the following ways.

F.4.1 A ‘NOTE # to entry’ is associated with a term or definition and is always numbered; a NOTE # to entry can include requirements or provisions but only pertaining to the use of the term.

Example:

moisture content mass by volume

mass of evaporable water divided by volume of dry material

Note 1 to entry: The method of evaporating water from a moist material shall be stated when “moisture content mass by volume” is used.

F.4.2 A NOTE in the text is numbered if there is more than one and never contains requirements or provisions (‘shall’, ‘should’, ‘may’, ‘can’) with respect to the document. NOTES in text do not have to be referred to in the text.

NOTE For an example of a NOTE in text, see entry **G.1.1.2** of this Manual.

F.4.3 NOTES in footnotes are numbered sequentially throughout the document and do not contain requirements or provisions in respect to the document.

F.4.4 NOTES in figures and tables are numbered and do not contain requirements or provisions, but NOTES in footnotes to figures and tables can contain requirements or provisions relative to the figures or tables.

Annex G (normative)

Copyright, Patents, Commercial Terms, and Trademarks

G.1 ANSI and ASB policies

ANSI's *Essential Requirements* includes normative policies involving patents, copyrights, and commercial terms such as warranties and trademarks.⁹ These policies are incumbent on ASB document development and publication. ASB document writers are encouraged to read ANSI's full explanation by accessing the URL given below.

G.2 Copyrighted material

ASB adheres to laws guarding copyrighted material and intellectual property. Include copyrighted material only with the full acknowledgement of the copyright information. Where copyright or reproduction of intellectual property is not allowed, do not include the material in an ASB document.

G.3 Patents

G.3.1 The ASB patent policy¹⁰

G.3.1.1 There is no objection in principle to drafting an American National Standard (ANS) in terms that include the use of an essential patent claim (one whose use would be required for compliance with that standard) if it is considered that technical reasons justify this approach.

G.3.1.2 Participants in the ASB document development process are encouraged to bring patents with claims *believed* to be essential to the attention of ASB's Secretariat.

G.3.1.3 If ASB receives a notice that a proposed, revised, or approved ANS may require the use of such a patent claim that is not already covered by an existing letter of assurance (LOA), the procedures in **G.3.2** shall be followed.

G.3.2 Procedures: Statement from patent holder

G.3.2.1 ASB shall receive from the patent holder, or a party authorized to make assurances on its behalf, in written or electronic form, either:

- a) assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any essential patent claim(s); or
- b) assurance that a license to such essential patent claim(s) will be made available to applicants desiring to utilize the license for the purpose of implementing the standard either:

⁹ The 2020 revision of these policies are on the ANSI website at: <https://ansi.org/american-national-standards/ans-introduction/essential-requirements>

¹⁰ Adapted from section 3 of ANSI's *Essential Requirements*

- i) under reasonable terms and conditions that are demonstrably free of any unfair discrimination; or
- ii) without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

G.3.2.2 Such assurance shall indicate that the patent holder (or third party authorized to make assurances on its behalf) will include in any documents transferring ownership of patents subject to the assurance, provisions sufficient to ensure that the commitments in the assurance are binding on the transferee, and that the transferee will similarly include appropriate provisions in the event of future transfers with the goal of binding each successor-in-interest.

G.3.2.3 The assurance shall also indicate that it is intended to be binding on successors-in-interest regardless of whether such provisions are included in the relevant transfer documents.

G.3.3 Record of Statement

ASB shall retain a record of the patent holder's statement in ASB files, and the record shall be made publicly available at ASB's election of either the ASB website or ANSI's LOA repository.

G.3.4 Notice

G.3.4.1 When ASB receives from a patent holder the assurance set forth in G.3.2 above, the standard shall include a note substantially as follows.

- a) NOTE - the user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights.
- b) By publication of this standard, no position is taken with respect to the validity of any such claims(s) or of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from ASB.

G.3.4.2 Neither ASB nor ANSI is responsible for identifying patents for which a license may be required by an ANS or for conducting inquiries into the legal validity or scope of those patents that are brought to their attention.

G.4 Commercial Terms and Trademarks

G.4.1 In accordance with ANSI's Essential Requirements, Section 3.2, ANS shall not include terms or conditions that are primarily contractual or commercial in nature, as opposed to technical, engineering, or scientific in nature. In addition, an ANS shall not endorse or require the use of proprietary products or services or endorse or require the use of conformity-assessment bodies, testing facilities or training organizations.

G.4.2 Prohibited material includes manufacturer lists, service provider lists, or text in the document or in an annex.

G.4.3 If there is only one source (not a preferred source but a sole source) for necessary equipment, materials, or services necessary to comply with a standard, then a footnote or informative annex can list the source but ONLY if the reference includes the words “or equivalent.”

G.5 Expression of Trade Names and Trademarks

G.5.1 The correct designation or description of a product shall be given rather than a trade name or trademark. Avoid using proprietary trade names or trademarks for a particular product, even if they are in common use.

G.5.2 Exceptionally, when use of a trade name or trademark cannot be avoided, and the successful application of the document depends on the use of a trade name or trademark, correctly indicate their nature using symbol ® for a registered trademark and the symbol ™ for a trademark.

Annex H (normative)

Annexes and Bibliographies

H.1 Normative and Informative Annexes

Annexes provide relevant information that is not appropriate to include in the body of the document. Annexes can be **Normative** or **Informative**. A document can have as many Normative and Informative annexes as needed for the purpose of the document.

H.1.1 Lengthy didactic material, or treatise-level information are not appropriate for an annex and belong in an accompanying Technical Report.

H.1.2 A normative annex has information necessary for carrying out the requirements of a document. Include in a normative annex information such as specific test methods, metric or mathematical expressions, specific procedures, and so forth. If the normative annex contains references, also include those references in the bibliography of the document.

NOTE References cited in a normative annex are not part of the main document. Such references, then, need to be included in the bibliography.

H.1.3 An informative annex includes information helpful to the understanding or use of the document, but it is not necessary for the actual implementation of the content. Include an informative annex to provide information such as background material or a description of research findings that assist in the comprehension of the document. Informative annexes may contain optional requirements. For example, a test method that is optional may contain requirements, but it is not necessary to follow these requirements to claim conformance with the document.

H.2 Bibliography

The last annex is the Bibliography, and it is an informative annex only. Keep the bibliography as concise as possible—it is not intended to be an exhaustive list. Include informal references cited in the document as well as other useful references that pertain to the document. The Bibliography does not contain normative references, as they are cited in Section 2.

Annex J (informative)

Bibliography

The following bibliography is not intended to be an all-inclusive list, review, or endorsement of literature on this topic. The goal of the bibliography is to provide examples of publications addressed in the standard.

- 1] American National Standards Institute (ANSI). *ANSI Essential Requirements: Due Process Requirements for American National Standards*, 2019.
- 2] *ANSI Style Guidesheet - 2003*¹¹.
- 3] *Conformity Assessment for Standards Writers*. International Organization for Standardization, 2016.
- 4] *How to Write Standards Update 2016 - EN*¹².
- 5] *ISO/IEC Directives, Part 2 - Principles and rules for the structure and drafting of ISO and IEC documents*, 8th ed. ISO, 2018.
- 6] *ISO/IEC 17000:20 Conformity assessment - Vocabulary and general principles*.¹³
- 7] *MLA Handbook, 8th Edition*. The Modern Language Association of America, 2016.
- 8] National Fire Protection Association, *NFPA 4*¹⁴.
- 9] Purdue Writing Lab. "MLA Formatting and Style Guide // Purdue Writing Lab." *Purdue Writing Lab*¹⁵.
- 10] *Recommended Practice for the Designation and Organization of Standards*, ANSI/SWES 1:2013, The Society for Standards Professionals (SES).

¹¹ share.ansi.org/shared%20documents/Standards%20Activities/American%20National%20Standards/Procedures.%20Guides,%20and%20Forms/New%20ANSI%20Style%20Guidesheet%202.doc

¹² www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/how-to-write-standards.pdf

¹³ <https://www.iso.org/obp/ui/#iso:std:iso-iec:17000:ed-2:v2:en>

¹⁴ <https://catalog.nfpa.org/NFPA-4-Standard-for-Integrated-Fire-Protection-and-Life-Safety-System-Testing-C189.aspx>

¹⁵ owl.purdue.edu/owl/research_and_citation/mla_style/mla_formatting_and_style_guide/mla_formatting_and_style_guide.html



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