



ISO/TC 268/SC 1
Smart community infrastructures

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How to draft standards

Document type: Other meeting document

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Expected action: INFO

Background: ISO/TC 268/SC 1 Plenary meeting was held on 11th of April in Paris, France. In this meeting, the presentation concerning the ISO drafting rule was made by Mr. David Reid, the Editorial Programme Manager in ISO Central Secretariat. This document is the presentation material.

Committee URL: <https://isotc.iso.org/livelink/livelink/open/tc268sc1>



How to draft standards

Verbal forms

The following verbal forms are used in ISO documents:

- Requirements – shall, shall not
- Recommendations – should, should not
- Permission – may, may not
- Possibility and capability – can, cannot

Verbal forms

- Be clear about what is a **requirement** and what is a **recommendation** or other type of statement.
- Do not use other verbal forms, such as ‘must’ or ‘may not’, for requirements.
- ISO/IEC Directives, Part 2, Tables 3 to 7

Plain language

The benefits:

- quicker and easier to read and write
- avoids misinterpretation
- reduces discussion, time and cost during drafting
- conveys your message effectively

Plain language tips

- write with your reader in mind
- be concise: short sentences, simple words
- one idea per sentence
- remove unnecessary words
- use lists
- punctuation

Legal requirements (TMB resolution 70/2018)

The following **are not permitted** in ISO deliverables:

- statements that include an explicit requirement or recommendation to comply with laws, regulations or contracts

The following **are permitted** in ISO deliverables:

- statements related to legal and regulatory requirements that do not include an explicit requirement or recommendation to comply with laws, regulations or contracts
- factual examples of the content of specific laws or regulations for informative purposes

Title elements

SIMPLE
TEMPLATE

Cereals and pulses — Specification and test methods — Part 1: Rice

Maximum of three elements:

- 1 Introductory
- 2 Main
- 3 Complementary

1

2

3

Cereals and pulses — Specification and test methods — Part 1: Rice

Title rules

- Clear and concise
- Reflects the Scope
- Consistent with titles of related documents

Foreword

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This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*.

This second edition cancels and replaces the first edition (ISO 17301-1:2009), which has been technically revised.

The main changes compared to the previous edition are:

Specific text

- updated normative references;
- deletion of 4.3.

A list of all parts in the ISO 17301 series can be found on the ISO website.

Minor revisions

This third edition cancels and replaces the second edition (ISO 5506:1988), of which it constitutes a minor revision. The dated references have been replaced with undated references and the reference ISO 5505:1986 has been corrected to ISO 5500.

Introduction

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TEMPLATE

- Optional but encouraged
- Background information or commentary
- **No requirements ('shall')**
- Concise; don't duplicate the Scope
- Patent rights

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TEMPLATE

Scope

Subject
'Specifies', 'establishes',
'gives guidelines for',
'defines terms'

1 Scope

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.

Applicability

Scope

- Mandatory element, explains what the document does
- Concise
- Applicability of the document
- Only uses statements of fact
- **No requirements, recommendations or permissions**

Normative references

‘Documents referred to in the text in such a way that some or all of their content constitutes **requirements** of the standard.’

➤ ‘shall’:

Sampling shall be carried out in accordance with ISO 24333:2009, Clause 5.

➤ or equivalent normative language:

Determine the husked rice yield in accordance with ISO 6646.

Normative references

- Only documents cited **normatively** in the text
- Informative references listed in the Bibliography
- Normally ISO and IEC documents
(see ISO/IEC Directives, Part 2, 10.2)
- Only **publicly available** documents
- ‘There are no normative references in this document.’

Terms and definitions – entry

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TEMPLATE

Preferred term

Term number

3.3

milled rice

white rice

husked rice (3.2) from which almost all of the bran and embryo have been removed by milling

Cross-reference

Definition

Admitted term

[SOURCE: ISO 7301:2011, 3.3]

Source

Abbreviated term

3.7

HDK

heat-damaged kernel

kernel, whole or broken, which has changed its normal colour as a result of heating

Note 1 to entry: This category includes whole or broken kernels that are yellow due to alteration. Parboiled rice in a batch of non-parboiled rice is also included in this category.

Note to entry

Terms and definitions

3.15

gelatinization time

t_{90}

time necessary for 90 % of the kernels to pass from their natural state to the *gel state* (3.14)

[SOURCE: ISO 14864:1998, 3.3]

6.4 Gelatinization time

Determine the gelatinization time, t_{90} , for rice kernels during cooking. An example of a typical curve is given in Figure C.1. Three typical stages of gelatinization are shown in Figure C.2.

Definitions replace the term in context:

‘Determine the time necessary for 90% of the kernels to pass from their natural state to the gel state, t_{90} , for rice kernels during cooking.’

Terms and definitions

- Definitions shall not have an article (a, an, any, all)
- Definitions shall not have a full stop
- Avoid circular definitions, for example:

extraneous matter

matter that is extraneous

- Definitions shall not contain requirements, recommendations or permissions

Annexes

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How an annex is **referenced** in the main body of the document determines whether it is **normative** or **informative**.

- ‘...shall be determined in accordance with the method given in Annex A.’
→ **Normative**
- ‘See Annex B for an example of a suitable method.’
→ **Informative**

Bibliography - structure

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Bibliography

- [1] ISO 3696, *Water for analytical laboratory use — Specification and test methods*
- [2] ISO 5725-1, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*
- [3] ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*
- [4] ISO 6322-1, *Storage of cereals and pulses — Part 1: General recommendations for the keeping of cereals*
- [5] ISO 6322-2, *Storage of cereals and pulses — Part 2: Practical recommendations*
- [6] ISO 6322-3, *Storage of cereals and pulses — Part 3: Control of attack by pests*
- [7] ISO 7301:2011, *Rice — Specification*
- [8] ISO 14864:1998, *Rice — Evaluation of gelatinization time of kernels during cooking*
- [9] IEC 61010-2, *Safety requirements for electric equipment for measurement, control, and laboratory use — Part 2: Particular requirements for laboratory equipment for the heating of material*
- [10] STANDARD NO I.C.C. 167. *Determination of the protein content in cereal and cereal products for food and animal feeding stuffs according to the Dumas combustion method* (see <http://www.icc.or.at>)
- [11] Nitrogen-ammonia-protein modified Kjeldahl method — Titanium oxide and copper sulfate catalyst. *Official Methods and Recommended Practices of the AOCS* (ed. Firestone, D.E.), AOCS Official Method Ba Ai 4-91, 1997, AOCS Press, Champaign, IL
- [12] BERNER D.L., & BROWN J. Protein nitrogen combustion method collaborative study I. Comparison with Smalley total Kjeldahl nitrogen and combustion results. *J. Am. Oil Chem. Soc.* 1994, **71** (11) pp. 1291-1293

In **numerical** order:

- ISO standards followed by other international standards
- regional standards
- national standards
- literature references

or

in the **order in which they are cited** in the text

Bibliography

- Documents cited **informatively** in the document
- Additional/background information
- Guidelines for bibliographic references in ISO 690
- Avoid listing too many references

6.3 Nitrogen content and crude protein content

Determine the nitrogen content and crude protein content in accordance with either ISO 16634:—, Clause 9, or ISO 20483. For details on the determination of protein content using the Kjeldahl method, see Reference [12] in the Bibliography. For details concerning the use of the Dumas method, see References [10] and [16].

Calculate the crude protein content of the dry product by multiplying the value of the nitrogen content by the conversion factor specified in ISO 20483:2013, Annex C and Table C.1, that is adapted to the type of cereals or pulses [13][14] and to their use.

Table

Table A.2 — Precision data

Sample (density)	Test method	Mean value N/cm	Within laboratory			Between laboratories		
			s_r	r	(r)	s_R	R	(R)
A (22 kg/m ³)	Method A ^a	4,80	0,325	0,91	19,0	0,275	0,77	16,0
	Method B ^b	6,68	0,136	0,38	5,69	0,150	0,42	6,29
B (32 kg/m ³)	Method A ^a	4,03	0,625	1,75	43,4	0,520	1,46	36,2
	Method B ^b	6,52	0,375	1,05	16,1	0,271	0,76	11,66

s_r is the within-laboratory standard deviation (in measurement units).

r is the repeatability (in measurement units).

(r) is the repeatability (in percent of mean value).

s_R is the between-laboratory standard deviation (in measurement units).

R is the reproducibility (in measurement units).

(R) is the reproducibility (in percent of mean value).

NOTE Test speed = 500 mm/min.

^a Trouser test piece.

^b Angle test piece without nick.

Title

Header

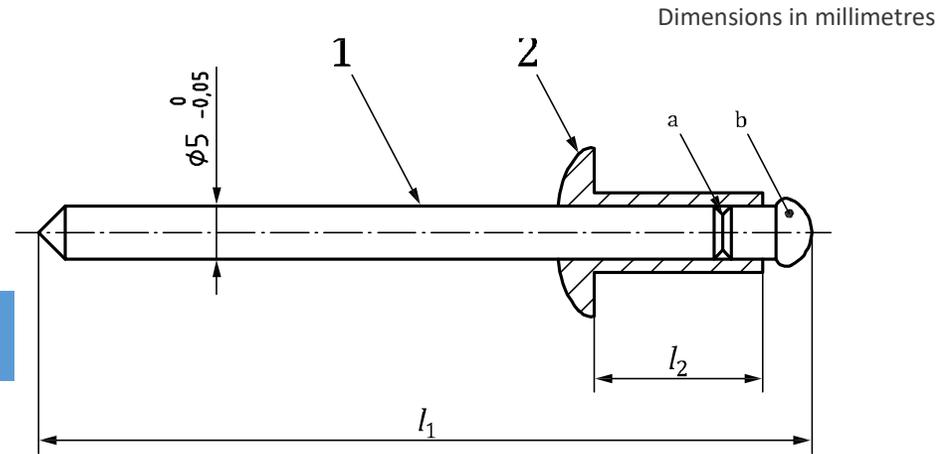
Body

Footer

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Figures

Figure



Units used in figure

Figure key

Key

- 1 mandrel shank
- 2 blind rivet head

Figure requirement

The mandrel shall be designed such that the blind rivet end deforms during installation, and the shank can expand.

NOTE This figure illustrates a type A rivet head.

Figure note

- ^a The break area shall be milled.
- ^b The mandrel head is commonly chromium plated.

Figure footnotes

Figure 1 — Blind rivet

Figure title

Figures

- Clear way of presenting information
- Shall be referenced in the text
- Numbered consecutively with Arabic numbering:
i.e. Figure 1 ... Figure 2 ... Figure 3
- Figures in annexes: Figure A.1 ... Figure A.2 ...
Figure A.3

Best practice

- **Clear** lines – not fuzzy
- **Concise** – don't clutter up figures with details
- **Consistent** – make figures look the same throughout the document
- **Complete** – are all necessary elements represented in the figure?
- Send a **revisable** format
- Send figures separately from draft as early as possible
- **Avoid text** in figures – they shall be language neutral
- Seek **permission** from copyright holder

Notes and Examples

NOTE Lower mass fractions of moisture are sometimes needed for certain destinations depending on the climate, duration of transport and storage. For further details, see ISO 6322-1, ISO 6322-2 and ISO 6322-3.

EXAMPLE Vehicle speed, throttle angle, minor position, system status, etc.

Notes and Examples

- Give additional information
- Assist the understanding/use of the document
- **NO requirements, recommendations or permissions**
- Placed after paragraph to which they refer
- Numbered if 2 or more in same clause, table or figure

Subdivision of text

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6 Test methods

Clause

6.1 Moisture content

Determine the mass fraction of moisture in accordance with the method specified in ISO 712.

6.2 Waxy rice content

Determine the mass fraction of waxy rice. [Annex B](#) gives an example of a suitable method.

6.3 Nitrogen content and crude protein content

Determine the nitrogen content and crude protein content in accordance with either ISO 16634:—, Clause 9, or ISO 20483. For details on the determination of protein content using the Kjeldahl method, see Reference [\[12\]](#) in the Bibliography. For details concerning the use of the Dumas method, see References [\[10\]](#) and [\[16\]](#).

Calculate the crude protein content of the dry product by multiplying the value of the nitrogen content by the conversion factor specified in ISO 20483:2013, Annex C and Table C.1, that is adapted to the type of cereals or pulses [\[13\]](#)[\[14\]](#) and to their use.

Subclauses

Paragraph

Subdivision of text

- **Numbered subdivision** of clause
- Always **at least two** subclauses of the same level, e.g.

4 Test method

4.1 General

Text following the subclause title.

4.2 Sampling

Text following the subclause title.

4.3 Procedure

4.3.1 Text about procedure.

4.3.2 Text about procedure.

- N.B. If 4.1 has a title, so must 4.2. if 4.3.1 has no title, 4.3.2 cannot have a title.

Hanging paragraphs

Incorrect
5 Uncertainty of the certified value The combined expanded uncertainty of the measurement is calculated... 5.1 Budget of uncertainty [...]

If you refer to “Clause 5”, you are also referring to 5.1, etc.

Correct
5 Uncertainty of the certified value 5.1 General The combined expanded uncertainty of the measurement is calculated... 5.2 Budget of uncertainty [...]

Lists

- Numbered lists – up to 3 levels: a) → 1) → i)

EXAMPLE 1

The following basic principles shall apply to the drafting of definitions.

- a) The definition shall have the same grammatical form as the term:
 - 1) to define a verb, a verbal phrase shall be used;
 - 2) to define a singular noun, the singular shall be used.
- b) The preferred structure of a definition is a basic part stating the class to which the concept belongs, and another part enumerating the characteristics that distinguish the concept from other members of the class.

- Unnumbered lists

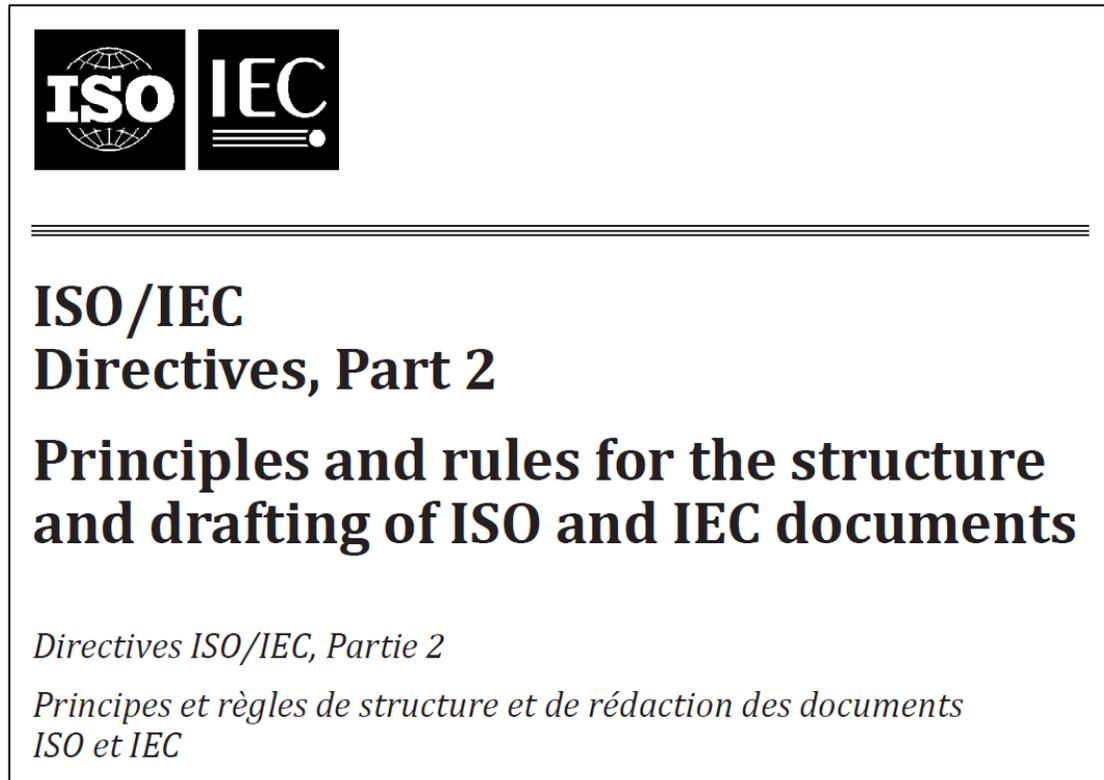
EXAMPLE 2

No switch is required for any of the following categories of apparatus:

- apparatus having a power consumption not exceeding 10 W under normal operating conditions;
- apparatus having a power consumption not exceeding 50 W, measured 2 min after the application of any of the fault conditions;
- apparatus intended for continuous operation.

Resources for drafting standards

The **ISO/IEC Directives, Part 2**, provide detailed drafting and editorial rules for International Standards and other ISO documents.



Resources for drafting standards

ISO/IEC Directives, Part 2, Annex A, includes a checklist for writers and editors of all types of ISO document

Task	Assessment	Done <input type="checkbox"/>	Comments
Structure	Check table of contents: Is the top-level structure logical? Is the subdivision consistent?		
	Hanging paragraphs: Check for and remove any hanging paragraphs.		
Use of plain language	Is the text clear and concise?		
	Are the sentences short? (check punctuation)		
Title	Is the title organized going from the more general to the more particular?		
	Does the title unintentionally limit the scope of the document?		
	Is it as clear and concise as possible?		
	Make sure that the title does not contain more than three elements.		
	If there are several parts, are the titles aligned?		
Foreword	Is the document a revision? If so, insert a revision statement including any amendments and technical corrigenda and a list of changes with respect to previous edition.		
	Are there any other organizations involved in the drafting that should be mentioned?		
Introduction	Is it purely informative?		
	Does it describe the content or give information on why the document is needed?		
Scope	Does it describe what the document does?		
	Does it state where it is applicable?		
	Does it only contain statements of fact?		

Resources for drafting standards

<https://www.iso.org/directives-and-policies.html>

ISO/IEC Directives, Part 2, can be found on the ISO website

ISO International Organization for Standardization

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Home > Taking part > Resources > Directives and Policies

Directives and Policies

The ISO/IEC Directives define the basic procedures to be followed in the development of International Standards and other publications.

There are, however, other documents containing guiding principles for standards development, which can also be found below.

Contact us

For questions about the ISO Directives please contact us on directives@iso.org

For any general questions on drafting ISO standards, please contact us on drafting@iso.org

Official Rules

Here are the official rules that state how to develop an ISO standard:

- [ISO/IEC Directives Part 1 and Consolidated ISO Supplement](#)
Official procedures to be followed when developing and maintaining an International Standard and procedures specific to ISO
- [JTC 1 Supplement](#)
Procedures specific to JTC 1
- [ISO/IEC Directives Part 2](#)
Principles to structure and draft documents intended to become International Standards, Technical Specifications or Publicly Available Specifications.

Supplementary Documents

Here are some supplementary documents that may help guide the standards development process:

- [Cooperation with CEN \(the Vienna Agreement\)](#)
Committees cooperating with CEN under the Vienna Agreement will need to refer to details on this agreement.
- [Global Relevance](#)
Guidance for how to make sure an International Standard can be implemented as broadly as possible.
- [Patent Policy](#)
Contains guidance for technical committees in case patent rights matters arise.

Guides

Here is some information about Guides, which provide advice to standards writers and national standards bodies:

- [ISO and ISO/IEC Guides: what they are and what they can help you achieve](#)
- [Full list of Guides available in the ISO Catalogue](#)
- [Publicly available ISO/IEC Guides](#)
- [List of ISO/IEC Guides \(please login to view full list\)](#)

Resources for drafting standards

www.iso.org/drafting-standards.html

Other
drafting
resources

Drafting standards



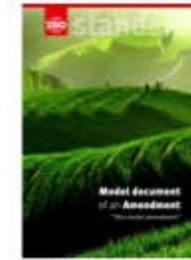
How to write standards - Tips for standards writers

This document is for people wanting to write clear, concise and user-friendly ISO International Standards and other Publications.



Model document of an International Standard - Rice model

This is a model document of an International Standard demonstrating a simple application of the ISO/IEC Directives, Part 2, with accompanying explanations and information about the content.



Model document of an Amendment - Rice model amendment

This is a model Amendment to an International Standard, to be used with the "Rice model".

Drafting standards FAQ [PDF]

Frequently asked questions about aspects of drafting.

Best practices for vocabularies and terminologies [PDF]

Tips for preparing your draft.

Simple template [Word]

Submit your draft using this template.

Other ISO templates

Simple
template

Resources for drafting standards

Simple template

The **simple template** contains standard template text for the basic structure of a document (title, Foreword, Clauses 1 to 3, Annexes) and examples of a figure and a table.

The image displays several overlapping pages from an ISO standard template, illustrating its structure and content. The pages include:

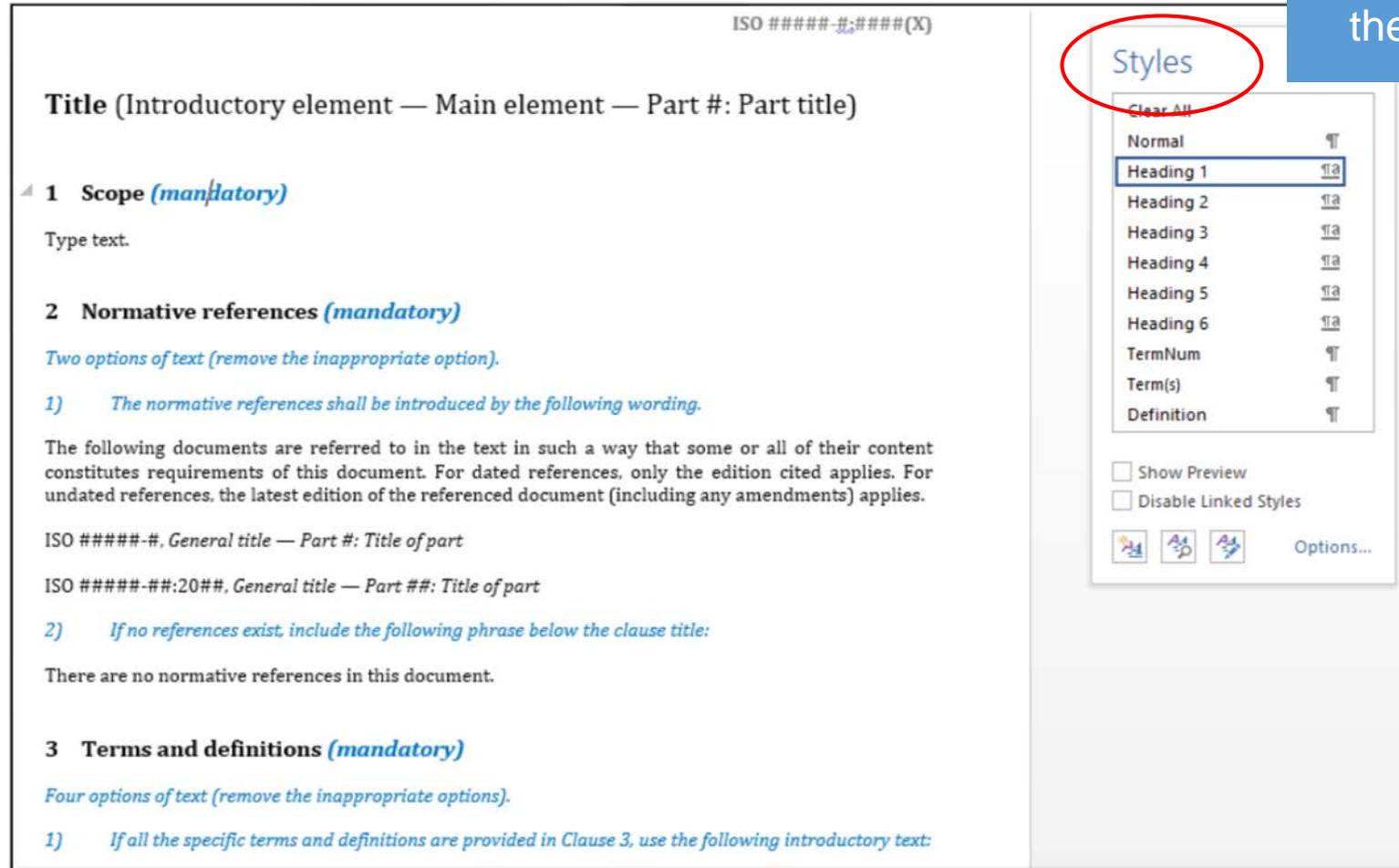
- Title page:** Shows the title (introductions, main element, part number, part title), copyright information, and the document status (WD/CD/IF).
- Foreword:** Contains introductory text, the ISO mission statement, and information about the document's development and approval.
- Clause 1 (Scope):** Defines the scope of the standard, including any exclusions.
- Clause 2 (Normative references):** Lists references to other standards, with options for how to cite them.
- Clause 3 (Terms and definitions):** Provides definitions for key terms used in the standard.
- Annex:** Shows an example of an annex title and its content.
- Table:** An example table (Table A.1) with columns for Type, No. series, Pressure, Length, and Temperature.
- Figure:** A technical drawing of a component with dimensions and a key.



Resources for drafting standards

Using the template

Always use the version on the ISO website, rather than a saved copy, as it is updated regularly.



The screenshot shows a document template for an ISO standard. The title is "ISO #####-#:#####(X)". The document is divided into sections: "1 Scope (mandatory)", "2 Normative references (mandatory)", and "3 Terms and definitions (mandatory)". Each section has specific instructions and options. A "Styles" menu is open on the right side, with "Heading 1" selected. The menu includes options like "Normal", "Heading 2" through "Heading 6", "TermNum", "Term(s)", and "Definition". There are also checkboxes for "Show Preview" and "Disable Linked Styles", and an "Options..." button.

ISO #####-#:#####(X)

Title (Introductory element — Main element — Part #: Part title)

1 Scope *(mandatory)*

Type text.

2 Normative references *(mandatory)*

Two options of text (remove the inappropriate option).

1) *The normative references shall be introduced by the following wording.*

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO #####-#, General title — Part #: Title of part

ISO #####-#:20##, General title — Part #: Title of part

2) *If no references exist, include the following phrase below the clause title:*

There are no normative references in this document.

3 Terms and definitions *(mandatory)*

Four options of text (remove the inappropriate options).

1) *If all the specific terms and definitions are provided in Clause 3, use the following introductory text:*

Styles

Clear All

Normal ¶

Heading 1 ¶

Heading 2 ¶

Heading 3 ¶

Heading 4 ¶

Heading 5 ¶

Heading 6 ¶

TermNum ¶

Term(s) ¶

Definition ¶

Show Preview

Disable Linked Styles

Options...

Apply styles using the Styles menu

An aerial photograph of a lush green hillside covered in terraced rice fields. The terraces are arranged in concentric, wavy patterns that follow the contours of the hill. In the lower-left foreground, a person wearing a blue shirt and dark pants is walking across the fields, carrying a long pole on their shoulder. In the lower-right, a bright light reflects off the water in one of the terraces, creating a shimmering effect. The overall scene is vibrant and scenic, capturing the beauty of traditional agriculture.

Thank you