



**Agenda Item 14.1.1:
Publication approval: Revision of OIML D 5:1982**

*Principles for the establishment of hierarchy schemes
for measuring instruments*

Information

FINAL DRAFT
DOCUMENT

57th CIML Meeting

2022

SUBMITTED
FOR CIML
APPROVAL

Revision of D 5:

Principles for the establishment of hierarchy schemes
for measuring instruments

(Information)



ORGANISATION INTERNATIONALE
DE MÉTROLOGIE LÉGALE

INTERNATIONAL ORGANIZATION
OF LEGAL METROLOGY

Result of CIML online voting

Type: CIML Preliminary online ballot

Title: Revision of D 5: Principles for the establishment of hierarchy schemes for measuring instruments -

Deadline: 2022-03-21

Status: Closed

Result:

Voted **Yes**: 26

Voted **No**: 0

Abstain: 0

Country	Vote	Comments
AUSTRALIA	Voted Yes on 2022-02-21 21:51:36	
BELARUS	Voted Yes on 2021-12-21 01:02:03	
CANADA	Voted Yes on 2022-03-21 15:10:07	
CUBA	Voted Yes on 2021-12-27 01:02:03	
FINLAND	Voted Yes on 2022-03-17 10:23:33	
FRANCE	Voted Yes on 2022-03-15 10:36:06	Yes
GERMANY	Voted Yes on 2022-10-13 at 18:11:54	Yes
HUNGARY	Voted Yes on 2022-02-08 10:07:17	
INDIA	Voted Yes on 2022-02-18 14:14:42	
IRAN	Voted Yes on 2022-03-17 15:14:18	
ITALY	Voted Yes on 2022-03-21 10:08:32	

Country	Vote	Comments
JAPAN	Voted Yes on 2022-02-22 05:51:43	
KOREA (R.)	Voted Yes on 2022-03-10 06:55:43	
MONACO	Voted Yes on 2021-12-20 01:02:03	
NETHERLANDS	Voted Yes on 2022-02-08 10:45:10	
NEW ZEALAND	Voted Yes on 2022-01-26 00:02:16	
NORWAY	Voted Yes on 2022-03-18 12:11:53	
P.R. CHINA	Voted Yes on 2022-03-07 03:30:13	
POLAND	Voted Yes on 2022-03-09 12:09:52	
ROMANIA	Voted Yes on 2022-01-10 13:15:26	
SAUDI ARABIA	Voted Yes on 2022-03-15 07:54:19	
SERBIA	Voted Yes on 2022-01-20 11:09:32	
SLOVAKIA	Voted Yes on 2022-03-21 10:57:43	
SWITZERLAND	Voted Yes on 2022-02-14 09:32:26	
UNITED KINGDOM	Voted Yes on 2022-03-09 13:38:54	Yes
UNITED STATES	Voted Yes on 2022-03-19 19:35:15	

Comments and responses after POB and before consultation in the PG

Template for comments and convener's observations

Date:2022-03-22

Document: TC4_P2_N031

Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0001 DE				Ge	We appreciate the work of the convenor collecting and evaluating the comments and creating a new draft. We voted "YES" on the last draft but we are surprised that now we see substantial changes in the content of the new draft. We do not agree to some of these therefore we regret we have to vote "NO" on this draft.		
0002 UK		1	5	Ed	SI [9]- all references	First reference so change to SI[1] reflect <i>in all</i> references within the document.	Accepted
0003 UK		3	All	ED	(VIM, XXX)	Use the relevant reference in squared brackets for the terminology.	Accepted
0004 FR		3.2		ed	There are two references from the VIM for metrology (1.16 and 2.2). The clause 1.16 deals with the International System of Unit.	Delete the reference 1.16 in the title.	Not accepted. There is only the reference to VIM 2.2. The reference to 1.16 is above and it is for the notes regarding SI.
0005 UK		3.3	Note 3	Ed	Define "evaluated from probability density functions based on experience or other information".		Not accepted. The Note 3 is the text from the VIM 2.26. The measurement uncertainty of Type A as well as Type B are characterized by standard deviations determined from the probability density functions concerning the particular components.
0006 UK		3.5, 3.6, 3.7, 3.10, 3.15, 3.17, 3.20, 3.21		ED	Notes from v2 not included but are included prior to 3.5.		Not accepted. Only important Notes are included. For other notes there is reference to the vocabulary.
0007		3.21		ED	Clarify what an authoritative body is.		Not accepted.

1 Country code (enter the ISO 3166 two-letter country code, e.g. CN for China)

2 Type of comment: ge = general te = technical ed = editorial

Template for comments and convener's observations

Date:2022-03-22

Document: TC4_P2_N031

Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
UK							The definition is from the VIM 5.14. To avoid an incorrect interpretation of this definition, we suggest to keep the wording exactly according to VIM.
0008 UK		3.22		ED	Acronym missing but is evident in other definitions underneath the title see 3.21	Add MPE	Not accepted. The definition 3.22 including all other definitions are taken exactly from the VIML. There in mentioned no acronym. The acronym is mentioned in the Note 3, according to definition of VIML.
0009 UK		3.23		ED	practice and process of applying statutory and regulatory structure and enforcement to metrology	Suggest addition of "The science of measurement and its application to" statutory and regulatory structure and enforcement to metrology.	Not accepted. The definition is directly from the VIML 1.01.
0010 UK		3.28-3.30		ED	Remove as covered by metrological traceability chain.		Not accepted. It is not clear what was thought by this comment. The definitions 3.28 – 3.30 are mentioned in the text of the document. We suggested to keep these definitions in the terminology.
0011 UK		3.33		ED	Define what an authorised institute is. Consistency required.		Not accepted.

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² Type of comment: ge = general te = technical ed = editorial

Template for comments and convener's observations

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Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
							To avoid an incorrect interpretation of this definition, we suggest to keep the wording as it is. The authorised institute in this definition means the institute having the competence to carry out the legal control of measuring instruments.
0012 UK		4.1	1 st para second sentence	ED	Addition of certified in front of reference materials?		Not accepted. The reference materials need not be always certified. See, for example, ISO 17034.
0013 DE		4.3	c)	te	We do not agree with the change in this paragraph, which was not of editorial nature. The activities of a laboratory (especially if it is not an NMI) is not always directly covered by the CIPM MRA (cf. ILAC P10 No. 2 and Annex A).	Change "shall be accredited or peer assessed <u>and</u> covered by the Mutual Recognition Arrangement" back to "shall be accredited or peer assessed <u>and/or</u> their services are covered by the Mutual Recognition Arrangement"	Accepted After reconsideration the sentence is corrected backward according to 4 CD. ILAC P10 No. 2 and Annex A allows the consideration when metrological traceability is not established through the CIPM MRA and ILAC Arrangement.
0014 UK		4.3	Fig 1	ED	Does the figure require certified reference materials within its structure?		Not accepted. We suggest to keep the figure as it is, because the explanation for reference materials is mentioned in 4.6 ("In many fields, certified reference materials perform the role of reference and working measurement standards.")

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² Type of comment: ge = general te = technical ed = editorial

Template for comments and convener's observations

Date:2022-03-22

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Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0015 DE		4.3	Figure 1	Ed/Te	We do not see the reason for limiting the actions of the legal metrology laboratories to "in-house" calibrations. We do not see a technical or organisational necessity of this limitation. (see also our comment on figure 2 in 5.6).	Replace "in-house calibration of working measurement standards" by "calibration of working measurement standards"	Not accepted The explanation of the "In-house calibration" is given in the 5.5.1 "In-house calibration means regular calibration of own working measurement standards or measuring instruments which is performed by the metrology laboratory, the accredited calibration laboratory or the company itself against its own reference measurement standard with metrological traceability." According to 5.5.1 there is no limitation for legal metrology laboratories.
0016 DE		4.4	Last sentence	te	This is a technical change of a topic that has been discussed in previous drafts of OIML D5. The result of the discussion was the sentence of the 4 th CD. We do not agree to accept reports as proof of traceability which refer to mpes without information on measurement uncertainty.	Change "the MPE of the measuring instrument <u>is recommended to be</u> accompanied with information on the measurement uncertainty related to that MPE" back to "the MPE of the measuring instrument <u>shall be</u> accompanied with information on the measurement uncertainty that relates to that MPE"	Accepted. After reconsideration the sentence is corrected backward according to 4 CD. The previous intention was to not use such a strong word. But we agree that the MPE shall be accompanied with information on the measurement uncertainty.
0017 UK		4.6	Note 1	ED	ISO 17034:2016 currently under review prior to publication of D 5 check to see updated version of ISO 17034 has been published and update the document.		Accepted. The standard is still under the review.
0018		5	Figure 2	ED	No reference to primary standards	Addition of equivalent national primary standards	Not accepted.

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UK							<p>No exact changes in the texts (in the table) were proposed.</p> <p>The primary standards in relation to NMI are described in 5.2.2 "If the NMI of the country has facilities and skills to realise the corresponding SI base units and derived units, the national measurement standards may be equivalent to the primary standards realising the units."</p> <p>Therefore, we propose to do not change the figure 2.</p>
0019 UK		5	Figure 2	Ed	National measurement standard 2 nd column include <i>certified</i> reference materials.	As above	<p>Not accepted.</p> <p>It is not clear what is meaning by this comment. No exact changes in the texts (in the table) were proposed.</p> <p>The certification of the reference materials and reference materials certificates are already included in the 2nd line.</p> <p>To avoid the misunderstanding, we propose to keep it as it is.</p>
0020 UK		5	Figure 2	Ed	National measurement standard 4th column include reference measurement standards.		<p>Not accepted.</p> <p>It is not clear what is meaning by this comment. No exact changes in the texts (in the table) were proposed.</p>

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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
							<p>The reference measurement standards are already included in the 2nd line.</p> <p>To avoid the misunderstanding, we propose to keep it as it is.</p>
0021 UK		5	Figure 2	ED	After type approval against OIML recommendations		<p>Not accepted.</p> <p>It is not clear what is meaning by this comment. No exact changes in the texts (in the table) were proposed.</p> <p>The national type approvals are mostly based on the national specifications that may be different from OIML recommendations.</p> <p>To avoid the misunderstanding, we propose to keep it as it is.</p>
0022 UK		5	Figure 2	ED	No reference to measurement standard.		<p>Not accepted.</p> <p>It is not clear what is meaning by this comment. No exact changes in the texts (in the table) were proposed.</p> <p>To avoid the misunderstanding, we propose to keep it as it is.</p>
0023 UK		5.3.2	1st sentence	ED	Remove the word "firm's"	Change to organisation's	Accepted

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Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0024 DE		5.3.3		te	<p>We agree that it is the task of the customer to ensure that the correct measurement uncertainty is achieved by the laboratory.</p> <p>However, we do not agree with the new wording that makes a proper consideration of the measurement uncertainty optional.</p>	<p>Change "the customer <u>should ensure</u> that the measurement uncertainty achieved in the accredited calibration laboratory is suitable and sufficient for the intended use of the measuring instrument"</p> <p>to "the customer <u>has to ensure</u> that the measurement uncertainty achieved in the accredited laboratory is suitable and sufficient for the intended use of the measuring instrument"</p>	<p>Accepted</p> <p>After reconsideration the sentence is corrected backward according to 4 CD.</p> <p>The previous intention was to not use such a strong word. We agree that the customer has to ensure that the measurement uncertainty. It is his duty.</p>
0025 DE		5.4.1		te	<p>We do not agree with the new wording as it says the standards "should" be calibrated by an NMI or accredited calibration laboratory. We do not see an option to this therefore this needs to be changed back to the sense of the 4th CD of OIML D5. To make it more clear we propose to use the term "shall".</p>	<p>Change "Their reference measurement standards <u>should be</u> calibrated by an NMI with suitable calibration and measurement capabilities or by an accredited calibration laboratory"</p> <p>to "Their reference measurement standards <u>shall be</u> calibrated by an NMI with suitable calibration and measurement capabilities or by an accredited calibration laboratory"</p>	<p>Not accepted</p> <p>The reference to NMI and to accredited calibration laboratory in this clause is intended to be only the recommendation as the most suitable solution. The reason is that the metrological traceability need not be always through the CIPM MRA or ILAC Arrangement. There is possibility that the calibration service supplier is not accredited (cf. ILAC P10 No. 2 and Annex A).</p> <p>See also your comment 0013 DE.</p>
0026 UK		5.4.1	1 st sentence	ED	<p>Include type approval against OIML recommendations. Wording needs to be consistent. Why are we not referring to OIML certificates.</p>		<p>Not accepted</p> <p>The national type approvals are mostly based on the national specifications that may be different from OIML recommendations.</p>

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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0027 UK		5.5.2	2 nd sentence	Ed	Addition of and metrologically traceable.		Accepted
0028 DE		5.6	Figure 2	Ed / te	Row "Working measurement standards", column "Tasks...": We do not see the necessity of adding the term "in-house calibration". We prefer to reduce it to the general term "calibration". See also our comment on figure 1 in 4.3	Delete "in-house calibration"	Not accepted The explanation of the "In-house calibration" is given in the 5.5.1 "In-house calibration means regular calibration of own working measurement standards or measuring instruments which is performed by the metrology laboratory, the accredited calibration laboratory or the company itself <u>against its own reference measurement standard</u> with metrological traceability." We propose to keep it as it is in order to be more specific regarding the use of working standards. The reference to in-house calibration of the measuring instruments is suitable to be mentioned in this cell.
0029 DE		5.6	Figure 2	te	Row "Working measurement standards", column "Basis for the tasks": We do not agree to delete the legal metrology laboratories. The legal metrology laboratories are not explicitly mentioned in ILAC P10 but this does not mean they do not fulfil the requirements of ILAC P10 (cf. ILAC P10 Section 3b in connection with Annex A).	Re-insert "legal metrology laboratories"	Accepted

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Template for comments and convener's observations

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Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
					In addition, we feel this would be in contradiction with section 4.3 / Figure 1.		After reconsideration we agree to re-insert the "legal metrology laboratories". The term "legal metrology laboratory" is mentioned in this document as well as in the cells of the Figure 1 and 2, including its definition (see 3.33). Therefore, the reference to the legal metrology laboratory in this cell is suitable to be consistent with the document.
0030 UK		6		ED	Primary standard not included.	Suggest unbroken chains of calibrations from the Primary standard down to measuring instruments,	Not accepted It is not clear what is meaning by this comment. No exact changes in the texts were proposed. To avoid the misunderstanding, we propose to keep it as it is.
0031 DE		6.1.5		te	We do not agree to make the application of OIML D 8 optional for other OIML Documents.	Change "is determined by the appropriate level of their metrological and technical characteristics. The specifications stated in OIML D 8 [5] <u>may be applied</u> in this process." Back to "is determined by the appropriate level of their metrological and technical characteristics <u>in accordance with</u> the specification stated in OIML D 8 [5]."	Accepted After reconsideration the sentence is corrected backward. The choice of measuring instruments for fulfilling the role of reference and working measurement standards shall be determined according to OIML D 8. After the correction of the text, the meaning of this clause is clearer.

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Template for comments and convener's observations

Date:2022-03-22	Document: TC4_P2_N031	Project:
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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses
0032 DE		7.2.1	c)	Ed / te	We appreciate the intention to make the document easier to read. However, in this clause the reduction to "rated operating conditions" leaves open when and why these need to be content of the hierarchy scheme. The rated operating conditions should be described somewhere else in the documentation of the laboratory. This would also prevent the hierarchy schemes to be overloaded with information. We propose to leave the old text of 7.2.1 c) slightly changed, reorganised and amended by "if applicable".	Change the measurement ranges and rated operating conditions of all the measurement standards and measuring instruments indicated in the hierarchy scheme" to "the range of measurements of all the measurement standards and measuring instruments indicated in the hierarchy scheme and, if applicable, ranges of the most important conditions of measurements which define the procedure for the dissemination of the units.	Accepted
0033 UK		7.2.1 (d)		ED	Sentence infers that accuracy is the uncertainty.	Suggest evaluation of the accuracy and uncertainty of.....	Accepted
0034 UK		Annex B			Key required for symbols		Accepted

C:\Users\luis_\Documents\comments\494-FRANCE-p2-D5_POB_2021-12_Comments_FR (1).docx: Collation successful

C:\Users\luis_\Documents\comments\494-GERMANY-p2-D5_POB_2021-12_Comments_DE_PSt2_2022-03-07.docx: Collation successful

C:\Users\luis_\Documents\comments\494-UNITED KINGDOM-p2-D5_POB_2021-12_Comments_templateUK.docx: Collation successful

Collation of files was successful. Number of collated files: 3

SELECTED (number of files): 3

PASSED TEST (number of files): 3

FAILED TEST (number of files): 0

CCT - Version 4.0/2015

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Comments and responses from the PG member to consultation after POB

Template for comments and convener's observations

Date:2022-04-04	Document:	Project:
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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses	PG comment to Convener's response
0013 DE		4.3	c)	te	We do not agree with the change in this paragraph, which was not of editorial nature. The activities of a laboratory (especially if it is not an NMI) is not always directly covered by the CIPM MRA (cf. ILAC P10 No. 2 and Annex A).	Change "shall be accredited or peer assessed <u>and</u> covered by the Mutual Recognition Arrangement" back to "shall be accredited or peer assessed <u>and/or</u> their services are covered by the Mutual Recognition Arrangement"	Accepted After reconsideration the sentence is corrected backward according to 4 CD. ILAC P10 No. 2 and Annex A allows the consideration when metrological traceability is not established through the CIPM MRA and ILAC Arrangement.	Agree with Convener's response.
0015 DE		4.3	Figure 1	Ed/Te	We do not see the reason for limiting the actions of the legal metrology laboratories to "in-house" calibrations. We do not see a technical or organisational necessity of this limitation. (see also our comment on figure 2 in 5.6).	Replace "in-house calibration of working measurement standards" by "calibration of working measurement standards"	Not accepted The explanation of the "In-house calibration" is given in the 5.5.1 " <u>In-house calibration means regular calibration of own working measurement standards or measuring instruments which is performed by the metrology laboratory, the accredited calibration laboratory or the company itself</u> against its own reference measurement standard with metrological traceability." According to 5.5.1 there is no limitation for legal metrology laboratories.	Agree with Convener's response.
0016 DE		4.4	Last sentence	te	This is a technical change of a topic that has been discussed in previous drafts of OIML D5. The result of the discussion was the sentence of the 4 th CD. We do not agree to accept reports as proof of traceability which refer to mpes without information on measurement uncertainty.	Change "the MPE of the measuring instrument <u>is recommended to be</u> accompanied with information on the measurement uncertainty related to that MPE" back to	Accepted. After reconsideration the sentence is corrected backward according to 4 CD. The previous intention was to not use such a strong word. But we agree that the MPE shall be accompanied with information on the measurement uncertainty.	Agree with Convener's response.

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Template for comments and convener's observations

Date:2022-04-04

Document:

Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses	PG comment to Convener's response
						“the MPE of the measuring instrument <u>shall be</u> accompanied with information on the measurement uncertainty that relates to that MPE”		
0024 DE		5.3.3		te	<p>We agree that it is the task of the customer to ensure that the correct measurement uncertainty is achieved by the laboratory.</p> <p>However, we do not agree with the new wording that makes a proper consideration of the measurement uncertainty optional.</p>	<p>Change “the customer <u>should ensure</u> that the measurement uncertainty achieved in the accredited calibration laboratory is suitable and sufficient for the intended use of the measuring instrument”</p> <p>to “the customer <u>has to ensure</u> that the measurement uncertainty achieved in the accredited laboratory is suitable and sufficient for the intended use of the measuring instrument”</p>	<p>Accepted</p> <p>After reconsideration the sentence is corrected backward according to 4 CD.</p> <p>The previous intention was to not use such a strong word. We agree that the customer has to ensure that the measurement uncertainty. It is his duty.</p>	Agree with Convener's response.
0025 DE		5.4.1		te	<p>We do not agree with the new wording as it says the standards “should” be calibrated by an NMI or accredited calibration laboratory. We do not see an option to this therefore this needs to be changed back to the sense of the 4th CD of OIML D5. To make it more clear we propose to use the term “shall”.</p>	<p>Change “Their reference measurement standards <u>should be</u> calibrated by an NMI with suitable calibration and measurement capabilities or by an accredited calibration laboratory”</p> <p>to</p>	<p>Not accepted</p> <p>The reference to NMI and to accredited calibration laboratory in this clause is intended to be only the recommendation as the most suitable solution. The reason is that the metrological traceability need not be always through the CIPM MRA or ILAC Arrangement. There is possibility that the calibration service supplier is not accredited (cf. ILAC P10 No. 2 and Annex A).</p> <p>See also your comment 0013 DE.</p>	Agree with Convener's response.

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Template for comments and convener's observations

Date:2022-04-04

Document:

Project:

Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses	PG comment to Convener's response
						"Their reference measurement standards <u>shall be</u> calibrated by an NMI with suitable calibration and measurement capabilities or by an accredited calibration laboratory"		
0028 DE		5.6	Figure 2	Ed / te	Row "Working measurement standards", column "Tasks...": We do not see the necessity of adding the term "in-house calibration". We prefer to reduce it to the general term "calibration". See also our comment on figure 1 in 4.3	Delete "in-house calibration"	Not accepted The explanation of the "In-house calibration" is given in the 5.5.1 "In-house calibration means regular calibration of own working measurement standards or measuring instruments which is performed by the metrology laboratory, the accredited calibration laboratory or the company itself <u>against its own reference measurement standard</u> with metrological traceability." We propose to keep it as it is in order to be more specific regarding the use of working standards. The reference to in-house calibration of the measuring instruments is suitable to be mentioned in this cell.	Agree with Convener's response.
0029 DE		5.6	Figure 2	te	Row "Working measurement standards", column "Basis for the tasks": We do not agree to delete the legal metrology laboratories. The legal metrology laboratories are not explicitly mentioned in ILAC P10 but this does not mean they do not fulfil the requirements of ILAC P10 (cf. ILAC P10 Section 3b in connection with Annex A). In addition, we feel this would be in contradiction with section 4.3 / Figure 1.	Re-insert "legal metrology laboratories"	Accepted After reconsideration we agree to re-insert the "legal metrology laboratories". The term "legal metrology laboratory" is mentioned in this document as well as in the cells of the Figure 1 and 2, including its definition (see 3.33). Therefore, the reference to the legal metrology laboratory in this cell is suitable to be consistent with the document.	Agree with Convener's response.

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Template for comments and convener's observations

Date:2022-04-04	Document:	Project:
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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses	PG comment to Convener's response
0031 DE		6.1.5		te	We do not agree to make the application of OIML D 8 optional for other OIML Documents.	Change "is determined by the appropriate level of their metrological and technical characteristics. The specifications stated in OIML D 8 [5] <u>may be applied</u> in this process." Back to "is determined by the appropriate level of their metrological and technical characteristics <u>in accordance with</u> the specification stated in OIML D 8 [5]."	Accepted After reconsideration the sentence is corrected backward. The choice of measuring instruments for fulfilling the role of reference and working measurement standards shall be determined according to OIML D 8. After the correction of the text, the meaning of this clause is clearer.	Agree with Convener's response.
0032 DE		7.2.1	c)	Ed / te	We appreciate the intention to make the document easier to read. However, in this clause the reduction to "rated operating conditions" leaves open when and why these need to be content of the hierarchy scheme. The rated operating conditions should be described somewhere else in the documentation of the laboratory. This would also prevent the hierarchy schemes to be overloaded with information. We propose to leave the old text of 7.2.1 c) slightly changed, reorganised and amended by "if applicable".	Change the measurement ranges and rated operating conditions of all the measurement standards and measuring instruments indicated in the hierarchy scheme" to "the range of measurements of all the measurement standards and measuring instruments indicated in the hierarchy scheme and, if applicable, ranges of the most important conditions of measurements which define the procedure for the dissemination of the units.	Accepted	Australia agrees with the need to improve the wording to consider the most important conditions of measurements as well as cases where conditions may fall outside of rated operating conditions. However, the proposed generic wording may cause confusion. We believe that retaining the widely recognised and understood term "rated operating conditions" and including the text proposed will improve clarity.

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² Type of comment: ge = general te = technical ed = editorial

Template for comments and convener's observations

Date:2022-04-04	Document:	Project:
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Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment ²	Comments	Proposed change	Convener's responses	PG comment to Convener's response
								We propose the changed text should read “the measurement ranges and the rated operating conditions of all the measurement standards and measuring instruments indicated in the hierarchy scheme and, if applicable, the ranges of the most important conditions of measurements which define the procedure for the dissemination of units”