



TC 4/p 9:					Revision of D 10: Guidelines for the determination of recalibration intervals of measuring equipment used in testing laboratories		
PG comments on 3rd WD					TC4_P9_N006		
Circulation date:					17 July 2017	Convener: SK – Mr. Stephan Kral	Closing date for voting and/or comments: Tuesday 17 October 2017 at 17:00 CET
Date comments submitted:					17 October 2017	Please type your comments in this form and post it (in Word format) as soon as possible and <u>no later than the closing date</u> using the PG vote and comment page on the OIML website (Structure → My Access → PG vote & comment).	
PLEASE INSERT THE COUNTRY CODE AND THE PART AND CLAUSE NUMBER IN EACH ROW. PLEASE DO NOT MODIFY THE NUMBER OF COLUMNS IN THE TABLE.							
Country Code ¹	Part	Clause/ Subclause	Paragraph/ Figure/ Table/	Type of comment ²	COMMENTS	PROPOSED CHANGE	OBSERVATIONS OF THE CONVENER/PG on each comment submitted
NL-1		general		ed	The text of the draft and that of the original OIML D 10 is rather unclear formulated in a number of (sub)clauses. This may lead to different or diverging interpretations.	It is suggested to involve BIML (as editor) or a native EN speaker in an early stage in the drafting, while if the editorial work is postponed to the last stage the extend of such an operation may be thus large that PG members could not feel comfortable with all the amended clauses. Anyhow doing the editorials in parallel is often more efficient than doing these at the end.	BIML was involved as the editor during preparation of 1 CD.
NI-2		general		gen	The NL expert of the accreditation body suggested to extend the commenting period until the closure of the Vancouver meeting of ILAC-AIC at the end of this month, at which meeting probably feedback will be provided to TC 4/p9. This especially while presumably the ILAC-G 24 publication is supposed to be developed in parallel to OIML D 10.	Suggest to allow a somewhat extended deadline for ILAC input.	The deadline was not extended.

¹ MB = Member body (enter the ISO 3166 two-letter country code, e.g. CN for China)

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

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NL-3		3		ed	<p>Minor editorials:</p> <p>As laid down in the several standardization directives for the technical work, including OIML B 6-2:</p> <ul style="list-style-type: none"> - each term in terminology should not start with an uppercase character. <p>VIML, VIM3 and GUM are informal names.</p> <ul style="list-style-type: none"> - VIML should be referred to as OIML V1 - VIM3 should be referred to as OIML V2-200 - GUM should be referred to as OIML G1-100 <p>- Only the word “Note” should be in italics. Not the note itself.</p> <p>- The reference to the vocabulary should be at the end of the definition, after the notes</p> <p>See OIML V1,0.09 as an example of the lay-out</p>	<p>Change the first character of each term to the lowercase character and apply the further standard lay-out as defined in B 6-2. As an example</p> <p>3.1 Measurement uncertainty, uncertainty of measurement, uncertainty</p> <p>non-negative parameter characterizing the dispersion of the quantity values being attributed to a measurand, based on the information used</p> <p><i>Note 1</i> A calibration may be expressed by a statement, calibration function, calibration diagram, calibration curve, or calibration table. In some cases, it may consist of an additive or multiplicative correction of the indication with associated measurement uncertainty.</p> <p><i>Note 2</i> Calibration should not be confused with adjustment of a measuring system, often mistakenly called “self-calibration”, nor with verification of calibration.</p> <p><i>Note 3</i> Often, the first step alone in the above definition is perceived as being calibration.</p> <p>[OIML V2-200, 2.26]</p>	Accepted The text was modified accordingly.
DK		3		ge	<i>Error in references and GUM (JCGM 100) is missing in the list of references</i>	Correct the errors and add GUM to the list of references	Accepted. Reference to GUM was deleted (insubstantiality of the reference)
DK		3.11		ge	<p><i>The term BMC should not be used anymore. ILAC and BIPM has agreed that BMC and CMC (3.10) is identical – see the paper:</i></p> <p>http://www.bipm.org/utis/common/documents/jcbr/CIPM_2007_11_CMC_BMC_accepted.pdf</p>	Delete 3.11	Accepted.
NL-4		4.1		ed	<p>The quoted sub clauses of the DIS ISO 17025 contain quite a few more or less editorial incorrect statements</p> <p>E.g.</p> <p>6.4.6 of DIS ISO 17025 is rather unclear because measurement uncertainty should be expressed as a quantity value, whereas measurement accuracy should not be expressed as a quantity value (V2-200,2.13)</p> <p>When combining these two terms using “and” the meaning becomes rather vague .</p>	It may be wise to await the FDIS or publication before including these clauses.	Accepted. Sub-clauses of ISO/IEC 17025:2017 were used during preparation of 1 CD.

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JP		3.11 & 4.4		Gen/tech	<i>ILAC now uses the term “calibration and measurement capability (CMC)” for the accreditation scope to describe calibration laboratories. The next version of ISO/IEC 17011 on the revision process in 2017 and ILAC P14 (ILAC Policy for Uncertainty in Calibration) mention this policy. Therefore, the term “best measurement capability (BMC)” should not be used.</i>	Delete “or BMC” which appears twice in 4.4. Also, delete the definition of BMC in 3.11.	Accepted.
JP		4.1 & 4.9		Gen/tech	<i>ISO/IEC 17025 is now at the FDIS (Final Draft International Standards) stage and it will be revised within 2017. The requirements in 3WD therefore should be compliant with those in FDIS.</i>	Check 3WD by comparing appropriate requirements with those in FDIS, and revise the requirements if necessary.	Accepted. Sub-clauses of ISO/IEC 17025:2017 were used during preparation of 1 CD.
DE			4.1, 4.9, Bibliography	Ge	<i>The references are not made to the latest draft of ISO/IEC 17025 (ISO/IEC FDIS 17025:2017). We propose to wait for the final publication and then adapt the references accordingly (as already announced by TC secretariat in the e-mail dated 17 July 2017)</i>		Accepted. Sub-clauses of ISO/IEC 17025:2017 were used during preparation of 1 CD.
DK		4.3		ge	<i>One of the mentioned factors is “costs of necessary corrections..”, this is a very subjective measure. Instead a general risk assessment should be included – what is the consequences if the instrument is out of calibration (thus not traceable anymore)</i>	Consider including risk assessment in 4.3	Accepted Text was updated as follows: “risk assessment analysis regarding the consequences if the measuring equipment is out of calibration (it is not traceable anymore)”
DK		4.4			<i>CMC=BMC, see comment above</i>	Delete “BMC”	Accepted.
Fr		4	4.10	ed		It is proposed to change: “The laboratory should check whether the results from external calibration and internal tests are falling within predetermined set limits prior to approving the measuring instrument for further use.” With “The laboratory should check whether the results from external calibration and/or internal tests are falling within predetermined set limits prior to approving the measuring instrument for further use.”	Accepted. Text was modified as follows: “The laboratory should check whether the results from external calibration and/or internal tests fall within predetermined set limits prior to approving the measuring equipment for further use.”
IR		5		te	<i>When the uncertainty of measurement required or declared by the laboratory is based on the accuracy of the instrument, for example, the electrical calibrator, so the initial calibration interval shall be determined according to the manufacturer's recommendation.</i>		Accepted. Second indent in clause 5.1 was updated as follows: — the measuring equipment manufacturer's recommendation (e.g. when the uncertainty of measurement required or declared by the testing laboratory is based on the accuracy of instrument);

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DK		5.1			<i>Risk assessment is missing from the list (see also comment above)</i>	Consider including risk assessment in 5.1	Accepted. New indent in clause 5.1 was added: — risk assessment analysis in relation to consequences in incorrect determining the calibration interval;
NL-5		5.2		ed	<i>...measurements, or of the particular...</i>	<i>...measurements, or knowledge of the particular...</i>	Accepted
NL-6		6.1.1		ed	<i>- in some measuring instruments could...</i>	change to: <i>- for some measuring instruments it could...</i>	Partially accepted Text was updated as follows “for certain measuring equipment it may be sufficient to carry out a limited calibration instead of a full calibration”
DE		6.1.1	3rd hyphen	Te	<i>We do not see an improvement by the new wording and propose to keep the wording from the 2nd WD.</i>	Replace the new wording “in some measuring instruments could be sufficient to carry out a limited calibration instead of a full calibration” by the original wording from the 2nd WD: “it may be sufficient to carry out a limited calibration of certain instruments instead of a full calibration”	Accepted Text was updated as follows “for certain measuring equipment it may be sufficient to carry out a limited calibration instead of a full calibration”
Fr		6	6.1.1	ed		It is proposed to change “in some measuring instruments could be sufficient to carry out a limited calibration instead of a full calibration”; With :” and for some measuring instruments it could be sufficient to carry out a limited calibration instead of a full calibration”	Partially accepted Text was updated as follows: “for certain measuring equipment it may be sufficient to carry out a limited calibration instead of a full calibration”.
IR		6.1.3		te	<i>When should a new calibration interval decision begin? After the second calibration and reviewing its results, or more calibrations? It seems that at least three calibration data are needed to show that requirements are met and there is no risk, so that the trend can be predicted.</i>		Agreed. The clause 6.1.3 was rewording as follows: “ It is recommended for new measuring equipment to be calibrated more frequently at the beginning, so as to establish behavioural trends. After analysis the behavioural trends the periodicities of recalibration intervals may be re-evaluated.” <i>Note:</i> It is recommended for new measuring equipment to collect calibration data at least from three successive calibration periodicities to establish behavioural trend.

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Fr		6	6.1.3	ed		It is proposed to change this paragraph “Quite contrary to the general perception that new instruments need not be calibrated or can have a larger period in between calibrations, it is necessary that new instruments are calibrated more frequently with shorter periodicities, so as to establish behavioural trends. After analysing the behavioural trends the periodicities may be decided upon.” With this paragraph:”It is necessary that new measuring instruments are calibrated more frequently, so as to establish behavioural trends. After analysis the behavioural trends the periodicities may be adjusted. “	Partially accepted Text was updated as follows: “ It is recommended for new measuring equipment to be calibrated more frequently at the beginning, so as to establish behavioural trends. After analysis the behavioural trends the periodicities of recalibration intervals may be re-evaluated.”
NL-7		6.2.1		ed	(or of another set limits)	suggested for both issues to change to: (or any other set of limits as required)	Accepted
IR		6.2.1		te	<i>“It is recommended that appropriate decision criteria for extension or reduction of calibration interval are specified for individual typical cases.” This is a very general statement, should be an example. After each review, how much can we increase or decrease? If successive records increase the calibration interval, how long will the increase be allowed and vice versa.</i>		Accepted. The sentence was rewording as follows: “It is recommended that appropriate decision criteria for extension or reduction of recalibration interval of the measuring equipment are specified for individual cases (e.g. the subsequent calibration interval may be extended or unchanged if it is found to be within 80 % of the maximum permissible error that is required for measurement, or reduced if it is found to be outside 80 % of the maximum permissible error).”
NL-8		6.2.3		ed	<i>“...redoing a large number of jobs..”</i> job is probably not the right word to use	suggest to replace by <i>“...repeating a lot of work..”</i>	Accepted
NL-9		6.3.2		ed	unclear what is meant by <i>“...the law of variability of the measuring instrument..”</i>	Maybe it was meant : <i>...the variability properties..</i>	Accepted
IR		6.3.2		te	<i>Example: This method is ... This method is suitable for measurad with single value for example gauge blocks, standard resistance, etc.</i>		Accepted. <i>Example</i> was replaced by <i>Note</i> in wording: “This method is not suitable for calibrations of measuring equipment without an instrumental drift. This method is suitable for measurand with single value, for example calibration of gauge blocks or standard resistance.”

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DE		6.3.2	Example	Te	<i>We are not in favour of adding these instruments as an example. We would propose to add a general remark concerning instrumental drift.</i>	Replace “Example: This method is suitable for example for gauges but is not suitable for example for callipers, because callipers do not drift” by “Remark: This method is not suitable for calibrations of instruments without an instrumental drift”	Accepted <i>Example</i> was replaced by <i>Note</i> in wording: “This method is not suitable for calibrations of measuring equipment without an instrumental drift. This method is suitable for measurand with single value, for example calibration of gauge blocks or standard resistance.”
NL-10		6.4.1		ed	<p><i>“This is a variation on the foregoing methods. The ..., rather than calendar months. The measuring instrument is fitted with an elapsed time indicator and is returned for calibration when the indicator reaches a specified value. Examples of measuring instruments are ...)</i></p> <p><i>The important theoretical advantage ..”</i></p> <p>Could be improved</p>	<p>Suggested improvements:</p> <p><i>“This is a variant on the previous methods. The ..., rather than in months. The measuring instrument is equipped with a device which indicates the elapsed time and is returned for calibration when the indication reaches a specified value. Examples of such measuring instruments are...)</i></p> <p><i>The major advantage in theory .”.</i></p>	<p>Accepted</p> <p>The test was rewording as follows:</p> <p><i>“This is a variant on the previous methods. The ..., rather than in months. The measuring equipment is equipped with a device which indicates the elapsed time and is returned for calibration when the indication reaches a specified value. Examples of such measuring instruments are...)</i></p> <p><i>The major advantage in principle.”.</i></p>
NL-11		6.4.2		ed	<p><i>“...using an automatic check, including:”</i></p> <p>The word “when” is missing</p> <p>“_</p> <p><i>- it should not be used when a measuring.....or when.....or when...”</i></p>	<p><i>“...using an automatic check, including when:”</i></p> <p>correct to:</p> <p>“_</p> <p><i>- it should not be used because a measuring.....or because.....or because...”</i></p>	<p>Accepted</p> <p>Partially accepted Text changes as follows “it should not be used providing that a measuring equipment is known to drift or deteriorate when it is on the shelf, or handled, or subjected to a number of short on-off cycles;”</p>
NL-12		6.4.2		ed	<i>“really”</i> is very vague .		<p>Accepted.</p> <p>The word “really” was deleted.</p>

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NL-13		6.5.1		ed	<p><i>"...can be used when an easy and quickly measure of a reference part can be done."</i></p> <p>Unclear phrase. Was it meant to use "measurement" ? Where does "part" refer to ?</p>	Use different wording to explain your intension	Accepted. The sentence was rewording as follows: "This is a variant on methods 1 and 2 and is particularly suitable when an easy and quickly calibration of a reference part of measuring equipment is possible".
NL-14		6.5.1		ed	<i>(or of another set limits)</i>	change to: <i>(or any other set of limits as required)</i>	Accepted.
NL-15		6.6.2		ed	"appear" is not the correct word to use	revert to "can be found in" or "are presented in" or "are available in"	Accepted. Text changed as follows: "Detailed examples are presented for example in ...".
NL-16		6.7		ed	Methods comparison	should be: Comparison of methods	Accepted.
NL-17		6.7		ed	<p><i>"...and a laboratory may choose to use different methods with different measuring instruments or in different departments.."</i></p> <p>It is not clear what is meant by "<i>..in different departments..</i>".</p>	<p>Maybe the following was the intension:</p> <p><i>"...and a laboratory may choose to use different methods using different measuring instruments or on different locations.."</i></p>	Accepted.
CA	-	-	-	-	no specific comments	-	thank you for review and feedback
Convener				ed/te	To harmonise the terminology in the text of guide with the title of guide "Guidelines for the determination of recalibration intervals of measuring equipment used in testing laboratories".		<p>In the whole document to replace "the measuring instrument" by "measuring equipment" as appropriate.</p> <p>In the whole document to replace "laboratory" by "testing laboratory" as appropriate.</p> <p>In the whole document to replace "calibration interval" by "recalibration interval" as appropriate.</p>