Guidelines for the CCQM KCWG on the Review of CCQM CMCs for Inclusion in Appendix C of the CIPM MRA

Glossary

NMI	National metrology institute
DI	Designated institute
JCRB	Joint Committee of the BIPM and the RMOs: http://www.bipm.org/en/committees/jc/jcrb
KCDB	Key Comparison Database: http://kcdb.bipm.org
RMO	Regional Metrology Organisation
CCQM	Consultative Committee for Metrology in Chemistry and Biology
KCWG	Working group on Key Comparisons and CMC Quality
IGO	International intergovernmental organization

1 Introduction

1.1 Terms of reference

Within CCQM the Key Comparison and CMC Quality Working Group (KCWG) is responsible for overseeing the review of CMCs, which refer to chemical and biological CMCs throughout this document. The terms of reference of the KCWG are described in Section 8 of the CIPM document "Calibration and Measurement Capabilities in the context of the MRA" (CIPM MRA-D-04). The working group is responsible for

- defining specific technical review criteria;
- coordinating the inter-regional review process;
- seeking advice from the concerned CCQM Working Groups on providing guidance on the range of CMCs supported by specific comparisons and identifying where comparisons are needed; and
- coordinating the review of existing CMCs in the context of new information.

1.2 CIPM Policy documents

The open access section of the CIPM MRA website (http://www.bipm.org/en/cipm-mra/cipm-mra-documents/) contains most of the relevant guidance documents for CMC submission and review. The "Policy documents" section contains files related to the MRA and the "Guidance on CMCs" section contains specific information for CMCs. The CIPM document CIPM MRA-G-01 "Guide to the implementation of the CIPM MRA" describes the relevant role of CMCs under the MRA. Section 6 of this document describes specific issues related to CMCs. The document CIPM MRA-D-04 provides an overarching description of CMC preparation, criteria for CMC review, the intra-regional and inter-regional review processes and the publication and modification of CMCs. All CCQM KCWG members should be familiar with these documents.

1.3 Aim of this document

It is the aim of this CCQM KCWG Guidance document to provide specific information for chemistry & biological CMCs. Hereinafter, the KCWG refers to the CCQM KCWG.

2 Summary of the CMC Review Process

2.1 The general CIPM process

The overarching document CIPM MRA-D-04 describes the general process for CMC submission and review. CIPM MRA-D-04 describes the general procedures which apply across all the CIPM Consultative Committees. The submission and review of CMCs is covered in Sections 4 and 5 of that document.

2.2 The CCQM CMC review process

Within CCQM we follow a process as described in Section 8 of CIPM MRA-D-04 whereby the co-ordination of the review of CMCs is carried out by the CC Working Group on CMCs. The KCWG receives chemistry and biology CMCs submitted annually from each of the RMOs. The working group oversees the review of CMCs and liaises with each RMO to resolve any issues during the annual review cycle. The process with the integration of BioCMC review is outlined in detail in Appendix I and II.

3 Membership of the CCQM KCWG

3.1 Membership

The KCWG consists of the following members:

– A chair and a vice-chair, who are nominated by the President of the CCQM and approved by the CCQM
– A representative from each of the CCQM technical working groups (where CMCs are being submitted by NMIs or DIs participating in those working groups or in relating RMO Metrology in Chemistry Technical Committees - TCs)
– The chairs of the RMO Metrology in Chemistry Technical Committees (or their designated representatives)
– Representatives nominated from each of the RMOs, preferably also being a member of a CCQM WG, to cover all relevant technical areas of the KCWG's activities
– A BIPM representative
– A rapporteur who keeps minutes of the KCWG annual meeting

Note that it is most important that the membership of the KCWG covers the technical areas which are being discussed during the review process. It is also essential that all members actively contribute to the review process in order that all areas of expertise are covered.

Remark: A maximum of one chair and 4 members per RMO was agreed. RMO TC chairs should confirm, preferably before the inter-regional review commences, who their RMO representatives will be at KCWG meeting to KCWG Chair. A maximum of one observer per RMO can be allowed at the KCWG meeting if the RMO quota has not been used. Generally, observers will not contribute to the meeting.

3.2 Other KCWG meeting attendees

The KCWG meeting is also attended by the JCRB executive secretary. The JCRB executive secretary is responsible for the posting of all information on the KCWG website and on the JCRB website and, also co-ordinates the RMO voting on each set of CMCs. Other attendees from other NMIs/DIs must request the approval of the KCWG chair to attend as observers.

4 Role of the RMOs

4.1 Responsibility of the RMOs

The RMOs are responsible for the submission of CMCs for inter-regional review and for all revisions to CMC files during the review process. Each RMO TC chair must prepare a detailed report on the intra-regional review process within their RMO. This must be received prior to the annual KCWG meeting. A template for this report is given in Appendix III. For each CMC entry the submitting NMI/DI must provide an entry in the CMC Excel file briefly describing the supporting information for cases where they are not directly under pinned by a key comparison. The RMO must review this and ensure entries are included for all such CMCs.

4.2 Communication of CMC issues

While CMCs are under review by the KCWG all correspondence from KCWG members must be addressed to the relevant RMO TC chair and copied to the KCWG chair. It is the aim of the KCWG to come to a consensus agreement on all CMCs. During the review of the non-fast track CMCs, RMO TC chairs will exchange information and comments until any issues have been resolved. CMCs will not be submitted to the JCRB website for final approval until all issues are resolved. In some cases this may involve returning CMCs to the CCQM and its WG for further comments.

5 Submission of CMCs

The open access section of the CIPM MRA website under the "Additional instructions and templates for CMC Excel files" section contains the "Excel template for CMCs in Chemistry & biology" which must be used for all CMC submissions (http://www.bipm.org/utils/common/documents/jcrb/QM_CMC_template.xls). This file includes full instructions on the use of the template. The categories for CMCs for chemistry are covered in http://kcdb.bipm.org/appendixC/QM/QM_categories.pdf. The Excel files (with one worksheet for each category) should be forward to each RMO TC chair in time for each annual cycle of CMCs.

6 Approval of CMCs

The final formal approval of CMCs is done by the RMOs on the JCRB website as it is done for CMCs in all CCs. Each set of CMCs from each RMO must be approved by the other RMOs within a set time frame. The CMC section of the JCRB website is password protected so that only RMO representatives can access the files. Chemistry & biology CMCs are normally not posted on the JCRB website until all issues have been resolved during the KCWG review process.

7 Assessment Guidelines for Chemistry and Biology CMCs

7.1 CIPM assessment guidelines

CIPM-MRA-G-03 "Guidelines for the review of Quality Systems operated by IGO institutes and/or designated institutes, and the review of their calibration and measurement capabilities (CMCs)" describes the review process. CIPM-MRA-D-04 contains the "Criteria for acceptance of CMCs" in Section 3 and outlines for all CMCs in Appendix C the general criteria used to assess CMCs. These criteria are:

1) Results of key and supplementary comparisons
2) Documented results of past CC, RMO or other comparisons (including bilateral)
3) Knowledge of technical activities by other NMIs, including publications
4) On-site peer assessment reports
5) Active participation in RMO projects
6) Other available knowledge and experience

7.2 Underpinning by key comparisons

In general KCs are used to demonstrate the capabilities and competencies, expressed in the form of CMCs, claimed by the NMIs and DIs participating in the CIPM MRA. NMIs/DIs claiming CMCs that are underpinned by the results of defined KCs have to participate in these KCs. **Where an NMI/DI offers a service in a particular measurement area and a CCQM key comparison occurs for this measurement area, then the NMI/DI has to participate unless it has participated in a similar key comparison within the last 5 years. If a key comparison occurs and a parallel pilot study is also co-ordinated at the same time an**

NMI/DI with CMCs in this area, or an NMI/DI wishing to submit CMCs in this area, must participate in the key comparison, not the pilot study.

7.3 Underpinning by evidence from pilot studies

In the chemistry area we have a large number of pilot studies and these may be used as supporting evidence for CMCs, although key and supplementary comparisons will always be considered to provide a higher level of evidence. **Pilot study results can only be used to support CMCs where no appropriate KC has been carried out.** Where pilot studies are used as evidence the results must demonstrate capability in a transparent way, a full report must be available with laboratories clearly identified. Reference values for the samples involved in such pilot studies must be assigned and approved by the WG, otherwise it is difficult to assess performance with respect to the best estimate of the true value for the samples involved. Official regional pilot studies may be used in a similar way if such transparency issues are considered. Regional pilot studies must be approved by the CCQM for use in supporting CMCs.

7.4 List of CCQM and RMO comparisons ready to underpin CMCs

In submitting CMCs linked to key comparisons, supplementary comparisons, bilateral comparisons, or pilot studies, the KCWG maintains a list of all comparison reports which are deemed ready for use in supporting CMCs. This list was developed because the timeframe to reach the stage where a draft B report is published on the KCDB can be very long. To avoid a long delay, key comparison reports may be deemed ready for use by the KCWG in assessing CMCs if they are a "draft B report or where the KCRV and its uncertainty has been established and the working group confirms (in the form of meeting notes or other equivalent documents) that they will not change and that participants' results and uncertainties have been finalised and approved by the participants and the working group chair".

In the case of pilot studies reports must be formal written reports where, similarly, the participant's results and uncertainties and the reference values have been finalised and the name(s) of the participating NMI/DI(s) concerned have been disclosed. These reports must have been approved by all of the participants and the working group chair. Each of the CCQM technical working group chairs is responsible for updating the KCWG comparison list. The CCQM WG chairs submit their updates twice yearly (in June and December) to the KCWG Chair for consolidation. This list is posted on the KCWG website and must also contain a link to where the report is located on the CCQM website. **RMOs should not submit claims for inter-regional review which are underpinned by comparison reports which are not yet approved for use by the KCWG.** If such CMCs are submitted they will be postponed until the following cycle unless significant additional underpinning evidence is available.

7.5 CMCs linked to comparisons which are about to commence

CMCs should not be submitted where a key comparison is about to commence in that measurement area and NMIs/DIs should wait for the results of the comparison. Obviously the time that NMIs/DIs should have to wait for this should be reasonable and if a key comparison is simply planned at some undefined date in the future, then CMC submission may be possible.

7.6 Evidence from peer reviews and assessments

On-site peer reviews can provide useful additional supporting information. The on-site peer review should be performed according to document CIPM 2007/25. On site reviews performed as part of the accreditation assessment, can be used as support for CMCs when they fulfil the conditions of CIPM 2007/25. NMIs/DIs must be prepared to release the names of the on-site

peer reviewers/assessors and the content of the peer-review reports to the KCWG members and to allow the KCWG to contact these peer reviewers/assessors if necessary.

7.7 Evidence from publications

Other evidence such as publications may be used but as the referee process for such things is not transparent and may not be with the same vigour, then it must be accepted that these provide evidence which would be considered lower in the hierarchy of supporting evidence. Publications should cover all the relevant metrological aspects needed to provide evidence to support claims appropriately. Guidance may be obtained from documents such as ISO 15193 which outlines the requirements of reference measurement procedures in the laboratory medicine field.

8 Links to Key Comparison Results (Appendix B)

8.1 CMCs directly underpinned by key comparisons

CMCs are assessed with respect to results obtained in key comparisons by reviewing the claimed measurement capability range and uncertainties in comparison with the x_i and $U(x_i)$ of the NMI/DI's result and the x_{ref} and $U(x_{ref})$ of the key comparison. In general a result from a particular NMI/DI would be considered to be consistent with the KCRV if the 95% confidence interval for the degrees of equivalence for the NMI/DI contained zero. All key comparison reports will contain the Degrees of Equivalence (DoE) graphs, expressed at the 95% confidence level, to allow this assessment to be easily made. **If this criterion is met then where there is a one to one correspondence between the measurand of the key comparison and a CMC the minimum acceptable uncertainty for a CMC would be $U(x_i)$. However the magnitude of the uncertainty, $U(x_i)$ of the NMI/DI's result, compared with the magnitude of $U(x_{ref})$ must also be considered. Where $U(x_i)$ is significantly smaller than $U(x_{ref})$ then the reliability of the uncertainty estimate of the NMI/DI may require further evidence.**

Where the DoE criterion is not met (i.e. its 95% confidence interval does not cross zero) this would indicate that a particular result was not consistent with the KCRV. In such a case $U(x_i)$ may have been underestimated or there may have been an unidentified source of bias. Ideally, the NMI/DI will have reviewed its uncertainty estimation following such an occurrence and will have revised its uncertainty budget. If at that stage it wishes to claim a lower uncertainty than is demonstrated in the key comparison then further evidence, such as a bilateral comparison, would be required.

8.2 CMC concentration ranges

Obviously CMCs can often cover a range of concentrations, while key comparisons typically cover a limited number of concentration points. Therefore the appropriateness of the uncertainties over the whole measurement range must be considered, ideally based on the "How far the light shines" declaration of the KC. The assessment of the appropriateness of the adjustment of claimed uncertainty over concentration range for a CMC will need to be made by technical experts.

9 Types of Dissemination Services

Where NMIs/DIs disseminate their measurement capabilities via services described as "value assignment of CRMs", "calibration services", "value assignment for proficiency testing scheme samples" etc the NMI/DI will be expected to provide details of the exact nature of this service including a unique service identifier. These services generally relate to some form of reference measurement provision and details should be given in the "exact nature of service

delivered" column of the CMC template. The KCWG will expect the NMI/DI to outline the exact nature of the service, for example is it reference measurement provision for samples from clients or for samples for PT schemes and to provide information such as:

- are samples unknowns which are submitted by clients
- are samples prepared by an external group but the NMI/DI knows the expected composition of such samples
- are the samples prepared in-house or of known origin

In the "mechanism of service delivery column" ideally the nature of the service should be clearly identified, however if an NMI/DI has a service offered to clients that they typically describe in a particular way then they may describe it in that way in this column and provide further information in the "exact nature of service delivered" column. Ideally this column will have an entry such as "reference value provision for samples of known composition submitted by external clients" that clearly indicates the purpose of the service and the level of information that the NMI/DI has about the samples.

10 Traceability

10.1 Traceability requirements for the CMC template

NMIs and DIs with calibration and measurement capabilities in the KCDB must meet the requirements of the CIPM 2009-24 document "Traceability in the CIPM MRA". This outlines two options for achieving traceability (via an in-house primary realisation or via services from another NMI/DI with CMCs or from BIPM). Traceability in the CMC template needs to be identified to a particular NMI/DI. This implies that the traceability of the results from disseminated services will typically be expected to be to the SI (or another relevant international standard) through the NMI/DI listed in this column of the template. This must of course be justified and there may be cases, for instance where limited sample preparation is involved, where traceability may instead be to the source of the calibration standards which are used. Traceability obtained from another NMI/DI has to be obtained from another NMI or DI recognized for that capability under the CIPM MRA. See document CIPM MRA-D-04, section 8. For example, in the relevant column of the template it should be stated that traceability is obtained from NMIX. It is implied that if NMIX is to be listed they should have an existing CMC for this.

10.2 Calibration materials

In all cases where a calibration standard is inherent in the process NMIs/DIs are expected to state in the "details of calibrants used..." column of the CMC template the nature of the calibrant and how its purity or concentration has been confirmed. For example, for an analysis of pesticides in food an NMI/DI would need to say how the purity value of the pure pesticide used as the calibrant was checked. This could simply involve a statement such as "pure calibrant from commercial source and in-house purity assessment by techniques #### was carried out". This information is requested because of the importance of calibration standards in ensuring the traceability of results. Any NMI/DI carrying out such in-house assessment needs to have participated in the relevant CCQM key comparisons for purity assessment and would be expected to have the capability reviewed during relevant assessments or peer reviews.

11 The Inclusion of Certified Reference Materials in CMCs

Section 8.1 of the CIPM document CIPM MRA-D-04 outlines the criteria which CRMs must meet to be included in Appendix C. Where CRMs are listed under the mechanism of measurement service delivery they should ideally be uniquely identified where possible and not

just listed as “CRM”. The measurement capability which is listed in the CMC should be the main method used in the certification of the material otherwise there is limited linkage between the capability and the CRM. The measurement uncertainty of the stated certified value of the CRM would be expected to typically be larger than the measurement uncertainty of the measurement capability. In some cases this uncertainty may be lower than the measurement capability as considerable time may go into the analysis of a single CRM spanning many months of work. If lower uncertainties are claimed then the evidence for this must be provided, for example by making available the report of an on-site peer review confirming that the lower uncertainty claim is justified. It should also be recognised that some CRMs are produced in large batches and some are produced on an as required basis and this will potentially alter the achievable uncertainty. The CCQM Gas Analysis Working Group has specific criteria for the assessment of CMCs for CRMs which must be adhered to during CMC assessment.

12 Subcontracting

The CIPM document “Subcontracting of measurements under the CIPM MRA” (CIPM 2005-9) covers the criteria which must be fulfilled by NMIs who may be subcontracting aspects of their work.

13 Modifications to Existing CMCs

Modifications must be carried out strictly in accordance with Section 12 of CIPM MRA-D-04. Files must be downloaded from the KCDB website, changes made and then the revisions submitted to the KCWG (where necessary) in the usual annual review cycle.

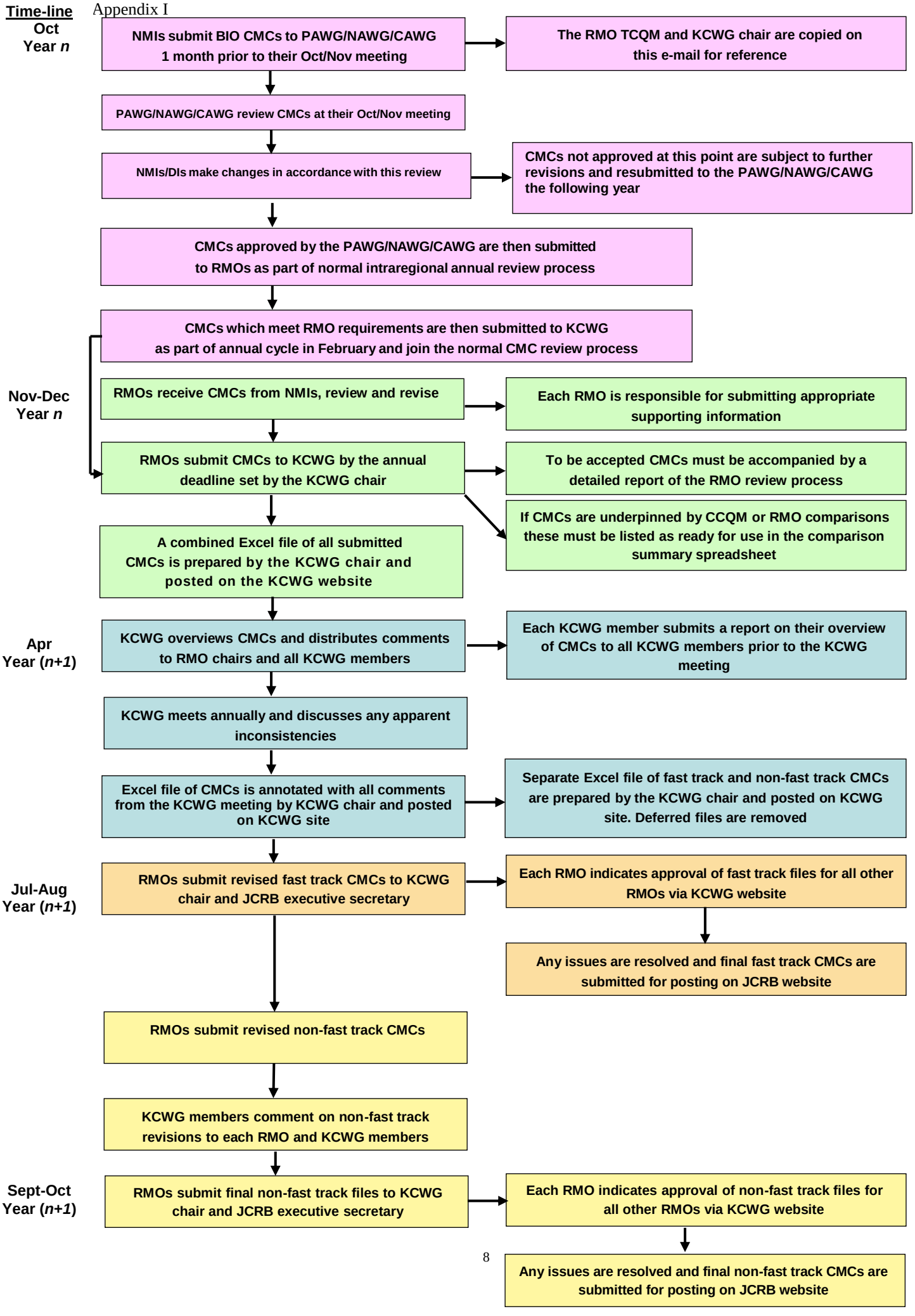
14 Reviewing CMCs in Light of New Evidence

The document “Monitoring the Impact of Key and Supplementary Comparison Results on CMC Claims (JCRB-11/7(a))” outlines the general JCRB guidelines. Each NMI/DI is responsible for this but in addition each RMO “should monitor the impacts of results on CMC claims for its member NMIs”. The KCWG has accepted the job of co-ordinating this review of existing CMCs. Ideally this review will be carried out by measurement category to ensure that all claims in each measurement area can be reviewed for consistency as well as current underpinning evidence. The KCWG will maintain a plan for the review of existing CMCs to ensure that ultimately each CMC is re-reviewed every five to ten years. The RMOs will be responsible for the initial review of existing CMCs, ideally following the plan developed by the KCWG. Following the RMO review they will submit a report to the KCWG and the KCWG will determine what level of scrutiny is required by the KCWG members.

15 CMCs in new measurement areas

There will inevitably be new measurement areas which are not fully covered by the existing CMC categories. In such cases the relevant CCQM working group chair liaises with the KCWG chair to propose new categories for inclusion. The review of CMCs in new measurement areas may involve processes that are different to those outlined in this document to ensure full assessment by appropriate technical experts of such claims. For instance, previously claims in the bioanalysis field were reviewed separately by the CCQM Bioanalysis Review Team and this team provided feedback to the KCWG. Currently, bio-CMCs are submitted to the respective CCQM Working Groups for technical review and comments prior to their submission for inter- and intra-RMO review. Please refer to Appendix 1 for details.

Appendix I


Time-line
Oct
Year n
NMIs submit BIO CMCs to PAWG/NAWG/CAWG 1 month prior to their Oct/Nov meeting
The RMO TCQM and KCWG chair are copied on this e-mail for reference
PAWG/NAWG/CAWG review CMCs at their Oct/Nov meeting
NMIs/DIs make changes in accordance with this review
CMCs not approved at this point are subject to further revisions and resubmitted to the PAWG/NAWG/CAWG the following year
CMCs approved by the PAWG/NAWG/CAWG are then submitted to RMOs as part of normal intraregional annual review process
CMCs which meet RMO requirements are then submitted to KCWG as part of annual cycle in February and join the normal CMC review process
Nov-Dec
Year n
RMOs receive CMCs from NMIs, review and revise
Each RMO is responsible for submitting appropriate supporting information
RMOs submit CMCs to KCWG by the annual deadline set by the KCWG chair
To be accepted CMCs must be accompanied by a detailed report of the RMO review process
If CMCs are underpinned by CCQM or RMO comparisons these must be listed as ready for use in the comparison summary spreadsheet
A combined Excel file of all submitted CMCs is prepared by the KCWG chair and posted on the KCWG website
Apr
Year (n+1)
KCWG overviews CMCs and distributes comments to RMO chairs and all KCWG members
Each KCWG member submits a report on their overview of CMCs to all KCWG members prior to the KCWG meeting
KCWG meets annually and discusses any apparent inconsistencies
Excel file of CMCs is annotated with all comments from the KCWG meeting by KCWG chair and posted on KCWG site
Separate Excel file of fast track and non-fast track CMCs are prepared by the KCWG chair and posted on KCWG site. Deferred files are removed
Jul-Aug
Year (n+1)
RMOs submit revised fast track CMCs to KCWG chair and JCRB executive secretary
Each RMO indicates approval of fast track files for all other RMOs via KCWG website
Any issues are resolved and final fast track CMCs are submitted for posting on JCRB website
RMOs submit revised non-fast track CMCs
KCWG members comment on non-fast track revisions to each RMO and KCWG members
Sept-Oct
Year (n+1)
RMOs submit final non-fast track files to KCWG chair and JCRB executive secretary
Each RMO indicates approval of non-fast track files for all other RMOs via KCWG website
Any issues are resolved and final non-fast track CMCs are submitted for posting on JCRB website

Pink = BioCMC review by PAWG/NAWG/CAWG
Green = annual intra-regional review of CMCs within RMOs
Blue = annual review by KCWG (coinciding with April CCQM meetings)
Orange = CMCs with no issues are accepted as "fast track" and are posted to the JCRB website for approval
Yellow = CMCs where more issues require resolving are labelled "non-fast track" and may go through several iterations before submission to the JCRB website for approval

Appendix II – Summary of the CMC Submission and Review Process

A) The timetable for the submission process is set by the KCWG chair. The KCWG chair notifies the Chair of the Chemistry TC at each RMO at the end of each calendar year of the submission deadline for the commencement of the inter-regional review of CMCs. This is typically February or March each year to allow discussion at the annual meeting of the KCWG prior to the CCQM WG and plenary meetings in April. Please note that the BioCMC review meeting for reviewing BIO CMCs by the PAWG/NAWG/CAWG will normally be scheduled for 6 months earlier than the annual meeting of the KCWG.

B) Prior to the submission of CMCs each year the KCWG Chair posts on the KCWG website an updated comparison list received from each of the WG Chairs so that RMO TC Chairs can ensure that CMCs which are submitted are covered by comparisons which are deemed ready to underpin CMC claims.

C) CMC files, preferably with the confirmation of the quality systems of the NMIs/DIs, are submitted by the RMO TC Chairs to the KCWG chair and copied to the CCQM Executive Secretary. The JCRB Executive Secretary posts each submission on the KCWG website. All relevant supporting information is also posted on the KCWG website.

D) The KCWG chair combines the submissions from each RMO into a consolidated file of all CMCs to be reviewed in that cycle and distributes this Excel file to all the KCWG members and to the JCRB executive secretary for posting on the KCWG website. The TC Chair from each RMO is required to submit a report on the review process carried out within their region. This must be received with the CMCs files and be in the form of the template report in Appendix III of this document.

E) Prior to the KCWG meeting KCWG members are required to send in a written report containing their comments on the submitted CMCs to each RMO TC chair (copied to all KCWG members).

F) CMCs for which no reasonable and objective issues were raised in writing by KCWG members prior to the meeting will be accepted and entered into the designated "fast track" approval process.

G) The remaining CMCs will be briefly discussed at the KCWG meeting and the consensus opinion of the KCWG members sought. At this stage, further CMCs may be added to the fast track scheme; these CMCs will require little or no modification prior to publication in Appendix C.

H) The remaining CMCs are designated "non-fast track" and the issues related to these files are discussed with the relevant CCQM working groups, with specialists in the relevant measurement areas and with the NMI/DI involved (via their RMO) with the aim of revising CMCs to meet the concerns raised during the review process.

I) At the KCWG meeting a timetable is set by the KCWG chair outlining the deadlines for the review of non-fast track files, their resubmission and posting on the JCRB site for approval by each RMO.

J) After the KCWG meeting the KCWG Chair prepares two sets of Excel files of CMCs for the fast track and non-fast track, respectively. These are submitted to the CCQM Executive Secretary for posting on the KCWG website.

K) Any minor modifications required for the fast track CMCs are highlighted in this Excel file and RMO TC Chairs must submit revised files within the deadline set at the KCWG meeting.

L) The KCWG Chair creates a revised fast track Excel file and submits this to the JCRB Executive Secretary for posting to the JCRB CMC website for approval by each RMO.

M) The non-fast track CMCs will be posted to the JCRB CMC website only once all issues with all CMCs have been resolved. Each RMO TC chair will have to submit revised non-fast track CMC files in accordance with the timetable. These are then checked by KCWG members to ensure that all revisions have been made and then a final non-fast track file is submitted by each RMO TC Chair.

N) Each RMO TC Chair sends the JCRB Executive Secretary an e-mail confirming their approval of the other RMOs' non-fast track CMCs and then the files are loaded on the JCRB CMC website by the Executive Secretary for formal approval.

O) The formal approval of files on the JCRB CMC website (fast track and non-fast track) is carried out in accordance with Section 6 of CIPM MRA-G-01.

Appendix III – Template for an RMO report for submission of CMCs

REPORT ON THE XXX (insert RMO) INTRA-REGIONAL REVIEW OF CHEMISTRY CMC CLAIMS FOR CYCLE XXX (enter cycle number)

Submitted to the Chairman of the KCWG at CCQM for inter-RMO review
Insert date

1. Intra-regional review procedure

- Outline the time frame of the review undertaken (when CMCs received and when review completed)
- Outline the review process
- Outline the reviewers involved and their exact role
- Outline the specifics of the criteria used for RMO assessment and briefly summarise for each NMI/DI's claims (this should be captured in the relevant column "Clear description of supporting evidence for this claim" in the new CMC template).
- Summarise all additional information provided by each NMI/DI

2. Summary of the entries

- Summarise the number of new, revised and rejected claims submitted from each NMI/DI and fill in the table below

Summary of new CMC claims for XXX (enter RMO name) cycle XX

Country	Institute	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7	Category 8	Category 9	Category 10	Category 11	Category 12	Category 13	Category 14

Summary of revised CMC claims XXX (enter RMO name) cycle XX

Country	Institute	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7	Category 8	Category 9	Category 10	Category 11	Category 12	Category 13	Category 14

Summary of rejected CMC claims XXX (enter RMO name) cycle XX

Country	Institute	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7	Category 8	Category 9	Category 10	Category 11	Category 12	Category 13	Category 14

Enter number of claims in each category