

AFRIMETS TCQM Report to CCQM

March 2025

1. Summary of general issues

AFRIMETS (the African regional metrology organisation) held its 17th General Assembly and related meetings from 29 July to 2 August 2024 hosted by Kenya Bureau of Standards (KEBS) in Nairobi, Kenya. Most of the technical committees including the Technical Committee for Quality Systems (TC-QS) met before the General Assembly.



Figure 1: AFRIMETS is collaborating with PAQI on capacity building within the region to meet the Agenda 2063 aspirations also in terms of the African Continental Free Trade Area (AfCFTA)

In terms of the election of executive officers, no new members were elected during 2024. Dr Henry Rotich from the Kenya Bureau of Standards (KEBS) is currently the Chairperson of AFRIMETS until 2025. Mr John-Paul Musimami from the Uganda National Bureau of Standards (UNBS) is the Vice-chair responsible for Legal Metrology and Mr Matthew Ranganai from SIRDC-NMI in Zimbabwe is the Vice-chair for Scientific and Industrial Metrology. Mr Donald Masuku from the NMISA in South Africa is the current Interim Head of the AFRIMETS Secretariat.

The 18th General Assembly of AFRIMETS will be hosted by Ghana in July 2025.

2. Current Technical Committee (TC) and Working Group Chairs and Contact Details

The AFRIMETS structure includes working groups to mirror the international consultative committee working groups (CC-WGs) and are identified as TC-(parameter).

The contact details of the TC Chairs important to Chemistry and Biology are listed below:

Function	Name	Details
TC-QM Vice-Chair (Bio analysis)	Dr Angelique Botha Mrs Désirée Prevoo-Franszen	National Metrology Institute of South Africa (NMISA), Private Bag X34, Lynnwood Ridge, 0040, RSA Tel: +27 12 947 2705 e-mail: abotha@nmisa.org Tel: +27 12 947 2738 e-mail: dprevoo@nmisa.org
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TC-QS	Dr Noha Emad Khaled	National Institute for Standards (NIS), Tersa Street, El Haram, Giza, 12211 Egypt Tel: ++(202)33862322 e-mail: nemadnis@yahoo.co.uk or nemadnis@netscape.net

3. AFRIMETS CMCs

As of 20 March 2025, there were a total of 769 AFRIMETS CMCs accepted in Appendix C of the KCDB.

The CMCs originate from:

South Africa (NMISA)	=	523 (124 CMCs in Chemistry and Biology)
Egypt (NIS)	=	112 (2 CMCs in Chemistry)
Zimbabwe (SIRDC)	=	19
Kenya (KEBS)	=	37 (2 CMCs in Chemistry)
Tunisia (DEFNAT)	=	25
Ethiopia (EMI)	=	12
Zambia (ZMA)	=	11
Namibia (NSI)	=	7
Morocco (LPEE)	=	20
Botswana (BOBS)	=	3

4. Development work in Chemistry and Biology

LNMc-INRAP, who is the designated institute for metrology in chemistry in Tunisia is now ready to release the first draft of The Tunisian National Strategy of Metrology in chemistry with the support of BIPM and AFRIMETS. The strategy aims to achieve comparability of measurement results to meet the national needs in terms of production of certified reference materials (CRMs) and organisation of proficiency testing (PT) schemes in the MAGMET/AFRIMETS framework.

In the beginning of 2024, LNMc-INRAP has organised a bilateral comparison with PTB in Germany: LNMc-BC-01: Copper Standard Solution in Nitric Acid: SRM-Cu Bilateral Comparison. Pending the approval of the AFRIMETS TC-QM, the LNMc is planning to pilot an AFRIMETS key comparison with the same copper calibration solution produced by LNMc-INRAP. As a capacity building and knowledge transfer (CBKT) participant, LNMc-INRAP will be participating in the key comparison study CCQM-K154.e: Organic solvent calibration solution - gravimetric preparation and value assignment of Ochratoxin A (OTA) in acetonitrile (ACN).

LNMc-INRAP in Tunisia has submitted their first CMCs for certified calibration solutions for patulin and aflatoxins. The institute has registered to participate in the supplementary comparison, AFRIMETS.QM-S1 - Pesticides in yellow plum. This comparison will allow INRAP to support the planned CMC claims for analysing pesticides in vegetable and fruit matrices. In the framework of this activity INRAP is

currently planning a training activity with the NMISA in South Africa to continue building on core competencies and knowledge transfer.

The schedule for the AFRIMETS supplementary comparison for pesticides in fruit (AFRIMETS.QM-S1) has been finalised and the comparison samples have been distributed to the participants. The comparison will enable AFRIMETS NMIs, such as LNMc-INRAP in Tunisia, who has an advanced capability in this area, to claim new CMCs. Much interest has also been shown by developing NMIs from the SIM region, such as Columbia, Bolivia, and Argentina as well as from other NMIs active in the Organic Analysis Working Group (OAWG) of the CCQM.

NIS in Egypt has submitted new CMC claims in the field of Chemistry and Biology for 2025 that includes their measurement capabilities for anions in a range of water matrices (seawater, contaminated water, drinking water, fresh water and ground water), certified calibration solutions for patulin and heavy metals in rice.

AFRIMETS is also supporting Phase 2 of the Pan African Quality Infrastructure (PAQI) project *Harnessing quality infrastructure in the cassava value chain* with the organisation of a proficiency testing (PT) scheme for cassava. The PT scheme was planned for four (4) PT rounds for the determination of the moisture and protein content in cassava; toxic and nutritional elements in cassava flour; pesticides in cassava and hydrocyanic acid (HCN) in cassava. All four PT rounds have been completed, and an on-line workshop was held in February 2024 to discuss the results with the participants.

The participants were invited to present their methods including how they established metrological traceability, validated their methods, and performed quality assurance. Based on the outcomes of the PT scheme and the feedback from the participants, PTB in Germany agreed to support two repeat rounds of the PT scheme that were run from April to June 2024. These two repeat PT rounds were for the determination of toxic and nutritional elements in cassava and the determination of mycotoxins in cassava.



Figure 2: Gap analysis session with colleagues from Rwanda Standards Board (RSB) in preparation for ISO/IEC 17043 accreditation

At the end of 2024, the NMISA Training Centre was contracted to provide training on ISO 17034 for the competent production of reference materials for the British Standards Institute (BSI) Standards Partnership programme to the Rwanda Standards Board (RSB) in Rwanda and the Kenya Bureau of Standards (KEBS) in Kenya. The training also had a practical competent to introduce trainees to the practical aspects of reference material preparation. In February 2025, ten (10)

participants from RSB were assisted with training and consultation to perform a gap analysis on their readiness for accreditation to ISO/IEC 17043 for the provision of PT schemes. Also in February 2025, fifteen (15) trainees from KEBS received training in ISO 17034 and ISO 33405. The NMISA was also contracted by the International Trade Centre MARKUP II program to provide ISO 17034 training for eight (8) colleagues of the East African Community (EAC).



Figure 3: Colleagues from KEBS receive practical training in RM preparation

For any further information on the activities in AFRIMETS or the activities of the TC-QM for Chemistry, please contact:

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