



**AFRIMETS**  
Intra-Africa Metrology System  
Système Intra-Africain de Métrologie



**AFRIMETS TECHNICAL  
COMITEE FOR THERMOMETRY  
(TC-T) REPORT**

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**TC-T Chair**  
**Virtual**  
**27 July, 2021**

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# TC-T MEETING ATTENDANCE

| Name                      | Institute          | RMO     | Contact details  |
|---------------------------|--------------------|---------|--|
| Dr. Efrem K Ejigu         | NMISA              | SADCMET | <a href="mailto:eejigu@nmisa.org">eejigu@nmisa.org</a>   |
| Ziti Abdela               | LPEE-LNM - Morocco | MAGMET  | <a href="mailto:ziti@lpee.ma">ziti@lpee.ma</a>   |
| Tebogo Kajane             | BOBS – Botswana    | SADCMET | <a href="mailto:kajane@bobstandards.bw">kajane@bobstandards.bw</a>   |
| Prof. Mohamed Gamal Ahmed | NIS - Egypt        | NEWMET  | <a href="mailto:Gamal70@yahoo.com">Gamal70@yahoo.com</a><br><a href="mailto:mgahmed.ma@gmail.com">mgahmed.ma@gmail.com</a> |
| Hicham SOUHALE            | LPEE-LNM - Morocco | MAGMET  | <a href="mailto:souhale@lpee.ma">souhale@lpee.ma</a>   |
| Khalid Ali                | NIS - Egypt        | NEWMET  | <a href="mailto:khalid_ali_nis@yahoo.com">khalid_ali_nis@yahoo.com</a>   |
| Blessing Chibaya          | SIRDC- Zimbabwe    | SADCMET | <a href="mailto:bchibaya@gmail.com">bchibaya@gmail.com</a>   |
| Solomon Rukundo           | UBS - Uganada      | EAMET   | <a href="mailto:solomon.rukundo@unbs.go.ug">solomon.rukundo@unbs.go.ug</a>   |
| Christian NgHaKwong       | MBS - Mauritius    | SADCMET | <a href="mailto:CNgHaKwong@msb.intnet.mu">CNgHaKwong@msb.intnet.mu</a>   |
| James Madziwa             | SIRDC- Zimbabwe    | SADCMET | <a href="mailto:jmadziwa@sirdc.ac.zw">jmadziwa@sirdc.ac.zw</a>   |

# CURRENT INTER-COMPARISON

## AFRIMETS. T-S2

- Supplementary comparison of Industrial PRT calibration capability
- Range: -50 °C to 450 °C
- Started: May 2012
- Completed: **2020**

Participating NMIs: South Africa, Morocco, Ghana, Burkinfaso

Status: **Final report published on Metrologia (Efrem Kebede Ejigu et.al. 2020, Metrologia 57 03008) and BIPM website**

## CONT...

### AFRIMETS. T-S3

- Supplementary comparison of Industrial PRT calibration capability
- Range: -50 °C to 450 °C
- Started: May 2012 and postponed
- Status: To be re-started by 2022
- Participating NMIs:  
South Africa, Zambia, Zimbabwe, Botswana, Namibia, Mozambique, Democratic Republic of the Congo, Rwanda

### AFRIMETS. T-S7

- Supplementary comparison of noble metal thermocouple
- Range: 0 °C to 1200 °C
- Started: June 2019
- Pilot/coordinator: NMISA/NIS
- Status: measurement at KEBS. Initial measurement at NMISA and measurement at NIS is completed.
- Participating NMIs:  
South Africa, Egypt, Zambia, Botswana, Kenya, Zimbabwe, Ghana, Morocco, Ethiopia.

# PLANNED INTER-COMPARISONS

- SPRT, AFRIMETS TS-6 (Hg - Zn)
  - Pilot/Coordinator: NMISA/NIS
  - Reference: South Africa
  - Participants: South Africa, Egypt, Zambia, Zimbabwe, Kenya  
South Africa, Egypt, Morocco, Ghana, Ethiopia
  - Status: Protocol under review
  - Fund: PTB
- Radiation Thermometer (600 °C to 1100 °C)
  - Pilot/Coordinator: NMISA/NIS
  - Reference: South Africa
  - Participants: South Africa, Egypt, Zambia, Egypt
  - Status: Protocol to be prepared,
  - Fund: to be secured
- Humidity: Dew point (-20 °C – 30 °C)
  - Pilot/Coordinator: NMISA/NIS
  - Reference: South Africa
  - Participants: South Africa, Egypt, Morocco, Kenya
  - Status: Protocol to be prepared
  - Fund: to be secured

# CURRENT INTERNATIONAL INTER-COMPARISON PARTICIPATION

NMISA

- CCT-K7\_2021
- APMP. T-K4.2
- APMP. T-S11/12
- APMP. T-S16
- APMP. T-S17
- APMP. T-S6
- CCT body infrared thermometer

# CMC submission

- ❑ Laboratoire Public d'Essais et d'Études, Laboratoire National de Métrologie (LPEE/LNM) (Thermometry Service classification 2.2.2 & 2.7.1)
  - Platinum resistance thermometer (-40 °C – 260 °C)
  - Temperature sensor with display unit (-40 °C – 260 °C)

Status: Review process started, CMC submitted for **Inter-RMO** review


- ❑ National Institute of Standards (NIS) (Thermometry Service classification 2.2.2 & 2.3.3)
  - Platinum resistance thermometer (-50 °C – 550 °C)
  - Noble metal thermocouple at fixed points Zn, Al, Ag, Co-C, Pd-C

Status: Review process started, CMC submitted for **Inter-RMO** review



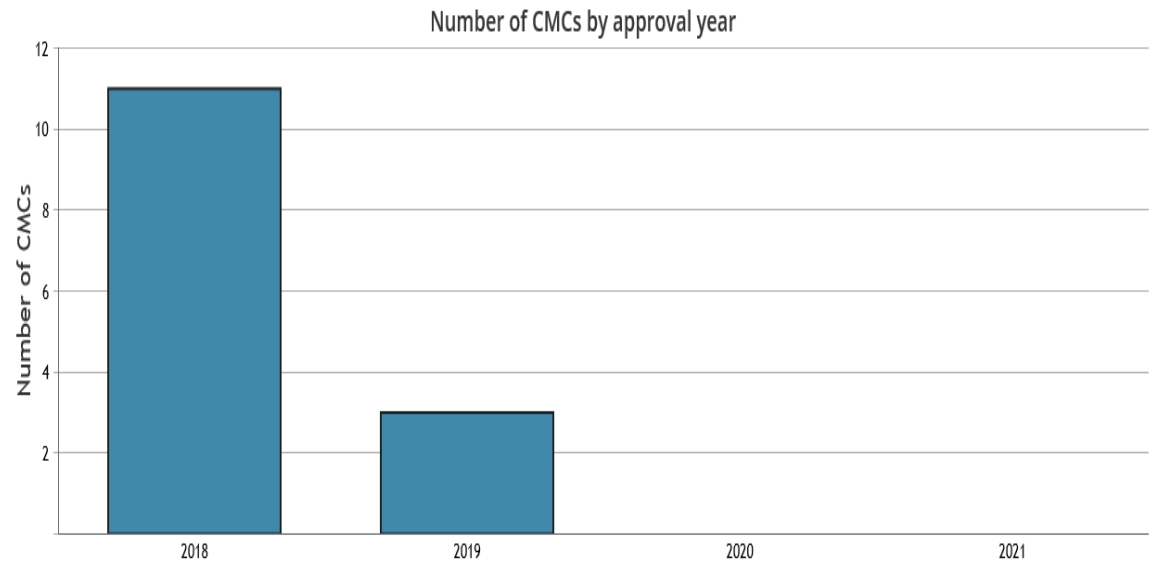
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# Planned CMC submission

- Kenya Bureau of standards (KEBS)
    - Status: Quality system peer-review
  - Ghana Standards Authority(GSA)
    - Status: Quality system peer-review
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# Approved and published CMC

- Zimbabwe (SIRDC NMI)
- Zambia (ZMA)
- Botswana (BOBS)



Inter  
RMO  
CMC  
review

- AFRIMETS TC-T is actively participating in inter RMO CMC reviewing.



# WORKSHOP/TRAINING

- NMISA will provide training to a temperature metrology staff from Malawi Bureau of Standards (MBS)\_ End of July 2021
- NIS Egypt is ready to provide temperature metrology training to any interested NMIs
- KEBS is planning to provided fixed point cell thermometry symposium for the East African region
- EURAMET – BIPM short training course on comparisons in thermometry, Online training course was conducted 26 - 27 April 2021. AFRIMETS temperature metrologists participated
- KCDB 2.0 - Online technical exchanges organised by the BIPM was conducted in March 2021. AFRIMETS temperature metrologists participated



Thank you