

# CERTIFICATE OF ACCREDITATION

## BOTSWANA BUREAU OF STANDARDS (INDUSTRIAL METROLOGY UNIT)

*Established by the Standards Act No. 16 of 1995*

**Facility Accreditation Number: CAL-14 001**

is a SADCAS accredited Calibration Laboratory  
provided that all SADCAS conditions are complied with

This certificate is valid as per the scope stated in the accompanying schedule of accreditation,  
Annexure "A", bearing the above accreditation number for

### TEMPERATURE METROLOGY

*The facility is accredited in accordance with the recognized International Standard*

**ISO/IEC 17025:2017**

*The accreditation demonstrates technical competency for a defined scope and the operation  
of a laboratory quality management system*

*SADCAS is a subsidiarity organization of SADC. A memorandum of understanding between SADC and  
SADCAS serves as the basis for the recognition of SADCAS by SADC Member States  
as a multi-economy accreditation body*

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**Eve Christine Gadzikwa**  
**SADCAS Chief Executive Officer**

**Date of Renewal of Accreditation: 30 May 2026**  
**Effective Date (Issue No: 1): 30 May 2026**  
**Certificate Expires: 29 May 2031**

## ANNEXURE A

### SCHEDULE OF ACCREDITATION

#### TEMPERATURE METROLOGY

Laboratory Accreditation Number: **CAL-14 001 (ISO/IEC 17025:2017)**

| <b>Permanent Address of Laboratory</b><br>Botswana Bureau of Standards<br>Industrial Metrology Unit<br>Plot 55745, Block 8, Airport Road<br>Gaborone<br>Botswana<br><br><b>Postal Address</b><br>Private Bag BO48<br>Gaborone<br>Botswana<br><br><b>Tel</b> : +267 390 3200/364 5651<br><b>Fax</b> : +267 390 3120<br><b>Cell</b> : +267 71 384 114<br><b>Email</b> : <a href="mailto:kajane@bobstandards.bw">kajane@bobstandards.bw</a> |                                                                                                   | <b>Technical Signatories</b> : Mr K Tshaila (Items 1, 2, 3 & 4)<br>Mr N Nkgare (All items)<br><br><b>Nominated Representative</b> : Mr T S Kajane<br><br><b>Issue No</b> : 01<br><b>Date of Issue</b> : 30 May 2026<br><b>Expiry Date</b> : 29 May 2031 |                                                                        |                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ITEM                                                                                                                                                                                                                                                                                                                                                                                                                                     | MEASURED QUANTITY<br>OR TYPE OF GAUGE OR<br>INSTRUMENT                                            | METHOD                                                                                                                                                                                                                                                  | RANGE OF MEASURED<br>QUANTITY                                          | CALIBRATION AND<br>MEASUREMENT<br>CAPABILITY<br>EXPRESSED AS AN<br>UNCERTAINTY (±) |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                        | Thermocouples <ul style="list-style-type: none"> <li>Noble Metals</li> <li>Base Metals</li> </ul> | Internal: <i>IM/EM/TP06</i><br>Reference: <i>SANAS TR 19</i>                                                                                                                                                                                            | -30°C to 250°C<br>250°C to 1000°C<br>-30°C to 250°C<br>250°C to 1000°C | 0.3°C<br>5.0°C<br>0.4°C<br>5.0°C                                                   |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ice Point Reference                                                                               | Internal: <i>IM/EM/TP01</i><br>Reference: <i>SANAS TR 19</i>                                                                                                                                                                                            | 0.0°C                                                                  | 0.02°C                                                                             |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                        | Platinum Resistance<br>Thermometers                                                               | Internal: <i>IM/EM/TP07</i><br>Reference: <i>SANAS TR 19</i>                                                                                                                                                                                            | -40°C to 250°C                                                         | 0.03°C                                                                             |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                        | Thermometers <ul style="list-style-type: none"> <li>Liquid-in-Glass</li> </ul>                    | Internal: <i>IM/EM/TP02</i><br>Reference: <i>SANAS TR 19</i>                                                                                                                                                                                            | -30°C to 250°C                                                         | 0.16°C                                                                             |

Original date of accreditation: 23 March 2016

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The CMC, expressed as an expanded uncertainty of measurement, is stated as the standard uncertainty of measurement multiplied by a coverage factor  $k = 2$ , corresponding to a confidence level of approximately 95%.

## ANNEXURE A

Laboratory Accreditation No: CAL-14 001 (ISO/IEC 17025:2017)

Issue No: 01

Date of Issue: 30 May 2026

Date of Expiry: 29 May 2031

| ITEM | MEASURED QUANTITY OR<br>TYPE OF GAUGE OR<br>INSTRUMENT                 | METHOD                                                       | RANGE OF<br>MEASURED<br>QUANTITY                      | CALIBRATION AND<br>MEASUREMENT<br>CAPABILITY<br>EXPRESSED AS AN<br>UNCERTAINTY ( $\pm$ ) |
|------|------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------|
| 4    | Thermometers <ul style="list-style-type: none"> <li>Digital</li> </ul> | Internal: <i>IM/EM/TP05</i><br>Reference: <i>SANAS TR 19</i> | -40°C to 250°C<br>250°C to 1000°C                     | 0.03°C<br>5.0°C                                                                          |
| 5    | Temperature Installations<br>(Multilocations over time<br>Monitoring)  | Internal: <i>IM/EM/TP10</i><br>Reference: <i>SANAS TR 19</i> | -73°C to -40°C<br>-40°C to +125°C<br>+125°C to +950°C | 2.2°C<br>0.6°C<br>3.2°C                                                                  |
| 6    | On-site Calibration for Items 4 and 5 above                            |                                                              |                                                       |                                                                                          |

Original date of accreditation: 23 March 2016

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The CMC, expressed as an expanded uncertainty of measurement, is stated as the standard uncertainty of measurement multiplied by a coverage factor  $k = 2$ , corresponding to a confidence level of approximately 95%.

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**Victor R Mundembe**  
For SADCAS Technical Manager