

# 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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**Mrs Maureen P Mutasa**  
**SADCAS Chief Executive Officer**

**Date of Renewal of Accreditation: 30 May 2021**  
**Effective Date (Issue No: 1): 30 May 2021**  
**Certificate Expires: 29 May 2026**

**ANNEXURE A**  
**SCHEDULE OF ACCREDITATION**  
**TEMPERATURE METROLOGY**

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

<b>Permanent Address of Laboratory</b> Botswana Bureau of Standards Industrial Metrology Unit Main Airport Road Plot 55745, Block 8 Gaborone Botswana  <b>Postal Address</b> Private Bag BO 48 Gaborone Botswana  <b>Tel</b> : +267 390 3200 / 3645651 <b>Cell</b> : +267 71384114 <b>Fax</b> : +267 3903120 <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) Mr N Nkgare (All Items)  <b>Nominated Representative</b> : Mr T S Kajane  <b>Issue No</b> : 01 <b>Date of Issue</b> : 30 May 2021 <b>Expiry Date</b> : 29 May 2026		
ITEM	MEASURED QUANTITY OR TYPE OF GAUGE OR INSTRUMENT	METHOD	RANGE OF MEASURED QUANTITY	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )
1	Thermocouples	Internal: IM/EM/TP06 Reference: SANAS TR 19	-30 °C to 250 °C	0.3 °C
	<ul style="list-style-type: none"> <li>• Noble Metals</li> <li>• Base Metals</li> </ul>		250 °C to 1000 °C	5.0 °C
2	Ice Point Reference	Internal: IM/EM/TP01 Reference: SANAS TR 19	-30 °C to 250 °C	0.4 °C
			250 °C to 1000 °C	5.0 °C
3	Platinum Resistance Thermometers	Internal: IM/EM/TP07 Reference: SANAS TR 19	0.0 °C	0.02 °C
4	Thermometers	Internal: IM/EM/TP02 Reference: SANAS TR 19	-40 °C to 250 °C	0.03 °C
	<ul style="list-style-type: none"> <li>• Liquid-in-glass</li> <li>• Digital</li> </ul>		-30 °C to 250 °C	0.16 °C
5	Temperature Installations (Multi-locations over time monitoring)	Internal: IM/EM/TP05 Reference: SANAS TR 19	-40 °C to 250 °C	0.03 °C
			250 °C to 1000 °C	5.0 °C
6	On-site calibration for item 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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**Pinkie J Malebe**  
**SADCAS Technical Manager**