

Schedule

The Reference Standard Pte Ltd
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Victory Center
Singapore 388410

Certificate No. : LA-2018-0680-C

Issue No. : 6

Date : 07 April 2022

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FIELD OF TESTING : Calibration and Measurement

MEASURED QUANTITIES/ RANGE/ INSTRUMENTS TO BE CALIBRATED	METHOD / FREQUENCY	CALIBRATION & MEASUREMENT CAPABILITY (CMC *)
A. TEMPERATURE		
A1. Calibration of Kaye RTD probe comparison to SPRT probe with bath	In-house method TRS-WI-EQP-T01 Rev 03, 08 March 2022	
Liquid nitrogen approx. -196°C		0.014°C
-60.0°C		0.013°C
0.0°		0.011°C
100°C		0.012°C
160°C		0.012°C
260°C		0.016°C
400°C		0.012°C
Triple Point Water (TPW) cell		0.005°C
From approx. -196.0°C to -80.0°C		0.030°C
> -80.0°C to 0.0°C		0.026°C
> 0.0°C to 200.0°C		0.027°C
> 200.0°C to 300.0°C		0.029°C
> 300.0°C to 420.0°C		0.024°C
A2. Calibration of Temperature Enclosure	In-house method TRS-WI-EQP-T09 Rev 03, 03 March 2022	
> -20°C to 0°C		0.9 °C
> 0°C to 30°C		0.8 °C
> 30°C to 50°C		0.6 °C
> 50°C to 100°C		0.5 °C
> 100°C to 125°C		0.9 °C
> 125°C to 150°C		1.3 °C
> 150°C to 180°C		2.0 °C

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<p>> 180°C to 400°C > 400°C to 700°C > 700°C to 1000°C > 1000°C to 1200°C</p>		<p>2.0°C 2.8°C 3.7°C 4.1°C</p>
<p>A3. Calibration of RTD probe with Indicator / logger system using drywell</p> <p>From -90.0°C to 65.0°C</p>	<p>In-house method TRS-WI-EQP-T11 Rev 03, 03 March 2022</p>	<p>0.27 °C</p>
<p>A4. Calibration of RTD probe (general type) with indicator using temperature bath</p> <p>Liquid nitrogen approx. -196°C From -80.0°C to 400.0°C</p>	<p>In-house method TRS-WI-EQP-T03 Rev 03, 03 March 2022</p>	<p>0.013°C 0.065°C</p>
<p>A5 Calibration of Resistance Temperature Probe</p> <p>LN2 approx. -196.0°C > -80°C to 0.01°C > 100.0°C to 200.0°C > 200.0°C to 350.0°C > 350.0°C to 420.0°C Triple Point Water (TPW) cell</p>	<p>In-house method TRS-WI-EQP-T02 Rev 02 03 Mar 2022</p>	<p>0.012 0.013 0.012 0.016 0.012 0.004</p>
<p>B HUMIDITY</p>		
<p>B1. Calibration of Temperature & Humidity sensor</p> <p>At 10°C to 23°C (10 to 85)% Relative Humidity</p> <p>At >23°C to 60°C (10 to 85)% Relative Humidity</p>	<p>In-house method TRS-WI-EQP-TH01 Rev 02, 03 May 2019</p>	<p>0.4°C 2.0 % Relative Humidity</p> <p>0.7°C 2.4 % Relative Humidity</p>

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C ELECTRICAL		
C1 Calibration of Validator or Advance Validator System (AVS)	In-house method TRS-WI-EQP-E01 Rev 01 & TRS-WI-EQP-E03 Rev 01, 02 Jan 2020	
10 V Range		
0 V		0.000062 V
5 V		0.000065 V
7.5 V		0.000068 V
30 mV Range		
0 mV		0.00066 mV
22.5 mV		0.00082 mV
60 mV Range		
0 mV		0.00085 mV
45 mV		0.0012 mV
300 mV Range		
0 mV		0.00076 mV
225 mV		0.0018 mV
Resistor 100 Ω		0.0023 Ω

Approved signatories

Mr Adrian Yam Chee Choong) All items under section A, B and C
Mr Alan Chan Nang Chay)

Ms Koh Mui Hui - All items under section A and B

Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. A laboratory's fulfilment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid calibration results. The **management system requirements** in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.