



INTERNATIONAL
ACCREDITATION
SERVICE®

CERTIFICATE OF ACCREDITATION

This is to attest that

BSTECH PTE LTD

19 SENOKO LOOP, LEVEL 3
SINGAPORE 758169

Calibration Laboratory CL-295

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date October 9, 2024

Expiration Date November 1, 2025



A handwritten signature in black ink, reading 'Raj Nathan'.

President

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

BSTECH PTE LTD

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Accredited to ISO/IEC 17025:2017

Effective Date October 9, 2024

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Mechanical			
Pneumatic Pressure instruments (Lab & Site ⁴)	-14 psi to 30 psi 0 psi to 1000 psi 0 psi to 10000 psi	0.008 psi 0.053 psi 1.4 psi	Using pressure gauge by comparison method
Hydraulic pressure instruments (Lab & Site ⁴)	0 psi to 10000 psi	1.4 psi	Using pressure gauge by comparison method
Low pressure instruments (Lab & Site ⁴)	-100 Pa to 100 Pa -1000 Pa to 1000 Pa -5000 Pa to 5000 Pa	0.53 Pa 0.92 Pa 2.2 Pa	Using pressure gauge by comparison method
Vibration Meter (Lab & Site ⁴)			Using Vibration calibrator by comparison method.
Acceleration	1 m/s ² to 100 m/s ²	2.6 %	
Velocity	1 mm/s to 100 mm/s	2.6 %	
Thermal			
Humidity/ Temperature Measuring Instruments (Lab & Site ⁴)	5 °C to 40 °C 10 %RH to 90 %RH	0.27 °C 0.8 %RH	Using reference Temperature & humidity sensor and Temperature & Humidity Generator by comparison method.
Humidity Instruments (Fixed Points) (Lab & Site ⁴)	11.3 %RH @ 23 °C 35 %RH @ 23 °C 50 %RH @ 23 °C 60 %RH @ 23 °C 75.3 %RH @ 23 °C	0.3 %RH 0.4 %RH 0.6 %RH 0.6 %RH 0.7 %RH	Using Humidity Standards by direct method

* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Digital Thermometer with Sensor, (Temperature Transmitter, Temperature Transducer, Data Logger with Sensor, Temperature Controller with Sensor, Temperature Gauge, Temperature Indicator with Sensor, Temperature Recorder with Sensor, Capillary Thermometer) (Lab & Site ⁴)	-75 °C to 30 °C 30 °C to 500 °C	0.053 °C 0.023 °C	Using SPRT & PRT comparison method
Electrical – DC/LF			
AC Voltage Source ³ (Lab & Site ⁴) (45 Hz to 65 Hz)	6 V to 57.7 V 57.7 V to 100 V 100 V to 220 V 220 V to 380 V	0.034 V 0.059 V 0.13 V 0.22 V	Using portable three phase energy meter tester
AC Current Source ³ (Lab & Site ⁴) (45 Hz to 65 Hz)	2 mA to 20 mA 20 mA to 50 mA 50 mA to 100 mA 100 mA to 200 mA 200 mA to 500 mA 0.5 A to 1 A 1 A to 2 A 2 A to 5 A 5 A to 10 A 10 A to 20 A 20 A to 50 A 50 A to 100 A	0.012 mA 0.029 mA 0.059 mA 0.12 mA 0.29 mA 0.00059 A 0.0012 A 0.0029 A 0.0059 A 0.012 A 0.029 A 0.059 A	
AC Electric Power Source ³ (Lab & Site ⁴) (45 Hz to 65 Hz)	Up to 57.7 W 57.7 W to 288.5 W 288.5 W to 2200 W 2200 W to 17600 W 17600 W to 38000 W	3.3 W 17 W 130 W 1000 W 2200 W	
AC Electric Energy Source ³ (Lab & Site ⁴) (45 Hz to 65 Hz) Voltage 57.7 V to 380 V Current 0.1 A to 100 A	1 W to 5 kW	0.06 %	
Chemical/Gas			
pH Instruments (Fixed Points) (Lab & Site ⁴)	2.00 pH 4.01 pH 7.01 pH 10.00 pH	0.016 pH 0.016 pH 0.017 pH 0.017 pH	Using Standard Solutions by Direct method

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MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY ^{1,2} (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Conductivity Instruments (fixed points) (Lab & Site ⁴)	10 µS/cm 84 µS/cm 1413 µS/cm 5 mS/cm 10 mS/cm 100 mS/cm 200 mS/cm	0.13 µS/cm 0.54 µS/cm 8.3 µS/cm 0.065 mS/cm 0.13 mS/cm 1.3 mS/cm 2.6 mS/cm	Using Standard Solutions by Direct method
TDS Instruments (fixed points) (Lab & Site ⁴)	6.65 x 10 ⁻³ 66.7 x 10 ⁻³ 133.4 x 10 ⁻³ 6.6 x 10 ⁻⁶ 66 x 10 ⁻⁶ 939 x 10 ⁻⁶	0.065 x 10 ⁻³ 0.56 x 10 ⁻³ 1.4 x 10 ⁻³ 0.64 x 10 ⁻⁶ 7.4 x 10 ⁻⁶ 41.6 x 10 ⁻⁶	Using Standard Solutions by Direct method
Turbidity Instruments (Lab & Site ⁴)	5 NTU 50 NTU 100 NTU	0.064 NTU 0.07 NTU 1.4 NTU	Using Standard Solutions by Direct method
Oxidation-Reduction Potential (ORP) Instruments (Lab & Site ⁴)	200 mV 476 mV	2.1 mV 4.8 mV	Using Standard Solutions by Direct method
Gas Detection (Lab & Site ⁴)			Comparison with Standard Reference Gases
Oxygen (O ₂)	O ₂ : 12 % & O ₂ : 18 %	0.058 %	
Carbon Monoxide (CO)	CO: 50 x 10 ⁻⁶ & CO: 100 x 10 ⁻⁶	2.4 x 10 ⁻⁶	
Methane (CH ₄)	CH ₄ : 2.5 % (50 %LEL)	0.58 %	
Hydrogen Sulfide (H ₂ S)	H ₂ S: 25 x 10 ⁻⁶	2.2 x 10 ⁻⁶	

¹The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

²When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

³Capability is suitable for the calibration of measuring devices in the stated ranges.

⁴Also available as site calibration. Note that actual measurement uncertainties achievable at a customer's site can normally be expected to be larger than the uncertainties listed on this Scope of Accreditation.

Notes

NTU = Nephelometric Turbidity Unit

LEL = Lower Explosive Limit