CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

S K Sales & Service Co., Ltd.

194/56, 194/57 Thakham Rd., Samae Dam, Bang Khun Thian,
Bangkok 10150 Thailand

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 26 January 2026

Certificate Number: AC-3279

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

S K Sales & Service Co., Ltd.

194/56, 194/57 Thakham Rd., Samae Dam, Bang Khun Thian,
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CALIBRATION

Valid to: **January 26, 2026** Certificate Number: **AC-3279**

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1,2] pH Meter	1.68 pH 2.00 pH 4.01 pH 6.86 pH 7.01 pH 9.18 pH 10.01 pH	0.012 pH 0.015 pH 0.024 pH 0.04 pH 0.042 pH 0.054 pH 0.059 pH	SK-WI-001 Comparison to aqueous solutions
[1,2] Conductivity Meter	5 µS/cm 10 µS/cm 84 µS/cm 1413 µS/cm 5 mS/cm 12.88 mS/cm 50 mS/cm 111 mS/cm	0.051 µS/cm 0.34 µS/cm 0.84 µS/cm 14 µS/cm 0.049 mS/cm 0.13 mS/cm 0.49 mS/cm 1.1 mS/cm	SK-WI-003 Comparison to aqueous solutions
[1,2] TDS Meter	10 mg/L 50 mg/L 100 mg/L 500 mg/L 1 000 mg/L 1 500 mg/L	0.3 mg/L 0.4 mg/L 0.8 mg/L 4.1 mg/L 7.9 mg/L 12 mg/L	SK-WI-004 Comparison to aqueous solutions

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1,2] Turbidity Meter	1 NTU 10 NTU 20 NTU 50 NTU 100 NTU 500 NTU 800 NTU 1 000 NTU 2 000 NTU 4 000 NTU	0.02 NTU 0.13 NTU 0.18 NTU 0.37 NTU 1.2 NTU 4.3 NTU 6.9 NTU 8.4 NTU 19 NTU 42 NTU	SK-WI-005 Comparison to aqueous solutions

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1] DC Voltage – Source	(0 to 14) pH (- 414.12 to 414.12) mV	0.005 pH 0.06 mV	SK-WI-023 pH Meter Simulation
[1] DC Voltage – Source (Digital Indicator/ Digital Controller)	(-0.15 to 0.15) V (> 0.15 to 1.5) V (>1.5 to 5) V (>5 to 10) V (>10 to 15) V	0.001 V 0.001 2 V 0.002 V 0.003 V 0.003 7 V	SK-WI-023 Comparison to Voltage Calibrator
[1] DC Current – Source (Digital Indicator/ Digital Controller)	Up to 4 mA (>4 to 8) mA (>8 to 12 mA (>12 to 16) mA (>16 to 20) mA	0.003 mA 0.003 5 mA 0.004 mA 0.004 5 mA 0.005 2 mA	SK-WI-023 Comparison to Voltage Calibrator
[1] DC Voltage – Measure (Digital Indicator/ Digital Controller)	(-0.3 to 0.3) V (> 0.3 to 2) V (>2 to 4) V (>4 to 6) V (>6 to 8) V (>8 to 10) V (> 10 to 20) V (>20 to 30) V	0.001 9 V 0.002 2 V 0.002 6 V 0.003 V 0.003 2 V 0.003 6 V 0.005 3 V 0.007 1 V	SK-WI-024 Comparison to Multimeter
[1] DC Current – Measure (Digital Indicator/ Digital Controller)	Up to 4 mA (>4 to 8) mA (>8 to 12 mA (>12 to 16) mA (>16 to 20) mA	0.003 4 mA 0.004 mA 0.004 5 mA 0.005 2 mA 0.005 8 mA	SK-WI-024 Comparison to Multimeter

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1] Height Gauge	Up to 300 mm (>300 to 600) mm (>600 to 1 000) mm	0.015 mm 0.016 mm 0.02 mm	SK-WI-011 Comparison to Gage Blocks
Steel Ruler	Up to 1 000 mm (>1 000 to 2 000) mm	0.021 mm 0.036 mm	SK-WI-009 Comparison to Scale Measuring Machine
Steel Tape Measure	Up to 1 m (>1 to 2) m (>2 to 3) m (>3 to 4) m (>4 to 5) m (>5 to 6) m (>6 to 7) m (>7 to 8) m (>8 to 9) m (>9 to 10) m (>10 to 20) m (>20 to 30) m (>20 to 40) m (>40 to 50) m	0.021 mm 0.031 mm 0.043 mm 0.056 mm 0.069 mm 0.082 mm 0.095 mm 0.11 mm 0.13 mm 0.14 mm 0.27 mm 0.4 mm 0.54 mm 0.67 mm	SK-WI-010 Comparison to Scale Measuring Machine
Textile Tape Measure	Up to 1 m (>1 to 2) m (>2 to 3) m (>3 to 4) m (>4 to 5) m (>5 to 6) m (>6 to 7) m (>7 to 8) m (>8 to 9) m (>9 to 10) m (>10 to 20) m (>20 to 30) m (>20 to 40) m (>40 to 50) m	0.049 mm 0.094 mm 0.14 mm 0.19 mm 0.24 mm 0.28 mm 0.33 mm 0.37 mm 0.42 mm 0.47 mm 0.93 mm 1.4 mm 1.9 mm 2.4 mm	SK-WI-010 Comparison to Scale Measuring Machine

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1,3] Balance/Scale	(1 to 20) mg (>20 to 50) mg (>50 to 100) mg (>100 to 200) mg (>200 to 500) mg (>0.5 to 1) g (>1 to 2) g (>2 to 5) g (>5 to 10) g (>10 to 20) g (>20 to 50) g (>50 to 100) g (>100 to 220) g (>220 to 320) g (>320 to 500) g (>500 to 1 000) g (>1 000 to 2 000) g (>2 000 to 3 000) g (>3 000 to 5 000) g (>5 000 to 6 000) g (>6 to 10) kg (>10 to 20) kg (>20 to 50) kg (>50 to 100) kg (>100 to 200) kg (>200 to 300) kg (>300 to 500) kg (>500 to 1 000) kg (>1 000 to 2 000) kg (>2 000 to 3 000) kg	0.006 2 mg 0.007 4 mg 0.008 7 mg 0.011 mg 0.013 mg 0.016 mg 0.019 mg 0.026 mg 0.033 mg 0.045 mg 0.074 mg 0.14 mg 0.32 mg 0.47 mg 0.70 mg 1.4 mg 2.8 mg 4.3mg 7 mg 8.4 mg 15 mg 30 mg 0.82 g 2.6 g 4.7 g 7.1 g 15 g 75 g 84 g 0.1 kg	SK-WI-013 based on UKAS LAB 14:2019
[1,3] Moisture Analyzer (Balance)	Up to 100 g (>100 to 200) g	0.6 mg 0.6 mg	SK-WI-012 Comparison to Masses

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Volumetric Glassware – (Graduated Burets, Graduated Cylinders, Pipets (one Mark), Volumetric Flasks (to Contain), Volumetric Flask (to Deliver), Measuring and Dilution Pipets, Beaker, Dilutor, Volumetric Dispenser	(100 to 200) µL (>200 to 500) µL (>500 to 1 000) µL (>1 000 to 2 000) µL (>2 000 to 5 000) µL (>5 000 to 10 000) µL (>10 000 to 20 000) µL (>20 000 to 50 000) µL (>50 to 100) mL (>100 to 200) mL (>200 to 500) mL (>500 to 1 000) mL (>1 000 to 2 000) mL	0.25 µL 0.26 µL 0.98 µL 1.8 µL 3.1 µL 4.5 µL 9.5 µL 14 µL 0.02 mL 0.035 mL 0.083 mL 0.17 mL 0.33 mL	SK-WI-006 based on ASTM E542-01(2021)
Hydrometer	(0.6 to 2) g/cm^3	0.000 5 g/cm^3	SK-WI-007 Comparison to Electronic Balance (Cuckow's Method)
[1]Volume Liquid Flow Meter (Ultrasonic Flowmeter, Variable Area Flowmeter, Coriolis Flowmeter, Magnetic Flow meter)	(100 to 15 000) l/h (1 000 to 40 000) l/h (15 000 to 120 000) l/h (1 to 300) m^3/h (50 to 300) m^3/h	0.07 % of reading 0.07 % of reading 0.13 % of reading 0.12 % of reading 0.15 % of reading	SK-WI-018, SK-WI-019 with reference flow meter Media: Water
Volume Liquid Flow Meter (Ultrasonic Flowmeter, Variable Area Flowmeter, Coriolis Flowmeter, Magnetic Flow meter)	(100 to 15 000) l/h (1 000 to 40 000) l/h (15 000 to 120 000) l/h (1 to 300) m^3/h (50 to 300) m^3/h	0.07 % of reading 0.07 % of reading 0.13 % of reading 0.12 % of reading 0.15 % of reading	SK-WI-019 with reference flow meter Media: Water
[1]Pressure/Vacuum Gauges (Digital Pressure Gauges, Pressure Transducers, Pressure Transmitters, Manometers, Vacuum Gauges)	Pneumatic: (-95 to -0) kPa (> -0 to 2.5) kPa (> 2.5 to 100) kPa (> 100 to 200) kPa (> 200 to 2 000) kPa (> 2 000 to 7 000) kPa Hydraulic: (0 to 70) MPa	 0.089 kPa 0.022 kPa 0.090 kPa 0.090 kPa 0.75 kPa 1.9 kPa 18 kPa	SK-WI-020 Comparison to Pressure Calibrator

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Differential Pressure Gauges	Pneumatic: (-95 to -0) kPa (> -0 to 2.5) kPa (> 2.5 to 100) kPa (> 100 to 200) kPa (> 200 to 2 000) kPa (> 2 000 to 7 000) kPa	 0.089 kPa 0.022 kPa 0.09 kPa 0.09 kPa 0.75 kPa 1.9 kPa	SK-WI-020 Comparison to Pressure Calibrator
Pressure Safety Valves (Pressure release point)	Pneumatic: (> 0 to 200) kPa (> 200 to 2 000) kPa (> 2 000 to 7 000) kPa Hydraulic: (0 to 70) MPa	 0.3 kPa 0.81 kPa 1.8 kPa 20 kPa	SK-WI-025 Comparison to Pressure Calibrator
Pressure Switches (Pressure switching point)	Pneumatic: (> 0 to 200) kPa (> 200 to 2 000) kPa (> 2 000 to 7 000) kPa Hydraulic: (0 to 70) MPa	 0.3 kPa 0.81 kPa 1.8 kPa 20 kPa	SK-WI-026 Comparison to Pressure Calibrator

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1] Thermometer with sensor / Data Logger	(-40 to 200) °C (>200 to 400) °C (>400 to 500) °C (>500 to 650) °C (>650 to 1 200) °C	0.05 °C 0.17 °C 0.21 °C 2.6 °C 3.4 °C	SK-WI-016 Comparison to Standard Thermometer
[1] Infrared Thermometer	50 °C 100 °C 200 °C 300 °C 400 °C 500 °C	0.9 °C 1.5 °C 2.4 °C 2.9 °C 4.7 °C 5.1 °C	SK-WI-014 Comparison to flat plate blackbody source $\varepsilon = 0.95$, $\lambda = (8 \text{ to } 14)$ µm
[1] Liquid in Glass Thermometers / Mercury In Glass Thermometer	(-40 to 50) °C (>50 to 100) °C (>100 to 200) °C	0.08 °C 0.08 °C 0.08 °C	SK-WI-015 Comparison to Digital thermometer with PRT sensor

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1] Moisture Analyzer (Temperature)	(20 to 200) °C	0.6 °C	SK-WI-012 Comparison to Digital thermometer with PRT sensor
[1] Thermo Reactor	(-10 to 150) °C	0.1 °C	SK-WI-017 Comparison to Data Acquisition with sensor

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
[1] Tachometer, RPM – Non-Contact	(0 to 99.99) rpm (> 99.99 to 999.9) rpm (> 999.99 to 100 000) rpm	0.0058 rpm 0.058 rpm 0.58 rpm	SK-WI-021 Comparison to Multifunction calibrator
[1] Stopwatch / Timer	1 sec to 9 h	0.038 sec	SK-WI-008 Comparison to Frequency counter
[1] Frequency – Source (Digital Indicator/ Digital Controller)	Up to 5 Hz (>5 to 50) Hz (>50 to 500) Hz (>500 to 5 000) Hz (> 5 000 to 50 000) Hz	0.003 Hz 0.055 Hz 0.06 Hz 0.6 Hz 3.2 Hz	SK-WI-023 Comparison to Multifunction calibrator
[1] Frequency – Measure (Digital Indicator/ Digital Controller)	Up to 5 Hz (>5 to 50) Hz (>50 to 500) Hz (>500 to 5 000) Hz (> 5 000 to 50 000) Hz	0.003 Hz 0.055 Hz 0.060 Hz 0.60 Hz 3.2 Hz	SK-WI-024 Comparison to Multifunction calibrator
[1] Pulse – Source (Digital Indicator/ Digital Controller)	(0.6 to 9 999 999) Counts	1.8 Counts	SK-WI-023 Comparison to Multifunction calibrator
[1] Pulse – Measure (Digital Indicator/ Digital Controller)	(0.6 to 9 999 999) Counts	1.8 Counts	SK-WI-024 Comparison to Multifunction calibrator

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (k=2), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. The nominal values listed are approximate.
3. The CMC for scales and balances are highly dependent upon the resolution of the unit under test. The uncertainty presented here does not include the resolution of the unit under test. The resolution will be included in the reported measurement uncertainty at the time of calibration.
4. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-3279.

Jason Stine, Vice President