



財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

(Certificate No : LN0881-240207)

This is to certify that

National Measurement Laboratory, R. O. C.

National Measurement Laboratory, R. O. C.(Temperature, Humidity)

321, Sec. 2, Kuang Fu Rd., Hsinchu, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2017 ; CNS 17025:2018

Accreditation Number : N0881

Originally Accredited : May 15, 2002

Effective Period : May 15, 2021 to May 14, 2026

Accredited Scope : Calibration Field, see described in the Appendix

Specific Accreditation Program : Accreditation Program for National Metrology Institutes



Scan to verify

Yi-Ling Chen

Yi-Ling Chen
President, Taiwan Accreditation Foundation
February 07, 2024

Accreditation Number : N0881

Laboratory Head : LIN, Tzeng-Yow

Temperature/Humidity

calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		explanation	value
KE1002 Platinum resistance thermometer, Fixed-point Cell	FLUKE/5960A, ISOTECH/17924, FLUKE/5900E, Hart Scientific/5901A, Hart Scientific/5943, ISOTECH/17668, FLUKE/5904, NML/Sn, ISOTECH/17669, ISOTECH/17671, NML/Al, FLUKE/5907, FLUKE/5908, ISOTECH/17673	Instrument Calibration Technique for the Fixed-Point Calibration of Platinum Resistance Thermometer (Document No.: 07-3-82-0061)	-190	°C	962	°C	FP of Ag	6.0	mK
			-190	°C	962	°C	FP of Al	4.1	mK
			-190	°C	962	°C	FP of Zn	2.1	mK
			-190	°C	962	°C	FP of Sn	0.52	mK
			-190	°C	962	°C	FP of In	0.85	mK
			-190	°C	962	°C	MP of Ga	0.37	mK
			-190	°C	962	°C	TP of H ₂ O	0.16	mK
			-190	°C	962	°C	TP of Hg	0.43	mK
			-190	°C	962	°C	TP of Ar	0.81	mK
Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien									



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			brand /model	document name /no.	minimum value	units		maximum value	units
KE1002 Resistance thermometer detector, Resistance thermometer, Thermometer containing display meter (Digital thermometer)	ISOTECH 909/25.5, ROSEMOUNT 162CE	Instrument Calibration Technique for Resistance Temperature Thermometer (Document No.: 07-3-82-0060)	0	°C	0	°C		6.3 (0.0063)	mK (°C)
			5	°C	10	°C		6.8 (0.0068)	mK (°C)
			>10	°C	20	°C		7.0 (0.0070)	mK (°C)
			>20	°C	30	°C		7.0 (0.0070)	mK (°C)
			>30	°C	40	°C		7.4 (0.0074)	mK (°C)
			>40	°C	50	°C		6.9 (0.0069)	mK (°C)
			>50	°C	60	°C		7.0 (0.0070)	mK (°C)
			>60	°C	70	°C		7.3 (0.0073)	mK (°C)
			>70	°C	80	°C		8.0 (0.0080)	mK (°C)
			>80	°C	100	°C		11 (0.011)	mK (°C)
			>100	°C	150	°C		8.7 (0.0087)	mK (°C)
			>150	°C	200	°C		9.0 (0.0090)	mK (°C)
			>200	°C	250	°C		11 (0.011)	mK (°C)
>250	°C	300	°C		18 (0.018)	mK (°C)			

Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien

KE1004 type R, S, B thermocouple	Hart -5943-09, CMS-Sn-1-05, Fluke-5906-Zn-06116, Fluke-5907-Al-07170, Fluke-5908-Ag-08077	Instrument Calibration Technique for the Fixed-Point Calibration of Noble Metal Thermocouples (Document No.: 07-3-89-0009)	29.7646	°C	29.7646	°C	MP of Ga	0.20	°C
			231.928	°C	231.928	°C	FP of Sn	0.14	°C
			419.527	°C	419.527	°C	FP of Zn	0.13	°C
			660.323	°C	660.323	°C	FP of Al	0.12	°C
			961.78	°C	961.78	°C	FP of Ag	0.11	°C
			0	°C	961.78	°C		0.20	°C
			>961.78	°C	1200	°C		0.41	°C

Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KE1007 Standard radiation thermometer	Ag: CHINO IR-RO-AG, Cu: CHINO IR-RO-Cu	Instrument Calibration Technique for the Fixed-Point Calibration of Radiation Thermometers (Document No.: 07-3-90-0113)	800	°C	800	°C	650 nm	0.38	°C
			900	°C	900	°C	650 nm	0.30	°C
			1000	°C	1000	°C	650 nm	0.31	°C
			1100	°C	1100	°C	650 nm	0.35	°C
			1200	°C	1200	°C	650 nm	0.37	°C
			1300	°C	1300	°C	650 nm	0.45	°C
			1400	°C	1400	°C	650 nm	0.66	°C
			1500	°C	1500	°C	650 nm	0.89	°C
			1600	°C	1600	°C	650 nm	1.2	°C
			1700	°C	1700	°C	650 nm	1.5	°C
			1800	°C	1800	°C	650 nm	1.8	°C
			1900	°C	1900	°C	650 nm	2.1	°C
			2000	°C	2000	°C	650 nm	2.5	°C
			800	°C	800	°C	900 nm	0.28	°C
			900	°C	900	°C	900 nm	0.24	°C
			1000	°C	1000	°C	900 nm	0.26	°C
			1100	°C	1100	°C	900 nm	0.31	°C
			1200	°C	1200	°C	900 nm	0.34	°C
			1300	°C	1300	°C	900 nm	0.41	°C
			1400	°C	1400	°C	900 nm	0.55	°C
			1500	°C	1500	°C	900 nm	0.71	°C
			1600	°C	1600	°C	900 nm	0.89	°C
			1700	°C	1700	°C	900 nm	1.1	°C
			1800	°C	1800	°C	900 nm	1.4	°C
1900	°C	1900	°C	900 nm	1.6	°C			
2000	°C	2000	°C	900 nm	1.9	°C			
Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien									



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model	document name /no.	minimum value	units	maximum value	units	explanation	value	units
KE1007 Linear Pyrometer	Ag: CHINO IR-RO-AG, Cu: CHINO IR-RO-Cu	Instrument Calibration Technique for the Fixed-Point Calibration of Radiation Thermometers (Document No.: 07-3-90-0113)	961.78	°C	961.78	°C	(@650 nm) -Ag	0.25	°C
			1084.62	°C	1084.62	°C	(@650 nm) -Cu	0.33	°C
			961.78	°C	961.78	°C	(@900 nm) -Ag	0.25	°C
			1084.62	°C	1084.62	°C	(@900 nm) -Cu	0.30	°C
Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien									
KE1007 Radiation thermometer	ASL/T100-250-ID	Instrument Calibration Technique for the Comparative Calibration of Room Temperature Radiation Thermometer (Document No.: 07-3-97-0003)	10	°C	90	°C		0.1	°C
Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien									



calibration items	working standard	calibration method	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
	brand /model		document name /no.	minimum value	units	maximum value		units	explanation
KE2001 Hygrometer electronic psychrometer, humidity transducer, digital humidity analyzer,	Thunder Scientific 2500ST	Instrument Calibration Technique for Two-Pressure Humidity Generator (2500) Calibration System (Document No.: 07-3-99-5145)	10	%	98	%	relative humidity	(0.0038×RH+0.0306)	%RH
			0	°C	<35	°C	Temperature	0.064	°C
			35	°C	<69.5	°C	Temperature	0.12	°C
Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien									
KE2003 Optical chilled dew point hygrometer	Thunder Scientific 2500ST	Instrument Calibration Technique for Two-Pressure Humidity Generator (2500) Calibration System (Document No.: 07-3-99-5145)	-27	°C	25	°C	Dew point	0.068	°C
			>25	°C	<68	°C	Dew point	0.089	°C
Approval Signatory: KO, Hsin-Yi; YEH, Chien-Chih; TSAI, Shu-Fei; TU, Tsung-Hsien									

Note : Smallest uncertainty represents an expanded uncertainty using a coverage factor approximately 95 % level of confidence.
(Null Below)

