

Name: Shanghai Institute of Quality Inspection and Technical Research Co., Ltd.

Address: No. 900, Jiangyue Road, Minhang District, Shanghai, China (Metrology Testing)

Registration No. CNAS L0128

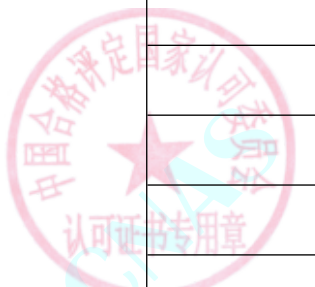
Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS

Effective Date: 2026-01-21 Expiry Date: 2030-10-11

CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT  
SCHEDULE OF ACCREDITATION CERTIFICATE

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

Note: The instruments with \* represents onsite calibration can be performed.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
一、Thermometry							
1	*Digital Temperature Indicators and Controllers	Temperature	V.R.of Digital Temperature Indicators and Controllers JYG617	thermal resistor(-200~600)°C	U=0.20°C		
				Type T Thermocouple (-200~0)°C	U=0.7°C		
				Type T Thermocouple (0~400)°C	U=0.6°C		
				Type K Thermocouple (-200~-100)°C	U=0.7°C		
				Type K Thermocouple (-100~1372)°C	U=0.6°C		
				Type J Thermocouple (-210~-100)°C	U=0.6°C		
				Type J Thermocouple (-100~1200)°C	U=0.5°C		



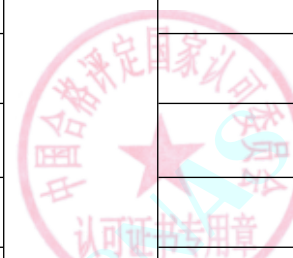
No. CNAS L0128

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Type B Thermocouple (600~800)°C	U=1.4°C		
				Type B Thermocouple (800~1820)°C	U=1.2°C		
				Type R Thermocouple (-20~0)°C	U=1.6°C		
				Type R Thermocouple (0~100)°C	U=1.5°C		
				Type R Thermocouple (100~1767)°C	U=1.3°C		
				Type S Thermocouple (-20~0)°C	U=1.6°C		
				Type S Thermocouple (0~200)°C	U=1.5°C		
				Type S Thermocouple (200~1400)°C	U=1.3°C		
				Type S Thermocouple (1400~1767)°C	U=1.4°C		
				Type E Thermocouple (-200~600)°C	U=0.6°C		
				Type E Thermocouple (600~1000)°C	U=0.5°C		
				Type N Thermocouple (-200~-100)°C	U=0.9°C		
				Type N Thermocouple (-100~900)°C	U=0.8°C		
Type N Thermocouple (900~1300)°C	U=0.6°C						
2	*Vacuum drying oven	temperature	Calibration Specification for Vacuum Ovens JJF(min)1093	0~300)°C	U=0.4°C		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Pressure		(-90~200) kPa	U=0.8kPa		
3	*High temperature test chambers	Temperature	Calibration Specification for the Low/high temperature test chambers SQI/JL-JF-46	(300~500) °C	U=1.2°C		
4	*Environmental test equipment	Temperature	Calibration specification for Environmental testing Equipment for Temperature and Humidity Parameters. JJF1101	(-80~300) °C	U=0.22°C		
		Humidity		(10~98) %RH	U=1.2%RH		
5	*Aging life test chamber/Low pressure test chamber	Differential Pressure	Calibration Specification for the Equipment of the Environmental Testing for Differential Pressure and Wind Speed and illuminance SQI/JL-JF-47	(1~190) Pa	U=0.5Pa		
		Wind Speed		(0.2~20)m/s	U=0.10m/s		
6	*Recorders for Industrial Process Measurement	Temperature	Recorders for Industrial Process Measurement JJG74	thermal resistor:(-200~600)°C	U=0.2°C		
				Type T Thermocouple (-200~0)°C	U=0.7°C		
				Type T Thermocouple(0~400)°C	U=0.6°C		
				Type K Thermocouple (-200~-100)°C	U=0.7°C		
				Type K Thermocouple (-100~1372) °C	U=0.6°C		
				Type J Thermocouple (-210~-100)°C	U=0.6°C		
				Type J Thermocouple(-100~1200)°C	U=0.5°C		



No. CNAS L0128

第 3 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Type B Thermocouple (600~800) °C	U=1.4 °C		
				Type B Thermocouple (800~1820) °C	U=1.2 °C		
				Type R Thermocouple (-20~0) °C	U=1.6 °C		
				Type R Thermocouple (0~100) °C	U=1.5 °C		
				Type R Thermocouple (100~1767) °C	U=1.3 °C		
				Type S Thermocouple (-20~0) °C	U=1.6 °C		
				Type S Thermocouple (0~200) °C	U=1.5 °C		
				Type S Thermocouple (200~1400) °C	U=1.3 °C		
				Type S Thermocouple (1400~1767) °C	U=1.4 °C		
				Type E Thermocouple (-200~600) °C	U=0.6 °C		
				Type E Thermocouple (600~1000) °C	U=0.5 °C		
				Type N Thermocouple (-200~-100) °C	U=0.9 °C		
				Type N Thermocouple (-100~900) °C	U=0.8 °C		
				Type N Thermocouple (900~1300) °C	U=0.6 °C		
				input :(0.001~15) V,(0.001~22)mA	U <sub>rel</sub> =0.030%		



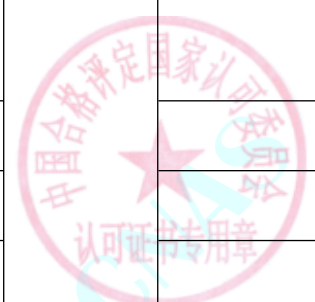
No. CNAS L0128

第 4 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
7	*Carbon dioxide incubator	temperature	Carbon dioxide incubator calibration specification SQI/JL-JF-49	(10~50) °C	U=0.3°C		
		Concentration		(1~15) %	U <sub>rel</sub> =3%		
8	Liquid-in-Glass Thermometers	Temperature	Liquid-in-Glass Thermometers for Working JYG130	(-80~300) °C	U=0.06°C		
9	*Temperature Itinerant Detecting Instrument	Temperature	Calibration Specification for Temperature Itinerant Detecting Instrument JJF 1171	(-60~300) °C	U=0.12°C		
10	Mechanical Thermo-hygrometers	Temperature	Mechanical Thermo-hygrometers JJG205	(5~50) °C	U=0.3°C		
		Humidity		(30~95) %RH	U=1.4%RH		
11	Radiation Thermometers	Temperature	V.R. of the Working Radiation Thermometers JJG 856	(-50~50) °C	U=1.0°C		
				(50~500) °C	U=1.0°C		
				(500~1100) °C	U=2°C		
12	*Thermostatic Baths for Temperature Calibration	Temperature	Measurement and Test Norm of Metrological Characteristics of Thermostatic Baths for Temperature Calibration JJF1030	Temperature fluctuation (-80~300) °C	U=0.003°C		
				Horizontal temperature difference (-80~300) °C	U=0.002°C		
				Maximum temperature difference (-80~0) °C	U=0.006°C		
				Maximum temperature difference (0~100) °C	U=0.003°C		
				Maximum temperature difference (100~300) °C	U=0.006°C		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
13	*Digital Temperature-hygrometers	Humidity	Calibration Specification for Digital Temperature-hygrometers JJF 1076	(10~90) %RH	U=1.0%RH		
		Temperature		(5~50) °C	U=0.10°C		
14	*Industry Platinum and Copper Resistance Thermometers	Temperature (Industry Copper Resistance Thermometers)	Verification Regulation of Industry Platinum and Copper Resistance Thermometers JJG 229	(-50~150) °C	U= (0.027~0.032) °C		
		Temperature (Industry Platinum Resistance Thermometers)		(-80~600) °C	U= (0.027~0.14) °C		
				-196°C	U=0.036°C		
15	*Thermometers of Clinic Autoclave	Temperature	Calibration Specification for Thermometers of Clinic Autoclave JJF1308	(20~150)°C	U=0.28 °C		
16	Base Metal Thermocouple	Temperature	Calibration Specification for Base Metal Thermocouples JJF 1637	(-40~300) °C	U=0.5°C		
				(300~400) °C	U=1.1°C		
				(400~1100) °C	U=1.2°C		
17	Thermal Imagers	Temperature	C.S. for Thermal Imagers JJF1187	(-15~200) °C	U=1.1 °C		
				(200~450) °C	U=1.2°C		
18	Bimetallic Thermometer	Temperature	Calibration Specification for bimetallic thermometers JJF 1908	(-80~500)°C	U=0.4°C	(- 80 ~ 500) °C bimetallic thermometer	



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

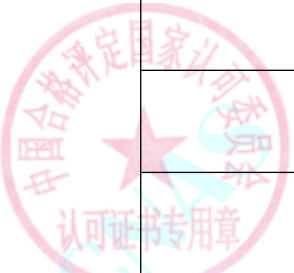
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
19	Filled System thermometer	Temperature	Calibration Specification for Filled system thermometers JJF 1909	(-80~600)°C	U=0.4°C	A round scale steam Filled system with a measuring range of (-30-200) °C, a round scale gas Filled system with a measuring range of (-80-600) °C, and a liquid Filled system thermometer with a measuring range of (-40-250) °C		
20	*Enthalpy Potential Testing Apparatus	Power	Calibration Specification for Enthalpy Potential Testing Apparatus JJF (Jixie)1005	0.01W~80kW	U <sub>rel</sub> =0.05%			
				Temperature	Environmental: (-40~100) °C			U=0.22°C
				Pt100: (-50~100) °C	U=0.034°C			
				Pt100: (100~150) °C	U=0.05°C			
		Thermocouple: (-50~300) °C		U=0.4°C				
Humidity	(20~95) %RH	U=1.2%RH						



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Pressure	ilac-MRA	(-0.1~60)MPa	$U=0.2\%FS$		
		Tachometer		(20~33000) r/min	$U_{rel}=0.02\%$		
		voltage		0.01V~1000V	$U_{rel}=0.05\%$		
		current		0.001A~80A	$U_{rel}=0.05\%$		
		frequency		40Hz~30kHz	$U_{rel}=0.01\%$		
		Power factor		0~1	$U=0.0006$		
		electric energy		0.01V~1000V; 0.001A~80A	$U_{rel}=0.05\%$		
		flow		0.2m <sup>3</sup> /h~40m <sup>3</sup> /h	$U_{rel}=0.2\%$		
		wind speed		0.2m/s~20m/s	$U_{rel}=6\%$		
		Nozzle size		(5~250)mm	$U=0.03mm$		
21	*Temperature Transmitter	Temperature	Calibration Specification of the Temperature Transmitter JJF1183	(-200~800)°C Resistance Thermometer input (without sensor)	$U=(0.3~0.6)°C$		
				(-200°C~1800)°C Thermocouple input (without sensor)	$U=(0.5~1.6)°C$		
				(-80°C~660)°C Resistance Thermometer input (with sensor)	$U=0.3°C$		
				(-40~1100)°C Thermocouple input (with sensor)	$U=1.0°C$		

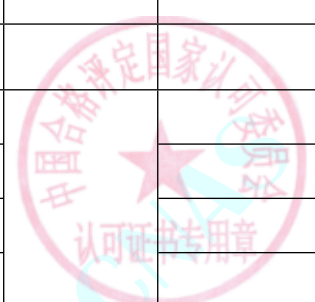


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
22	*Box type resistance furnace	Temperature	Calibration specification for box type resistance furnace JJF 1376	(300~1100) °C	U=2.2°C		
23	*Baby Incubator	Temperature	Calibration Specification for Baby Incubator JJF 1260	(20~50) °C	U=0.12°C		
		Humidity		(10~90) %RH	U=2.0%RH		
		Oxygen concentration		30%~40%	U=2.0%		
24	*Disintegration Analyzers	Temperature	Calibration Specification for Disintegration Analyzers JJF 1449	(0~100) °C	U=0.34°C		
		Length		(0~300)mm	U=0.12mm		
		time		1s~30min	U <sub>rel</sub> =0.09%		
		Disintegration time		(1~520)s	U <sub>rel</sub> =10.6%		
25	Flow Intergration Meters	Flow	Verification Regulation of Flow Intergration Meters JJG1003	(1~100)% range	U <sub>rel</sub> =0.04%		
26	Surface Thermometer	Temperature	Calibration Specification for the Surface Thermometers JJF1409	(20~300) °C	U=1.0°C		
				(300~400)°C	U=1.2°C		
27	Gas Float Meter	Flow-rate	Verification Regulation of float meter JJG257	5 mL/min~500L/min	U <sub>rel</sub> = (0.7%~0.4%)		
28	*heat distortion and vicat softening temperature apparatus	temperature	Calibration specification for heat distortion and vicat softening temperature apparatus JJF (zhe) 1051	室温~300°C	U=0.20°C		
		heating rate		(50~120)°C/h	U=0.10°C/h		
		Length		(1.005~10.000) mm	U=2.0 μm		
		mass		(0.001~500) g	U=0.006g		
				(500~2000) g	U=0.012g		

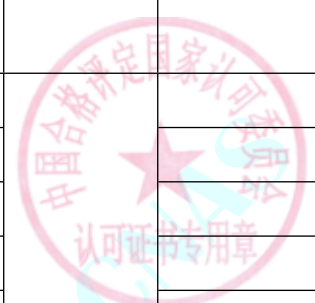


No. CNAS L0128

第 9 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(2000~5000) g	U=0.017g		
29	Liquid level measuring device	current	Verification Regulation of the Liquid level measuring device JJG 971	(4~20)mA	U=0.11%FS		
		Level		Horizontal simulation method: (0~2000)mm	U=0.32mm		
				Horizontal simulation method: (2000~10000)mm	U <sub>rel</sub> =0.016%		
				Vertical measurement method: (0~2000)mm	U=2mm		
		Pressure		(0~100)kPa	U=0.09kPa		
voltage	(0.1~50)V	U=0.11%FS					
30	*Natural ventilation thermal aging test oven	Temperature	Verification procedure for test equipment of rubber plastic wire and cable - Part6: Natural ventilation thermal aging test oven JB/T 4278.6	(-40~600) °C	U=0.5°C		
		ventilation rate		(8~20)/h	U <sub>rel</sub> =2%		
31	Precision dew point hygrometer	Dew point temperature	Verification regulation of precision dew point meter JJG499	(-70~20)°CDP	U=0.20 °CDP		
32	Temperature Block Calibrator	Temperature	Calibration Guideline of the Temperature Block Calibrators JJF1257	(-80~150) °C	U=0.12°C		
				(150~420) °C	U=0.44°C		
				(420~660) °C	U=0.60°C		
				(660~700) °C	U=0.66°C		
				(700~1100) °C	U=1.3°C		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
33	*Digital Thermometer	Temperature	The Working Digital Thermometer JJF(lu)90 JJF(lu)90	(-80~300) °C	U=0.06°C		
				(300~600) °C	U=0.10°C		
				(600~1100) °C	U=1.0°C		
34	*Fabric shrinkage rate testing machine	Temperature	Calibration Specification for Fabric Shrinkage Testers JJF (Fabric) 052	(25~98) °C	U=0.6°C		
		Rotating speed		(50~1200) r/min	U <sub>rel</sub> =0.28%		
		time		(0~30) min	U=0.3s		
		Level		(100~300) mm	U=0.7mm		
35	*salt fog test chamber	Temperature	Calibration specification for salt fog test chamber JJF (Zhe) 1125	(5~70) °C	U=0.4°C		
		Salt spray deposition rate		(1.0~2.0)mL/ (80cm <sup>2</sup> •h)	U=0.3mL/(80cm <sup>2</sup> •h)		
36	*Drug Dissolution Meter	Temperature	Calibration Specification for Drug Dissolution Meter SQI/JL-JF-62	(0~50) °C	U=0.20°C		
		speed		(20~500) r/min	U <sub>rel</sub> =0.6%		
		Coaxiality		(0~5) mm	U=0.09mm		
		Shaft oscillation		(0~5) mm	U=0.11mm		
		Cup swing		(0~5) mm	U=0.08mm		
		Depth		(0~30) mm	U=0.21mm		
		Verticality of Dissolution Cup		(-2~92)°	U=0.12°		
		Verticality of Rotary Shaft		(-2~92)°	U=0.12°		



在线扫码获取验证

No. CNAS L0128

第 11 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Sampling Pump Speed		(0~10) mL/min	$U=0.1\text{mL/min}$		
37	Thermal Mass Gas Flowmeters	Flow	Thermal Mass Gas Flowmeters JJG1132	(5~50000) mL/min	$U_{\text{rel}}=0.44\%$		
38	Temperature Switches	Temperature	Calibration Specification for Temperature Parameters of Temperature Switches JJF 1632	(-30~300)°C	Action Temperature: $U=0.3$ °C; On-off Temperature Difference: $U=0.20$ °C		
39	*Washing fastness testing machine	Temperature	Calibration Specification for Washing Fastness Testing Machine JJF (Textile) 026	(0~150) °C (deviation)	$U=0.7$ °C		
				(0~150) °C (Indication error)	$U=0.7$ °C		
				(0~150) °C (Volatility)	$U=0.6$ °C		
				Rotate speed	40r/min	$U=0.20$ r/min	
		Time		30min、45min	$U=2.0$ s		
		capacity		550mL	$U=4$ mL		
		length		125mm (Cup depth)	$U=1.0$ mm		
			45mm (The distance from the shaft core to the bottom of the test cup)	$U=1.0$ mm			



No. CNAS L0128

第 12 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
40	*Temperature and humidity standard chambers	Temperature	Calibration specification for Temperature and humidity standard chambers JJF 1564	Temperature Uniformity: (5~50) °C, Temperature Fluctuation: (5~50) °C, Temperature rate of change: (0~5) °C/min	Temperature Uniformity: $U=0.05$ °C; Temperature Fluctuation: $U=0.02$ °C; Temperature rate of change: $U=0.03$ °C/min		
		Humidity		Humidity Uniformity: (10~90) %RH, Humidity Fluctuation: (10~90) %RH, Humidity rate of change: (0~10) %RH/min	Humidity Uniformity: $U=0.5\%$ RH; Humidity Fluctuation: $U=0.2\%$ RH; Humidity rate of change: $U=0.3\%$ RH/min.		
41	*Infrared Thermometers for Measurement of Human Temperature	Temperature	Calibration specification of Infrared Thermometers for Measurement of Human Temperature JJF 1107	(22~40) °C	$U=0.10$ °C		
42	*Illumination test chamber	Illuminance	Calibration Specification for the Equipment of the Environmental Testing for Differential Pressure and Wind Speed and illuminance SQI/JL-JF-47	(1~3000)lx	$U=49$ lx		
43	Copper/Copper-Nickel Thermocouple	Temperature	V.R. of Working Copper / Copper-Nickel Thermocouple JJG368	(-80~300) °C	$U=0.3$ °C		

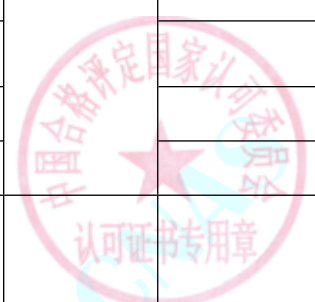


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

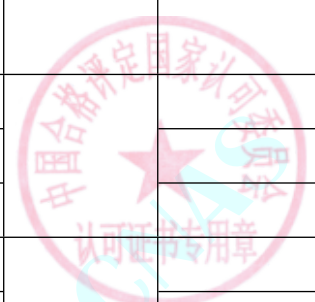
在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
44	Infrared devices for instant screening of human skin temperature	Temperature	Calibration Specification of Infrared Thermometers for Measurement of Human Temperature JJF 1107	(22~40) °C	U=0.10 °C		
45	Sheathed Thermocouple	Temperature	Calibration Specification for Sheathed Thermocouples JJF 1262	(-40~300) °C	U=0.3 °C		
				(300~400) °C	U=1.1 °C		
				(400~1100) °C	U=1.2 °C		
46	Temperature Data Acquisition Instruments	temperature	Calibration Specification of Temperature Data Acquisition Instruments JJF 1366	(-80~500) °C	U=0.05 °C		
47	Temperature Calibration Devices for Polymerase Chain Reaction Analyzers	Temperature	Calibration Specification of Temperature Calibration Devices for Polymerase Chain Reaction Analyzers JJF 1821	(0~120) °C	U=0.04 °C		
48	*Dissolution Testers	Temperature	Calibration Specification for Dissolution Testers JJF(zhe)1096	(0~50) °C	U=0.10 °C		
		Revolution Speed		(50~200) rpm	U <sub>rel</sub> =0.6%		
		Length		coaxiality:(0~5)mm	U=0.06mm		
				swing scope:(0~5)mm	U=0.08mm		
49	Thermistor thermometers	Temperature	Calibration Specification of Thermistor Thermometers JJF 1379	(-50~200) °C	resolution0.001 °C: U=0.030 °C, resolution0.01 °C: U=0.06 °C, resolution0.1 °C: U=0.10 °C		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
50	Resistance-capacitance dew point hygrometer	Dew point temperature	Calibration specification for dew point hygrometer with resistance-capacitance method JJF 1272	(-70~20)°CDP	U=0.4°CDP		
51	*Temperature Indicators	Temperature	Calibration Specification for Temperature Indicators JJF1664	Digit thermal resistor(-200~600)°C	U=(0.10~0.3)°C		
				Digit Thermocouple (-200~1800)°C	U= (0.5~1.6) °C		
				Analog thermal resistor(-200~600)°C	U=(0.3~0.5)°C		
				Analog Thermocouple (-200~1800)°C	U= (0.6~1.6) °C		
52	*Divided Flow Humidity Generator	Temperature	Calibration Specification for Divided Flow Humidity Generator JJF(military)42	(5~50) °C	U=0.20°C		
		Dew point temperature		(-70~20) °CDP	U=0.34°CDP		
		Relative humidity		(10~90) %RH	U=1.6%RH		
53	*Liquid constant temperature testing equipment	Temperature	Measurement Specification for Temperature Performance of Liquid Constant Temperature Testing Equipment JJF 2019	(-80~300) °C	U= (0.05~0.3) °C		
54	*Short Base Metal Thermocouples	Temperature	Calibration Specification for Short Base Metal Thermocouples JJF 1991	(-40~300) °C	U=0.5°C		
				(300~400) °C	U=1.1 °C		
				(400~1000) °C	U=1.2 °C		
55	*Stream Sterilizer	Temperature	Calibration Specification for Temperature and Pressure parameters of Stream	(20~150) °C	U=0.15°C		
		Pressure		(0~400) kPa	U=1.7 kPa		



No. CNAS L0128

第 15 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Time	Sterilizer JFF (Shanghai) 60	(10~3600) s	U=0.4 s		
56	Distributed fiber optic thermometer	Temperature	Calibration specification for distributed fiber optic thermometers JFF 1630	(-20~100) °C	U=0.20°C		
57	Passive Medical Cold Boxes	Temperature	Calibration Specification for Temperature Parameter of Passive Medical Cold Boxes JFF 1676	(-20~20) °C	U=0.20°C		
58	Calibration Specification for Surface Temperature Sources	Temperature	Calibration Specification for Surface Temperature Sources JFF (Lu) 137	Stability: (30~400) °C	U=0.12°C		
				Uniformity: (30~400) °C	U=0.3°C		
				Indication error: (30~400) °C	U=0.26°C		
59	Thermometers of WBGT-index Meters	Temperature	Calibration Specification for Thermometers of WBGT-index Meters JFF 1407	(5~120) °C	U=0.3°C		
60	*Large Steam Sterilizers	temperature	Calibration Specification for Temperature, Pressure and Time Parameters of Large Steam Sterilizers JFF 2088	(100~150) °C	U=0.14°C		
		time		(1~3600) s	U=1s		
		pressure		(70~400) kPa.abs	U=1.2kPa		
61	*Forced air heat aging test oven	Temperature	Verification procedure for test equipment of rubber plastic wire and cable -Part 13: Forced air heat aging test oven JB/T 4278.13	(-80~300) °C	U=0.5°C		
		Air change rate		(0~200) time/h	U=1 次/h		
		Time		1ms~3600s	U=0.6s		
62	*Dust and Sand Testing Equipments	Temperature	Calibration Specification for Dust and Sand Testing Equipments JFF(JG)18	(23~71) °C	U=0.36°C		
		Humidity		(10~30) %RH	U=1.4%RH		



在线扫码获取验证

No. CNAS L0128

第 16 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Wind velocity		(1.2~29) m/s	U=(0.41~0.65) m/s		
		Dust concentration		(0.2~12) g/m <sup>3</sup>	U=(0.09~0.9) g/m <sup>3</sup>		
		Sand and dust sedimentation rate		6.0g/(m <sup>2</sup> ·d)	U=0.25g/(m <sup>2</sup> ·d)		
63	Temperature and Humidity Itinerant Detecting instruments	Temperature	Calibration Specification for Temperature and Humidity Itinerant Detecting Instruments JJF 1171	(-80~300) °C	U=0.04°C		
				(300~1100) °C	U=1.2°C		
		Humidity		(10~90) %RH	U=1.0%RH		
64	*Salt Mist Testing Chambers	Temperature	Calibration Specification for Salt Mist Testing Chambers JJF 2168	(5~70) °C	U=0.2°C		
		Time		(0~10) min	U=0.4min		
		Salt mist sedimentation rate		(1.0~2.0) mL/ (h·80cm <sup>2</sup> )	U=0.04mL/(h·80cm <sup>2</sup> )		
65	*Atmospheric pressure test chambers	Temperature	Calibration Specification for Atmospheric pressure test chambers JJF 2119	(-80~80) °C	U=0.4°C		
		Temperature		(80~200) °C	U=0.7°C		
		Pressure		(0.1~2.0) kPa	U=0.10 kPa		
				(2.0~25.0) kPa	U=0.40 kPa		
				(25.0~120.0) kPa	U=1.4 kPa		
		Time		(10~3600) s	U=0.5s		
66	*Thermocouple Calibration Furnaces	Temperature	Testing Specification for Temperature Uniformity in Thermocouple Calibration Furnaces JJF 1184	Axial temperature difference: (300~1084) °C	U=0.27°C		

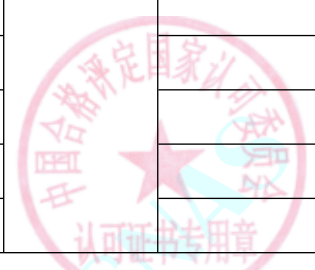


No. CNAS L0128

第 17 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Radial temperature difference: (300~1084) °C	U=0.14°C		
67	*Constant temperature shaking incubator	Temperature	Calibration Specification for Constant temperature shaking incubator JJF(SH) 086	Error: (20~80)°C	U=0.2°C		
				Uniformity: (20~80)°C	U=0.2°C		
				Volatility(20~80)°C	U=0.2°C		
		Frequency (20~500) 次/min		U=2 次/min			
		Concentration		Error: (1.6~15) %	U=0.5%		
				Volatility: (1.6~15) %	U=0.03%		
二、Mechanics							
1	*Moisture Meters	Quality	Verification Regulation of Thermogravimetric Moisture Meters JJG 658	(0~1)kg	U=(0.2~10)mg		
		Moisture		(0~100)%	U=0.09%		
2	*Electronic Balance	Quality	Verification Regulation of Electronic Balance JJG 1036, Calibration Specification of Electronic Balances JJF1847	(1~100) mg	U=(0.004~0.005) mg		
				100mg~1g	U=(0.005~0.008) mg		
				(1~100) g	U= (0.008~0.06) mg		
				100g~1kg	U= (0.06~2) mg		
				(1~100) kg	U=2mg~0.5g		
				(100~200) kg	U= (0.5~5) g		

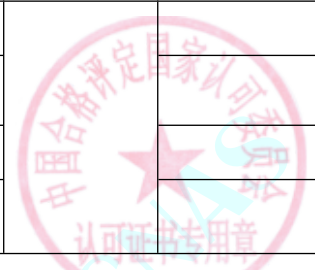


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
3	*Flow Meters	Flow	Specification for on-line flow Calibration by master meter method SQI/JL-JF-54	(0.2~40) m <sup>3</sup> /h, DN (8-50) mm	U <sub>rel</sub> =0.20%	Accredited only for Water Medium	
4	Tachometer	rotate speed	Verification Regulation of Tachometer JJG 105	(20~60000) r/min	U <sub>rel</sub> =0.02%		
5	*Weights	Quality	Verification Regulation of Weights JJG 99	F <sub>1</sub> Class: 1mg~500mg	U=(0.004~0.010)mg	Field calibration is not carried out for grade F2 and above	
				F <sub>1</sub> Class: 1g~500g	U=(0.02~0.4)mg		
				F <sub>2</sub> Class:1mg~500mg	U=(0.02~0.03)mg		
				F <sub>1</sub> Class: 1kg~5kg	U=(0.6 ~4)mg		
				F <sub>2</sub> Class:1g~500g	U= (0.03 ~0.6) mg		
				F <sub>2</sub> Class:1kg~5kg	U=(2 ~8)mg		
				M <sub>1</sub> Class: 1mg~500mg	U=(0.02~0.08)mg		
				M <sub>1</sub> Class: 1g~500g	U=(0.3~3)mg		
				M <sub>1</sub> Class: 1kg~25kg	U=5mg~0.2g		
6	*Electromagnetic flowmeter	Flow	Calibration Specification for Electromagnetic Flowmeters JJF (Su) 228	(8~40)m <sup>3</sup> /h, DN50	U <sub>rel</sub> =3.6%		
				(30~400)m <sup>3</sup> /h, DN(100~150)	U <sub>rel</sub> =2.8%		
				(80~400)m <sup>3</sup> /h, DN200	U <sub>rel</sub> =2.5%		
				(240~1200)m <sup>3</sup> /h, DN(250~300)	U <sub>rel</sub> =2.4%		

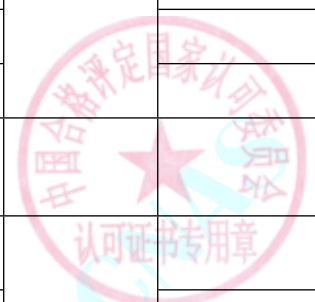


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
7	*Mass flowmeter	flow	Online calibration specification for Mass flowmeters by Mass method SQI/JL-JF-43	(0.01~40) m <sup>3</sup> /h, DN(4-50)	U <sub>rel</sub> =0.4%	Accredited only for Water Medium	
8	*Mechanical Balance	Quality	Verification Regulation of Mechanical Balance JJG 98	(0~20)g e=0.01mg	U=0.03mg		
				(0~200)g e=0.1mg	U=0.08mg		
				(1~5)kg e=1mg~5mg	U=(0.8~1.6)mg		
				(20~200)kg e=(10~100) mg	U=(0.15~2.4)g		
9	Force Transducers	force	Verification Regulation of Force Transducers JJG 391	0.1N~20N	U <sub>rel</sub> =0.05%		
				20N~10kN	U <sub>rel</sub> =0.02%		
				10kN~1000kN	U <sub>rel</sub> =0.03%		
10	*Falling Weight Impact Testing Machines	speed	Calibration Specification for Falling Weight Impact Testing Machines JJF 1445	(0.1~30)m/s	U <sub>rel</sub> =0.8%		
		height		(0.01~5) m	U=2mm		
		Quality		(0.01~35) kg	U=1g		
		Radius		(0.5~500) mm	U=0.06mm		
		energy loss		(0.01~100) %	U <sub>rel</sub> =1.5%		
11	Standard Glass Hydrometers	Density	Verification Regulation of Standard Glass Hydrometers JJG 86	(650~1500) kg/m <sup>3</sup>	U=0.20 kg/m <sup>3</sup>		
12	Vibration Displacement Transducer	displacement	Verification Regulation of Vibration Displacement Transducer JJG 644	0.002mm~1000mm (20Hz~2000Hz)	U <sub>rel</sub> =1.4%		
		Sensitivity		0.002mm~1000mm (0.2Hz~10kHz)	U <sub>rel</sub> =1.4%		



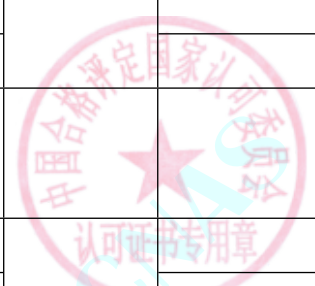
No. CNAS L0128

第 20 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

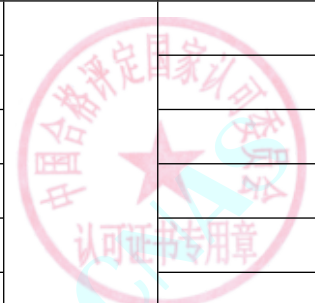
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
13	Working Glass Hydrometers	Density	Verification Regulation of Working Glass Hydrometers JJG 42	(650~2000) kg/m <sup>3</sup>	U=0.4 kg/m <sup>3</sup>		
		Soil Degree		(-5~50) S°	U=0.20 S°		
		alcohol concentration		(0~100) %	U=0.4%		
14	*Falling Body Type Shock Testing Machine	acceleration	Verification Regulation of Shock and Bump Testing Machines JJG 1174	(100~5000) m/s <sup>2</sup>	U <sub>rel</sub> =4%		
		Pulse width		(0.05~240) ms	U <sub>rel</sub> =0.8%		
15	Working Glass Container	Capacity	Verification Regulation of Working Glass Container JJG196	(0.1~100)mL	U=(0.002~0.019)mL		
				(100~500)mL	U=(0.019~0.08)mL		
				(500~2000) mL	U=(0.08~0.26)mL		
16	*Portable Vibration Calibrator	acceleration	Verification Regulation of Portable Vibration Calibrator JJG 1062	(0.5~500) m/s <sup>2</sup>	U <sub>rel</sub> =3%		
		displacement		(1~25)mm	U <sub>rel</sub> =3%		
		Frequency		(10~2000)Hz	U=0.6Hz		
17	Locomotive Pipett	Capacity	Verification Regulation of Locomotive Pipette JJG646	(0.1~50) μ L	U=(0.02~0.2) μ L		
				(50~500) μ L	U=(0.2~0.5) μ L		
				(500~10000) μ L	U=(0.5~2.2) μ L		
18	*Laboratory Oscillation-type Liquid Density Meters	Density	Calibration Specification for Laboratory Oscillation-type Liquid Density Meters JJF 2165	(0.65~2) g/cm <sup>3</sup>	U= (0.0002~0.0003) g/cm <sup>3</sup>		
19	*Equipment of Power Measuring	torque	Verification Regulation of Equipment of Power Measuring JJG 653	(0.01~108.2) Nm	U <sub>rel</sub> =0.28%		
				(108.2~3000) Nm	U <sub>rel</sub> =0.27%		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(3000~10000) Nm	$U_{rel}=0.30\%$		
		Rotate Speed		(20~20000) r/min	$U_{rel}=0.17\%$		
20	*Mass Comparators	Mass	Calibration Specification for Mass Comparators JJF 1326	repeatability: (0~1000)g	$U=(2 \times 10^{-3} \sim 2)mg$	/	
		Mass		Eccentric load error: (0~1000)g	$U=(3 \times 10^{-3} \sim 3)mg$		
		Mass		Partial indication error: (0~1000)g	$U=(5 \times 10^{-3} \sim 4)mg$		
21	Shore D Durometer	Hardness	Verification Regulation of Shore D Durometer JJG1039	0~100HD	$U=0.14HD$		
		Force		(0.1~50) N	$U_{rel}=0.2\%$		
		Length		(0~10)mm	$U=6 \mu m$		
		Angle		(0~90)°	$U=0.03^\circ$		
22	Electromagnetic Velocity Transducer	speed	Verification Regulation of Electromagnetic Velocity Transducer JJG 134	(0.01~20)m/s (20Hz~2000Hz)	$U_{rel}=1.1\%$		
		Sensitivity		1cm/s~10cm/s (20Hz~2000Hz)	$U_{rel}=1.1\%$		
23	*Metallic Rockwell Hardness Testers	Hardness	Standard Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials ASTM E18, Verification Regulation of Metallic Rockwell Hardness Testers(Scales A,B,C,D,E,F,G,H,K,N,T) JJG 112	(80~88)HRA	$U=0.6HRA$		
				(85~95)HRB	$U=0.8HRBw$		
				(60~70)HRC	$U=0.6HRC$		
				(35~55)HRC	$U=0.6HRC$		
				(20~30)HRC	$U=0.7HRC$		
				(89~91)HR15N	$U=0.7HR15N$		

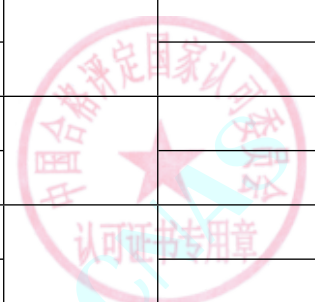


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
				(74~80)HR30N	U=0.7HR30N			
				(42~54)HR30N	U=0.9HR30N			
				(32~61)HR45N	U=0.9HR45N			
				(88~93)HR15T	U=1.2HR15TW			
				(70~82)HR30T	U=1.2HR30TW			
				(55~72)HR45T	U=1.7HR45TW			
				Force	(10kgf~150kgf)			U <sub>rel</sub> =0.3%
				Depth	(100~1500) N			
		Angle		(0~1) mm	U=0.6 μ m			
		Size		0~180°	U=0.03°			
		Time		(0~1) mm	U=6 μ m			
				(1~60) s	U <sub>rel</sub> =1.0%			
24	Standard Dynamometers	force	Verification Regulation of Standard Dynamometers JJG 144	0.1N~20N	U <sub>rel</sub> =0.05%			
				20N~10kN	U <sub>rel</sub> =0.02%			
				10kN~1000kN	U <sub>rel</sub> =0.03%			
25	*Calibration Instrument for Torque Wrenches	torque	Verification Regulation of Calibration Instrument for Torque Wrenches JJG 797	(0.02~1) Nm	U <sub>rel</sub> =0.3%			
				(1~3000) Nm	U <sub>rel</sub> =0.13%			
26	*Torsion Testing Machines	torque	Verification Regulation of Torsion Testing Machines JJG 269	(0.05~50000) Nm	U <sub>rel</sub> =0.22%			
		angle		(0.1~50) °	U=0.01°			
				(50~1080) °	U <sub>rel</sub> =0.02%			



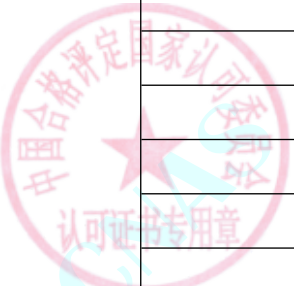
No. CNAS L0128

第 23 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

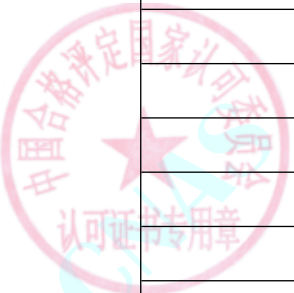
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Torsional angular velocity		(0.1~6) ° /min	U=0.01° /min		
				(6~1080) ° /min	U <sub>rel</sub> =0.22%		
		Coaxiality		(0.01~1) mm	U=0.02mm		
		Length		(0~150) mm	U=0.03mm		
27	*Analogue Indicating Weighing Instruments	Weight	Verification Regulation of Analogue Indicating Weighing Instruments JJG 13	(0.2~8) kg	U=(3.3~3.7) g		
28	*Non-self-indicating Weighing Instruments	Weight	Verification Regulation of Non-self-indicating Weighing Instruments JJG 14	(0.04~3)kg	U=(0.5 ~0.6)g		
				(0.1~5)kg	U=(0.5 ~0.6)g		
				(0.1~10)kg	U=(0.5 ~0.8)g		
				(1~100)kg	U=(6~11)g		
				(4~300)kg	U=(21~38)g		
				(4~500)kg	U=(21~59)g		
				(10~1000)kg	U=(0.05~0.12)kg		
				(20~2000)kg	U=(0.05~0.24)kg		
				(20~3000)kg	U=(0.05~0.42)kg		
				(40~5000)kg	U=(0.1~0.6)kg		
				(5~10000)kg	U=(0.2~1.4)kg		
				(200~30000) kg	U=(0.4~4.5)kg		
				(400~60000) kg	U=U=(2.9~12)kg		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
29	*Digital Indicating Weighing Instruments	Weight	Verification Regulation of Digital Indicating Weighing Instruments JJG 539	(2~300)g	U=(10~30) mg		
				(2~500)g	U=(10~40) mg		
				(2~1000)g	U=(10~60) mg		
				(0.02~3)kg	U=(0.3~0.4)g		
				(0.04~6)kg	U=(0.3~0.9)g		
				(0.1~15)kg	U=(1.2~1.5)g		
				(0.2~30)kg	U=(3~4)g		
				(0.4~60)kg	U=(6~7)g		
				(1~150)kg	U=(6~10)g		
				(2~300)kg	U=(20~40)g		
				(2~500)kg	U=(20~50)g		
				(4~1000)kg	U=(0.07 ~0.13)kg		
				(10~2000)kg	U=(0.1~0.4)kg		
				(20~3000)kg	U=(0.1~0.5)kg		
				(20~5000)kg	U=(0.1~0.6)kg		
				(200~10000) kg	U=(2~3)kg		
(200~20000) kg	U=(2~4) kg						
(200~30000) kg	U=(2~5) kg						
(400~60000) kg	U=(3~11)kg						

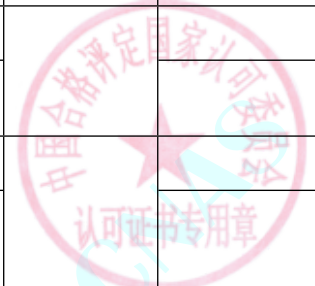


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(400~80000) kg	$U=(3\sim 12)kg$		
				(400~100000) kg	$U=(3\sim 14)kg$		
30	*Automatic Gravimetric Filling Instruments	Weight	Verification Regulation of Automatic Gravimetric Filling Instruments JJG 564	X (0.1) Class, (0.01~200) kg	$U_{rel}=(0.25\sim 0.02)\%$		
				X (0.2) Class, (0.01~200) kg	$U_{rel}=(0.25\sim 0.02)\%$		
				X (0.5) Class, (0.01~200) kg	$U_{rel}=(0.26\sim 0.03)\%$		
				X (1) Class, (0.01~200) kg	$U_{rel}=(0.27\sim 0.06)\%$		
				X (2) Class, (0.01~200) kg	$U_{rel}=(0.30\sim 0.12)\%$		
31	*Quantitative Filling Machine for Liquid Material	Weight	Verification Regulation of Quantitative Filling Machine for Liquid Material JJG 687	(50~32000) g	$U_{rel}=(1.2\sim 0.01)\%$	use the weighing method to verify the volume of the filling machine	
				(32~150) kg	$U_{rel}=(0.20\sim 0.08)\%$		
		Volume		(50~32000) mL	$U_{rel}=(1.2\sim 0.04)\%$		
				(32~150) L	$U_{rel}=(0.28\sim 0.10)\%$		
32	*Precise Pressure Gauges	pressure	Verification Regulation of Elastic Element Precise Pressure Gauges and Vacuum Gauges JJG49	(-0.1~0.01) MPa	$U=(0.08\sim 0.13)\%FS$		
				(0.01~250) MPa	$U=(0.08\sim 0.13)\%FS$		
33	*Elastic Element Pressure Gauges, Pressure-Vacuum Gauges and Vacuum Gauges for General Use	pressure	Verification Regulation of Elastic Element Pressure Gauges, Pressure-Vacuum Gauges and Vacuum Gauges for General Use JJG52	(-0.1~0.01) MPa	$U=0.34\%FS$		
				(0.01~250) MPa	$U=0.34\%FS$		



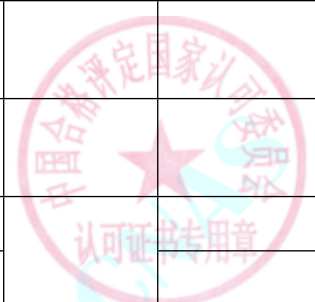
No. CNAS L0128

第 26 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

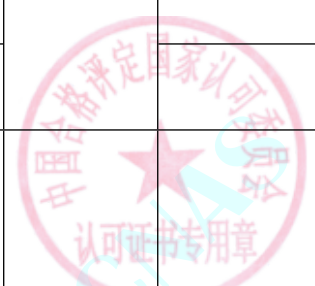
在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
34	*Digital Pressure Gauges	pressure	Verification Regulation of Digital Pressure Gauges JJG875	(-0.1~0.01) MPa	$U=(0.01\sim0.07)\%FS$		
				(0.01~250) MPa	$U=(0.01\sim0.07)\%FS$		
35	*Pressure Regulators with Bourdon Tube Pressure Gauge	pressure	Calibration Specification for Pressure Regulators with Bourdon Tube Pressure Gauge JJF1328	0.005MPa~25MPa	$U_{rel}=1\%$		
36	*Pressure Controllers	pressure	Verification Regulation of Pressure Controllers JJG544	(-0.1~0.01) MPa	$U=0.12\%FS$		
				(0.01~60) MPa	$U=0.12\%FS$		
37	*Pressure Transmitter	pressure	Verification Regulation of the Pressure Transmitter JJG882	(-0.1~0.01) MPa	$U=0.02\%FS$		
				(0.01~250) MPa	$U=0.02\%FS$		
38	Industrial Thermal Conductivity Vacuum Gauges	Vacuum	Calibration Specification of Industrial Thermal Conductivity Vacuum Gauges JJF1050	$(2.0\times 10^{-1}\sim 1.0\times 10^5)$ Pa	$U_{rel}=4\%$		
39	Channel Reference Leaks	Flow	calibration specification of channel reference leaks SQI/JL-JF-40	(0.1~60) mL/min	$U_{rel}=3\%$		
40	*Working Dynamometers	force	Verification Regulation of Working Dynamometers JJG455	1.96mN~2000kN	$U_{rel}=0.2\%$		
41	*Dedicated work force measuring machine	force	Calibration specification for dedicated working dynamometer JJF 1134	0.1N~2000kN	$U_{rel}=0.4\%$		
42	*electronic universal testing machine	force	Verification Regulation of Electronic Universal Testing Machine JJG475	9.8 μ N~500kN	$U_{rel}=0.18\%$		
				500kN~2000kN	$U_{rel}=0.50\%$		
				2000kN~10000kN	$U_{rel}=0.50\%$		



在线扫码获取验证

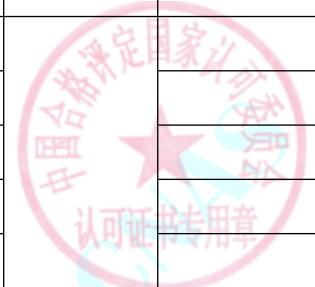
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		concentricity		(0.1~40) mm	$U=0.021\text{mm}$		
		Displacement		(0~1000)mm	$U=(8\sim 14)\mu\text{m}$		
		speed		(0.001~100)mm/s	$U_{\text{rel}}=0.2\%$		
43	*Tension , Compression and Universal Testing Machine	force	Verification Regulation of Tension , Compression and Universal Testing Machines JJG139	9.8 $\mu\text{N}$ ~500kN	$U_{\text{rel}}=0.18\%$		
				500kN~2000kN	$U_{\text{rel}}=0.50\%$		
				2000kN~10000kN	$U_{\text{rel}}=0.50\%$		
		Displacement		0.1mm~0.3mm	$U=0.72\mu\text{m}$		
		0.3mm~800mm		$U_{\text{rel}}=0.2\%$			
Concentricity	(0.1~40) mm	$U=0.021\text{mm}$					
44	*Material Testing Machine	force	Standard Practices for Force Calibration and Verification of Testing Machines ASTM E4	0.1N~2000kN	$U_{\text{rel}}=0.4\%$		
45	*Material Testing Machine	displacement	Standard Practices for Verification of Displacement Measuring Systems and Devices Used in Material Testing Machines ASTM E2309/E2309M	(0.001~750)mm	$U=0.06\text{mm}$		
				(750~1000)mm	$U=0.78\text{mm}$		
				(1000~2000)mm	$U=0.80\text{mm}$		
46	*Testing Machine(Alignme nt)	Alignment	Standard Practice for Verification of Testing Frame and Specimen Alignment Under Tensile and Compressive Axial Force Application ASTM E1012	(0.001~2450) $\mu\text{m}/\text{m}$	$U_{\text{rel}}=1.4\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
47	*material testing machine	speed	Standard Practices for Verification of Speed for Material Testing Machines ASTM E2658	(0.001~100)mm/s	$U_{rel}=0.2\%$			
48	*Electric-hydraulic Servo Universal Test Machine	force	Verification regulation of electro hydraulic servo universal testing machine JJG 1063	9.8 $\mu$ N~500kN	$U_{rel}=0.18\%$			
				500kN~2000kN	$U_{rel}=0.50\%$			
				2000kN~3000kN	$U_{rel}=0.50\%$			
		concentricity		(0.1~40) mm	$U=0.021\text{mm}$			
		Displacement		0.1mm~0.3mm	$U=0.72 \mu\text{m}$			
0.3mm~800mm	$U_{rel}=0.2\%$							
49	*Static uniaxial testing machine	force	Metallic materials-Verification of static uniaxial testing machines-Part1 Tensioncompression testing machines-Verification and calibration of the force-measuring system ISO 7500-1	1.96mN~2000kN	$U_{rel}=0.4\%$			
		concentricity		(0.1~40) mm	$U=0.021\text{mm}$			
50	*high temperature creep and endurance strength testing machine	force	Verification regulation of high temperature creep and endurance strength testing machine JJG 276	0.1mN~2000kN	$U_{rel}=0.16\%$			
				Temperature	(-80~200) $^{\circ}\text{C}$			$U=0.3^{\circ}\text{C}$
					(200~300) $^{\circ}\text{C}$			$U=0.6^{\circ}\text{C}$
					(300~500) $^{\circ}\text{C}$			$U=1.2^{\circ}\text{C}$
					(500~1100) $^{\circ}\text{C}$			$U=2.1^{\circ}\text{C}$
		concentricity		(0.01~12) %	$U_{rel}=1.2\%$			



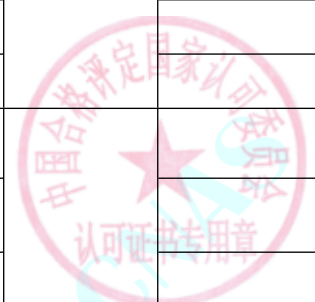
No. CNAS L0128

第 29 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Displacement	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR COMPETENCY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	(12~15) %	$U_{rel}=0.9\%$		
				(15~20) %	$U_{rel}=0.6\%$		
				(0.01~0.3) mm	$U=0.72 \mu m$		
				(0.3~50) mm	$U_{rel}=0.17\%$		
		(50~800) mm		$U_{rel}=0.20\%$			
Time	(1~3600) s	$U=0.13s$					
51	*Fatigue Testing Machines	force	Axial Force Fatigue Testing Machines JIG 556, Standard Practice for Verification of Constant Amplitude Dynamic Forces in an Axial Fatigue Testing System ASTM E467	0.1mN~10MN	$U_{rel}=0.16\%$		
		concentricity		(0~12) %	$U_{rel}=1.2\%$		
52	*Torque Wrenches	torque	Verification Regulation of Torque Wrenches JIG707	0.06Nm~2Nm	$U_{rel}=2\%$		
				2Nm~3000Nm	$U_{rel}=0.9\%$		
53	*Metal Brielle Hardness Tester	Hardness	Verification Regulation of Metal Brielle Hardness Tester JIG150	(50~125)HBW	$U_{rel}=1.9\%$		
				(125~225)HBW	$U_{rel}=1.4\%$		
				(225~650)HBW	$U_{rel}=1.2\%$		
54	*Metal Rockwell Hardness Tests	Hardness	Verification Regulation of Metal Rockwell Hardness Tests(A、B、C、D、E、F、G、H、R、N、T Scale) JIG112	(20~95)HRA, HRB, HRC	$U=(0.6~0.8)HR$		
				(32~91) HRN (34~93) HRT	$U=(0.7~0.9)HRN$ $U=(1.2~1.7)HRTw$		
				Force	(9.8~1571)N		
		Length		(0~4) $\mu m$	$U=0.6 \mu m$		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Angle		(0~150)°	$U=0.03^\circ$		
55	Leeb Hardness Tester	Hardness	Verification Regulation of Leeb Hardness Tester JJG747	(330~890) HLD	$U=8\text{HLD}$		
56	*Metal Vickers Hardness Tester	Hardness	Verification Regulation of Metal Vickers Hardness Tester JJG151	HV5~HV100, (50~225)HV	$U_{\text{rel}}=2.7\%$		
				HV5~HV100, (225~1000)HV	$U_{\text{rel}}=2.0\%$		
				HV0.2~HV5, (50~225)HV	$U_{\text{rel}}=5.3\%$		
				HV0.2~HV5, (225~1000)HV	$U_{\text{rel}}=4.0\%$		
				HV0.05~HV0.2, (50~225)HV	$U_{\text{rel}}=5.1\%$		
				HV0.05~HV0.2, (225~1000)HV	$U_{\text{rel}}=6.0\%$		
57	Shore A Durometers	Hardness	Verification Regulation of Shore A Durometers JJG304	(0~100) HA	$U=0.2\text{HA}$		
		Force		(0.1~50) N	$U_{\text{rel}}=0.2\%$		
		Length		(0~10)mm	$U=5\ \mu\text{m}$		
		Angle		(10~40)°	$U=0.04^\circ$		
58	*Hydraulic Vibration Testing System	Frequency	Verification Regulation of Hydraulic Vibration Testing System JJG 638	(0.1~2000) Hz	$U_{\text{rel}}=0.012\%$		
		Displacement		(0.1~50) mm (0.1~10k) Hz	$U_{\text{rel}}=3\%$		
		acceleration		(0.05~1000) m/s <sup>2</sup> (0.1~10k) Hz	$U_{\text{rel}}=3\%$		
		Velocity		(0.01~20) m/s (0.1~10k) Hz	$U_{\text{rel}}=1.1\%$		



No. CNAS L0128

第 31 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
59	*Metallic Webster Hardness Testing Machines	Hardness	Verification Regulation for Metallic Webster Hardness Testing Machines JJG 944	(5~18) HW	$U=0.3HW$		
		Length		(0.02~1) mm	$U=4 \mu m$		
		Angle		(0~180) °	$U=0.03^\circ$		
		Size		(0.02~50) mm	$U=6 \mu m$		
60	*Mechanical Vibration Generator for Testing	Frequency	Verification Regulation of Mechanical Vibration Generator for Testing JJG189	(10~200)Hz	$U=0.6Hz$		
		Displacement		(1~50)mm (0.1~200)Hz	$U_{rel}=3\%$		
		acceleration		(0.5~1000) m/s <sup>2</sup> (0.1~200)Hz	$U_{rel}=3\%$		
61	*Microhardness Testing Machine in International Rubber Hardness Degree	Length	Verification Regulation for Microhardness Testing Machine in International Rubber Hardness Degree JJG 898	(0~10) mm	$U=6 \mu m$		
		Hardness		(30~85)IRHD	$U=1.3IRHD$		
		Force		0.2mN~10N	$U_{rel}=0.2\%$		
62	*Plastic Ball Indentation Hardness Testing Machine	Force	Verification Regulation for Plastic Ball Indentation Hardness Testing Machine JJG 369	(4.9~961) N	$U_{rel}=0.3\%$		
		Size		(0~15) mm	$U=6 \mu m$		
		Depth		(0~1) mm	$U=0.6 \mu m$		
		Time		(1~120) s	$U_{rel}=1.0\%$		
63	Piezoelectric Accelerometer	acceleration	Verification Regulation of Piezoelectric Accelerometer JJG233	(0.02~100)m/s <sup>2</sup> (0.2~1k) Hz	$U_{rel}=1.1\%$		
				(2~100)m/s <sup>2</sup> (1k~2k) Hz	$U_{rel}=2.0\%$		
				(100~20000)m/s <sup>2</sup> (2k~10k) Hz	$U_{rel}=3.0\%$		



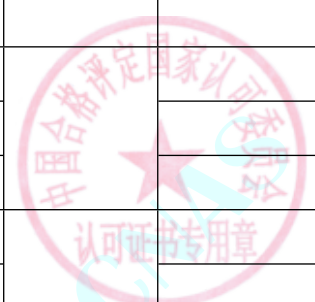
No. CNAS L0128

第 32 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(20000~100000)m/s <sup>2</sup> (5k~10k) Hz	U <sub>rel</sub> =5.0%		
64	*Plastic Rock Well Hardness Testing Machine	Hardness	Verification Regulation for Plastic Rock Well Hardness Testing Machine JJG 884	(70~94)HRE	U=1.1HRE		
				(100~120)HRL	U=0.6HRL		
				(85~110)HRM	U=0.8HRM		
				(114~125)HRR	U=0.7HRR		
		Force	(50~2000) N	U <sub>rel</sub> =0.3%			
		Depth	(0~1) mm	U=0.6 μ m			
		Size	(0~800) mm	U=6 μ m			
Time	(1~3600) s	U <sub>rel</sub> =1.0%					
65	*Verification Regulation of Vibration Meters	acceleration	Verification Regulation of Measuring Vibration Instruments JJG676	(2~100000)m/s <sup>2</sup> (0.2~10k) Hz	U <sub>rel</sub> =3.0%~5.0%		
		velocity		(0~20)m/s (0.2~10k) Hz	U <sub>rel</sub> =1.1%~3.0%		
		displacement		(0.002~1000)mm (0.2~10k) Hz	U <sub>rel</sub> =1.4%~3.0%		
66	*Pencil Hardness Testers	Mass	Calibration Specification for Pencil Hardness Testers JJF(石化) 007	(0.1~1000) g	U=0.02g		
				(1000~2000) g	U=0.13g		
		Angle		(0~90) °	U=0.02°		
67	*Electrodynamic vibration testing systems	Frequency	Verification Regulation of Electrodynamic Vibration Testing System JJG 948	(0.1~2000) Hz	U <sub>rel</sub> =0.012%		
		Displacement		(1~50) mm (0.1~10k) Hz	U <sub>rel</sub> =3%		

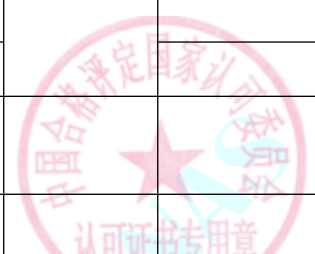


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		acceleration		(0.05~1000) m/s <sup>2</sup> (0.1~10k) Hz	U <sub>rel</sub> =3%		
68	Metallic Rockwell Hardness Reference Blocks	Hardness	Verification Regulation of Metallic Rockwell Hardness Reference Blocks (Scales A,B,C,D,E,F,G,H,K,N,T) JJG 113	(20~88) HRA	U=0.56 HRA		
				(85~100) HRB	U=0.56HRB		
				(20~30) HRC	U=0.56HRC		
				(35~55) HRC	U=0.56HRC		
				(60~70) HRC	U=0.56HRC		
				(70~91) HR15N	U=0.84HR15N		
				(42~80) HR30N	U=0.84HR30N		
				(73~93) HR15T	U=0.84HR15T		
				(82~82) HR30T	U=0.84HR30T		
				(55~72) HR45T	U=0.84 HR45T		
(32~61) HR45N	U=0.84HR45N						
69	*Bump Testing Machines	acceleration	Verification Regulation of Shock and Bump Testing Machines JJG 1174	(100~5000) m/s <sup>2</sup>	U <sub>rel</sub> =4%		
		Pulse width		(0.05~240) ms	U <sub>rel</sub> =0.8%		
70	Aneroid Barometer	Pressure	Verification Regulation of Aneroid Barometer and Aneroid Barograph JJG 272	(500~1060) hPa	U=0.4hPa		
71	Digital Barometers	Pressure	Verification Regulation of Digital Barometers JJG1084	(100~1200) hPa	U=0.12hPa		
72	Multi-Component	Force	Calibration Specification for Multi-component Force Transducer JJF1560	0.1N~1MN	U <sub>rel</sub> =0.05%		



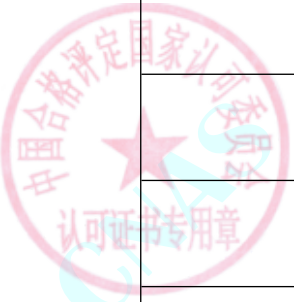
No. CNAS L0128

第 34 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

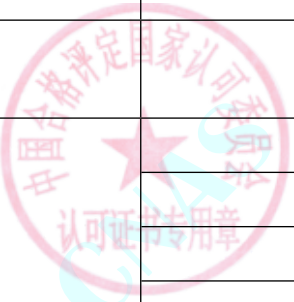
在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
73	*Laser Vibrometers	Frequency	Calibration Specification for Laser Vibrometers JJF 1219	(0.1~200k)Hz	$U_{rel}=3.4 \times 10^{-5}$		
		Voltage		10mV~10V (0.1~200k)Hz	$U_{rel}=0.4\%$		
		acceleration		(0.1~100000) m/s <sup>2</sup> (0.1~200k)Hz	$U_{rel}=0.5\%$		
74	*Temperature/Humidity/Vibration Combined Environmental Testing System	acceleration	Calibration Specification for Temperature/Humidity/Vibration Combined Environmental Testing System JJF1270	(0.5~1000) m/s <sup>2</sup> (20Hz~2000Hz)	$U_{rel}=3\%$		
		Temperature		(-75~200) °C	$U=0.3^{\circ}\text{C}$		
		Humidity		(10~90) %RH	$U=1.2\%RH$		
		Heating rate		(0.5~60) °C/min	$U= (0.12\sim0.38) ^{\circ}\text{C}/\text{min}$		
		The wind speed		(0.5~20) m/s	$U= (0.08\sim0.60) \text{m/s}$		
		Dew point temperature		(-20~20)°CDP	$U=0.2^{\circ}\text{C DP}$		
75	*Pendulum Impact Testing Machines	Energy	Verification Regulation of Pendulum Impact Testing Machines JJG 145	Direct method of measurement:(0.25~750)J	$U_{rel}=0.8\%$		
				Indirect method of measurement: (0.25-40) J	$U_{rel}=2.0\%$		
				Indirect method of measurement: (40-300) J	$U_{rel}=2.4\%$		
				Indirect method of measurement: (300-750) J	$U_{rel}=2.3\%$		
		Distance		(0~0.5)mm	$U=6 \mu\text{m}$		



在线扫码获取验证

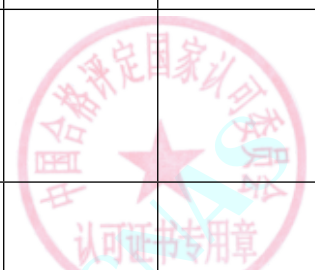
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Center Distance		(50~1000)mm	$U_{rel}=0.15\%$		
		Force		(1~10000) N	$U_{rel}=0.4\%$		
		Size		(0~150) mm	$U=0.04\text{mm}$		
		Angle		(0.1~180) °	$U_{rel}=0.1\%$		
		Initial potential energy of pendulum		(0.5~750) J	$U_{rel}=0.2\%$		
		Impact velocity		(0.1~10) m/s	$U_{rel}=0.8\%$		
76	*Electric and Pneumatic Torque Wrenches	Torque	Calibration Specification for Electric and Pneumatic Torque Wrenches JJF1610	(0.1~3000) Nm	$U_{rel}=1.5\%$		
77	Dynamic Force Sensors	Static force value	Verification Regulation of Dynamic Force Sensors JJG632	10N~1000kN	$U_{rel}=0.4\%$		
		Dynamic force value		10N~1000kN (0.1Hz~200kHz)	$U_{rel}=0.6\%~2.0\%$		
		Frequency		0.1Hz~200kHz	$U_{rel}=0.01\%$		
78	Elevator Overspeed Governor Tester	speed	Calibration Specification for Elevator Overspeed Governor Testers JJF 1374	(0.1000~20.000)m/s	$U_{rel}=0.03\%~0.32\%$		
79	Vickers Hardness Reference Blocks	Hardness	Verification Regulation for Vickers Hardness Reference Blocks JJG148	(700~800) HV1	$U_{rel}=1.4\%$		
				(700~800)HV0.5	$U_{rel}=1.6\%$		
				(700~800)HV0.2	$U_{rel}=2.3\%~2.5\%$		
				(400~600)HV0.1	$U_{rel}=2.5\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(175~225)HV0.05	$U_{rel}=3.2\%$		
80	*standard vibrators	acceleration	standard vibrators JJG298	(0.1~1000) m/s <sup>2</sup>	$U_{rel}=3\%$		
		Frequency		(0.1~10k)Hz			
				(0.2~10k)Hz	$U=2 \times 10^{-4}$ Hz		
				(0.2~10k)Hz	$U_{rel}=0.01\%$		
81	*Buoy Type Oxygen Inhalers	Pressure	Verification Regulation of Buoy Type Oxygen Inhalers JJG 913	(0~25)MPa	$U=0.17$ MPa		
		Flow		(1~10)L/min	$U_{rel}=1.2\%$		
82	*Motor Vehicle Engine Speed Measuring Instruments	Rotational Speed	Calibration Specification for Motor Vehicle Engine Speed Measuring Instruments JJF1375	(600~5000) r/min	$U_{rel}=0.3\%$		
		Time		(0~5) s	$U=0.08$ s		
83	*Syringe Pumps and Infusion Pumps	Flow	Calibration Specification for Syringe Pumps and Infusion Pumps JJF 1259	(5~20)mL/h	$U_{rel}=2.5\%$		
				(20~200)mL/h	$U_{rel}=1.2\%$		
				(200~1000)mL/h	$U_{rel}=2.5\%$		
		Pressure		(0~200) kPa	$U=2.4$ kPa		
84	Positive Control of Drug Container - Closure Integrity Test (CCIT)	Leak Rate	Calibration Specification for Positive Control of Drug Container - Closure Integrity Test (CCIT) SQI/JL-JF-64	$(1.4 \times 10^{-5} \sim 1.4 \times 10^{-3})$ Pa · m <sup>3</sup> /s	$U_{rel}=6.2\%$		
85	*Medical Suction Equipment	pressure	Calibration Specification of Medical Suction Equipment JJF 1810	(-0.095~0) MPa	$U=0.001$ MPa		

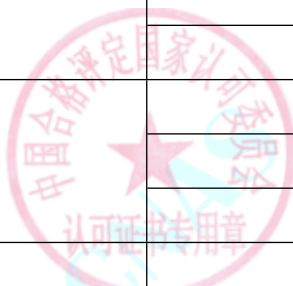


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
86	Vacuum Helium Leaks	leak rate	Calibration Specification for Vacuum Helium Leaks JJF 1833	$(1.0 \times 10^{-10} \sim 1.0 \times 10^{-4}) \text{ Pa} \cdot \text{m}^3/\text{s}$	$U_{\text{rel}}=12\%$		
87	Gasoline Vapor Recovery Detectors	Flow-rate	Calibration Specification for Gasoline Vapor Recovery Detectors JJF 1948	$(3.3 \sim 50) \text{ L/min}$	$U_{\text{rel}}=0.8\%$		
		Time		$(10 \sim 1800) \text{ s}$	$U=1\text{s}$		
		Pressure		$(-5 \sim 5) \text{ kPa}$	$U=3.4\text{Pa}$		
88	*Electromagnetic Horizontal Vibration Generator for Testing	Frequency	Verification Regulation for Electromagnetic Horizontal Vibration Generator for Testing JJG 1000	$(0.1 \sim 2000) \text{ Hz}$	$U_{\text{rel}}=0.012\%$		
		Acceleration		$(0.05 \sim 1000) \text{ m/s}^2$	$U_{\text{rel}}=3\%$		
		Displacement		$(0.1 \sim 50) \text{ mm}$	$U_{\text{rel}}=3\%$		
89	*Measuring instrumentations for strain gauge transducer	voltage ratio	Calibration specification for measuring instrumentations for strain gauge transducer JJF 1469	$(-100 \sim -0.1) \text{ mV/V}$	$U_{\text{rel}}=0.0056\%$		
				$(0.1 \sim 100) \text{ mV/V}$	$U_{\text{rel}}=0.0056\%$		
90	*Medical Centrifuges	Speed	Calibration Specification for Medical Centrifuges JJF 2004	$(20 \sim 30000) \text{ r/min}$	$U_{\text{rel}}=0.1\%$		
		Time		$(180 \sim 3600) \text{ s}$	$U_{\text{rel}}=0.3\%$		
		Temperature		$(-10 \sim 100) \text{ }^\circ\text{C}$	$U=0.3\text{ }^\circ\text{C}$		
		Noise		$(40 \sim 100) \text{ dB}$	$U=3\text{dB}$		
91	*Interfacial tensiometer	tension	Calibration Specification for Interface Tensiometer JJF 1464	$(10 \sim 1000) \text{ mN/m}$	$U_{\text{rel}}=0.2\%$		
		Length		$(0.09 \sim 1) \text{ mm}$	$U_{\text{rel}}=0.01\%$		
				$(1 \sim 100) \text{ mm}$	$U_{\text{rel}}=0.2\%$		
92	*Spring hammers	Energy	Calibration specification for spring hammers JJF 1475	$(0.2 \sim 0.5) \text{ J}$	$U=0.004\text{J}$		
				$(0.5 \sim 1.5) \text{ J}$	$U=0.01\text{J}$		



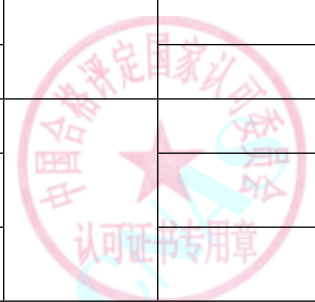
No. CNAS L0128

第 38 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(1.5~2.0) J	$U=0.02J$		
93	*Open Channel Flowmeter	Flow	The Online Calibration Specification of Open Channel Flowmeter JJF(Zhe)1080	(1~500) m <sup>3</sup> /h	$U_{rel}=3.2\%$		
				(500~1000) m <sup>3</sup> /h	$U_{rel}=3.8\%$		
94	*Shock measuring instruments	Acceleration	Calibration specification for shock measuring instruments JJF 1943	(100~10000) m/s <sup>2</sup>	$U_{rel}=2.5\%$		
				(0.015~20) ms			
		Pulse		(10000~100000) m/s <sup>2</sup> (0.015~20) ms	$U_{rel}=4.2\%$		
				(0.015~240) ms	$U_{rel}=0.5\%$		
95	*Brinell Hardness Testing Machines	Brinell hardness	Standard Test Method for Brinell Hardness of Metallic Materials ANNEXES A1 Verification Of Brinell Hardness Testing Machines ASTM E10	(50~125) HBW	$U_{rel}=1.9\%$		
				(125~225) HBW	$U_{rel}=1.1\%$		
				(225~650) HBW	$U_{rel}=1.0\%$		
		Force		(50~30000) N	$U_{rel}=0.3\%$		
		Length		Indentation Measuring System (0.1~10) mm	$U=1.5 \mu m$		
		Length		Indenter (1~10) mm	$U=1.8 \mu m$		
		Time	(1~60) s	$U=0.2s$			
96	*Vickers Hardness Testing Machines	Vickers hardness	Standard Test Methods For Vickers Hardness And Knoop Hardness Of Metallic Materials A1 Verification Of Vickers And Knoop Hardness Testing Machines A3	(175~800) HV0.05	$U_{rel}=6.8\%$		
				0.05HV~0.3HV, (175~240) HV	$U_{rel}=6.5\%$		
				0.05HV~0.3HV, (240~600) HV	$U_{rel}=2.5\%$		



No. CNAS L0128

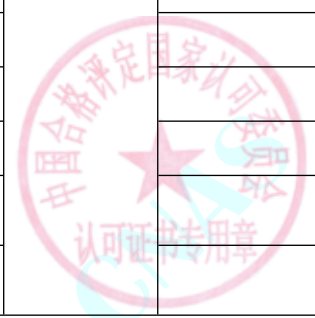
The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
			Standization Of Vickers And Knoop Indenters ASTM E92 A1 A3	0.05HV~0.3HV, (600~800) HV	$U_{rel}=2.0\%$			
				0.5HV~1HV, (175~240) HV	$U_{rel}=6.5\%$			
				0.5HV~1HV, (240~600) HV	$U_{rel}=2.0\%$			
				0.5HV~1HV, (600~800) HV	$U_{rel}=1.5\%$			
				3HV~30HV, (175~240) HV	$U_{rel}=2.0\%$			
				3HV~30HV, (240~600) HV	$U_{rel}=1.5\%$			
				3HV~30HV, (600~800) HV	$U_{rel}=1.5\%$			
				Force	(0.5~980.7) N			$U_{rel}=0.3\%$
				Length	Indentation Measuring System (0.1~1) mm			$U=1.5 \mu m$
				Time	Geometric Dimentions (0.001~20) mm			$U_{rel}=1.3\%$
97	Soap Film Flow meter	Flow	Verification Regulation of Soap Film Flow meter JJG 586	(0.02~9) m <sup>3</sup> /h	$U_{rel}=0.38\%$			
				(5~333.33) mL/min	$U_{rel}=0.73\%$			
		Capacity		(10~50) mL	$U_{rel}=0.17\%$			
				(50~200) mL	$U_{rel}=0.035\%$			
				(200~6000) mL	$U_{rel}=0.011\%$			



在线扫码获取验证

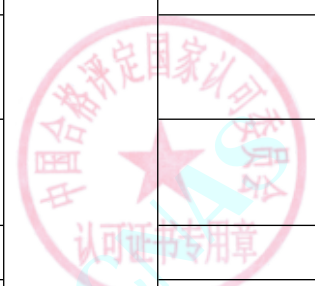
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
98	*Filter Integrity Testers	Pressure	Calibration Specification for Filter Integrity Testers JJF 2142	(0~800) kPa	U=0.7kPa		
		Flow		(5~125) mL/min	U <sub>rel</sub> =1.6%		
99	Reference Leaks	Flow	Calibration Specification for Reference Leaks by Soap Film Flowmeter JJF 1627	5mL/min~10L/min	U <sub>rel</sub> =2.2%		
100	Capacitance Diaphragm Vacuum Gauges	Vacuum	Calibration Specification for Capacitance Diaphragm Vacuum Gauges JJF 1503	(4×10 <sup>-1</sup> ~1×10 <sup>5</sup> ) Pa	U <sub>rel</sub> =1.9%±0.1%		
101	*Pressure Transducer(Static)	Pressure	Verification Regulation of Pressure Transducer(Static) JJG 860	(-100~-5) kPa	U=0.013%FS		
				0 kPa			
				5kPa~250MPa	U=0.013%FS		
102	*Body Scale	Mass	Calibration Specification for Body Scale JJF 2256	(0~600) kg	U=0.8g~0.30kg		
103	*Electromagnetic Flowmeters	Flow	Online Calibration Specification for Electromagnetic Flowmeters JJF 2216	DN50 (4~40)m <sup>3</sup> /h	U <sub>rel</sub> =1.8%		
				DN65 (12~60)m <sup>3</sup> /h	U <sub>rel</sub> =1.8%		
				DN80 (20~100)m <sup>3</sup> /h	U <sub>rel</sub> =1.8%		
				DN100 (30~150)m <sup>3</sup> /h	U <sub>rel</sub> =1.8%		
				DN125 (40~200)m <sup>3</sup> /h	U <sub>rel</sub> =1.8%		
				DN150 (60~300)m <sup>3</sup> /h	U <sub>rel</sub> =1.8%		
				DN200 (100~500)m <sup>3</sup> /h	U <sub>rel</sub> =1.7%		
				DN250 (160~800)m <sup>3</sup> /h	U <sub>rel</sub> =1.7%		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

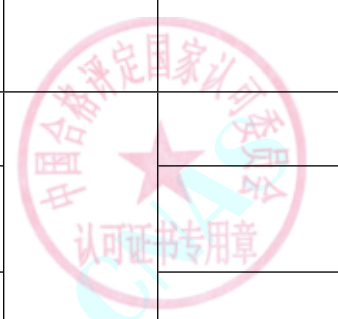
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				DN300 (200~1000)m <sup>3</sup> /h	$U_{rel}=1.7\%$		
104	*Deng-scales	Mass	Calibration Specification for Deng-scales JJF2254	(0~500) g	$U=(0.03\sim 1.6) g$		
三、Acoustics							
1	Sound Level Meters	Sound Pressure Level	V.R.of Sound Level Meters JJG 188	Acoustic Signal: (30dB~114dB),10Hz~200Hz	$U=0.5dB$		
				Acoustic Signal: (30dB~124dB), 250Hz~1.25kHz	$U=0.4dB$		
				Acoustic Signal: (30dB~114dB),1.6kHz~10kHz	$U=0.6dB$		
				Acoustic Signal: (30dB~114dB),12.5kHz~20kHz	$U=1.0dB$		
				Steady State Electrical Signal:(1dB~140dB), 31.5Hz~8kHz	$U=0.4dB$		
				Burst Signal:(10~140)dB,(0.25ms~200ms)	$U=0.2dB$		
		Time-aver Sound Level		Steady State Electrical signal :(10~140)dB, 4kHz	$U=0.2dB$		
				Burst Signal:(10~140)dB,4kHz,(0.25ms~200ms)	$U=0.2dB$		
		Attenuation Rate		F:(30~50)dB/s,4kHz	$U=0.4dB/s$		
	S:(3~6)dB/s,4kHz	$U=0.2dB/s$					



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
2	*Anechoic Rooms and Hemi-Anechoic Rooms	Sound Pressure Level	Calibration Specification for Acoustic Performance of Anechoic Rooms and Hemi-anechoic Rooms JJF 1147	Anechoic Rooms: (10~120)dB,20Hz~10kHz	U=0.8dB		
				Anechoic Rooms: (10~120)dB,10kHz~20kHz	U=1.2dB		
				Hemi-anechoic Rooms: (10~120)dB,20Hz~10kHz	U=1.0dB		
				Hemi-anechoic Rooms: (10~120)dB,10kHz~20kHz	U=1.5dB		
3	Sound Calibrator	Sound Pressure Level	V.R.of Sound Calibrator JJG 176	(94~124)dB,31.5Hz~16kHz	U=0.15dB		
		Frequency		31.5Hz~16kHz	U <sub>rel</sub> =0.2%		
		Total distortion + noise		0.1% ~5.0% ,31.5Hz~16kHz	U=0.1%		
4	*Microphone Preamplifiers	Sound Pressure Level	Calibration specification for Microphone Preamplifiers JJF 1137	Frequency Response: 120dB,10Hz~50kHz	U=0.3dB		
				Transmission Loss: 120dB,10Hz~50kHz	U=0.1dB		
5	Noise Level Statistical Analyzers	Sound Pressure Level	Verification Regulation of Noise Level Statistical Analyzers JJG 778	Acoustic Signal: (30dB~114dB),10Hz~200Hz	U=0.5dB		
				Acoustic Signal: (30dB~124dB), 250Hz~1.25kHz	U=0.4dB		
				Acoustic Signal: (30dB~114dB),1.6kHz~10kHz	U=0.6dB		

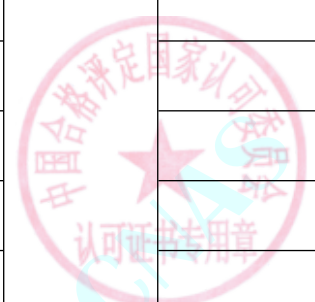


No. CNAS L0128

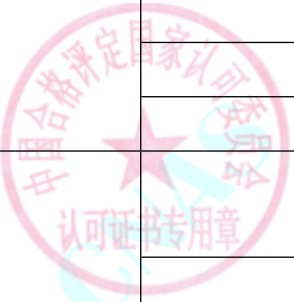
The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			ilac-M	Acoustic Signal: (30dB~114dB),12.5kHz~20kHz	U=1.0dB		
				Steady State Electrical Signal:(1dB~140dB), 31.5Hz~8kHz	U=0.2dB		
				Burst Signal:(10~140)dB,4kHz,(0.25ms~200ms)	U=0.2dB		
				F:(30~50)dB/s,4kHz	U=0.4dB/s		
				S:(3~6)dB/s,4kHz	U=0.2dB/s		
				Repetitive Burst Sound Signal: 10~140)dB,(0.25~200)ms	U=0.2dB		
Attenuation Rate							
Time-average Sound Level							
Percentile Level							
6	Working Standard Microphone	Sound Pressure Level	Verification regulation of Working Standard Microphones(Electrostatic Actuator Method) JJG 175	124dB, 250Hz	U=0.17dB		
				(80~130)dB,20Hz~4kHz	U=0.20dB		
				(80~130)dB,5kHz~8kHz	U=0.30dB		
				(80~130)dB,10kHz~20kHz	U=0.50dB		
				124dB,25kHz~40kHz	U=0.70dB		
7	*Acoustic Performance of	Reverberation Time	Calibration Specification for Acoustic Performance of	1s~20s	U <sub>rel</sub> =9%		



No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
	Reverberation Rooms	Sound pressure Level	Reverberation Rooms JJF 1143	(10~130)dB, 100Hz~8kHz	$U=0.60\text{dB}$			
8	*Ultrasonic Source for Medical Ultrasonic Diagnostic Equipment	Ultrasonic Power	Verification regulation of Ultrasonic Source for Medical Ultrasonic Diagnostic Equipment JJG 639	(10~100)mW	$U_{\text{rel}}=11\%$			
9	*Audio - frequency Signal Generator	Voltage	V.R.of Audio-frequency Signal Generator JJG 607	1mV~10mV (10Hz~20kHz)	$U_{\text{rel}}=0.3\%$			
				10mV~100V (10Hz~20kHz)	$U_{\text{rel}}=1.3\%$			
				Frequency	10Hz~20kHz			$U_{\text{rel}}=0.2\%$
		Resistance		0.1 $\Omega$ ~ 10k $\Omega$	$U_{\text{rel}}=0.3\%$			
				THD	0.01%~0.05%, (10Hz~20kHz)			$U=0.006\%$
					0.05%~0.1%, (10Hz~20kHz)			$U=0.012\%$
		0.1%~0.2%, (10Hz~20kHz)			$U=0.024\%$			
		Attenuation		1dB~10dB, 1kHz	$U=0.03\text{dB}$			
				10dB~80dB, 1kHz	$U=0.06\text{dB}$			
10	*Audio-frequency power amplifier	Sound pressure level	Calibration specification for audio-frequency power amplifiers JJF 1200	Frequency response: (60~120)dB, (20Hz~20kHz)	$U=0.3\text{dB}$			
				Gain control: (1~100)dB, (20Hz~20kHz)	$U=0.1\text{dB}$			

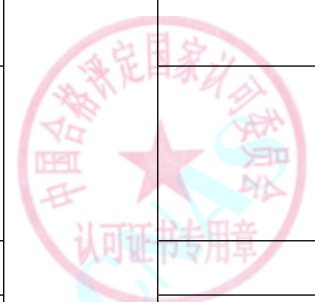


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

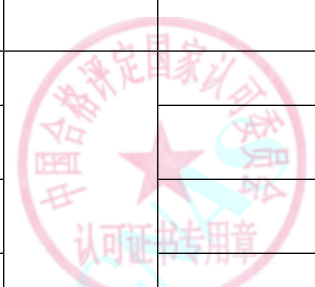
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Maximum gain: (1~100)dB, (20Hz~20kHz)	U=0.1dB		
				Gain difference: (1~100)dB, (20Hz~20kHz)	U=0.1dB		
11	*Transducers of Ultrasonic Flaw Detector	Pulse duration	Calibration Specification for Transducers of Ultrasonic Flaw Detector JJF 1294	(25~6500) ns	U <sub>rel</sub> =4.5%		
		Frequency		(0.5~15) MHz	U <sub>rel</sub> =4%		
		Sound Pressure Level		(1~130) dB	U=0.4dB		
		Index point		(0.5~80) mm	U <sub>rel</sub> =1.5%		
		Beam angle		35° ~85°	U <sub>rel</sub> =3%		
12	*Multi-channels sound analyzer	Frequency weighting and frequency response	calibration specification for multi-channels sound analyzers JJF 1288	Frequency weighting and frequency response:(1~140) dB, (10Hz~20kHz)	U=0.2dB		
				Level linearity:(1~140)dB, (10Hz~20kHz)	U=0.3dB		
				Burst response:(1~140) dB, (10~500)ms	U=0.2dB		
		Time-average Sound Level		Steady State Electrical signal and Repetitive Burst Sound Signal: (10~140) dB, 4kHz, (10~500)ms	U=0.2dB		
		Time-weighting F and S		F: (20~50) dB/s,4kHz	U=0.1dB/s		
				S:(3~6)dB/s, 4kHz	U=0.1dB/s		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Reverberation time		(0.75~22.5) s	$U_{rel}=1.2\%$		
		The frequency of the output signal		(10Hz~20kHz)	$U_{rel}=0.2\%$		
		Amplitude of the output signal		10mV~10V, (10Hz~20kHz)	$U_{rel}=0.3\%$		
		White noise and pink noise output signal frequency band sound level		(20~140)dB, (20Hz~20kHz)	$U=1.3dB$		
13	*Ultrasonic Phased Array Flow Detectors	Length	Calibration Specification of Ultrasonic Phased Array Flow Detectors JJF 1338	(3~55) mm	$U_{rel}=2\%$		
		Angle		$2.5^{\circ} \sim 90.0^{\circ}$	$U_{rel}=2\%$		
14	*Color Doppler Ultrasound Diagnostic Equipments	Velocity	Calibration Specification for Color Doppler Ultrasound Diagnostic Equipments—Blood Flow Measurement JJF 1438	(10~120) cm/s	$U_{rel}=2\%$		
15	*Ultrasonic Flow Detector	Bandwidth	Verification Regulation of Ultrasonic Flow Detectors JJG 746	(0.02~30)MHz	$U_{rel}=1.5\%$		
		Attenuator		(0.1~20)dB, (0.02MHz~30MHz)	$U=0.2dB$		
				(20~50)dB, (0.02MHz~30MHz)	$U=0.3dB$		
				(50~81)dB, (0.02MHz~30MHz)	$U=0.5dB$		



No. CNAS L0128

第 47 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Amplitude Linearity		(0.1~20.0)%, (0.02MHz~30MHz)	$U=1.7\%$		
		Timebase Linearity		(0.1~20.0)%, (0.02MHz~30MHz)	$U=1.5\%$		
16	*Ultrasonic Source for Ultrasonic Doppler Fetal Monitor	Sound Intensity	Verification Regulation of Ultrasonic Source for	(1~100)mW/cm <sup>2</sup>	$U_{rel}=12\%$		
		Heart Rate	Ultrasonic Doppler Fetal Monitor JJG 394	(50~250)times/min	$U=1\text{times/min}$		
17	*Ultrasonic Source of Ultrasonic Doppler Foetal Meters	Sound Intensity	Verification Regulation of Ultrasonic Source for Ultrasonic Doppler Fetal Meters JJG 893	(1~100)mW/cm <sup>2</sup>	$U_{rel}=12\%$		
四、Electromagnetism							
1	*Digital AC Electrical Parameters Meter	AC Voltage	C.S. for Digital AC Electrical Parameters Meter JJF 1491	(1~1000)V (45~65)Hz	$U_{rel}=0.05\%$		
		AC Current		(0.2~40)A (45~65)Hz	$U_{rel}=0.05\%$		
		AC Power		(0.2~40000)W (45~65)Hz	$U_{rel}=0.05\%$		
		Frequency		(45~65)Hz	$U=0.003\text{Hz}$		
		Phase (power factor)		0~360° (PF:0~1)	$U=0.0010$		
2	*Online Testers of Winding Temperature Rise	Resistance	Calibration Specification for Online Testers of Winding Temperature Rise JJF 1540	0.1 Ω ~ 10k Ω	$U_{rel}=0.02\%$		
3	*DC Digital Voltmeter	DC Voltage	C.S. of Digital multimeter JJF 1587	20mV~200mV	$U_{rel}=0.0012\%$	6.5 bits and above do not carry out field calibration	
				0.2V~2V	$U_{rel}=0.0006\%$		
				2V~20V	$U_{rel}=0.0004\%$		



No. CNAS L0128

第 48 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				20V~200V	$U_{rel}=0.0006\%$		
				200V~1000V	$U_{rel}=0.0007\%$		
4	*Impulse Voltage Testers for Winding Interturn Insulation	Peak Voltage	C.S. for Impulse Voltage Testers for Winding Interturn Insulation JJF 1691	(100~15000)V	$U_{rel}=3\%$		
		Wave front time		10ns~100ms	$U_{rel}=3\%$		
5	*DC Digital Amperemeter	DC Current	C.S. of Digital multimeter JJF 1587	20 $\mu$ A~200 $\mu$ A	$U_{rel}=0.012\%$	6.5 bits and above do not carry out field calibration	
				0.2mA~2mA	$U_{rel}=0.006\%$		
				2mA~20mA	$U_{rel}=0.004\%$		
				20mA~200mA	$U_{rel}=0.006\%$		
				0.2A~2A	$U_{rel}=0.01\%$		
				2A~10A	$U_{rel}=0.05\%$		
				10A~20A	$U_{rel}=0.12\%$		
6	*Grow-wire Apparatus	Temperature	C.S. for Grow-wire Apparatus JJF (ZE) 1050	(0~1000) °C	$U=1.0^{\circ}\text{C}$		
		Force value		(0.1~5)N	$U=0.01\text{N}$		
		Time		(5~3600)s	$U=0.26\text{s}$		
		length		(0.1~150)mm	$U=(0.006\sim0.03)\text{mm}$		
7	*DC Digital Ohmmeter	Resistance	C.S. of Digital multimeter JJF 1587	1 $\Omega$ ~ 10 $\Omega$	$U_{rel}=0.0024\%$		
				10 $\Omega$ ~ 100 $\Omega$	$U_{rel}=0.0012\%$		
				0.1k $\Omega$ ~ 1k $\Omega$	$U_{rel}=0.001\%$		
				1k $\Omega$ ~ 10k $\Omega$	$U_{rel}=0.001\%$		



No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			ilac-MRA CHINA NATIONAL ACCREDITATION SUPERVISOR FOR COMPETENCY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	10k Ω ~ 100k Ω	$U_{rel}=0.0012\%$		
				0.1M Ω ~ 1 M Ω	$U_{rel}=0.0022\%$		
				1M Ω ~ 10M Ω	$U_{rel}=0.0042\%$		
				10M Ω ~ 100M Ω	$U_{rel}=0.03\%$		
8	*Reference Ballasts	Impedance	Calibration Specification for Reference Ballasts JJF 1502	1 Ω ~ 10k Ω	$U_{rel}=0.1\%$		
		PF		(0~1)	$U=0.0012$		
9	*AC Digital Voltmeter	AC Votage	C.S. of Digital multimeter JJF 1587	20mV~200mV (40Hz~100kHz)	$U_{rel}=0.02\%$	6.5 bits and above do not carry out field calibration	
				0.2V~2V(40Hz~100kHz)	$U_{rel}=0.006\%$		
				2V~20V(40Hz~100kHz)	$U_{rel}=0.006\%$		
				20V~200V(40Hz~100kHz)	$U_{rel}=0.006\%$		
				200V~1000V(40Hz~30kHz)	$U_{rel}=0.01\%$		
10	*Electrical Fast Transient/Burst Simulators	Voltage	Calibration Specification for Electrical Fast Transient/Burst Simulators JJF 1672	(0.1~4)kV	$U_{rel}=3.4\%$	合格评定 国家认可 委员会 认可证书专用章	
		Rise Time		(0.5~20)ns	$U_{rel}=4.4\%$		
		Pulse Duration		(20~1000)ns	$U_{rel}=2.6\%$		
		Repetition Frequency		1kHz~2MHz	$U_{rel}=2.6\%$		
		Pulse Group Duration		0.1 μ s ~ 300ms	$U_{rel}=2.6\%$		
		Period		(240~360)ms	$U_{rel}=2.6\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
11	*AC Digital Amperemeter	AC Current	C.S. of Digital multimeter JJF 1587	10mA~200mA(40Hz~10kHz)	$U_{rel}=0.02\%$	6.5 bits and above do not carry out field calibration	
				0.2A~2A(40Hz~10kHz)	$U_{rel}=0.03\%$		
				2A~10A(40Hz~10kHz)	$U_{rel}=0.05\%$		
				10A~20A(45Hz~5kHz)	$U_{rel}=0.2\%$		
12	Tesla meter	Magnetic field intensity	Calibration Specification of (1mT~2.5T) Magnetometers JJF 1832	(1~2000) mT	$U_{rel}=0.08\%$		
13	*DC low resistance meters	Resistance	Verification Regulation of DC Low Resistance Meters JJG 837	10 $\mu\Omega$ ~ 1m $\Omega$	$U_{rel}=0.3\%$		
				1m $\Omega$ ~ 10m $\Omega$	$U_{rel}=0.06\%$		
				10m $\Omega$ ~ 1M $\Omega$	$U_{rel}=0.03\%$		
				1M $\Omega$ ~ 10M $\Omega$	$U_{rel}=0.06\%$		
14	*Proof Tracking Index Tester	AC voltage	Calibration Specification for Proof Tracking Index Tester JJF(ZE) 1087	(10~600)V,(45~65)Hz	$U_{rel}=0.28\%$		
		AC current		(0.1~10)A,(45~65)Hz	$U_{rel}=0.3\%$		
		Force value		(0.1~5)N	$U=0.01N$		
		Time		(5~3600)s	$U=0.26s$		
		length		(0.1~150)mm	$U=0.0052mm$		
		angle		(1~320) $^{\circ}$	$U=0.2^{\circ}$		
15	*Multifunction Standard Sources	DC Votage	Calibration Specification for Multifunction Standard Sources JJF 1638	10mV~200mV	$U_{rel}=0.0015\%$		
				0.2V~10V	$U_{rel}=0.0002\%$		



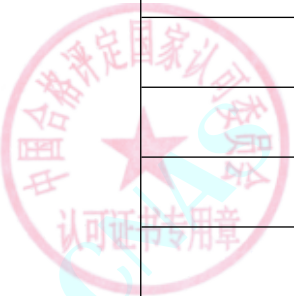
No. CNAS L0128

第 51 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				10V~1000V	$U_{rel}=0.0005\%$		
		DC Current		100 $\mu$ A~20 A	$U_{rel}=0.003\%$		
		DC Resistance		1 $\Omega$ ~2 $\Omega$	$U_{rel}=0.0020\%$		
				2 $\Omega$ ~20 $\Omega$	$U_{rel}=0.0012\%$		
				20 $\Omega$ ~200 $\Omega$	$U_{rel}=0.0010\%$		
				0.2k $\Omega$ ~2M $\Omega$	$U_{rel}=0.0012\%$		
				2M $\Omega$ ~20M $\Omega$	$U_{rel}=0.0030\%$		
				20M $\Omega$ ~100M $\Omega$	$U_{rel}=0.008\%$		
			AC Votage		10mV~20mV(50Hz~50kHz)	$U_{rel}=0.035\%$	
				10mV~20mV(50kHz~100kHz)	$U_{rel}=0.098\%$		
				20mV~0.5V(50Hz~20kHz)	$U_{rel}=0.0060\%$		
				20mV~0.5V(20kHz~100kHz)	$U_{rel}=0.020\%$		
				0.5V~60V(50Hz~1kHz)	$U_{rel}=0.0028\%$		
				0.5V~60V(1kHz~20kHz)	$U_{rel}=0.0025\%$		
				0.5V~60V(20kHz~100kHz)	$U_{rel}=0.0090\%$		
			60V~1000V(50Hz~20kHz)	$U_{rel}=0.0035\%$			

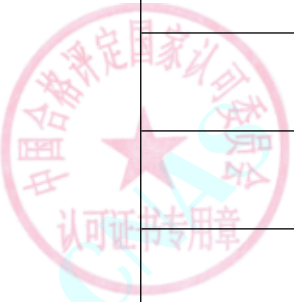


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC Current		60V~1000V(20kHz~100kHz)	$U_{rel}=0.0080\%$		
				100 μ A ~ 1mA(50Hz~5kHz)	$U_{rel}=0.06\%$		
				1mA~20A(50Hz~10kHz)	$U_{rel}=0.0075\%$		
16	*AC Voltage Source	Frequency	Calibration Specification for Stable Character of AC Voltage Stable Source JJF(military) 85	40Hz~1kHz	$U_{rel}=0.05\%$		
		Distortion		0.01%~30%	$U=0.1\%$		
		Voltage		15V~1000V	$U_{rel}=0.1\%$		
		Current		10mA~30A	$U_{rel}=0.1\%$		
				30A~400A	$U_{rel}=0.8\%$		
		Power		20W~3000W	$U_{rel}=0.2\%$		
				3kW~240kW	$U_{rel}=1.5\%$		
		Efficiency		(0.01%~120%),(20W~3000W)	$U_{rel}=0.2\%$		
				(0.01%~120%),(3kW~240kW)	$U_{rel}=1.5\%$		
		Input Power adjustment rate		(0.01%~100%),(15V~1000V)	$U_{rel}=0.1\%$		
Load adjustment rate	(0.01%~100%),(15V~1000V)	$U_{rel}=0.1\%$					
Output Voltage Stability	(0.01%~100%),(15V~1000V)	$U_{rel}=0.1\%$					

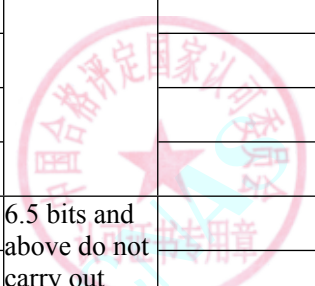


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
17	*DC Electronic Loads	DC Voltage	Calibration Specification for DC Electronic Loads JJF 1462	0.1V~1000V	$U_{rel}=0.01\%$		
		DC Current		1mA~20A	$U_{rel}=0.02\%$		
				20A~500A	$U_{rel}=0.12\%$		
		DC Resistance		0.1Ω~100kΩ	$U_{rel}=0.03\%$		
DC Power	1mW~30kW	$U_{rel}=0.2\%$					
18	*Spark tester	Voltage	Verification procedure for test equipment of rubber plastic wire and cable Part10:Spark tester JB/T 4278.10	(1~20)kV(50Hz)	$U_{rel}=1.2\%$		
19	*High Insulation Resistance Meter	Voltage	Calibration Specification for High Insulation Resistance Meters JJF 2225	(10~100)V	$U_{rel}=0.04\%$		
				(100~1000)V	$U_{rel}=0.60\%$		
		Resistance		1MΩ~10MΩ	$U_{rel}=0.26\%$		
				10MΩ~100MΩ	$U_{rel}=0.60\%$		
				100MΩ~1GΩ	$U_{rel}=1.2\%$		
				1GΩ~10GΩ	$U_{rel}=2.4\%$		
				10GΩ~100GΩ	$U_{rel}=5.8\%$		
1TΩ	$U_{rel}=5.9\%$						
20	*DC Standard Voltage Source (Generator)	DC Voltage	Calibration Specification for Multifunction Standard Sources JJF 1638	10mV~200.0000mV	$U=0.0008mV$	6.5 bits and above do not carry out	
				200.0000mV~329.9999mV	$U=0.0017mV$		

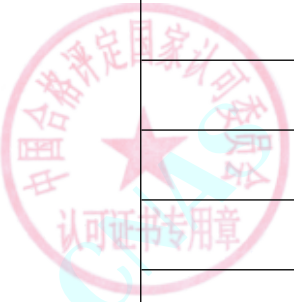


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				0.329999V~1.000000V	$U=0.000004V$	field calibration	
				1.000000V~3.299999V	$U=0.000015V$		
				3.299999V~20.00000V	$U=0.00007V$		
				20.00000V~32.99999V	$U=0.00020V$		
				32.99999V~200.0000V	$U=0.0010V$		
				200.0000V~329.9999V	$U=0.0030V$		
				329.9999V~500.000V	$U=0.004V$		
				500.000V~1000.000V	$U=0.006V$		
21	*AC Standard Voltage Source (Generator)	AC Voltage	Calibration Specification for Multifunction Standard Sources JJF 1638	20mV~200mV (10Hz~40Hz)	$U=0.015\%U_x+0.004mV$	6.5 bits and above do not carry out field calibration	
0.2V~2V (10Hz~40Hz)	$U=0.013\%U_x+0.00002V$						
2V~20V (10Hz~40Hz)	$U=0.013\%U_x+0.0002V$						
20V~200V (10Hz~40Hz)	$U=0.013\%U_x+0.002V$						
200V~1000V (10Hz~40Hz)	$U=0.013\%U_x+0.02V$						
20mV~200mV (40Hz~100Hz)	$U=0.012\%U_x+0.004mV$						
0.2V~2V (40Hz~100Hz)	$U=0.01\%U_x+0.00002V$						
2V~20V (40Hz~100Hz)	$U=0.01\%U_x+0.0002V$						
20V~200V (40Hz~100Hz)	$U=0.01\%U_x+0.002V$						

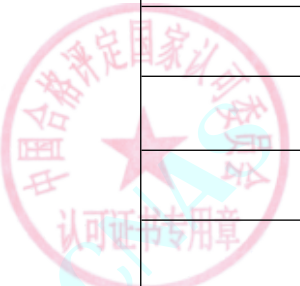


No. CNAS L0128

第 55 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				200V~1000V (40Hz~100Hz)	$U=0.01\%U_x+0.02V$		
				20mV~200mV (100Hz~2kHz)	$U=0.012\%U_x+0.002mV$		
				0.2V~2V (100Hz~2kHz)	$U=0.01\%U_x+0.00002V$		
				2V~20V (100Hz~2kHz)	$U=0.01\%U_x+0.0002V$		
				20V~200V (100Hz~2kHz)	$U=0.01\%U_x+0.002V$		
				200V~1000V (100Hz~2kHz)	$U=0.01\%U_x+0.02V$		
				20mV~200mV (2kHz~10kHz)	$U=0.014\%U_x+0.004mV$		
				0.2V~2V (2kHz~10kHz)	$U=0.01\%U_x+0.00002V$		
				2V~20V (2kHz~10kHz)	$U=0.01\%U_x+0.0002V$		
				20V~200V (2kHz~10kHz)	$U=0.01\%U_x+0.002V$		
				200V~1000V (2kHz~10kHz)	$U=0.01\%U_x+0.02V$		
				20mV~200mV (10kHz~30kHz)	$U=0.014\%U_x+0.004mV$		
				0.2V~2V (10kHz~30kHz)	$U=0.01\%U_x+0.00002V$		
				2V~20V (10kHz~30kHz)	$U=0.01\%U_x+0.0002V$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				20V~200V (10kHz~30kHz)	$U=0.01\%U_x+0.002V$		
				200V~1000V (10kHz~30kHz)	$U=0.01\%U_x+0.02V$		
				20mV~200mV (30kHz~100kHz)	$U=0.075\%U_x+0.02mV$		
				0.2V~2V (30kHz~100kHz)	$U=0.055\%U_x+0.0002V$		
				2V~20V (30kHz~100kHz)	$U=0.055\%U_x+0.002V$		
				20V~200V (30kHz~100kHz)	$U=0.055\%U_x+0.02V$		
				200V~1000V (30kHz~100kHz)	$U=0.055\%U_x+0.2V$		
				0.2V~200V (100kHz~300kHz)	$U=0.5\%U_x$		
				0.2V~200V (300kHz~1MHz)	$U=2\%U_x$		
				22	*DC Standard Current Source (Generator)		
2.00000mA~3.29999mA	$U=0.00008mA$						
3.29999mA~20.0000mA	$U=0.0003mA$						
20.0000mA~32.9999mA	$U=0.0022mA$						
32.9999mA~200.000mA	$U=0.009mA$						
200.000mA~329.999mA	$U=0.084mA$						
0.329999A~0.99999A	$U=0.00009A$						

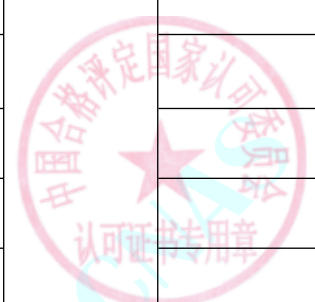


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				0.99999A~1.49999A	$U=0.00022A$		
				1.49999A~2.00000A	$U=0.00043A$		
				2.00000A~2.19999A	$U=0.00143A$		
				2.19999A~7.0000A	$U=0.0036A$		
				7.0000A~10.9999A	$U=0.0053A$		
				10.9999A~20.0000A	$U=0.0092A$		
23	*AC Standard Current Source (Generator)	AC Current	Calibration Specification for Multifunction Standard Sources JJF 1638	100 $\mu$ A~200 $\mu$ A (10Hz~2kHz)	$U=0.026\%Ix+ 0.02 \mu$ A	6.5 bits and above do not carry out field calibration	
0.2mA~2mA (10Hz~2kHz)	$U=0.026\%Ix+ 0.2 \mu$ A						
2mA~20mA (10Hz~2kHz)	$U=0.026\%Ix+ 0.002mA$						
20mA~200mA (10Hz~2kHz)	$U=0.026\%Ix+ 0.02mA$						
0.2A~2A (10Hz~2kHz)	$U=0.062\%Ix+ 0.0002A$						
2A~20A (10Hz~2kHz)	$U=0.082\%Ix+ 0.002A$						
100 $\mu$ A~200 $\mu$ A (2kHz~10kHz)	$U=0.026\%Ix+ 0.02 \mu$ A						
0.2mA~2mA (2kHz~10kHz)	$U=0.026\%Ix+ 0.2 \mu$ A						
2mA~20mA (2kHz~10kHz)	$U=0.026\%Ix+ 0.002mA$						
20mA~200mA (2kHz~10kHz)	$U=0.026\%Ix+ 0.02mA$						



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ( $k=2$ )	Note	Effective Date
				0.2A~2A (2kHz~10kHz)	$U=0.075\%Ix+0.0002A$		
				2A~20A (2kHz~10kHz)	$U=0.3\%Ix+0.002A$		
				100 $\mu$ A~200 $\mu$ A (10kHz~30kHz)	$U=0.062\%Ix+0.01 \mu A$		
				0.2mA~2mA (10kHz~30kHz)	$U=0.062\%Ix+0.01 \mu A$		
				2mA~20mA (10kHz~30kHz)	$U=0.062\%Ix+0.01 \mu A$		
				20mA~200mA (10kHz~30kHz)	$U=0.062\%Ix+0.01 \mu A$		
24	Electrical Meters for Measuring Alternating-current Electrical Energy	Alternating-current Electrical Energy	Verification Regulation of Electrical Meters for Measuring Alternating-current Electrical Energy JJG 596	$3 \times (57.7 \sim 380)V 3 \times (0.1 \sim 100)A$ (50Hz、60Hz)	$U_{rel}=0.14\%$		
25	Electromechanical Meters for Measuring Alternating-current Electrical Energy	Alternating-current Electrical Energy	Verification Regulation of Electromechanical Meters for Measuring Alternating-current Electrical Energy JJG 307	$3 \times (57.7 \sim 380)V 3 \times (0.1 \sim 100)A$ (50Hz、60Hz)	$U_{rel}=0.2\%$		
26	*Earth Resistance Meters	Resistance	Earth Resistance Meters JJG 366	$0.01 \Omega \sim 11111.110 \Omega$	$U_{rel}=0.4\%$		
27	*Electrical Meters for Measuring Alternating-current Electrical Energy	Alternating-current Electrical Energy	Verification Regulation of Direct Meters at Place Of Installation JJG (HU)49	$3 \times (57.7 \sim 380)V 3 \times (0.1 \sim 100)A$ (50Hz)	$U_{rel}=0.14\%$		



No. CNAS L0128

第 59 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
28	*Electromechanical Meters for Measuring Alternating-current Electrical Energy	Alternating-current Electrical Energy	Verification Regulation of Direct Meters at Place Of Installation JJG (HU)49	$3 \times (57.7 \sim 380)V$ $3 \times (0.1 \sim 100)A$ (50Hz)	$U_{rel}=0.21\%$		
29	*Electronic Insulating Resistance Meters	Voltage Resistance	Verification Regulation of Electronic Insulating Resistance Meters JJG 1005	50V~10kV	$U_{rel}=0.6\%$		
				100 $\Omega$ ~10M $\Omega$	$U_{rel}=0.3\%$		
				10M $\Omega$ ~100M $\Omega$	$U_{rel}=0.6\%$		
				100M $\Omega$ ~1G $\Omega$	$U_{rel}=1.2\%$		
				1000M $\Omega$ ~10G $\Omega$	$U_{rel}=2.4\%$		
				10G $\Omega$ ~100G $\Omega$	$U_{rel}=6\%$		
30	*Clamp Ammeters	AC Current	Calibration Specification for Clamp Ammeters JJF 1075	0.1A~100A(45Hz~400Hz)	$U_{rel}=0.05\%$		
				100A~1000A(45Hz~400Hz)	$U_{rel}=0.6\%$		
				1000A~2000A(45Hz~400Hz)	$U_{rel}=0.8\%$		
		DC Current		0.1A~100A	$U_{rel}=0.05\%$		
				100A~1000A	$U_{rel}=0.6\%$		
				1000A~2000A	$U_{rel}=0.8\%$		
31	*Voltage meter	DC Voltage	V.R.of Ammeter, Voltmeter, Power meter and Ohmmeter JJG 124	10mV~1000V	$U_{rel}=0.042\%$		
		AC Voltage		10mV~1000V (45Hz~65Hz)	$U_{rel}=0.042\%$		
32	*Current meter	DC current	V.R.of Ammeter, Voltmeter, Power meter and Ohmmeter	(0.001~30) A	$U_{rel}=0.044\%$		



在线扫码获取验证

No. CNAS L0128

第 60 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

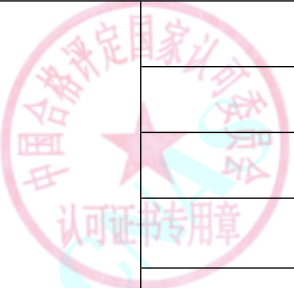
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC current	JJG 124	(0.001~30) A (45Hz~65Hz)	$U_{rel}=0.044\%$		
33	*Power meter	DC power	V.R.of Ammeter, Voltmeter, Power meter and Ohmmeter JJG 124	(0.3~15000)W	$U_{rel}=0.065\%$		
		AC power		(0.3~15000)W (45Hz~ 65Hz)	$U_{rel}=0.065\%$		
34	*Leakage current tester	DC Voltage	V.R. of Leakage Current Meter JJG 843	(10~300)V	$U_{rel}=0.11\%$		
		AC Voltage		(10~300)V(45Hz~ 400Hz)	$U_{rel}=0.11\%$		
		DC Leakage current		10 $\mu$ A~200mA	$U_{rel}=0.1\%$		
		AC Leakage current		10 $\mu$ A~200mA(20Hz~ 45Hz)	$U_{rel}=1.5\%$		
				10 $\mu$ A~200mA(45Hz~ 400Hz)	$U_{rel}=0.1\%$		
				20 $\mu$ A~ 200mA(400Hz~ 100kHz)	$U_{rel}=1.5\%$		
				20 $\mu$ A~20mA, (100kHz~1MHz)	$U_{rel}=1.5\%$		
		Dc resistance		(100~3000) $\Omega$	$U_{rel}=0.1\%$		
		Ac impedance		100 $\Omega$ ~20k $\Omega$ (20Hz~ 10kHz)	$U_{rel}=0.2\%$		
				100 $\Omega$ ~20k $\Omega$ (10kHz~1MHz)	$U_{rel}=0.4\%$		
35	*EARTH CONTI NUITY TESTER	Current of Earth Continu ity	V.R. of Earth Continuity Meter JJG 984	(1~60)A	$U_{rel}=0.12\%$		



No. CNAS L0128

第 61 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Earth Continuity Resistance		(10~1000) mΩ	$U_{rel}=0.24\%$		
		Time		10s~60min	$U_{rel}=1.2\%$		
36	*Insulation resistance meter	resistance	V.R. of Megohm -meter JJG 622	100Ω~1MΩ	$U_{rel}=2.0\%$		
				(1~100) MΩ	$U_{rel}=2.4\%$		
				(100~1000) MΩ	$U_{rel}=3\%$		
				(1~10) GΩ	$U_{rel}=4\%$		
		DC Voltage		(100~2500) V	$U_{rel}=1.2\%$		
37	*Withstanding Voltage Tester	DC Voltage	V.R. of Withstanding Voltage Testers JJG 795	VDC (0.5~15) kV	$U_{rel}=0.34\%$		
		AC Voltage		VAC (0.5~15) kV (50Hz)	$U_{rel}=0.58\%$		
		DC Current		IDC (0.5~199) mA	$U_{rel}=0.58\%$		
		AC Current		IAC (0.5~199) mA (50Hz)	$U_{rel}=1.2\%$		
		Time		1s~60min	$U_{rel}=1.2\%$		
38	Current Transformer	The Ratio difference of current	V.R. of Current Transformer for measurement JJG 313	2000A/5A, Rated current 5%	$U_{rel}=0.052\%$		
				2000A/5A, Rated current 20%	$U_{rel}=0.026\%$		
				2000A/5A, Rated current 100%,120%	$U_{rel}=0.017\%$		
		the phase difference of current		0~999.9', Rated current 5%	$U=1.9'$		
				0~999.9', Rated current 20%	$U=1.0'$		

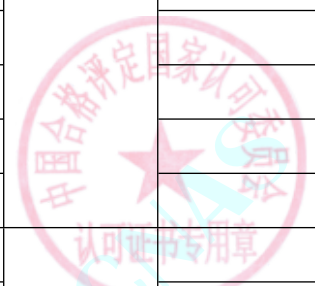


No. CNAS L0128

第 62 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.


No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				0~999.9', Rated current 100%,120%	$U=0.7'$		
39	Voltage Transformer	the Ratio difference of voltage	V.R.of Voltage Transformer for measurement JJG 314	10kV/100V, Rated voltage 20%	$U_{rel}=0.033\%$		
				10kV/100V, Rated voltage 50%	$U_{rel}=0.025\%$		
				10kV/100V, Rated voltage 80%,100%,120%	$U_{rel}=0.017\%$		
		the phase difference of voltage		0~999.9', Rated voltage 20%	$U=1.4'$		
		0~999.9', Rated voltage 50%		$U=1.0'$			
		0~999.9', Rated voltage 80%,100%,120%		$U=0.7'$			
40	*Surface Resistance Tester	Resistance	Calibration specification for surface resistance tester JJF 1285	(0.001~10)MΩ	$U_{rel}=0.46\%$		
				(10~100)MΩ	$U_{rel}=0.7\%$		
				(100~1×10 <sup>3</sup> )MΩ	$U_{rel}=1.2\%$		
				(1×10 <sup>3</sup> ~1×10 <sup>4</sup> )MΩ	$U_{rel}=2.3\%$		
				(1×10 <sup>4</sup> ~1×10 <sup>5</sup> )MΩ	$U_{rel}=5.8\%$		
				1×10 <sup>6</sup> MΩ	$U_{rel}=2.3\%$		
		DC Voltage		(10~100)V	$U_{rel}=0.1\%$		
		250V		$U_{rel}=0.12\%$			
41	D.C. Resistance Box/D.C. Standard Resistors	Resistance	Verification Regulation of D.C.Resistance Box JJG 982,Verification Regulation	0.001 Ω ~2 Ω			
				2 Ω ~20 Ω	$U=0.0008\%Rx+0.000014 \Omega$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			of D.C.Standard Resistors JJG 166	20 Ω ~ 200 Ω	$U=0.0008\%R_x+0.00005 \Omega$		
				0.2k Ω ~ 2k Ω	$U=0.0008\%R_x+0.000005k \Omega$		
				2k Ω ~ 20k Ω	$U=0.0008\%R_x+0.000005k \Omega$		
				20k Ω ~ 200k Ω	$U=0.0008\%R_x+0.00005k \Omega$		
				0.2M Ω ~ 2M Ω	$U=0.0008\%R_x+0.000001M \Omega$		
				2M Ω ~ 20M Ω	$U=0.0011\%R_x+0.0001M \Omega$		
				20M Ω ~ 200M Ω	$U=0.004\%R_x+0.01M \Omega$		
				0.2G Ω ~ 1G Ω	$U=0.06\%R_x+0.001G \Omega$		
				1G Ω ~ 2G Ω	$U=1.0\%R_x+0.01G \Omega$		
				2G Ω ~ 20G Ω	$U=3\%R_x+0.1G \Omega$		
				20G Ω ~ 100G Ω	$U=6\%R_x+0.1G \Omega$		
42	D.C.Potentiometers	DC voltage	Verification Regulation of D.C.Potentiometers JJG 123	10mV~13.11110V	$U_{rel}=0.007\%$		
43	D.C.Bridges	resistance	Verification Regulation of D.C.Bridges JJG 125	1m Ω ~ 100m Ω	$U_{rel}=0.59\%$		
				100m Ω ~ 1 Ω	$U_{rel}=0.15\%$		
				1 Ω ~ 10 Ω	$U_{rel}=0.059\%$		
				10 Ω ~ 100k Ω	$U_{rel}=0.0016\%$		
44	*Magnetic Particle Flaw Detectors	Magnetization Current	C.S. for Magnetic Particle Flaw Detectors JJF 1273	(500~6000) A	$U_{rel}=2.8\%$		

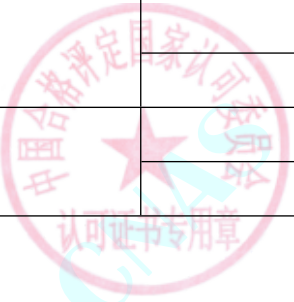


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
45	High Voltage Electrostatic voltmeter	Voltage	V.R.of High Voltage Electrostatic voltmeter JJG 494	600V~30kV, (DC, 45Hz~400Hz)	$U_{rel}=0.3\%$		
46	*Harmonic Analysis System	Voltage Measure	Calibration Specification for Harmonious and Flicker Analysis System JJF 1205	1V~1000V(Fundamental Frequency:45Hz~65Hz)	$U_{rel}=0.03\%$		
				1V~1000V(Fundamental Frequency:45Hz~65Hz)	$U_{rel}=0.07\%$		
		Current Measure		0.001A~20A(Fundamental Frequency:45Hz~65Hz)	$U_{rel}=0.05\%$		
				0.001A~20A(Fundamental Frequency:45Hz~65Hz)	$U_{rel}=0.09\%$		
		Voltage		(0.1~1000) V	$U_{rel}=0.1\%$		
		THD		(0.1~50) % (45Hz~800Hz)	$U_{rel}=0.1\%$		
		peak factor		1.30~1.50	$U_{rel}=3.3\%$		
		peak phase		(80~100)°	$U_{rel}=3.0\%$		
		resistance		(0.1~1) Ω	$U_{rel}=0.15\%$		
		inductance		(0.05~0.5) Ω	$U_{rel}=0.2\%$		
47	*Lightning Surge(Oscillatory waves)Test Signal	Voltage	Electromagnetic compatibility -Testing and measurement techniques -	1V~20kV	$U_{rel}=3.3\%$		
		Current		1A~20kA	$U_{rel}=3.3\%$		

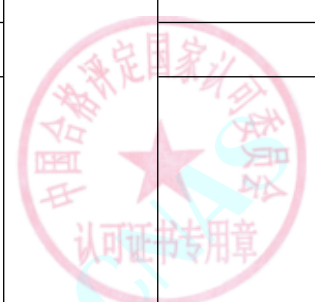


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Generator	Time	Surge immunity test (6.2.3 calibration of generator, 6.4 calibration of CDN, A.2.3 calibration of generator, A.4 calibration of CDN) GB/T 17626.5, Electromagnetic compatibility-Testing and measurement techniques- Part 12: Ring wave immunity test GB/T 17626.12	10ns~10ms	$U_{rel}=3\%$		
48	*Human body impedance simulation network	Input impedance	Methods of measurement of touch current and protective conductor current (Appendix K Network Performance and Calibration) GB/T 12113	100 Ω ~ 20k Ω (10Hz~10kHz)	$U_{rel}=0.2\%$		
				100 Ω ~ 20k Ω (10kHz~1MHz)	$U_{rel}=0.4\%$		
		Input-output voltage		1mV~10V (10Hz~100kHz)	$U_{rel}=0.2\%$		
				1mV~10V (100kHz~1MHz)	$U_{rel}=1.1\%$		
49	*Electrical fast transient/burst	Voltage	Electromagnetic compatibility-Testing and measurement techniques- Electrical fast transient/burst immunity test (6.2.3 Calibration of Electrical fast transient/burst generator, 6.3.2 Calibration of CDN, 6.4.2 Calibration of capacitive coupling clamp) GB/T 17626.4	1V~10kV	$U_{rel}=4.4\%$		
		Rise Time		3ns~20ns	$U_{rel}=6.2\%$		
		Time		20ns~1s	$U_{rel}=1.4\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
50	Electrostatic discharge simulators	Current	C.S. for Electrostatic Discharge Simulators JJF 1397	1A~60A	$U_{rel}=6\%$		
		Rise Time		0.5ns~1ms	$U_{rel}=13\%$		
		Voltage		1V~30kV	$U_{rel}=3.3\%$		
51	*Standard Capacitor	Capacitance	Verification Regulation of Standard Capacitors JJG 183	10pF~1 μ F(1kHz)	$U_{rel}=0.05\%$		
52	*Alternating Current Bridge (LCR Tester)	Resistance	V.R. of Alternating Current Bridge JJG 441	1m Ω (1kHz、100kHz)	$U_{rel}=12\%$		
				10m Ω (1kHz、100kHz)	$U_{rel}=3.0\%$		
				100m Ω (1kHz、100kHz)	$U_{rel}=0.6\%$		
				1 Ω、10 Ω、100 Ω、1k Ω、10k Ω、100k Ω (1kHz、100kHz)	$U_{rel}=0.12\%$		
		Capacitance		1pF、10pF、100pF(1kHz)	$U_{rel}=0.12\%$		
		Capacitance		0.001 μ F、0.01 μ F、0.1 μ F、1 μ F(1kHz)	$U_{rel}=0.06\%$		
		Capacitance		0.1 μ F~1 μ F(100Hz)	$U_{rel}=0.6\%$		
				1 μ F~1mF(100Hz)	$U_{rel}=2.3\%$		
		Inductance		0.0001H、1H(1kHz)	$U_{rel}=0.23\%$		
Inductance	0.001H、0.01H、0.1H(1kHz)	$U_{rel}=0.12\%$					
53	*Reference ballast	Impedac	Ballasts for tubular fluorescent lamps-Performance requirements Appendix C Reference	1 Ω ~10k Ω	$U_{rel}=0.1\%$		

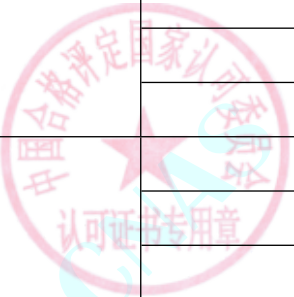


No. CNAS L0128

第 67 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		PF	ballast calibration GB/T 14044	0~1	$U=0.0012$		
54	*Power Frequency magnetic field Generator	Magnetic Field	Electromagnetic compatibility Testing and measurement techniques- Power Frequency magnetic field immunity test(part 6.) GB/T 17626.8	1 $\mu$ T~0.1mT	$U_{rel}=4\%$		
		Current		(1~1000)A (16.7Hz~60Hz)	$U_{rel}=1.5\%$		
		Coil factor		(0.4~3)/m	$U_{rel}=4\%$		
55	*Pulse magnetic field Generator (include Damped oscillatory magnetic field)	Magnetic Field	Electromagnetic compatibility Testing and measurement techniques- Pulse magnetic field immunity test(part 6.) GB/T 17626.9,Electromagnetic compatibility Testing and measurement techniques- Damped oscillatory magnetic field immunity test(part 6.) GB/T 17626.10	1 $\mu$ T~0.1mT	$U_{rel}=3.0\%$		
		Pulse Current		1A~20kA	$U_{rel}=3.3\%$		
		Time		1ns~1s	$U_{rel}=3\%$		
		Current		(1~1000)A	$U_{rel}=1.5\%$		
		Coil factor		(0.4~3)/m	$U_{rel}=4\%$		
56	*Resistance Strain Gauge Indicators	Resistance Strain	Verification Regulation of Resistance Strain Gauge Indicators JJG 623	(1~500) $\mu \epsilon$	$U=1 \mu \epsilon$		
				(500~1000) $\mu \epsilon$	$U=2 \mu \epsilon$		
				(1000~2000) $\mu \epsilon$	$U=3 \mu \epsilon$		
				(2000~100000) $\mu \epsilon$	$U_{rel}=0.15\%$		
57	*DC Stabilized Power Supplies	DC Voltage	Calibration Specification DC Stabilized Power Supplies JJF 1597	(0.01~1000) V	$U_{rel}=0.03\%$		
		DC Current		(0.01~20) A	$U_{rel}=0.08\%$		
				(20~500) A	$U_{rel}=0.12\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		load effect for DC Voltage power supplies	ilac-MRA INTERNATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	10mV~10V	$U_{rel}=0.01\%$		
		load effect for DC Current power supplies		10 $\mu$ A~10A	$U_{rel}=0.08\%$		
		source voltage effect for DC Voltage power supplies		10mV~10V	$U_{rel}=0.01\%$		
		source voltage effect for DC Current power supplies		10 $\mu$ A~10A	$U_{rel}=0.08\%$		
		PARD for DC Voltage power supplies		10mV~50V (20Hz~20MHz)	$U_{rel}=0.03\%$		
		PARD for DC Current power supplies		200 $\mu$ A~10A (20Hz~20MHz)	$U_{rel}=0.08\%$		
				(10~50) A (20Hz~20MHz)	$U_{rel}=0.12\%$		
58	*Clamp Earth Resistance Meter	Resistance		V.R.of Clamp Earth Resistance Meters JJG 1054	0.001 $\Omega$ ~0.01 $\Omega$	$U_{rel}=2\%$	
				0.01 $\Omega$ ~10k $\Omega$	$U_{rel}=0.3\%$		
59	*Process Calibrator	DC Voltage(measure)	Calibration Specification for Process Calibrators JJF 1472	10mV~300V	$U_{rel}=0.002\%$		



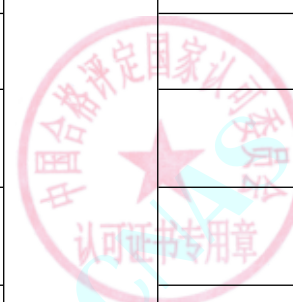
在线扫码获取验证

No. CNAS L0128

第 69 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		DC Voltage(measure)		100 μ A ~ 100mA	$U_{rel}=0.02\%$		
		AC Voltage(measure)		10mV ~ 300V (10Hz ~ 10kHz)	$U_{rel}=0.03\%$		
		AC Voltage(measure)		(0.1 ~ 200)mA (10Hz ~ 10kHz)	$U_{rel}=0.08\%$		
		Resistance(measure)		10 Ω ~ 100 k Ω	$U_{rel}=0.02\%$		
		Frequency(measure)		1Hz ~ 500kHz	$U_{rel}=0.008\%$		
		Temperature(thermocouple measure)		(-250 ~ -100)°C	$U=0.5^{\circ}\text{C}$		
				(-100 ~ 120)°C	$U=0.2^{\circ}\text{C}$		
				(120 ~ 1000)°C	$U=0.3^{\circ}\text{C}$		
				(1000 ~ 1700)°C	$U=0.6^{\circ}\text{C}$		
		Temperature(thermal resistance measure)		(-200 ~ 400)°C	$U=0.2^{\circ}\text{C}$		
				(400 ~ 850)°C	$U=0.3^{\circ}\text{C}$		
		DC Voltage(output)		0.1mV ~ 100V	$U_{rel}=0.002\%$		
		DC Current(output)		100 μ A ~ 100mA	$U_{rel}=0.008\%$		
		Resistance(output)		1 Ω ~ 100 k Ω	$U_{rel}=0.008\%$		



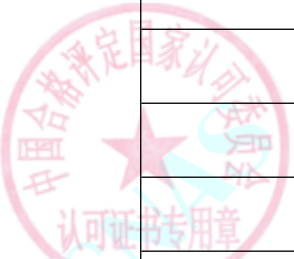
No. CNAS L0128

第 70 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Frequency(output)	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	1Hz~50kHz	$U_{rel}=0.008\%$		
		Temperature(thermocouple output)		(-250~-100)°C	$U=0.5^{\circ}\text{C}$		
				(-100~120)°C	$U=0.2^{\circ}\text{C}$		
				(120~1000)°C	$U=0.3^{\circ}\text{C}$		
				(1000~1800)°C	$U=0.6^{\circ}\text{C}$		
		Temperature(thermal resistance output)		(-200~400)°C	$U=0.1^{\circ}\text{C}$		
				(400~800)°C	$U=0.2^{\circ}\text{C}$		
60	*Standard Inductor	Inductor	Verification Regulation of Standard Inductors JJG 726	100 μ H、1mH、10mH、100mH、1H (1kHz)	$U_{rel}=0.05\%$		
61	*Dips Generator	Voltage	Calibration Specification for Dips Generator JJF (浙)1061	0.1V~1000V (DC、45Hz~400Hz)	$U_{rel}=0.4\%$		
		Time		0.4ns~200s	$U_{rel}=3\%$		
62	*Power quality test analyzer	Power	Verification code for power quality analyzer DL/T 1028	0.1mW~50kW (DC、40Hz~1kHz)	$U_{rel}=0.05\%$		
				50kW~25MW (DC、40Hz~1kHz)	$U_{rel}=0.7\%$		
		Voltage		0.1V~1000V (DC、40Hz~1kHz)	$U_{rel}=0.03\%$		
		Current		0.1mA~50A (DC、40Hz~1kHz)	$U_{rel}=0.03\%$		
				50A~2500A (DC、40Hz~1kHz)	$U_{rel}=0.6\%$		

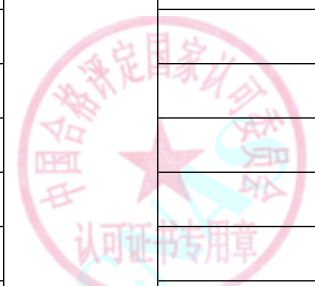


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Frequency		40Hz~1kHz	$U_{rel}=0.008\%$		
		Harmonious voltage content		(2~60 times): (0.01~20)% (DC、45Hz~65Hz)	$U=0.03\%$		
		Harmonious current content		(2~60 times): (0.01~20)% (DC、45Hz~65Hz)	$U=0.04\%$		
		Flicker		0.10~5.00 (DC、45Hz~65Hz)	$U_{rel}=2\%$		
63	*Safety performance comprehensive tester	DC Voltage(Withstanding)	Electronic Insulating Resistance Meters JJG 1005,V.R.of Withstanding Voltage Testers	(0.5~20) kV	$U_{rel}=0.4\%$		
		AC Voltage(Withstanding)	JJG 795,V.R. of Leakage Current Meter JJG 843,V.R. of Earth Continuity Meter JJG 984	(0.5~20) kV (50Hz)	$U_{rel}=0.6\%$		
		DC Current (Withstanding)		(0.1~199) mA	$U_{rel}=0.6\%$		
		AC Current(Withstanding)		(0.1~199) mA (50Hz)	$U_{rel}=1.2\%$		
		resistance(Insulation)		100 Ω ~10M Ω	$U_{rel}=0.3\%$		
				(10~100) M Ω	$U_{rel}=0.6\%$		
				(100~1000) M Ω	$U_{rel}=1.2\%$		
				(1~10) G Ω	$U_{rel}=2.4\%$		
				(10~100) G Ω	$U_{rel}=6\%$		
		Voltage ( IR)		50V~20kV	$U_{rel}=0.6\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

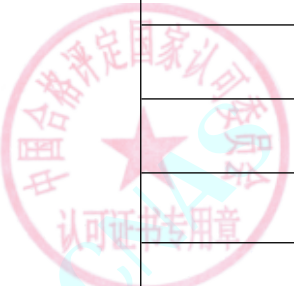
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		DC Voltage (Leakage)	ilac-MRA	(10~300) V	$U_{rel}=0.6\%$		
		AC Voltage (Leakage)		(10~300) V (50Hz~400Hz)	$U_{rel}=0.6\%$		
		DC current(Leakage)		(0.1~199) mA	$U_{rel}=0.5\%$		
		AC current(Leakage)		(0.1~199) mA(50Hz~400Hz)	$U_{rel}=0.6\%$		
		Current (Earth Continuity)		(1~60) A	$U_{rel}=0.12\%$		
		Resistance (Earth Continuity)		(10~1000) mΩ	$U_{rel}=0.24\%$		
		Time		10s~60min	$U_{rel}=1.2\%$		
64	*Digital Multimeter	DC Voltage	C.S. of Digital multimeter JJF 1587	20 μV~20mV	$U_{rel}=0.03\%$	国家合格评定 国家认可 母 认证 书 专 用 章	
				20mV~200mV	$U_{rel}=0.003\%$		
				0.2V~2V	$U_{rel}=0.0006\%$		
				2V~20V	$U_{rel}=0.0004\%$		
				20V~200V	$U_{rel}=0.0006\%$		
				200V~1000V	$U_{rel}=0.0007\%$		
		DC Current		10 μA~200 μA	$U_{rel}=0.012\%$		
				0.2mA~2mA	$U_{rel}=0.006\%$		
				2mA~20mA	$U_{rel}=0.004\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				20mA~200mA	$U_{rel}=0.006\%$		
				0.2A~2A	$U_{rel}=0.01\%$		
				2A~10A	$U_{rel}=0.05\%$		
				>10A~100A	$U_{rel}=0.08\%$		
		DC Resistance		1Ω~10Ω	$U_{rel}=0.0024\%$		
				10Ω~100Ω	$U_{rel}=0.0012\%$		
				0.1kΩ~1kΩ	$U_{rel}=0.001\%$		
				1kΩ~10kΩ	$U_{rel}=0.001\%$		
				10kΩ~100kΩ	$U_{rel}=0.0012\%$		
				0.1MΩ~1MΩ	$U_{rel}=0.0022\%$		
				1MΩ~10MΩ	$U_{rel}=0.005\%$		
				10MΩ~100MΩ	$U_{rel}=0.03\%$		
		AC Voltage		20mV~200mV (40Hz~20kHz)	$U_{rel}=0.02\%$		
				20mV~200mV (20kHz~50kHz)	$U_{rel}=0.03\%$		
				20mV~200mV (50kHz~100kHz)	$U_{rel}=0.07\%$		
				0.2V~200V(40Hz~20kHz)	$U_{rel}=0.006\%$		
				0.2V~200V(20kHz~50kHz)	$U_{rel}=0.01\%$		

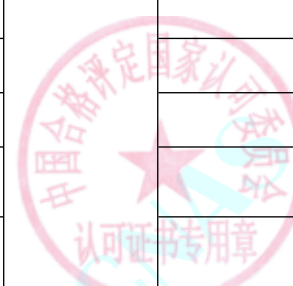


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

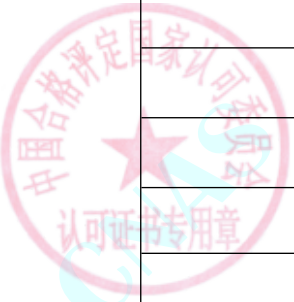
在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC Current	V.R. for Industry Frequency Single-Phase Meter JJG 440	0.2V~200V(50kHz~100kHz)	$U_{rel}=0.02\%$		
				200V~1000V(40Hz~1kHz)	$U_{rel}=0.01\%$		
				200V~1000V(1kHz~20kHz)	$U_{rel}=0.02\%$		
				200V~1000V(20kHz~30kHz)	$U_{rel}=0.1\%$		
				40 μ A~200mA(40Hz~1kHz)	$U_{rel}=0.02\%$		
				40 μ A~200mA(1kHz~5kHz)	$U_{rel}=0.05\%$		
				40 μ A~200mA(5kHz~10kHz)	$U_{rel}=0.2\%$		
				0.2A~2A(40Hz~1kHz)	$U_{rel}=0.03\%$		
				0.2A~2A(1kHz~5kHz)	$U_{rel}=0.06\%$		
				0.2A~2A(5kHz~10kHz)	$U_{rel}=0.8\%$		
				2A~10A(40Hz~1kHz)	$U_{rel}=0.05\%$		
				2A~10A(1kHz~5kHz)	$U_{rel}=0.1\%$		
				2A~10A(5kHz~10kHz)	$U_{rel}=0.4\%$		
				10A~100A(40Hz~1kHz)	$U_{rel}=0.1\%$		
10A~100A(1kHz~10kHz)	$U_{rel}=0.6\%$						
65	*Industry Frequency Single-	Power Factor	V.R. for Industry Frequency Single-Phase Meter JJG 440	0~1	$U=0.002$		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Phase Meter	Phase		0~360°	$U_{rel}=0.12\%$		
66	A.C. Resistance Boxes	resistance	Calibration Specification for A.C. Resistance Boxes JJF 1636	0.01 Ω ~ 0.1 Ω	$U_{rel}=3.5\%$		
				0.1 Ω ~ 1 Ω	$U_{rel}=0.38\%$		
				1 Ω ~ 100 Ω	$U_{rel}=0.06\%$		
				100 Ω ~ 100000 Ω	$U_{rel}=0.028\%$		
				100000 Ω ~ 10000000 Ω	$U_{rel}=0.036\%$		
				time constant	1ns ~ 100 μ s		
		residual resistance		1m Ω ~ 1 Ω	$U_{rel}=0.01\%$		
		residual inductance	10 μ H ~ 100 μ H	$U_{rel}=0.2\%$			
67	*Durability test equipment for household appliances and lamps	DC Voltage	C.S for Durability test equipment for household appliances and lamps SQI/JL-JF-60	0.1V ~ 1000V	$U_{rel}=0.01\%$		
		AC Voltage		0.1V ~ 1000V(40Hz~1kHz)	$U_{rel}=0.02\%$		
		DC Current		10mA ~ 30A	$U_{rel}=0.06\%$		
				30A ~ 2000A	$U_{rel}=2\%$		
		AC Current		10mA ~ 30A(40Hz~1kHz)	$U_{rel}=0.06\%$		
				30A ~ 2000A(40Hz~1kHz)	$U_{rel}=2\%$		
		impulse voltage		0.1kV ~ 20kV	$U_{rel}=3\%$		
impulse current	10A ~ 2000A	$U_{rel}=2\%$					

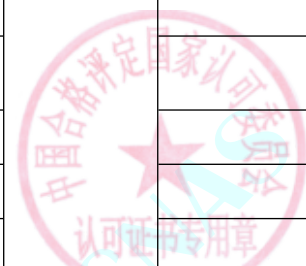


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Power	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR COMPETENCY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	1W~600kW	$U_{rel}=0.1\%$		
		PF		0~1	$U=0.002$		
		rotate speed		(10~10000)r/min	$U_{rel}=0.12\%$		
		time		1ms~24h	$U=0.006s$		
		temperature		(0~1000)°C	$U=0.3^{\circ}C$		
		force		(0.1~500)N	$U_{rel}=0.2\%$		
		size		(0.1~10000)mm	$U=0.03mm$		
68	*Energy consumption test equipment for refrigeration and washing appliances	voltage	Calibration Specification for Energy consumption test equipment for refrigeration and washing appliances SQI/JL-JF-61	0.01V~1000V	$U_{rel}=0.05\%$		
		current		0.001A~80A	$U_{rel}=0.05\%$		
		power		0.01W~80kW	$U_{rel}=0.05\%$		
		frequency		40Hz~30kHz	$U_{rel}=0.01\%$		
		PF		0~1	$U=0.0006$		
		THD		(0.1~20)% (50Hz~800Hz)	$U=0.5\%$		
		electric energy		0.01V~1000V; 0.001A~80A	$U_{rel}=0.05\%$		
		PT100		(-189.3442~660.323)°C	$U=0.2^{\circ}C$		
		thermocouple		(-189.3442~660.323)°C	$U=0.4^{\circ}C$		
		pressure		(-0.1~60)MPa	$U=0.2\%FS$		
		flow	0.001m <sup>3</sup> /h~40m <sup>3</sup> /h	$U_{rel}=0.2\%$			

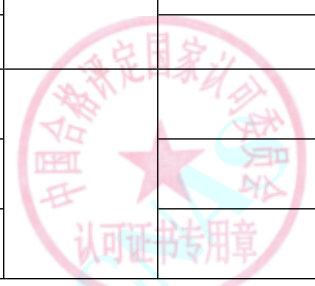


No. CNAS L0128

第 77 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		temperature	ilac-MRA CHINA NATIONAL ACCREDITATION REFERENCE FOR COFFEE QUALITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	(-25~100)°C	$U=0.2^{\circ}\text{C}$		
		humidity		20%RH~100%RH	$U=1\%\text{RH}$		
		wind speed		5m/s~25m/s	$U_{\text{rel}}=1\%$		
		time		0.01s~24h	$U_{\text{rel}}=0.1\%$		
		metering		1time~10000time	$U=1\%$ 次		
		rotate speed		(20~33000) r/min	$U_{\text{rel}}=0.02\%$		
69	*High-voltage withstand voltage tester	DC voltage	High-voltage withstand voltage tester JJG(军工) 18	(0.5~100)kV	$U_{\text{rel}}=0.6\%$		
		AC voltage		(0.5~100)kV(45~400)Hz	$U_{\text{rel}}=1.2\%$		
		DC current		(0.01~0.02)mA	$U_{\text{rel}}=1.2\%$		
				(0.02~1000)mA	$U_{\text{rel}}=0.6\%$		
		AC current		(0.01~0.02)mA(45~400)Hz	$U_{\text{rel}}=1.2\%$		
				(0.02~1000)mA(45~400)Hz	$U_{\text{rel}}=0.6\%$		
70	*Power Frequency A.C. Electrical Quantities Measuring Transducers	AC voltage	V.R.of Power Frequency A.C. Electrical Quantities Measuring Transducers JJG 126	0.1V~1000V(45Hz~65Hz)	$U_{\text{rel}}=0.03\%$		
		AC current		0.2A~50A(45Hz~65Hz)	$U_{\text{rel}}=0.03\%$		
				50A~2500A(45Hz~65Hz)	$U_{\text{rel}}=0.6\%$		



No. CNAS L0128

第 78 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC power		0.1W~50kW(0.1V~1000V, 0.2A~50A, 45Hz~65Hz)	$U_{rel}=0.06\%$		
				5W~2.5MW(0.1V~1000V, 50A~2500A, 45Hz~65Hz)	$U_{rel}=0.7\%$		
		Power Factor		0~1	$U=0.001$		
71	*Charge & Discharge of Battery Tester	DC Voltage	Calibration Specification for Charge&Discharge of Battery Tester JJF(军工) 108	10mV~1000V	$U_{rel}=0.01\%$		
		DC Current		10 $\mu$ A~20A	$U_{rel}=0.02\%$		
				20A~500A	$U_{rel}=0.15\%$		
				500A~2000A	$U_{rel}=0.5\%$		
		Resistance		0.1 $\Omega$ ~ 100 $\Omega$	$U_{rel}=0.4\%$		
				100 $\Omega$ ~ 1k $\Omega$	$U_{rel}=0.04\%$		
		Power		10mW~200W(1V~10V, 10mA~20A)	$U_{rel}=0.04\%$		
				200W~10kW(1V~1000V, 20A~2000A)	$U_{rel}=0.5\%$		
		Capability		0.1Ah~10Ah	$U_{rel}=0.06\%$		
				10Ah~1kAh	$U_{rel}=0.6\%$		
		Rise time		1 $\mu$ s~10ms	$U_{rel}=4\%$		
		temperature		-20 $^{\circ}$ C~100 $^{\circ}$ C	$U=0.2^{\circ}$ C		
72	Coil Number Testing Instructing	Coil Number	Calibration Specification for Coil Number Testing	(10~500)Coil Number	$U=1$ Coil Number		

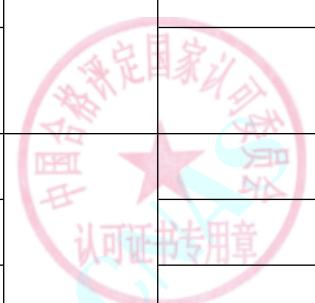


No. CNAS L0128

第 79 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			Instrument JJF(浙) 1065	(1000~2000)Coil Number	$U=3$ Coil Number		
				(3000~5000)Coil Number	$U=4$ Coil Number		
				(6000~7000)Coil Number	$U=5$ Coil Number		
				(7000~8000)Coil Number	$U=6$ Coil Number		
				10000 Coil Number	$U=7$ Coil Number		
73	*AC Charging Spot for Electric Vehicles	Electric energy	V.R.of AC Charging Spot for Electric Vehicles(for Trial Implementation) JJG 1148	$3 \times 220V$ , $3 \times (0.1A \sim 60)A$ , $0.5C \sim 1.0 \sim 0.5L$	$U_{rel}=0.2\%$		
74	*Off-board Charger for Electric Vehicles	Electric energy	V.R.of Off-board Charger for Electric Vehicles(for Trial Implementation) JJG 1149	$150V \sim 1000V$ , $2.5A \sim 250A$	$U_{rel}=0.2\%$		
75	DC shunt	resistance	Verification Regulation of DC shunts JJG 1069	$(0.0001 \sim 10) \Omega$ (Testing Current $\leq 5000A$ )	$U_{rel}=0.06\%$	DC standard source method	
				$(0.00001 \sim 0.0001) \Omega$ (Testing Current $\leq 5000A$ )	$U_{rel}=0.1\%$		
				$(0.000001 \sim 0.00001) \Omega$ (Testing Current $\leq 5000A$ )	$U_{rel}=0.12\%$		
76	*Damped oscillatory wave generator	short circuit current	Electromagnetic compatibility—Testing and measurement techniques—Damped oscillatory wave immunity test GB/T 17626.18	$(1 \sim 80)A$	$U_{rel}=3.5\%$		
		open circuit voltage		$(0.2 \sim 4)kV$	$U_{rel}=3.7\%$		
		Time		$10ns \sim 10s$	$U_{rel}=3.1\%$		

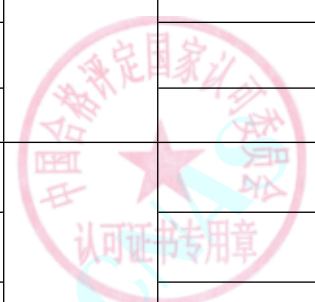


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Frequency		1Hz~50MHz	$U_{rel}=3.1\%$		
77	*Verification Regulation of Loop Resistance Testers	Resistance	Verification Regulation of Loop Resistance Testers JJG 1052	$1\mu\Omega\sim 0.1m\Omega$	$U_{rel}=0.12\%$		
				$0.1m\Omega\sim 600m\Omega$	$U_{rel}=0.06\%$		
		Current		$100A\sim 600A$	$U_{rel}=0.13\%$		
		Time		$10s\sim 3600s$	$U_{rel}=1.3\%$		
78	*Verification Regulation of DC Resistance Meters	Resistance	Verification Regulation of DC Resistance Meters JJG1205	$0.01m\Omega\sim 0.1m\Omega$	$U_{rel}=0.12\%$		
				$0.1m\Omega\sim 100k\Omega$	$U_{rel}=0.06\%$		
		Current		$1mA\sim 100A$	$U_{rel}=0.2\%$		
79	*Battery Internal Resistance Testers	Resistance	Calibration Specification for Battery Internal Resistance Testers JJF 1620	$1m\Omega\sim 10m\Omega$	$U_{rel}=0.2\%$		
				$10m\Omega\sim 3k\Omega$	$U_{rel}=0.06\%$		
		Voltage		$\pm(0.1\sim 800)V$	$U_{rel}=0.003\%$		
80	*Moment Disconnection Tester	Resistance	Calibration Specification for Moment Disconnection Tester JJF (军工) 198	$1\Omega\sim 5k\Omega$	$U_{rel}=1.3\%$		
		DC Voltage		$3V\sim 30V$	$U_{rel}=0.7\%$		
		DC Electric current		$10mA\sim 1A$	$U_{rel}=0.7\%$		
		Time		$0.01\mu s\sim 100\mu s$	$U_{rel}=0.6\%$		
81	*Standard AC Power Source	AC Power	Verification Regulation for Standard AC Power Source JJG (军工) 6	$5W\sim 30kW, (10Hz\sim 10kHz)$	$U_{rel}=0.06\%$		
		AC Voltage		$10mV\sim 200V, (10Hz\sim 40Hz)$	$U_{rel}=0.02\%$		
				$10mV\sim 200V, (40Hz\sim 10kHz)$	$U_{rel}=0.013\%$		

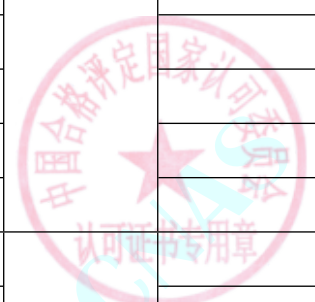


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC current	ilac-M	200V~1000V, (10Hz~10kHz)	$U_{rel}=0.015\%$		
				1mA~100A, (10Hz~40Hz)	$U_{rel}=0.02\%$		
		1mA~100A, (40Hz~10kHz)		$U_{rel}=0.015\%$			
		Phase		(-120~180)°	$U=0.02\%$		
		Frequency		10Hz~10kHz	$U_{rel}=0.06\%$		
82	*Roadvehicles-Electrical Transient Conduction Disturbance Simulators	DC Voltage	Calibration Specification of Road vehicles-Electrical Transient Conduction Disturbance Simulators JJF(电子) 0019	(10~60)V	$U_{rel}=0.6\%$		
		Pulse voltage		P1,P2,P4,P5:(0.1~700)V	$U_{rel}=3.2\%$		
				P3:(0.1~250)V	$U_{rel}=4.6\%$		
		Time		(0.5~20)ns	$U_{rel}=4.4\%$		
20ns~2s	$U_{rel}=3.2\%$						
83	*Test Devices for Action Characteristics of Low Voltage Circuit Breakers	current	Calibration Specification for Test Devices for Action Characteristics of Low Voltage Circuit Breakers JJF 1799	1A~2kA	$U_{rel}=0.14\%$		
				2kA~10kA	$U_{rel}=0.4\%$		
				10kA~40kA	$U_{rel}=3.2\%$		
				40kA~90kA	$U_{rel}=6.2\%$		
		time		1ms~1s	$U_{rel}=2\%$		
				1s~1h	$U_{rel}=0.3\%$		
84	*Impulse Current Tester	current	Calibration Specification for Impulse Current Tester JJF (浙)1110	1kA~40kA	$U_{rel}=3.2\%$		
				40kA~90kA	$U_{rel}=6.2\%$		



No. CNAS L0128

第 82 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		time		10ns~100ms	$U_{rel}=3.8\%$		
85	*Cable Testers	AC Voltage	Calibration Specification for Cable Testers JJF 1457	10V~1kV (50Hz、60Hz)	$U_{rel}=0.3\%$		
				1kV~1.5kV(50Hz、60Hz)	$U_{rel}=0.7\%$		
		Distortion		0.1%~20%	$U=0.3\%$		
		AC Current		(0.1~2)mA	$U_{rel}=0.4\%$		
		Voltage(IR)		10V~1kV	$U_{rel}=0.2\%$		
				1kV~1.5kV	$U_{rel}=0.6\%$		
		resistance(Insulation)		10kΩ~10MΩ	$U_{rel}=0.5\%$		
				10MΩ~100MΩ	$U_{rel}=0.7\%$		
				100MΩ~200MΩ	$U_{rel}=1.3\%$		
		Resistance		0.1Ω~1MΩ	$U_{rel}=0.4\%$		
Capacitance	1pF~1μF	$U_{rel}=0.3\%$					
86	*Surge Simulators	Voltage	Calibration Specification for Surge Simulators JJF 1741	(0.5~4)kV	$U_{rel}=3.5\%$		
		Current		(0.25~2)kA	$U_{rel}=4.4\%$		
		Time		50ns~100s	$U_{rel}=3.2\%$		
87	*Power Frequency Magnetic Field Simulators	Current	Calibration Specification for Power Frequency Magnetic Field Simulators JJF 1737	10mA~1600A(16Hz~60Hz)	$U_{rel}=2\%$		
		Magnetic Field Intensity		(1~1000)A/m (16Hz~50Hz)	$U_{rel}=12\%$		



No. CNAS L0128

第 83 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(1~1000)A/m (50Hz~60Hz)	$U_{rel}=6\%$		
88	*Testers for Relaying Protection	DC Voltage	Verification Regulation of Testers for Relaying Protection JJG 1112	10mV~1000V	$U_{rel}=0.004\%$		
		AC Voltage		10mV~1000V(50Hz~20kHz)	$U_{rel}=0.010\%$		
		DC Current		10 $\mu$ A~100A	$U_{rel}=0.008\%$		
		AC Current		100 $\mu$ A~100A(50Hz~5kHz)	$U_{rel}=0.016\%$		
		Harmonic Distortion		(0.1~20)%	$U=0.1\%$		
		Phase		0° ~360°	$U=0.02^\circ$		
		Time		1ms~9999.9s	$U_{rel}=0.02\%$		
		Rate		10Hz~1000Hz	$U_{rel}=0.0003\%$		
89	*AC Electronic Load	Voltage	Calibration Specification for AC Electronic Load JJF(电子)0002	0.1V~750V(40Hz~1000Hz)	$U_{rel}=0.03\%$		
		Current		0.1A~90A(40Hz~1000Hz)	$U_{rel}=0.08\%$		
		Frequency		40Hz~1000Hz	$U_{rel}=0.06\%$		
		Resistance		2.5 $\Omega$ ~1000 $\Omega$	$U_{rel}=0.2\%$		
		Power		1W~13kW(40Hz~1000Hz)	$U_{rel}=0.2\%$		
		Power Factor		0.01~1.00	$U=0.02$		
90	*Magnetic Yoke Detector	Magnetizing Current	Calibration Specification for Magnetic Yoke Detectors JJF1458	(0.1~20)A	$U_{rel}=5\%$		
		Lifting Force		10N~300N	$U_{rel}=4\%$		



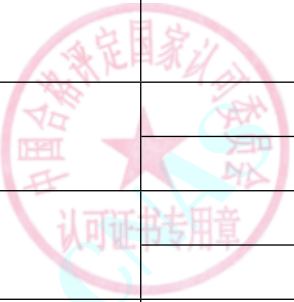
在线扫码获取验证

No. CNAS L0128

第 84 页 共 156 页

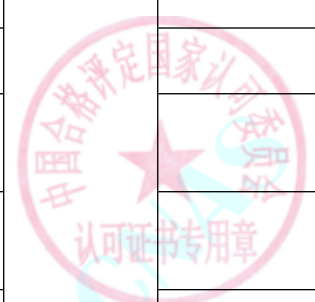
The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
91	*High Current Generator	AC Current	Calibration Specification of High Current Generator JJF(Mechanic) 1037	1A~2kA	$U_{rel}=0.15\%$		
92	Contactless Electrostatic Voltage Measuring Instruments	Electrostatic Voltage	Calibration Specification for Contactless Electrostatic Voltage Measuring Instruments JJF 1517	100V~20kV	$U_{rel}=0.6\%$		
93	*Medical Leakage Current Testers	Leakage Current	Verification Regulation of Medical Leakage Current Testers JJG 1188	DC: (0.01~20) mA	$U_{rel}=0.2\%$		
				AC: (0.01~20) mA (50Hz/60Hz)	$U_{rel}=0.5\%$		
		DC resistance		(0.5~2) kΩ	$U_{rel}=0.4\%$		
		Input impedance		(0.5~2) kΩ	$U_{rel}=0.5\%$		
		Transmission Impedance Frequency Response		(-70~0) dB (10Hz~1MHz)	$U=0.2dB$		
		Voltage		AC: (0.01~600) V (50Hz/60Hz)	$U_{rel}=0.5\%$		
94	*Eddy Current Conductivity Meters	Conductivity	Calibration Specification for Eddy Current Conductivity Meters JJF 1692	0.58 MS/m~58MS/m	$U=(0.09~0.32) MS/m$		
95	*Surface Probe Type Eddy Current Flaw Detector	Frequency	Calibration Specification of Eddy Current Flaw Detector JJF(JG) 265	10Hz~20MHz	$U_{rel}=1.2\%$		
		Voltage		100mV~10V	$U_{rel}=4.6\%$		
96	AC/DC High Voltage Meters	DC Voltage	Calibration Specification of AC/DC High Voltage Meters JJF(Zhe)1052	1kV~30 kV	$U_{rel}=0.14\%$		
		AC Voltage		1kV~20 kV (50Hz)	$U_{rel}=0.1\%$		
97	*AC/DC High	DC Current	Calibration Specification of	(0.1~2) kA	$U_{rel}=0.024\%$		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Current Measuring Instruments	AC Current	AC/DC High Current Measuring Instruments JJF(HuSuZheWan)4007	(0.1~2) kA (Power frequency)	$U_{rel}=0.026\%$		
98	*Power Analyzers	AC Voltage	Calibration Specification for Power Analyzers JJF 2040	10mV~1000V (50Hz~100kHz)	$U_{rel}=0.03\%$		
		AC Current		1mA~100A (50Hz~10kHz)	$U_{rel}=0.06\%$		
		AC Power		1mW~100kW (50Hz~10kHz)	$U_{rel}=0.10\%$		
		Phase		0° ~360°	$U=0.03^\circ$		
		Frequency		10Hz~1MHz	$U_{rel}=0.02\%$		
		DC Voltage		10mV~1000V	$U_{rel}=0.03\%$		
		DC Current		1mA~100A	$U_{rel}=0.05\%$		
		DC Power		1mW~100kW	$U_{rel}=0.05\%$		
五、Radio							
1	*EMI TEST RECEIVER	reference frequency	Calibration Specification for EMI Testing Receivers JJF 1144	10MHz	$U_{rel}=6 \times 10^{-10}$		
		IF output frequency		0.1MHz~1GHz	$U_{rel}=6 \times 10^{-10}$		
		1st IF image frequency interference		(0~130)dB(0.1MHz~1GHz)	$U=5\text{dB}$		
		2nd IF image frequency interference		(0~130)dB(0.1MHz~1GHz)	$U=5\text{dB}$		
		IF rejection		(0~130)dB(0.1MHz~1GHz)	$U=5\text{dB}$		



在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		bandwidth of 6dB filter	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF APPROVED CALIBRATION CERTIFICATION CENTERS	200Hz,9kHz,120kHz,1MHz	$U_{rel}=1.5\%$		
		noise indication		(-40~30)dB $\mu$ V(0.1MHz~500MHz)	$U=3$ dB		
		attenuator		(0~110)dB(0.1MHz~1GHz)	$U=0.5$ dB		
		level measurement		(30~120)dB $\mu$ V(0.1MHz~1GHz)	$U=0.30$ dB		
		pulse characteristic		9kHz~30MHz(-10~40)dB	$U=0.8$ dB		
				30MHz~1GHz(-10~40)dB	$U=1.0$ dB		
		input VSWR		1~10(0.1MHz~1GHz)	$U_{rel}=7\%$		
2	*Low-frequency volt-meters	Voltage	C.S. for Low-frequency volt-meters JJF 1925	1mV ~10mV(10Hz~1MHz)	$U_{rel}=1.4\%$		
				10mV ~100V(10Hz~1MHz)	$U_{rel}=0.4\%$		
3	*Oscilloscope voltage probe	Voltage decay ratio	C.S. for Oscilloscope Voltage Probes JJF 1437	1:1~1:10000 (1V~30000V)	$U_{rel}=0.7\%$		
		Frequency response		0.1V~50V (50kHz~100MHz)	$U=1.0$ dB		
		Resistance		50 $\Omega$ ~100M $\Omega$	$U_{rel}=0.6\%$		
		Rise time		1ns~10ms	$U_{rel}=10\%$		
4	*TDMA-GSM Radio Communication	SG frequency	Calibration Specification for TDMA-GSM Radio Communication Testers	10MHz ~2.7GHz	$U_{rel}=1.2 \times 10^{-8}$		
		SG Level		(-97~13)dBm(10MHz~2.7GHz)	$U=0.26$ dB		



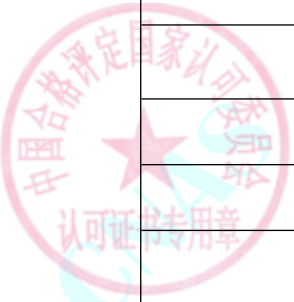
No. CNAS L0128

第 87 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Testers		JJF 1131	(-107~-97)dBm(10MHz~2.7GHz)	U=0.38dB		
				(-117~-107)dBm(10MHz~2.7GHz)	U=0.51dB		
				(-120~-117)dBm(10MHz~2.7GHz)	U=0.65dB		
		SG phase (peak)	0.3° ~60°	U=1.7°			
		SG phase (rms)	0.3° ~60°	U=0.5°			
		SG modulate frequency	1Hz~250kHz	U=5Hz			
		SG modulate level	0dB~10dB(1Hz~250kHz)	U=0.2dB			
		Analyzer frequency	10MHz ~2.7GHz	$U_{rel}=1.6 \times 10^{-8}$			
		Analyzer level	(-20~10)dBm (10MHz~2.7GHz)	U=0.28dB			
			(-70~-20)dBm (10MHz~2.7GHz)	U=0.30dB			
		Analyzer phase (peak)	0.3° ~60°	U=1.7°			
		Analyzer phase (rms)	0.3° ~60°	U=0.5°			
		Analyzer modulate frequency	1Hz~250kHz	U=5Hz			

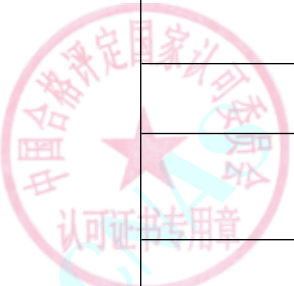


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date		
5	*CDMA Digital Radio Communication Testers	SG frequency	Calibration Specification of CDMA Digital Radio Communication Testers - JJF 1177	10MHz ~2.7GHz	$U_{rel}=1.2 \times 10^{-8}$				
		SG Level		(-97~13)dBm(10MHz~2.7GHz)	$U=0.26dB$				
				(-107~-97)dBm(10MHz~2.7GHz)	$U=0.38dB$				
				(-117~-107)dBm(10MHz~2.7GHz)	$U=0.51dB$				
				(-120~-117)dBm(10MHz~2.7GHz)	$U=0.65dB$				
				0.9~1.0	$U=0.001$				
		SG wave quality							
		SG EVM		1.5%~50%	$U=2.0\%$				
		SG modulate frequency		1Hz~250kHz	$U=5Hz$				
		SG phase (rms)		0.3° ~60°	$U=0.5^\circ$				
		Analyzer frequency		10MHz ~2.7GHz	$U_{rel}=1.6 \times 10^{-8}$				
				Analyzer level	(-20~10)dBm(10MHz~2.7GHz)	$U=0.28dB$			
(-70~-20)dBm(10MHz~2.7GHz)	$U=0.30dB$								
Analyzer wave quality	0.9~1.0	$U=0.001$							

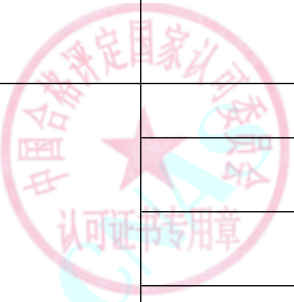


No. CNAS L0128

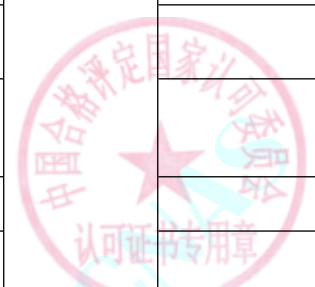
The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Analyzer EVM		1.5%~50%	$U=2.0\%$		
		Analyzer phase (rms)		$0.3^\circ \sim 60^\circ$	$U=0.5^\circ$		
		Analyzer modulate frequency		1Hz~250kHz	$U=5\text{Hz}$		
6	*Vector Signal Generator	Frequency	Calibration Specification for Vector Signal Generator JJF 1174	250kHz~20GHz	$U_{\text{rel}}=1 \times 10^{-8}$		
		Output High Level		(-20~30)dBm (10MHz~6GHz)	$U=0.4\text{dB}$		
		Output Low Level		(0~110)dB (2GHz~6GHz)	$U=0.3\text{dB}$		
		GSM/CDMA Modulated Frequency Error		1Hz~250kHz	$U=5\text{Hz}$		
		CDMA EVM		1.5%~50%	$U=2.0\%$		
		CDMA Wave Quality Rho		0.9~1.0	$U=0.001$		
		GSM/CDMA Phase Error(RMS)		$0.3^\circ \sim 60^\circ$	$U=0.5^\circ$		
7	*WLAN Test Set	Frequency	C.S. for WLAN Test Set JJF 1277	10MHz~8GHz	$U_{\text{rel}}=1.2 \times 10^{-8}$		
		Level		(-100~20)dBm (10MHz~3.6GHz)	$U=0.28\text{dB}$		
				(-100~20)dBm (3.6GHz~8GHz)	$U=0.31\text{dB}$		
		Spectral Duration		(-90~0)dBc (10MHz~8GHz)	$U=1.2\text{dB}$		



在线扫码获取验证

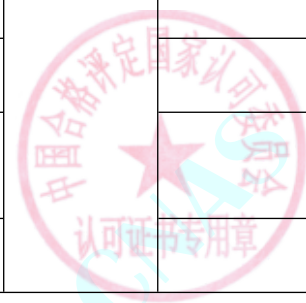
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Single-side Phase Noise		(-90~0)dBc (frequency deviation:10Hz~2MHz)	U=3dB		
		EVM		0~8%(BW:5MHz~80MHz)	U=0.4%		
				0~8%(BW:80MHz~160MHz)	U=1.2%		
		Frequency Error		-100kHz~100kHz	U=3.3Hz		
		Level Measure		(-90~10)dBm (200kHz~6GHz)	U=0.57dB		
		EVM Measure		0~8%(BW:5MHz~160MHz)	U=0.7%		
		Frequency Error Measure		-100kHz~100kHz	U=9.2Hz		
8	*Bluetooth Test Set	Frequency	C.S. for Bluetooth Test Set JJF 1278	10MHz~3GHz	$U_{rel}=1.2 \times 10^{-8}$		
	Level		(-100~20)dBm (10MHz~3GHz)	U=0.28dB			
	Spectral Purity		(-90~0)dBc (10MHz~3GHz)	U=1.2dB			
	Single-side Phase Noise		(-90~0)dBc (frequency deviation:10Hz~2MHz)	U=3dB			
	GFSK Frequency Error		-250kHz~250kHz (10MHz~3GHz)	$U_{rel}=1.2%$			
	EVM		0.3%~12%	U=1.0%			
	Frequency Error		-100kHz ~100kHz	U=12Hz			
	Level Measure		(-90~10)dBm (200kHz~3GHz)	U=0.56dB			



在线扫码获取验证

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		GFSK Frequency Error Measure		250kHz~250kHz (10MHz~3GHz)	$U_{rel}=1.2\%$		
		EVM Measure		0.3%~12% (10MHz~ 3GHz)	$U=1.2\%$		
		Frequency Error Measure		100kHz~100kHz	$U=12Hz$		
9	*LTE Radio Communication Testers	Frequency	C.S. for LTE Radio Communication Testers JJF 1443	10MHz~3.8GHz	$U_{rel}=1.2 \times 10^{-8}$		
		Level		(-100~20)dBm (10MHz~3.6GHz)	$U=0.28dB$		
				(-100~20)dBm (3.6GHz~3.8GHz)	$U=0.31dB$		
		Spectral Duration		(-90~0)dBc (10MHz~ 3.8GHz)	$U=1.2dB$		
		Single-side Phase Noise		(-90~0)dBc (frequency deviation:10Hz~2MHz)	$U=3dB$		
		EVM(RMS)		0.3%~17.5% (600MHz~3.8GHz)	$U=0.80\%$		
		IQ Offset		(-5~-80) dB (600MHz~3.8GHz)	$U=1.5dB$		
		Frequency Error		(-80~80)kHz (600MHz~3.8GHz)	$U=8.0Hz$		
		Level Measure		(-90~ 10)dBm(600MHz~ 3.8GHz)	$U=0.57dB$		
		EVM Measure		0.3%~17.5% (600MHz~3.8GHz)	$U=0.80\%$		



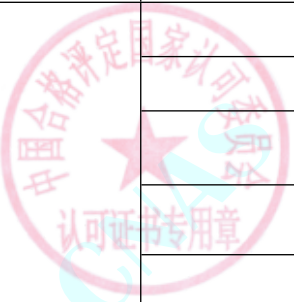
No. CNAS L0128

第 92 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Frequency Error Measure		(-80~80)kHz (600MHz~3.8GHz)	U=8.0Hz		
10	*Coaxial resistive attenuator	Attenuation	V.R. of coaxial resistive attenuator JJG 387	(0~90)dB (9kHz~100kHz)	U=0.04dB		
				(0~10)dB (100kHz~20GHz)	U=0.02dB		
				(10~40)dB (100kHz~20GHz)	U=0.04dB		
				(40~60)dB (100kHz~20GHz)	U=0.05dB		
				(60~70)dB (100kHz~20GHz)	U=0.18dB		
				(70~80)dB (100kHz~20GHz)	U=0.20dB		
				(80~90)dB (100kHz~20GHz)	U=0.28dB		
				(90~100)dB (100kHz~20GHz)	U=0.30dB		
		Standing-wave ratio		(1~2) (9kHz~20GHz)	U <sub>rel</sub> =1%		
11	*Spectrum analyzer	Frequency	Calibration specification of spectrum analyzer JJF 1396	100kHz~10MHz	U <sub>rel</sub> =1×10 <sup>-6</sup>		
				10MHz~20GHz	U <sub>rel</sub> =2×10 <sup>-7</sup>		
		Power level		(0~-20)dBm(10MHz~6GHz)	U=0.18dB		
				(0~-20)dBm(6GHz~12GHz)	U=0.35dB		
				(0~-20)dBm(12GHz~20GHz)	U=0.5dB		

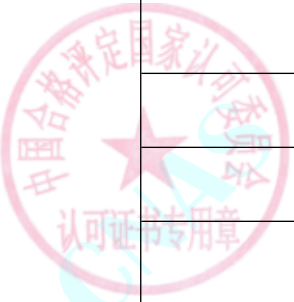


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Level	ilac-M	(0~60)dB (250kHz~1GHz)	U=0.25dB		
				(60~100)dB(250kHz~1GHz)	U=0.45dB		
		Frequency Span		10Hz~20GHz	U <sub>rel</sub> =1.5%		
		Resolution Bandwidth		1Hz~10MHz	U <sub>rel</sub> =1.5%		
		Noise sideband		100Hz~1MHz	U=3dB		
		Residual FM		0.2Hz~2Hz	U=0.2Hz		
				2Hz~50Hz	U=2Hz		
		Display average noise level		-160dBm~-50dBm (9kHz~20GHz)	U=3dB		
		Harmonic Distortion		-100dBc~0dBc(10MHz~20GHz)	U=3dB		
12	*Network analyzer	Frequency	Calibration specification of vector network analyzer JJF 1495	300 kHz~20GHz	U <sub>rel</sub> =1×10 <sup>-6</sup>		
	Output Amplitude of signal source	(20 ~ -70) dBm(300 kHz~20GHz)		U=0.18dB			
	Transmission and Reflection	Attenuation:(20 ~ 50) dB(50MHz~18GHz)		U=0.5dB			
		Reflection: (0~1) (50MHz~18GHz)		U=0.06			
		Transmission: (-180° ~180°) (50MHz~18GHz)		U=3°			



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

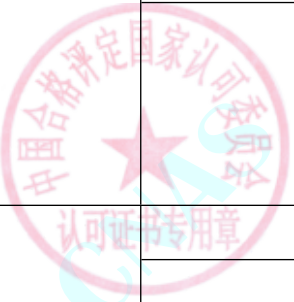
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
13	*Signal Generator	Frequency	Calibration specification for signal generators JJF 1931	0.1MHz~26.5GHz	$U_{rel}=6 \times 10^{-9}$		
		Power		(0~+20)dBm (0.1MHz~2GHz)	$U=0.14\text{dB}$		
				(0~+20)dBm (2GHz~4.2GHz)	$U=0.28\text{dB}$		
				(0~+20)dBm (4.2GHz~18GHz)	$U=0.30\text{dB}$		
				(0~+20)dBm (18GHz~26.5GHz)	$U=0.40\text{dB}$		
				(-120~0)dBm (0.1MHz~2GHz)	$U=0.20\text{dB}$		
				(-120~0)dBm (2GHz~18GHz)	$U=0.34\text{dB}$		
				(-120~0)dBm (18GHz~26.5GHz)	$U=0.43\text{dB}$		
		AM depth		(5~99)% carrier frequency: 0.1MHz~10MHz modulation frequency: 400Hz、1kHz	$U_{rel}=0.86\%$		
				(20~99)% carrier frequency: 10MHz~3GHz modulation frequency: 400Hz、1kHz	$U_{rel}=0.58\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			V.R. of Low Frequency Signal Generator JJG 602	(5~20)% carrier frequency: 10MHz~3GHz modulation frequency: 400Hz、1kHz	$U_{rel}=2.9\%$		
				(20~99)% carrier frequency: 3GHz~26.5GHz modulation frequency: 400Hz、1kHz	$U_{rel}=1.7\%$		
				(5~20)% carrier frequency: 3GHz~26.5GHz modulation frequency: 400Hz、1kHz	$U_{rel}=5.2\%$		
		FM deviation		(0.1~400)kHz carrier frequency: 0.1MHz~26.5GHz modulation frequency: 400Hz、1kHz	$U_{rel}=1.2\%$		
		Harmonic、Non-Harmonic、Inter-Harmonic Distortion		(-90~-20)dBc(0.1MHz~13GHz)	$U=1.6dB$		
14	*Low Frequency Signal Generator	Frequency	V.R. of Low Frequency Signal Generator JJG 602	1Hz~1MHz	$U_{rel}=1 \times 10^{-5}$		
Distortion	(0.001 ~30)%(5Hz ~100kHz)	$U=1dB$					



在线扫码获取验证

No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Voltage	ilac-M	1mV ~ 10mV(10Hz~100kHz)	$U_{rel}=2\%$		
				10mV~300V(10Hz~100kHz)	$U_{rel}=0.16\%$		
				1mV ~ 30V(100kHz~1MHz)	$U_{rel}=0.9\%$		
				30V~300V(100kHz~1MHz)	$U_{rel}=3\%$		
		Attenuation		0~100dB(10Hz~1MHz)	$U=0.2dB$		
15	*Television Video Generator	Luminance Amplitude	C.S. for Television Video Generator JJF 1235	60mV~1V	$U_{rel}=0.6\%$		
		Chrominance Amplitude		60mV~1V	$U_{rel}=1.2\%$		
		Chrominance Phase		(0~360)°	$U=0.6^\circ$		
		Pulse Width		1ns~30 μs	$U_{rel}=0.4\%$		
16	*Function generator	Frequency	V.R.of Function Generators JJG840	0.1Hz~240MHz	$U_{rel}=1.0 \times 10^{-8}$		
		Voltage (amplitude of output waveform)		Peak-Peak value: 3mV ~30V、1kHz (50 Ω Load measurement)	$U_{rel}=0.24\%$		
				Peak-Peak Value: 3mV ~30V、1kHz (Open circuit measurement)	$U_{rel}=0.084\%$		
		DC voltage		(1mV~5V)	$U_{rel}=0.1\%$		
		Voltage (sine wave amplitude)		1V (10Hz~100kHz)	$U=0.02 dB$		
1V (100kHz~200kHz)	$U=0.05dB$						



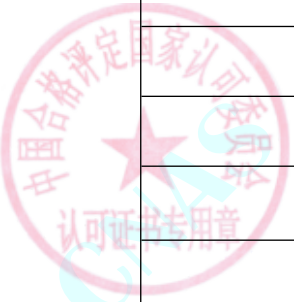
No. CNAS L0128

第 97 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

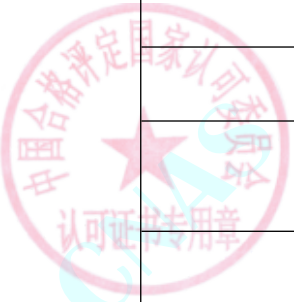
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		flatness)		1V (200kHz~240MHz)	$U=0.18\text{dB}$		
		Distortion		(0.01~30)% (5Hz~20kHz)	$U_{\text{rel}}=13\%$		
				(0.01~30)% (20kHz~50kHz)	$U_{\text{rel}}=26\%$		
				(0.01~30)% (50kHz~150kHz)	$U_{\text{rel}}=41\%$		
		Harmonic distortion		(-90~-20)dBc (150kHz~240MHz)	$U=2.1\text{dB}$		
		Rise time		135ps~100 μ s	$U=0.2\text{ns}$		
		square wave pulse duty cycle		(0.1~99.9)%	$U_{\text{rel}}=0.7\%$		
17	*Low Power Mount	VSWR	Verification regulation for lower power mount GJB/J 3598	(1~10) (50MHz~2GHz)	$U_{\text{rel}}=3.5\%$		
				(1~10) (2GHz~8GHz)	$U_{\text{rel}}=5.9\%$		
				(1~10) (8GHz~18GHz)	$U_{\text{rel}}=7.2\%$		
		CAL Factor		(10%~200%) (10MHz~2GHz)	$U=2.1\%$		
				(10%~200%) (2GHz~6GHz)	$U=2.4\%$		
				(10%~200%) (6GHz~12.4GHz)	$U=3.1\%$		
				(10%~200%) (12.4GHz~15GHz)	$U=3.4\%$		
				(10%~200%) (15GHz~18GHz)	$U=4.1\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

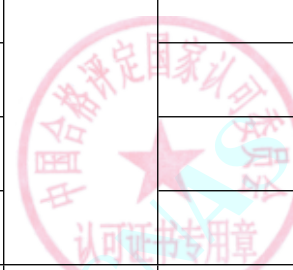
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
18	*FM Stereo Signal Generator	Frequency	XT-24 V.R. of Stereo Signal Generator JJG(DZ)12011	10Hz~100kHz	$U_{rel}=1 \times 10^{-8}$		
		Stereo Separation		(30~60) dB (50Hz~15kHz)	$U_{rel}=0.4\%$		
		Distortion		(-10~-100)dB(5Hz ~ 150kHz)	$U=1.2\text{dB}$		
19	*Audio Analyzer	Output Frequency	C.S. for Audio Analyzer JJF 1395	5Hz~150kHz	$U_{rel}=1 \times 10^{-7}$		
		Output Voltage		10mV~10V (1kHz)	$U_{rel}=1.3\%$		
		Source Distortion		(-10~-90)dB (10Hz~100kHz)	$U=0.6\text{dB}$		
		Voltage Measurement		10mV~100V (1kHz)	$U_{rel}=0.66\%$		
		Distortion Measurement		(10~100)% (10Hz,100Hz,1kHz,10kHz)	$U_{rel}=1.3\%$		
				(3~10)% (10Hz,100Hz,1kHz,10kHz)	$U_{rel}=0.88\%$		
		Distortion Measurement		(1~3)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.3\%$		
				(0.3~1)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=0.88\%$		
		Distortion Measurement		(0.10~0.30)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.4\%$		
(0.03~0.10)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.0\%$						



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(0.01~0.03)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.6\%$		
				(0.003~ 0.01)%(10Hz,100Hz,1kHz, 10kHz)	$U_{rel}=1.3\%$		
				(10~100)%, (20kHz, 100kHz)	$U_{rel}=1.6\%$		
				(3~10)%, (20kHz, 100kHz)	$U_{rel}=1.3\%$		
				(1~3)%, (20kHz, 100kHz)	$U_{rel}=1.6\%$		
				(0.30~1)%, (20kHz, 100kHz)	$U_{rel}=1.3\%$		
				(0.10~0.30)%, (20kHz, 100kHz)	$U_{rel}=1.6\%$		
				(0.03~0.10)%, (20kHz, 100kHz)	$U_{rel}=2.4\%$		
				(0.01~0.03)%, (20kHz, 100kHz)	$U_{rel}=3.6\%$		
				(0.10~100)%, (150kHz, 200kHz)	$U_{rel}=3.6\%$		
				(0.03~0.10)%, (150kHz, 200kHz)	$U_{rel}=5.8\%$		
				(0.01~0.03)%, (150kHz, 200kHz)	$U_{rel}=9.3\%$		
				20	*Video Signal measure meter		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Chrominance Level	ilac-MRA	(1~714) mV	$U_{rel}=0.6\%$		
		Phase		Vector phase: (0~360) <sup>o</sup>	$U=0.6^{\circ}$		
		Time		1 $\mu$ s~20 $\mu$ s	$U=10$ ns		
		Distortion		Difference Gain Distortion: (1~30)%	$U=0.4\%$		
				Difference Phase Distortion: (0~30) <sup>o</sup>	$U=0.4^{\circ}$		
21	*Analogue Oscilloscope	Time	V.R. of Analogue Oscilloscope JJG 262	(500ps~55s)/div	$U_{rel}=0.3\%$		
		Rise Time		150ps~50ns	$U=25$ ps		
		Voltage		(1mV ~5V)/div (1kHz)	$U_{rel}=0.4\%$		
		Bandwidth		50kHz~6.0GHz	$U_{rel}=5\%$		
22	Oscilloscope Calibrator	voltage	V.R. of Oscilloscope Calibrators JJG 278	10mV~200V	$U_{rel}=0.1\%$		
		Sine-wave flatness		10mV~1V (50kHz~100kHz)	$U_{rel}=1.0\%$		
				(0~+20)dBm (100kHz~3.2GHz)	$U=0.30$ dB		
		Rise time		300ps~1ns	$U_{rel}=4.0\%$		
		Time		2ns~0.5s	$U_{rel}=0.0012\%$		
23	*Distortion Meter	Distortion	Calibration Specification for Distortion Meters JJF 1852	(10~100)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.3\%$		
				(3~10)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=0.88\%$		



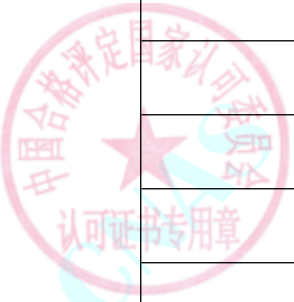
No. CNAS L0128

第 101 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

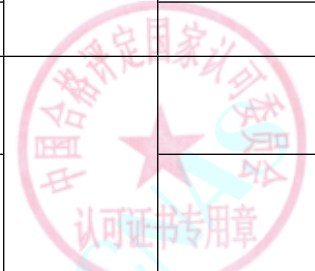
在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(1~3)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.3\%$		
				(0.3~1)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=0.88\%$		
				(0.10~0.30)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.4\%$		
				(0.03~0.10)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.0\%$		
				(0.01~0.03)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.6\%$		
				(0.003~0.01)%, (10Hz, 100Hz, 1kHz, 10kHz)	$U_{rel}=1.3\%$		
				(10~100)%, (20kHz, 100kHz)	$U_{rel}=1.6\%$		
				(3~10)%, (20kHz, 100kHz)	$U_{rel}=1.3\%$		
				(1~3)%, (20kHz, 100kHz)	$U_{rel}=1.6\%$		
				(0.30~1)%, (20kHz, 100kHz)	$U_{rel}=1.3\%$		
				(0.10~0.30)%, (20kHz, 100kHz)	$U_{rel}=1.6\%$		
				(0.03~0.10)%, (20kHz, 100kHz)	$U_{rel}=2.4\%$		



No. CNAS L0128

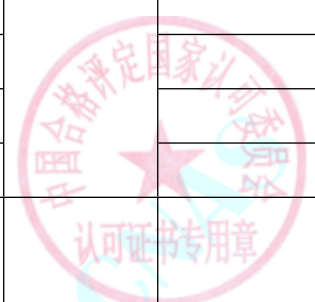
The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
				(0.01~0.03)%, (20kHz, 100kHz)	$U_{rel}=3.6\%$			
				(10~100)%, (150kHz, 200kHz)	$U_{rel}=3.6\%$			
				(3~10)%, (150kHz, 200kHz)	$U_{rel}=3.5\%$			
				(1~3)%, (150kHz, 200kHz)	$U_{rel}=3.6\%$			
				(0.30~1)%, (150kHz, 200kHz)	$U_{rel}=3.5\%$			
				(0.10~0.30)%, (150kHz, 200kHz)	$U_{rel}=3.6\%$			
				(0.03~0.10)%, (150kHz, 200kHz)	$U_{rel}=5.8\%$			
				(0.01~0.03)%, (150kHz, 200kHz)	$U_{rel}=9.3\%$			
				Voltage	1mV~300V, (1kHz)			$U_{rel}=0.66\%$
				1V, (10Hz~20kHz)	$U_{rel}=0.66\%$			
1V, (20kHz~200kHz)	$U_{rel}=1.4\%$							
24	Radio-frequency coupling decoupling device	Common Mode Impedance Attenuation(Coupling)	Electromagnetic compatibility Testing and measurement techniques-Immunity to conducted disturbances,induced by radio-frequency fields (part 6.) GB/T 17626.6	25 Ω ~ 300 Ω (150kHz~230MHz)	$U_{rel}=4\%$			
			0dB~60dB (150kHz~230MHz)	$U=0.5dB$				
25	Curve Tracer	Voltage(X-axis)	Calibration Specification for Semiconductor Device Curve	(0.1~1000)V	$U_{rel}=0.8\%$			



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Current(Y-axis)	Tracers JJF 1236	5 μ A ~ 20A	$U_{rel}=0.8\%$		
		Voltage (output)		(0.1 ~ 20) V	$U_{rel}=0.2\%$		
		resistance		100 Ω ~ 10M Ω	$U_{rel}=0.2\%$		
26	*Network Cable Analyzers	DC Loop Resistance	Calibration Specification for Network Cable Analyzers JJF 1494	(0 ~ 50) Ω	$U=0.08\%$		
		Delay Time		(50 ~ 500)ns	$U=3.0ns$		
		Insertion Loss		(0 ~ 40)dB	$U=0.16dB$		
		Near-end Crosstalk		(20 ~ 70)dB	$U=0.39dB$		
		Equivalent Far-end Crosstalk		(10 ~ 60)dB	$U=0.46dB$		
		Return Loss		(8 ~ 26)dB	$U=0.06dB$		
27	*Digital Oscilloscope	Voltage	Verification regulation for digital oscilloscope GJB 7691	(1mV ~ 10V)/div (1kHz)	$U_{rel}=0.4\%$		
		time		(500ps ~ 55s)/div	$U_{rel}=0.3\%$		
		Time base		(500ps ~ 55s)/div	$U_{rel}=2.6 \times 10^{-6}$		
		Bandwidth		50kHz ~ 6.0GHz	$U_{rel}=6.0\%$		
		Rise Time		65ps ~ 0.1ms	$U_{rel}=4.0\%$		
28	Microwave Radiation and Leakage Energy Measuring Instruments	Power density	Microwave Radiation and Leakage Energy Measuring Instruments JJG 776	0.1mW/cm <sup>2</sup> ~ 3mW/cm <sup>2</sup> (2.45GHz)	$U=1.3dB$		

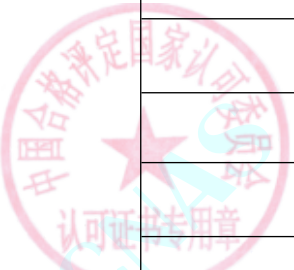


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
29	*Artificial Mains Network	Modulus of Impedance	Calibration Specification for Artificial Mains Networks	(0.1~100) Ω , (9kHz~108MHz)	$U_{rel}=6\%$		
		Phase Angle of Impedance	JJF 1705	(0.1~360)° , (9kHz~108MHz)	$U_{rel}=6\%$		
		Voltage division factor		(0.01~20)dB , (9kHz~108MHz)	$U=0.3dB$		
30	*Microwave Power Amplifier	Rated output power	V.R. of RF and Microwave Power Amplifiers JJF 1678	P:(1W~1000W) (9kHz~3GHz)	$U=0.32dB$		
				P:(1W~500W) (3GHz~10GHz)	$U=0.41dB$		
				P:(1W~150W) (10GHz~18GHz)	$U=0.41dB$		
		Gain		(0~80)dB (9kHz~240MHz)	$U=0.32dB$		
				(0~80)dB (240MHz~18GHz)	$U=0.41dB$		
		Gain flatness		±(0.5~12)dB (240MHz~18GHz)	$U=0.32dB$		
				±(0.5~12)dB (240MHz~18GHz)	$U=0.41dB$		
		1dB compression point output power		P:(1W~1000W) (9kHz~3GHz)	$U=0.32dB$		
				P:(1W~500W) (3GHz~10GHz)	$U=0.41dB$		
				P:(1W~150W) (10GHz~18GHz)	$U=0.41dB$		
Maximum output power	P:(1W~1000W) (9kHz~3GHz)	$U=0.32dB$					

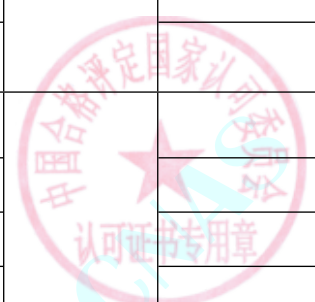


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

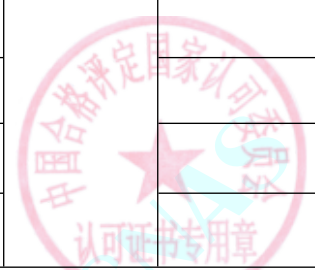
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Harmonic distortion and clutter suppression VSWR of Input voltage	ilac-M	P:(1W~500W) (3GHz~10GHz)	$U=0.41\text{dB}$		
				P:(1W~150W) (10GHz~18GHz)	$U=0.41\text{dB}$		
				(10~78)dBc (9kHz~26.5GHz)	$U=1.6\text{dB}$		
				VSWR:(1.05~3) (30kHz~2GHz)	$U_{\text{rel}}=3.5\%$		
				VSWR:(1.05~3) (2GHz~9GHz)	$U_{\text{rel}}=4.7\%$		
				VSWR:(1.05~3) (9GHz~18GHz)	$U_{\text{rel}}=5.9\%$		
31	*Directional Coupler	Port return loss	Calibration specification for directional coupler and standing wave ratio bridge JF 1680	(15~60)dB (300kHz~18GHz)	$U=0.2\text{dB}$		
		Insertion Loss		(0.01~3)dB (300kHz~18GHz)	$U=0.12\text{dB}$		
		Coupling Coefficient		(10~40)dB (300kHz~18GHz)	$U=0.2\text{dB}$		
		Directional		(20~50)dB (300kHz~18GHz)	$U=0.3\text{dB}$		
32	RF Communication Test Set	reference frequency	Calibration Specification for RF Communication Test Set JF 1065	10MHz	$U_{\text{rel}}=1 \times 10^{-9}$		
		input frequency		10kHz~10MHz	$U_{\text{rel}}=2 \times 10^{-6}$		
		span		10MHz~1000MHz	$U_{\text{rel}}=2 \times 10^{-9}$		
		span		10kHz~1000MHz	$U_{\text{rel}}=1.5\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

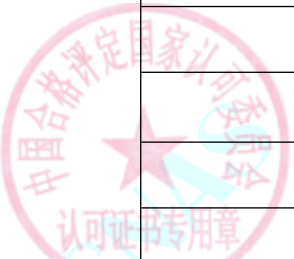
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		RBW		100Hz~1MHz	$U_{rel}=1.5\%$		
		reference level		(-70~+20)dBm	$U=0.3dB$		
		input level		(0~100)dB	$U=0.3dB$		
		input frequency response		(-70~20)dBm (100kHz~1000MHz)	$U=0.2dB$		
		input attenuation		(0~70)dB	$U=0.2dB$		
		DANL		(-160~-114)dBm	$U=3dB$		
		residuals		(-160~-90)dBm	$U=3dB$		
		OBW		(5~200)kHz	$U_{rel}=1.5\%$		
		ACP		(-70~0)dBc	$U=3dB$		
		output frequency		250kHz~1000MHz	$U_{rel}=6 \times 10^{-9}$		
		output level		(-137~+19)dBm	$U=0.6dB$		
		harmonic distortion		(-80~-30)dBc	$U=1.6dB$		
		non-harmonic distortion		(-90~-60)dBc	$U=1.6dB$		
		SSB noise		(-140~-70)dBc/Hz(45~900)MHz	$U=3dB$		
		AM depth		(0.1~99)%(CF: 450MHz;fm: 1kHz)	$U_{rel}=3\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		FM deviation		1Hz~400kHz(f: 45MHz, 450MHz, 900MHz)	$U_{rel}=1.2\%$		
		RF power		1μW~60W(10~900)MHz	$U_{rel}=4\%$		
		AM Measure		(0.1~95)%(carrier frequency: 5MHz~1000MHz, modulation frequency: 1kHz)	$U_{rel}=3\%$		
		FM Measure		20Hz~75kHz(carrier frequency: 5MHz~1000MHz, modulation frequency: 1kHz)	$U_{rel}=1.2\%$		
		output voltage		0.1mV~4V(DC~25kHz)	$U_{rel}=0.1\%$		
		Output frequency response		20Hz~25kHz	$U=0.01dB$		
		output distortion		0.0001%~0.13%	$U=1.5dB$		
		AF input frequency		20Hz~400kHz	$U_{rel}=1 \times 10^{-6}$		
		input voltage		20mV~30V(20Hz~25kHz)	$U_{rel}=0.05\%$		
		frequency response		20Hz~25kHz	$U=0.02dB$		
		bandwidth		20Hz~50kHz	$U_{rel}=6\%$		
		voltage		1mV/div~10V/div	$U_{rel}=0.4\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		time		10 $\mu$ s/div~100ms/div	$U_{rel}=0.3\%$		
33	*Charge Amplifiers	Charge	Verification Regulation of Charge Amplifiers JJG 338	(10~10 <sup>5</sup> )pC	$U_{rel}=0.05\%$		
		Voltage		10mV~10V, (10Hz~100kHz)	$U_{rel}=0.08\%$		
34	*Dynamical Signal Analyzer	Frequency	Verification Regulation of Dynamical Signal Analyzer JJG 834	0.1Hz~200kHz	$U_{rel}=3.4 \times 10^{-5}$		
		Voltage		1mV~10V, (10Hz~200kHz)	$U_{rel}=0.4\%$		
35	Absorbing Clamp	Absorption attenuation	Calibration Specification for Absorbing Clamp in the Range of 30MHz to 1.0GHz JJF 1155	(14~22)dB, (30MHz~1GHz)	$U=1.8dB$		
36	*Antenna feeder tester	Frequency	Calibration specification for antenna feeder tester JJF 1740	2MHz~18GHz	$U_{rel}=6 \times 10^{-9}$		
		Power		-30dBm~20dBm, (2MHz~18GHz)	$U=0.30dB$		
		VSWR		1~10, (2MHz~18GHz)	$U_{rel}=5.1\%$		
		Attenuation		0dB~30dB, (2MHz~18GHz)	$U=0.20dB$		
		Fault location distance		15m, (2MHz~18GHz)	$U_{rel}=1.1\%$		
		RF power		-50dBm~10dBm, (2MHz~18GHz)	$U=0.18dB$		
37	*Waveform Recorder	DC voltage	Calibration Specification for Waveform Recorders JJF1876	$\pm(10mV \sim 300mV)$	$U_{rel}=0.4\%$		
				$\pm(0.3V \sim 3V)$	$U_{rel}=0.05\%$		
				$\pm(3V \sim 30V)$	$U_{rel}=0.01\%$		
				$\pm(30V \sim 1000V)$	$U_{rel}=0.06\%$		

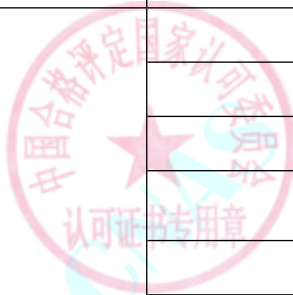


No. CNAS L0128

第 109 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC voltage	ilac-M	10mV~33mV, (10Hz~10kHz)	$U_{rel}=4\%$		
				33mV~330mV, (10Hz~10kHz)	$U_{rel}=0.4\%$		
				0.33V~3.3V, (10Hz~10kHz)	$U_{rel}=0.05\%$		
				3.3V~33V, (10Hz~10kHz)	$U_{rel}=0.02\%$		
				33V~330V, (10Hz~10kHz)	$U_{rel}=0.03\%$		
				330V~1000V, (10Hz~10kHz)	$U_{rel}=0.04\%$		
				Time base	1 $\mu$ s/div~10h/div		
		Frequency Bandwidth		10Hz~2MHz	$U_{rel}=1\%$		
		Resistance		50 $\Omega$ ~1M $\Omega$	$U_{rel}=0.01\%$		
		DC gain		0.5~1.5	$U_{rel}=0.4\%$		
Record Time	(1~1000)s	$U_{rel}=3 \times 10^{-7}$					
38	*High Voltage Dielectric Loss Tester	capacitance	V.R.of High Voltage Dielectric Loss Tester JJG 1126	100pF、1000pF、10nF	$U_{rel}=0.14\%$		
				100nF	$U_{rel}=0.16\%$		
				500nF	$U_{rel}=0.11\%$		
		loss factor		0%~0.2%(100pF、1000pF)	$U=0.003\%$		
				0.5%(100pF、1000pF)	$U=0.004\%$		
				1%(100pF、1000pF)	$U=0.005\%$		



在线扫码获取验证

No. CNAS L0128

第 110 页 共 156 页

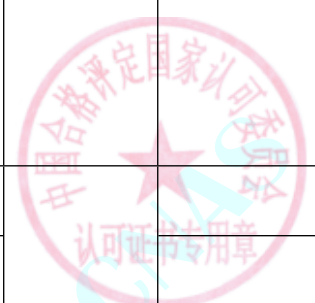
The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				2%(100pF、1000pF)	$U=0.007\%$		
				5%(100pF、1000pF)	$U=0.013\%$		
				10%(100pF、1000pF)	$U=0.023\%$		
				0.1%~0.2%(10nF、100nF、500nF)	$U=0.004\%$		
				0.5%(10nF、100nF、500nF)	$U=0.006\%$		
				1%(10nF、100nF、500nF)	$U=0.008\%$		
				2%(10nF、100nF、500nF)	$U=0.013\%$		
				5%(10nF、100nF、500nF)	$U=0.028\%$		
				10%(10nF、100nF、500nF)	$U=0.053\%$		
				39	*RF and Microwave Power Meters		
Calibration factor	0.5~2 (Frequency range: 0.1MHz~2GHz)	$U_{rel}=1.4\%$					
	0.5~2 (Frequency range: 2GHz~6GHz)	$U_{rel}=1.8\%$					
	0.5~2 (Frequency range: 6GHz~12.4GHz)	$U_{rel}=2.0\%$					



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			Road vehicles -- Component test methods for electrical disturbances from narrowband radiated electromagnetic energy -- Part 4: Harness excitation methods (part 9.3.1.2) ISO 11452-4	0.5~2 (Frequency range: 12.4GHz~15GHz)	$U_{rel}=2.4\%$		
				0.5~2 (Frequency range: 15GHz~18GHz)	$U_{rel}=2.5\%$		
		Power Linearity		Power range: -20dBm~10dBm (50MHz or 1GHz)	$U=0.04dB$		
		VSWR		1~2 (Frequency range: 0.1MHz~2GHz)	$U_{rel}=3.5\%$		
				1~2 (Frequency range: 2GHz~8GHz)	$U_{rel}=5.9\%$		
				1~2 (Frequency range: 8GHz~18GHz)	$U_{rel}=7.2\%$		
40	coupling decoupling device	Attenuation(Coupling)	Road vehicles -- Component test methods for electrical disturbances from narrowband radiated electromagnetic energy -- Part 4: Harness excitation methods (part 9.3.1.2) ISO 11452-4	0dB~60dB (9kHz~400MHz)	$U=0.5dB$		
41	*Attenuators from radio frequency to microwave frequency	Attenuation	Calibration Specification for Attenuators from Radio Frequency to Microwave Frequency JJF 2092	(0~100) dB, 10Hz~18GHz	$U= (0.02\sim0.30) dB$		
		VSWR		(100~120) dB, 100kHz~18GHz	$U= (0.30\sim0.39) dB$		
				1.0~5, 9kHz~18GHz	$U_{rel}=4\%$		



No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
42	*Coupling/Decoupling Networks of Conducted Disturbances Induced by Radio-Frequency Fields Testing	Common mode impedance	Calibration Specification for Coupling/Decoupling Networks of Conducted	(80~220) Ω, (150kHz~230MHz)	$U_{rel}=7.1\%$		
		Insertion loss	Disturbances Induced by Radio-Frequency Fields	(5~14)dB, (150kHz~230MHz)	$U=0.18\text{dB}$		
		Coupling coefficient	Testing JJF 2079	(-4.5~4.5) dB, (150kHz~230MHz)	$U=0.30\text{dB}$		
		Decoupling attenuation		(20~80) dB, (150kHz~230MHz)	$U=0.30\text{dB}$		
六、Time and Frequency							
1	Microwave frequency meter	Frequency	Verification regulations for microwave frequency counters JJG 841	100kHz~20GHz	$U_{rel}=2 \times 10^{-6} \sim 5 \times 10^{-11}$		
2	Electronic stopwatch	Time interval	Calibration Specification for Stopwatches JJF 2195	(1~3600)s	$U=0.01\text{s}$		
		Day Error		(-9.99~9.99)s	$U=0.06\text{s}$		
3	Mechanical stopwatch	Time interval	Calibration Specification for Stopwatches JJF 2195	(1~1800)s	$U=0.1\text{s}$		
4	*Time relay	Time	Calibration Specification for time relay JJF 1282	Electronic: 1ms~599s	$U=4 \times 10^{-5}R_x+3\text{ms}$	Calibration of electronic time relays without time relay tester method	
				Electronic: 600s~1h	$U=6 \times 10^{-5}R_x+0.01\text{s}$		
				Electronic: 1h~24h	$U=4.2 \times 10^{-5}R_x+0.1\text{s}$		
				Mechanical: 1s~10s	$U=0.16\text{s}$		
				Mechanical: 10s~599s	$U=0.44\text{s}$		
				Mechanical: 600s~1h	$U=0.76\text{s}$		
				Mechanical: 1h~24h	$U=1.4\text{s}$		

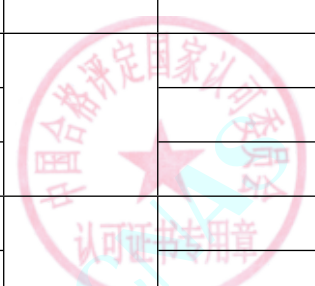


No. CNAS L0128

第 113 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
5	*Pulse Counters	frequency	Calibration Specification for Pulse Counters JJF 1686	10MHz	$U_{rel}=6.8 \times 10^{-9}$		
		Pulse Count		0~1000000	$U=1$		
七、Optic							
1	Illuminance meter	Illuminance	Verification Regulation of Illuminance Meter JJG 245	(4~3000)lx	$U_{rel}=1.6\%$		
		Cosine characteristics (directional response)		(0~10)%	$U=1.0\%$		
2	Ultraviolet Irradiance Meters	Radiosity	Verification Regulation of Ultraviolet Irradiance Meters JJG 879	(55~2000) $\mu$ W/cm <sup>2</sup>	$U_{rel}=16\%$		
				(2~80)mW/cm <sup>2</sup>	$U_{rel}=18\%$		
3	Luminance Meter	Luminance	Verification Regulation of Luminance Meter JJG 211	(0.5~1000)cd/m <sup>2</sup>	$U_{rel}=3.0\%$		
		chrominance		x、y: 全色域	$U(x)=0.0092, U(y)=0.0072$		
4	*Standard Light Sources Boxes	Illuminance	Calibration Specification for Standard Light Sources Boxes JJF(FZ) 055	(50~3000)lx	$U=47lx$		
		Correlated Colour Temperature		(2700~7500)K	$U=1.2 \times 10^2K$		
5	Lamp of Luminous Intensity	Luminance	Verification Regulation of Luminance Meter JJG 246	(5~150)cd	$U_{rel}=3.0\%$		
				(150~750)cd	$U_{rel}=2.6\%$		
				(750~1500)cd	$U_{rel}=2.9\%$		
6	*Spectral radiation system/Spectrometer	Wavelength	Verification Regulation of Analyzer of Spectrum Radiation JJG (Zhe) 85	(200~1500)nm	$U=0.45nm$		
		Color temperature distribution		(500~9000)K	$U=22K$		

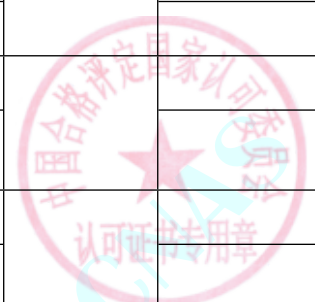


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Chromaticity coordinate		Full color gamut	$U=0.0025$		
7	Lamp for Total Luminous Flux	Total Luminous Flux	Verification Regulation of Standard Incandescent Lamp for Total Luminous Flux JJG 247	10lm~23500lm	$U_{rel}=2.2\%$		
8	*Artificial Accelerated Weathering Apparatus of Xenon Arc Lamp	irradiance	Calibration Specification for Irradiance of Artificial Accelerated Weathering Apparatus of Xenon Arc Lamp JJF 1525	$0.1 \text{ mW}\cdot\text{m}^{-2}\sim 1\text{kW}\cdot\text{m}^{-2}$ (300nm~800nm)	$U_{rel}=11\%$	spectroradiometer method	
9	*Abbe Refractometer	index of refraction	Verification Regulation of Abbe Refractometer JJG625	(1.3300~1.8000)nD	$U=9.2\times 10^{-5}\text{nD}$		
10	*Colorimeters and Color Difference Meters	Colourimetric	Verification Regulation of Colorimeters and Color Difference Meters JJG595	Y:1.0~100.0			
				x,y:full color gamut	$U=0.0053(0/d); U=0.0070(d/0)$		
11	*Specular Gloss Meters	Gloss	Verification Regulation of Specular Gloss Meters and Gloss Plates JJG696	(0~120.0) gloss unit	$U=1.5\text{GU}$		
12	*Hazemeter	Haze	Calibration Specification for Hazemeter JJF1303	0.1~30	$U=0.31$		
		Transmittance		(1~100)%	$U=0.8\%$		
13	*Color Light-box with Standard Light Sources	Luminance	Calibration Specification for Color Light-box with Standard Light Sources JJF (Min) 1062	(50~30000)cd/m <sup>2</sup>	$U_{rel}=8\%$		
		Colour coordinates		Full color gamut	$U=0.0035$		
14	*solar simulators	spectral match	Calibration Specification for Solar Simulators JJF 1615	(400~1100)nm	$U_{rel}=8\%$		
		irradiance non-uniformity		0.1%~50%	$U_{rel}=3\%$		

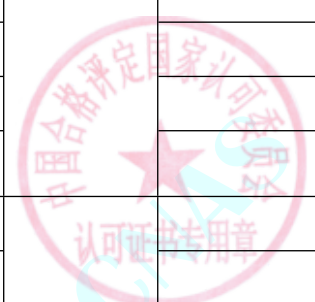


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		irradiance instability		0.1%~50%	$U_{rel}=2.1\%$		
15	*Whiteness Meters	Whiteness	Verification Regulation of Whiteness Meters JJG 512	1.0~100.0	(0/d): $U_{R457}=1.0$ , (d/0): $U_{R457}=1.0$ , (45/0): $U_{R457}=1.3$		
16	*Lasers for Medicine	laser power	Verification Regulation of Lasers for Medicine JJG 581	1mW~130W	$U_{rel}=6.0\%$		
		Laser energy		20mJ~10J	$U_{rel}=6.0\%$		
17	*Reflection Densitometers	Optical density	Calibration Specification for Reflection Densitometers JJF 1492	0.00~1.00	$U=0.03$		
				1.01~2.00	$U=0.04$		
18	*Calibration Specification for UV	Peak wavelength	Calibration Specification of UV Analyzer JJF 1936	(250~380) nm	$U=0.7nm$	Only test reflection	
		UV irradiance		(40~1000) $\mu W/cm^2$	$U_{rel}=11\%$		
19	*Standard Integrating Sphere Sources	Spectral Radiance	Calibration Specification for Standard Integrating Sphere Sources JJF 1990	( $10^{-4} \sim 10^3$ ) W/ ( $m^2 \cdot nm \cdot sr$ )	$U_{rel}=6.0\%$	use spectral radiance standard lamp and standard whiteboard	
				(0.5~5) $cd \cdot m^{-2}$	$U_{rel}=4.0\%$		
				(5~10000) $cd \cdot m^{-2}$	$U_{rel}=3.0\%$		
		Colour Temperature		(2000~3000) K	$U=25K$		
				(3000~6500) K	$U=1 \times 10^2 K$		
				(6500~10000) K	$U=1.5 \times 10^2 K$		
Chromaticity Coordinates	Pangamut	$U=0.0060$					
20	*Clarity Test Equipment	Illumination	Calibration Specification for Clarity Test Equipment JJF 1287	(100~5000) lx	$U_{rel}=9\%$		
		Time		(1~60) s	$U=0.2s$		
八、Chemistry							



No. CNAS L0128

第 116 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
1	*Ultraviolet, Visible, Near-Infrared Spectrophotometers	Wavelength	V.R. of Ultraviolet, Visible, Near-Infrared Spectrophotometers JJG 178	Grating-type instrument Band A: (190~340) nm	$U=0.4\text{nm}$		
				Grating-type instrument Band B: (340~900) nm	$U=0.4\text{nm}$		
				Prism-type instrument Band B: (340~900) nm	$U=0.8\text{nm}$		
				Grating-type instrument Band C: (900~2600) nm	$U=0.6\text{nm}$		
		Transmittance		A 段: (0~100) %	$U=0.3\%$		
				B 段: (0~100) %	$U=0.3\%$		
2	*Chlorine Alarm Detectors	Concentration	Calibration Specification for Chlorine Alarm Detectors JJF1433	(0.1~100) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.4\%$		
		time		(1~3600) s	$U=2\text{s}$		
3	*Laboratory pH Meters	pH	Verification Regulation of Laboratory pH Meters JJG119	Electricity pH: (0~14)	$U=0.001$		
				Instrument pH: (3~10)	$U=0.004$		
		Voltage		(-1900~1900) mV	$U=0.04\%\text{FS}$		
4	*Particulate Analyzer	Particle concentration	Calibration Specification for Particulate Analyzer JJF 1290	(10~10000) particles/mL	$U_{\text{rel}}=7\%$		
5	*Electrolytic Conductivity Meters	Electrolytic Conductivity	Verification Regulation of Electrolytic Conductivity Meters JJG376	Electricity: (1~2×10 <sup>4</sup> ) $\mu\text{S/cm}$	$U_{\text{rel}}=0.08\%$		
				Electricity: (5×10 <sup>-2</sup> ~1) $\mu\text{S/cm}$	$U_{\text{rel}}=0.13\%$		



No. CNAS L0128

第 117 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Instrument: (100 ~ 1.3 × 10 <sup>4</sup> ) μ S/cm	U <sub>rel</sub> =0.33%		
6	*Sulfur Dioxide Gas Detectors	Concentration	Verification Regulation of Sulfur Dioxide Gas Detectors JJG551	(1~300) μ mol/mol	U <sub>rel</sub> =2.2%		
		time		(1~3600) s	U=2s		
7	*Gas Chromatograph	Detection limit	V.R.of Gas Chromatograph JJG700	FID: ≤5 × 10 <sup>-10</sup> g/s	U <sub>rel</sub> =4%		
				FPD: ≤5 × 10 <sup>-10</sup> g/s (S), , ≤1 × 10 <sup>-10</sup> g/s (P)	U <sub>rel</sub> =3%(S), U <sub>rel</sub> =4%(P)		
				NPD: ≤5 × 10 <sup>-12</sup> g/s(N) ≤1 × 10 <sup>-11</sup> g/s(P)	U <sub>rel</sub> =4%		
				ECD: ≤5 × 10 <sup>-12</sup> g/mL	U <sub>rel</sub> =4%		
		sensitivity		TCD: ≥800mV•mL/mg	U <sub>rel</sub> =4%		
8	*Dynamic Light Scattering Particle Size Analyzers	Particle size	Verification Regulation of Dynamic Light Scattering Particle Size Analyzers JJG 1104	(0.1~100) nm	U <sub>rel</sub> =5%		
				(200~300) nm	U <sub>rel</sub> =4%		
				(400~500) nm	U <sub>rel</sub> =4%		
				(600~800) nm	U <sub>rel</sub> =4%		
9	*Liquid Chromatographs	minimum detectable concentration	V.R.of Liquid Chromatographs JJG705	UV-VIS: ≤5 × 10 <sup>-8</sup> g/mL	U <sub>rel</sub> =6%		
				FLD: ≤5 × 10 <sup>-9</sup> g/mL	U <sub>rel</sub> =6%		
				RID: ≤5 × 10 <sup>-6</sup> g/mL	U <sub>rel</sub> =7%		
				ELSD: ≤5 × 10 <sup>-6</sup> g/mL	U <sub>rel</sub> =7%		
		Temperature		(0~100) °C	U=0.3 °C		
		Flow rate		(0.1~10) mL/min	U <sub>rel</sub> =0.3%		



No. CNAS L0128

第 118 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
10	Rotational Viscometers	Dynamic Viscosity	Verification Regulation of Rotational Viscometers JJG 1002	(50~400) mPa·s	$U_{rel}=1.2\%$		
				(400~6000) mPa·s	$U_{rel}=1.3\%$		
				(6000~20000) mPa·s	$U_{rel}=1.5\%$		
				(20000~40000) mPa·s	$U_{rel}=1.7\%$		
				(40000~90000) mPa·s	$U_{rel}=1.8\%$		
				(90000~125000) mPa·s	$U_{rel}=1.9\%$		
11	*Mercury Analyzers	Detection limit	Verification Regulation of Mercury Analyzers JJG 548	absorption type: $\leq 1.0\text{ng}$	$U=0.2\text{ng}$		
				fluorescent type: $\leq 0.1\text{ng}$	$U=0.02\text{ng}$		
12	*Polarimeter	optical activity	Verification Regulation of Polarimeter and Saccharimeter JJG536	$-35^{\circ} \sim +35^{\circ}$	$U=0.005^{\circ}$		
13	Wood Moisture Content Measuring Meters	Moisture Content	Verification Regulation of Wood Moisture Content Measuring Meters JJG 986	6%~28%	$U=0.3\%$		
14	*Measurement Instruments	Temperature	V. R. of Melting-point Measurement Instruments JJG701	(50~300) °C (heating rate: 0.2°C/min )	$U=0.16^{\circ}\text{C}$		
				Capillary method: (50~300) °C (heating rate: 1.0°C/min )	$U=0.26^{\circ}\text{C}$		



No. CNAS L0128

第 119 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Hot table method: (50~300) °C (heating rate:1.0°C/min)	$U=0.12^{\circ}\text{C}$		
15	*Gas Chromatography-Mass Spectrometers	Signal-to-noise ratio	Calibration Specification for Gas Chromatography-Mass Spectrometers JJF1164	Ion trap, single quadrupole, triple quadrupole: $\geq 10:1$ Time of flight, electrostatic field of orbital hydrazine: $\geq 50:1$	$U_{\text{rel}}=6\%$ $U_{\text{rel}}=6\%$		
16	*Atomic Absorption Spectrophotometers	Detection limit	Verification Regulation for Atomic Absorption Spectrophotometers JJG 694	Cu: (0~5) $\mu\text{g/mL}$ Cd: (0~50) pg	$U=0.005 \mu\text{g/mL}$ $U=0.2\text{pg}$		
17	*Turbidimeters	turbidity	Verification Regulation of Turbidimeters JJG880	(0.001~400) NTU	$U_{\text{rel}}=4\%$		
18	*Air Samplers	flow time	Verification Regulation of Air Sampler JJG956	(50~6000) mL/min (300~3600) s	$U_{\text{rel}}=1.2\%$ $U_{\text{rel}}=0.01\%$		
19	*Alarmer Detectors of Combustible Gas	Gas Concentration	Alarmer Detectors of Combustible Gas JJG693	CH <sub>4</sub> (0.01~95) %LEL C <sub>3</sub> H <sub>8</sub> (0.01~95) %LEL i-C <sub>4</sub> H <sub>10</sub> (0.01~95) %LEL H <sub>2</sub> (0.01~95) %LEL C <sub>2</sub> H <sub>2</sub> (0.01~95) %LEL	$U_{\text{rel}}=2.7\%$ $U_{\text{rel}}=2.4\%$ $U_{\text{rel}}=2.1\%$ $U_{\text{rel}}=2.7\%$ $U_{\text{rel}}=2.7\%$		
20	Airborne Particle Counter	Particle Size	Calibration Specification for Airborne Particle Counter JJF1190	1%~100%	$U_{\text{rel}}=24\%$		

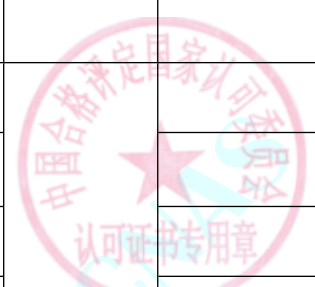


在线扫码获取验证

No. CNAS L0128

第 120 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

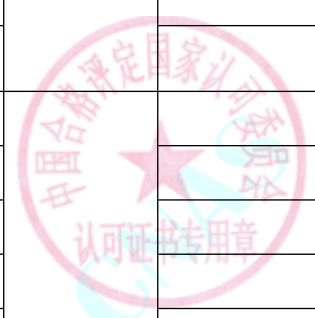
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Concentration		(4500~55000)particles/28.3L	$U_{rel}=14\%$		
		Flow		(0.1~40) L/min	$U=1.3\%$		
		Time		(30~600)s	$U=0.3s$		
21	*Instrument for KF Coulometry Titration	water content	Verification Regulation of Instrument for KF Coulometry Titration JJG1044	(10~5000) $\mu g$	$U_{rel}=3.1\%$		
22	*Inductively coupled plasma-atomic emission spectrometry	Detection limit	Verification Regulation of Emission Spectrometer JJG768	(0~50) mg/L	$U=0.00006mg/L(Ba)$ , $U=0.00026mg/L(Cr)$ , $U=0.00028mg/L(Cu)$ , $U=0.00004mg/L(Mn)$ , $U=0.00015mg/L(Ni)$ , $U=0.00013mg/L(Zn)$		
23	*Liquid chromatography-mass spectrometers	Signal-to-noise ratio	Calibration Specification for Liquid Chromatography - Mass Spectrometers JJF1317	16/2000 Single four-stage rod, Ion Trap: $\geq 10:1$	$U_{rel}=7\%$		
				Triple quadrupole(ESI-): $\geq 10:1$	$U_{rel}=7\%$		
				Triple quadrupole (ESI+、APCI+): $\geq 30:1$	$U_{rel}=7\%$		
24	*Ion Chromatograph	Minimum detectable concentration	Verification Regulation of Ion Chromatograph JJG823	Electrical Conductivity Detector: $\leq 0.02 \mu g/mL$	$U_{rel}=4\%$		
				UV-VIS Detector: $\leq 0.02 \mu g/mL$	$U_{rel}=4\%$		
				Electrochemical Detector: $\leq 0.02 \mu g/mL$	$U_{rel}=4\%$		
		Temperature		(0~50) $^{\circ}C$	$U=0.3 \text{ }^{\circ}C$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Flow rate		(0.1~10) mL/min	$U_{rel}=0.3\%$		
25	*Hand Saccharinmeter	concentration	Verification Regulation of Hand Saccharime(Content-meter) and Hand Refractometer JJG820	(0~65) %	$U=0.3\%$		
		refractivity		1.3000~1.7000	$U=0.0004$		
26	*Fourier Transform Infrared Spectrometers	wavenumber	Calibration Specification for Fourier Transform Infrared Spectrometers JJF1319	resolution0.01: (4000~400) $cm^{-1}$	$U=0.6cm^{-1}$		
				resolution0.5: (4000~400) $cm^{-1}$	$U=0.6cm^{-1}$		
				resolution1.0: (4000~400) $cm^{-1}$	$U=0.8cm^{-1}$		
				resolution2.0: (4000~400) $cm^{-1}$	$U=1.2cm^{-1}$		
27	*Atomic Fluorescence Spectrophotometer	Detection limit	V.R. of Atomic Fluorescence Spectrophotometers JJG 939	As: $\leq 0.4ng$	$U=0.006ng$		
				Sb: $\leq 0.4ng$	$U=0.004ng$		
28	*Automatic Potentiometric Titrators	electric potential	V.R. of Automatic Potentiometric Titrator JJG814	(-1900~1900) mV	$U=0.6mV$		
		volume		(2~100) mL	$U=0.02mL$		
		molar concentration		0.1mol/L	$U_{rel}=1.2\%$		
29	*Direct Reading Spectrometer	Detection limit	Verification Regulation of Emission Spectrometer JJG768	C: $\leq 0.02\%$	$U=0.0009\%$		
				Si: $\leq 0.02\%$	$U=0.0012\%$		
				Mn: $\leq 0.02\%$	$U=0.0009\%$		
				Cr: $\leq 0.01\%$	$U=0.0009\%$		
				Ni: $\leq 0.02\%$	$U=0.0011\%$		



No. CNAS L0128

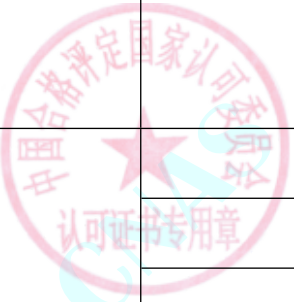
第 122 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证



No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(100~115) J/g	$U_{rel}=1.3\%$		
35	*Inductively coupled plasma massspectrometry	Detection limit	Verification Regulation of Inductively coupled plasma massspectrometry JJF1159	Be (0~10) μ g/mL	$U=0.48\text{ng/L}$		
				In (0~10) μ g/mL	$U=0.08\text{ng/L}$		
				Bi (0~10) μ g/mL	$U=0.06\text{ng/L}$		
36	*Analyser of Oxygen-Nitrogen-Hydrogen	content	Verification Regulation of Elemental Analyser JJF1321	O: (0.0005~0.02) %	$U_{rel}=7.9\%$		
				N: (0.001~0.01) %	$U_{rel}=8.3\%$		
				H: (1.0~9.0) × 10 <sup>-6</sup>	$U_{rel}=12\%$		
37	Dissolved Oxygen Meter	The Concentration of Dissolved Oxygen	Verification Regulation of Dissolved Oxygen Meter JJG291	(5~16) mg/L	$U=0.17\text{mg/L}$		
		temperature		(0~50) °C	$U=0.16^{\circ}\text{C}$		
38	*Sulfur Hydrogen Gas Detectors	Concentration	Verification Regulation of Sulfur Hydrogen Gas Detectors JJG695	(0.1~100) μ mol/mol	$U_{rel}=3.5\%$		
39	Pyknometer	Volume	Paints and varnishes-Determination of density-Pyknometer method (appendix A: calibration for pyknometer GB/T 6750	(0~100) mL	$U=0.12\text{mL}$		
40	*Flue Gas Analyzers	Concentration	Verification Regulation of Flue Gas Analyzers JJG968	SO <sub>2</sub> : (0.1~300) μ mol/mol	$U_{rel}=2.1\%$		
		Concentration		NO: (0.1~300) μ mol/mol	$U_{rel}=1.8\%$		
		Concentration		CO: (0.1~1000) μ mol/mol	$U_{rel}=1.6\%$		

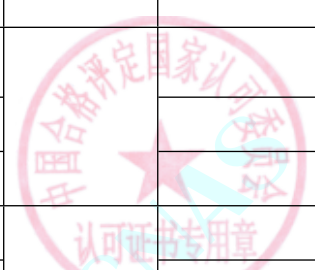


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Concentration		O <sub>2</sub> : (0.1~25) %	U <sub>rel</sub> =1.9%		
		Concentration		NO <sub>2</sub> : (0.1~100) μmol/mol	U <sub>rel</sub> =2%		
41	*Carbon Monoxide Detectors	Gas Concentration	Verification Regulation of Carbon Monoxide Detectors JJG915	(0.1~1000) μmol/mol	U <sub>rel</sub> =1.9%		
42	*Elemental Analyser	content	Verification Regulation of Elemental Analyser JJF1321	N: (0.1~46.6) %	U <sub>rel</sub> =2.4%,	N Analyser,CHN Analyser,H Analyser	
		content		C: (40~85) %	U <sub>rel</sub> =2.4%		
				N: (0.8~8.1) %	U <sub>rel</sub> =6.2%		
				H: (2~5) %	U <sub>rel</sub> =3.1 %		
43	*Ammonia Gas Detectors	Concentration	Verification Regulation of Ammonia Gas Detectors JJG1105	(1~300) μmol/mol	U <sub>rel</sub> =3.1%		
		Time		(1~3600) s	U=3s		
44	*Electrochemical Oxygen Meter	Concentration	Verification Regulation of Electrochemical Oxygen Meter JJG365	(25~100) %	U <sub>rel</sub> =3.1%		
		Concentration		(0.1~25) %	U <sub>rel</sub> =3.3%		
		Time		(1~3600) s	U=2s		
45	*Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer	Concentration	Verification Regulation of Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer JJG 635	CO: (1~1000) μmol/mol	U <sub>rel</sub> =1.7%		
		Concentration		CO <sub>2</sub> : (0.1~100) %	U <sub>rel</sub> =2.6%		
		Time		(1~3600) s	U=2s		
46	Samplers for Stack Dust	flow rate	Verification Regulation of Samplers for Stack Dust JJG680	(6~100) L/min	U <sub>rel</sub> =1.4%		
		temperature		Flowmeter Temperature: (10~35) °C	U=0.2°C		



No. CNAS L0128

第 125 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ( $k=2$ )	Note	Effective Date
		temperature		Flue Gas Temperature: (10~300) °C	$U=0.3^{\circ}\text{C}$		
		pressure		Dynamic Pressure: (0.1~1) kPa	$U=1.2\text{Pa}$		
				Dynamic Pressure: (1~ 2.5) kPa	$U=12\text{Pa}$		
		time		Flow meter pressure, static pressure: (-100~ 100) kPa	$U=0.06\text{kPa}$		
				(1~3600) s	$U=0.3\text{s}$		
47	*Total Suspended Particulates	Flow Rate	Verification Regulation of Total Suspended Particulates JJG943	(80~150) L/min	$U_{\text{rel}}=1.2\%$		
		Flow Rate		(150~1200) L/min	$U_{\text{rel}}=1.3\%$		
		Pressure		(87~105) kPa	$U=2.5\text{hPa}$		
		Temperature		(0~50) °C	$U=0.2^{\circ}\text{C}$		
		Time		(1~3600) s	$U=0.3\text{s}$		
48	*Laser particle size analyzer	particle size	Calibration Specification for Laser Particle Size JJF1211	(1~5) μm	$U_{\text{rel}}=8\%$		
				(5~20) μm	$U_{\text{rel}}=5\%$		
				(20~120) μm	$U_{\text{rel}}=3\%$		
				50.1 μm (玻璃微珠)	$U_{\text{rel}}=6\%$		
49	*Carbon-Sulfur Analyzers	content	Verification Regulation of Carbon-Sulfur Analyzers JJG 395	C: (0.005~0.01) %	$U_{\text{rel}}=5.3\%$	Infrared carbon-sulfur analyzer, Auto matic high speed	
				C: (0.01~0.1) %	$U_{\text{rel}}=3.6\%$		
				C: (0.1~1) %	$U_{\text{rel}}=1.1\%$		

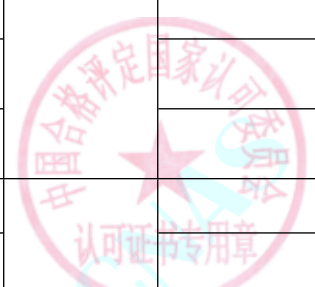


No. CNAS L0128

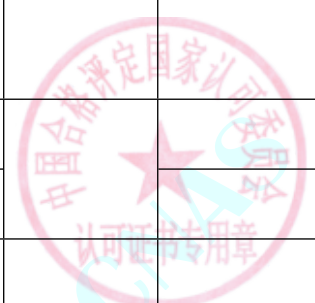
第 126 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		content	ilac-MRA CHINA NATIONAL ACCREDITATION FOR COMPETENCY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	C: (1~4) %	$U_{rel}=0.9\%$	carbon-sulfur analyzer	
				S: (0.003~0.01) %	$U_{rel}=6.0\%$		
				S: (0.01~0.1) %	$U_{rel}=4.7\%$		
				S: (0.1~0.2) %	$U_{rel}=3.7\%$		
				C: (0.030~0.1) %	$U_{rel}=5.0\%$		
				C: (0.1~0.5) %	$U_{rel}=2.7\%$		
				C: (0.5~1) %	$U_{rel}=2.7\%$		
				C: (1~4) %	$U_{rel}=1.6\%$		
				S: (0.003~0.01) %	$U_{rel}=6.7\%$		
				S: (0.01~0.05) %	$U_{rel}=5.5\%$		
				S: (0.05~0.1) %	$U_{rel}=4.2\%$		
				S: (0.1~0.2) %	$U_{rel}=4.0\%$		
50	*Flash Point Tester	Flash point	Calibration Specification for Open/Closed Cup Flash Point Testers JJF 1384	Closed cupflash point: (70~110) °C	$U=5.4^{\circ}\text{C}$		
				Closed cupflash point: (110~170) °C	$U=7.7^{\circ}\text{C}$		
				Open cupflash point: (110~250) °C	$U=8.3^{\circ}\text{C}$		
51	*Osmometers	molar concentration	Verification Regulation of Osmometers JJG1089	(90~400) mOsmol/kg	$U=2.4\text{mOsmol/kg}$		
				(400~710) mOsmol/kg	$U_{rel}=0.7\%$		
52	*Thermogravimetric Analyzers	Curie temperature	Verification Regulation for Thermogravimetric Analyzers	(250~500) °C	$U=1.3^{\circ}\text{C}$		

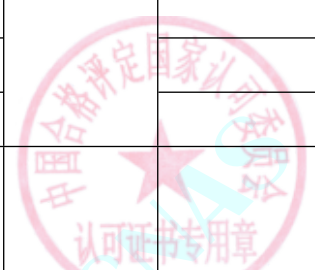


No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Melting point	JJG 1135	(50~250) °C	U=1.1°C		
				(500~800) °C	U=2.0°C		
				(50~200) °C	U=0.6°C		
				(200~300) °C	U=0.5°C		
				(300~400) °C	U=0.7°C		
				(400~500) °C	U=0.8°C		
		mass	(1~50) mg	U=0.020mg			
53	*Analyzers for oil content in water	Concentration	Analyzers for Oil Content in water JJG 950	(0.1~10) mg/L	U=0.17mg/L		
				(10~1000) mg/L	U <sub>rel</sub> =3.1%		
54	*On-line pH Meters	pH	Calibration Specification for On-line pH Meters JJF 1547	Electricity pH:(0~14)	U=0.01		
				Instrument pH:(3~10)	U=0.03		
		Voltage		(-1900~1900) mV	U=0.04%FS		
55	*Karl Fischer Volumetric Titrators for Water Content	Water Content	Karl Fischer Volumetric Titrators for Water Content JJG1154	(0.01~1) %	U <sub>rel</sub> =7.6%		
56	*Residual Chlorine Meters	Concentration	Calibration Specification for Residual Chlorine Meters JJF 1609	Total residual chlorine (0.1~500) mg/L	U <sub>rel</sub> =3.2%		
		Concentration		Free residual chlorine: (0.1~50) mg/L	U <sub>rel</sub> =3.3 %		
57	*Polymerase Chain Reaction Analyzers	Particle concentration	Calibration Specification for Polymerase Chain Reaction Analyzers JJF 1527	(10~100) °C	U=0.2°C		
		Concentration		(0.1~10 <sup>8</sup> ) copies/ μ L	U <sub>rel</sub> =8.0%		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
58	*Fluorescence spectrophotometer	Detection limit	Verification Regulation of Fluorescence spectrophotometer JJG 537	A Type: $\leq 5 \times 10^{-10}$ g/mL	$U=5.2 \times 10^{-12}$ g/mL		
				BType: $\leq 1 \times 10^{-8}$ g/mL	$U=6.0 \times 10^{-10}$ g/mL		
		Wavelength		(200~700) nm	$U=0.4$ nm		
59	*Chemical Oxygen Demand (COD) Meters	Temperature	Chemical Oxygen Demand (COD) Meters JJG 975	(100~200) °C	$U=0.6$ °C		
		time		(1~3600) s	$U=0.5$ s		
		concentration (Type A)		(0.1~50) mg/L	$U_{rel}=2.6\%$		
				(50~300) mg/L	$U_{rel}=2.0\%$		
				(300~1000) mg/L	$U_{rel}=1.8\%$		
concentration (Type B)	(0.1~100) mg/L	$U=2.6\%$					
60	*Class II Biosafety Cabinets	Wind speed	Calibration specification for Class II Biosafety Cabinets JJF 1815	(0.2~1.5) m/s	$U=0.04$ m/s		
		Nosie		(40~100) dB	$U=3$ dB		
		illumination		(50~200) lx	$U_{rel}=14\%$		
				(200~2000)lx	$U_{rel}=12\%$		
		cleanliness		(0.3~5) μm	$U_{rel}=29\%$		
		Leakage rate		(0.0001~1) %	$U_{rel}=30\%$		
61	*Volatile Organic Compounds Photo Ionization Detectors	Concentration	Calibration Specification for Volatile Organic Compounds Photo Ionization Detectors JJF 1172	(0.1~2000) μmol/mol	$U_{rel}=3.1\%$		

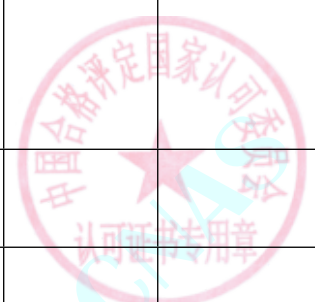


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
62	*Total organic carbon analyzer	Concentration of Inorganic carbon	Verification Regulation of Total Organic Carbon Analyzer JJG 821	(0.01~1000) mg/L	$U_{rel}=1.6\%$		
		Concentration of Organic carbon		(0.01~1000) mg/L	$U_{rel}=U_{rel}=1.8\%$		
63	*Time-of-Flight Mass Spectrometers	mass-to-charge ratio	Calibration Specification for Time-of-Flight Mass Spectrometers JJF 1528	ESI-TOF-MS: (172~4070) u	$U_{rel}=3 \times 10^{-5}$		
				MALDI-TOF-MS: (1000~67000) u	$U_{rel}=8 \times 10^{-3}$		
		Signal to noise ratio		ESI-TOF-MS: 1~10 <sup>6</sup>	$U_{rel}=15\%$		
				MALDI-TOF-MS: 1~10 <sup>6</sup>	$U_{rel}=18\%$		
64	*On-line Conductivity Meters	Conductivity	Calibration Specification for Online Conductivity Meters JJF(Xin) 19	Electricity: (1~2×10 <sup>4</sup> ) μ S/cm	$U=0.24\%FS$		
		Conductivity		Instrument: (0.9 ~1.3×10 <sup>4</sup> ) μ S/cm	$U=0.8\%FS$		
		Temperature		(0~50) °C	$U=0.3\%C$		
65	*On-line Automatic Determinators of Chemical Oxygen Demand(COD)	concentration	Verification Regulation of On-line Automatic Determinators of Chemical Oxygen Demand(COD) JJG 1012	(16~1000) mg/L	$U_{rel}=4\%$		
66	*Micro-spectrophotometers	concentration	Calibration Specification for Micro-spectrophotometers JJF 1836	(10~2000) ng/ μ L	$U_{rel}=10\%$		
67	*Alarmer Detector of Sulfur Hexafluoride	concentration	Calibration Specification for the Alarmer Detector of Sulfur Hexafluoride JJF 1263	(0.1~1000) μ mol/mol	$U_{rel}=2.4\%$		



No. CNAS L0128

第 130 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		time		5s~3600s	$U=1s$		
68	*Bacterial Endotoxin Analyzers	temperature	Calibration Specification for Bacterial Endotoxin Analyzers JJF1529	(20.0~50.0) °C	$U=0.2^{\circ}C$		
69	*Colony Counters	Bacterial Colony	Calibration Specification for Colony Counters JJF 1751	(20~300) CFU	$U_{rel}=3\%$		
70	*Blood Cell Analyzers	concentration	Verification Regulation of Blood Cell Analyzers JJG 714	WBC: (2×10 <sup>8</sup> ~2.5×10 <sup>10</sup> ) 个/L	$U_{rel}=4\%$		
				RBC: (1×10 <sup>11</sup> ~6×10 <sup>13</sup> ) 个/L	$U_{rel}=3\%$		
				HGB: (20~300) g/L	$U_{rel}=3\%$		
				PLT: (5×10 <sup>9</sup> ~5×10 <sup>12</sup> ) 个/L	$U_{rel}=8\%$		
71	*Hydrogen Chloride Gas Detectors and Alarms	Concentration	Calibration Specification for Hydrogen Chloride Gas Detectors and Alarms JJF 1888	(0.1~100) μ mol/mol	$U_{rel}=3.0\%$		
		Time		(1~3600) s	$U=1s$		
72	*(Automatic) Nucleic acid extractors	Temperature	Calibration Specification for (Automatic) Nucleic Acid Extractors JJF 1874	(20~100) °C	$U=1.5^{\circ}C$		
		Vibration frequency		(0.5~100) Hz	$U=0.6Hz$		
		Volume		(50~200) μ L	$U=1.3 \mu L$		
		Recovery rate		(10~100) %	$U=2.4\%$		
73	Flue Gas Samplers	flow rate	Verification Regulation of Flue Gas Samplers JJG 1169	(50~2000) mL/min	$U_{rel}=1.2\%$		
		time		(10~3600) s	$U=0.3 s$		
		temperature		(0~50) °C	$U=0.2^{\circ}C$		



No. CNAS L0128

第 131 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		pressure		(-40~40) kPa	U=0.06 kPa		
		atmospheric pressure		(80~106) kPa	U=0.16 kPa		
74	*Plate Electrophoresis Apparatus	Voltage	Calibration Specification for Plate Electrophoresis Apparatus JJF 1654	(0.2~20) V	U=0.3 V		
		(20~1000) V		U=0.4 V			
		Electricity		(2~20) mA	U=0.3 mA		
				20mA~2A	U=0.6 mA		
				(2~10) A	U=0.7mA		
75	*Elemental Analyzers of C、H、N、S	Content	Calibration Specification for Elemental Analyzers JJF 1321	C: (0.1~42) %	U <sub>rel</sub> =4%		
				H: (0.1~5) %	U <sub>rel</sub> =1.5%		
				N: (0.1~9) %	U <sub>rel</sub> =3%		
				S: (0.1~19) %	U <sub>rel</sub> =4%		
76	*Ultraviolet Fluorescence Sulfur Analyzers	Indication error	Calibration Specification for Ultraviolet Fluorescence Sulfur Analyzers JJF 1685	(0~10.0) mg/L	U=0.2mg/L		
				(10.0~100) mg/L	U <sub>rel</sub> =4%		
				(100~200) mg/L	U <sub>rel</sub> =3%		
77	*Flame Photometer	Detection limit	Verification Regulation of Flame Photometer JJG 630	K: ≤0.004mmol/L	U=0.0005mmol/L		
				Na: ≤0.008mmol/L	U=0.0023mmol/L		
78	*Ammonia-Nitrogen Automatic Analyzers	Concentration	Verification Regulation of Ammonia-Nitrogen Automatic Analyzers JJG 631	(0~2) mg/L	U=0.05 mg/L		
				(2~100) mg/L	U <sub>rel</sub> =2.8 %		

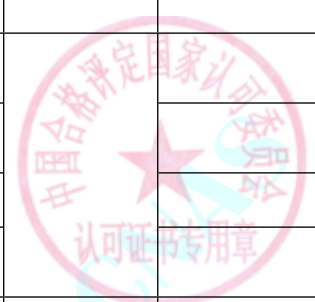


No. CNAS L0128

第 132 页 共 156 页

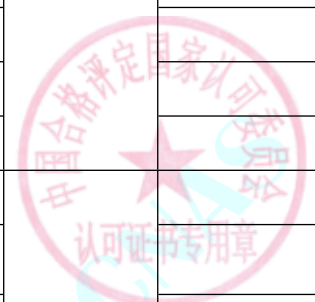
The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
79	*Energy Dispersive X-ray Fluorescence Spectrometers	Concentration	Calibration Specification for Energy Dispersive X-ray Fluorescence Spectrometers JJF 2024	polymer: (5~1200) mg/kg	$U_{rel}=6\%$		
		Concentration		metal: (0.001~100) %	$U_{rel}=5\%$		
		Detection Limit		polymer: $\leq 50\text{mg/kg}$	$U_{rel}=20\%$		
		Detection Limit		metal: $\leq 100\text{mg/kg}$	$U_{rel}=25\%$		
80	*Automatic Amino Acid Analyzer	Limit of detection	Verification Regulation of Automatic Amino Acid Analyzer JJG 1064	$\leq 1\text{nmol}$	$U_{rel}=12\%$		
		Pumping flow		(0.1~10) mL/min	$U_{rel}=0.4\%$		
81	*Adenosine Triphosphate(ATP) Fluorescence Detectors	Amount of substance	Calibration Specification for Adenosine Triphosphate(ATP) Fluorescence Detectors JJF 1828	( $1 \times 10^{-10} \sim 1 \times 10^{-18}$ ) mol	$U_{rel}=9\%$	Only the ATP method	
82	*Alarmer detectors of Benzene	Concentration	Calibration Specification for Alarmer Detectors of Benzene JJF 1674	(0.1~10) $\mu\text{mol/mol}$	$U=0.28 \mu\text{mol/mol}$		
				(10~100) $\mu\text{mol/mol}$	$U_{rel}=3.2\%$		
		Time		(1~3600) s	$U=1\text{s}$		
83	*Water Quality On-line Analyzers of Total Phosphorus and Total Nitrogen	Concentration	Verification regulation of Water Quality On-line Analyzers of Total Phosphorus and Total Nitrogen JJG 1094	Total P: (0~0.5) mg/L	$U=0.01\text{mg/L}$		
				Total P: (0.5~500) mg/L	$U_{rel}=1.9\%$		
				Total N: (0~2) mg/L	$U=0.02\text{mg/L}$		
				Total N: (2~500) mg/L	$U_{rel}=1.9\%$		
84	*Bomb Calorimeters	Calorie	Verification regulation of Bomb Calorimeters JJG 672	(26400~26500) J/g	$U_{rel}=0.12\%$		



在线扫码获取验证

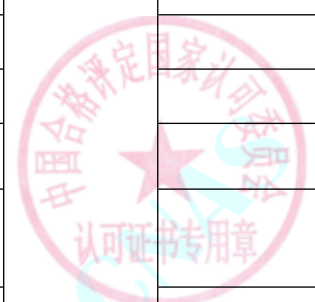
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
85	*Rotational Rheometers	Temperature	Calibration Specification for Rotational Rheometers JJF 2134	(-60~250) °C	U=0.3°C		
		Viscosity		(0.1~1000) Pa*s	U <sub>rel</sub> =7%		
86	*Gas Detectors of Acrylonitrile	Concentration	Calibration Specification for Gas Detectors of Acrylonitrile JJF 2113	(2.0~10.0) μ mol/mol	U=0.3 μ mol/mol		
				(10~80) μ mol/mol	U <sub>rel</sub> =3.1%		
		Time		(1~300) s	U=1s		
87	*Oxidation-Reduction Potential Meter	Potential	Calibration Specification of Oxidation-reduction Potential Meters JJF (Zhe) 1206	Electrometer: (-2000~2000) mV	U=0.02%FS		
				Instrument: (34~268) mV	U=1.2mV		
88	*Protein Purification Analyzers	Flow	Calibration Specification for Protein Purification Analyzers JJF 2204	(0.2~5) mL/min	U <sub>rel</sub> =0.7%		
				(5~50) mL/min	U <sub>rel</sub> =0.8%		
				(50~2500) mL/min	U <sub>rel</sub> =1.6%		
				pH	3~10	U=0.02	
		conductivity		(100~1500) μ S/cm	U=1.8 μ S/cm		
		temperature		(2~30) °C	U=0.4°C		
		volume		(10~1000) μ L	U=(1~3) μ L		
				(5000~50000) μ L	U=14 μ L		
89	*Extrusion Plastometers	quality	Verification Regulation of Extrusion Plastometers JJG 878	(0.325~21.60)kg	U <sub>rel</sub> =(0.10~0.18)%		
		Length		Piston head diameter: 9.474mm	U=0.002mm		
				Piston head diameter: (0.2~30)mm	U=0.03mm		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Time		(10~60)s	$U_{rel}=(0.08\sim0.5)\%$		
		Temperature		(125~300)°C	$U=0.3^{\circ}\text{C}$		
		Flow rate		Mass flow rate: (1~7)g/10min	$U_{rel}=(4\sim8)\%$		
				Volume flow rate: (3.86~4.56)cm <sup>3</sup> /10min	$U_{rel}=9\%$		
九、Special test							
1	*Electrosurgical Generator	Output Power	C.S.for Electrosurgical Generator JJF 1217	(10~50)W	$U=(3\sim5)W$		
				(50~400)W	$U_{rel}=6\%$		
2	*Cardiac defibrillators	delivered energy	C.S.for Cardiac Defibrillators JJF 1149	(2~40)J	$U=2J$		
				(40~360)J	$U_{rel}=5\%$		
		pulse frequency		(40~200)min <sup>-1</sup>	$U_{rel}=1\%$		
		pulse width		(20~50)ms	$U=0.5\text{ms}$		
		pulse current amplitude		(1~10)mA	$U=0.2\text{mA}$		
				(10~100)mA	$U_{rel}=1.3\%$		
		direct voltage		(0.5~2.0) mV	$U_{rel}=2.8\%$		
		Scanning speed		25mm/s	$U_{rel}=0.3\%$		
		Amplitude-frequency characteristics		1mV (1Hz~25Hz)	$U_{rel}=1.4\%$		
		Heart Rate		(30~200)min <sup>-1</sup>	$U=1\text{time}/\text{min}$		

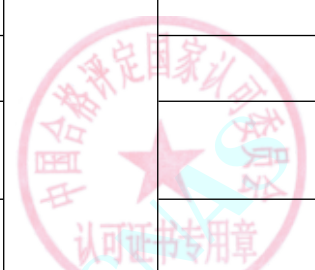


No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
3	*Multifunction Patient Monitoring Instruments	Electrocardio voltage	V.R.of Multifunction Patient Monitoring Instruments JJG 1163	(0.5~2.0)mV	$U_{rel}=2.8\%$	/	
		Scanning speed		(25~50)mm/s	$U_{rel}=0.3\%$		
		Heart Rate		(30~200)min <sup>-1</sup>	$U=1\text{time}/\text{min}$		
		Pressure		(6~40)kPa	$U=0.26\text{kPa}$		
		Pulse rate		(30~200)min <sup>-1</sup>	$U=1\text{time}/\text{min}$		
		Amplitude-frequency characteristics		1mV (1Hz~25Hz)	$U_{rel}=1.4\%$		
4	*Ventilators	Tidal Volume	C.S.for Ventilators JJF1234	(50~1000) mL	$U_{rel}=5\%$	/	
		Frequency		(10~40) min <sup>-1</sup>	$U_{rel}=4\%$		
		Inspiratory Flow Oxygen Concentration		21%~100%	$U=4\%$		
		Pressure		(0.2~3) kPa	$U_{rel}=6\%$		
5	*Hemodialysis Equipment	Dialysate Conductivity	C.S.for Hemodialysis Equipment JJF 1353	(12.5 ~15.5)mS/cm	$U_{rel}=1.2\%$	/	
		Dialysate Temperature		(25 ~40)°C	$U=0.2^{\circ}\text{C}$		
		Static (arterial) pulse pressure		(20~100) kPa	$U=0.4\text{kPa}$		
		Flow		Dialysate Flow: (400~800) mL/min	$U_{rel}=3.6\%$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			ilac-M	Anticoagulant pump injection flow: (5~20) mL/h	$U_{rel}=2.6\%$		
				Blood Flow: (400~800) mL/min	$U_{rel}=3.6\%$		
		Dehydrating capacity		500mL/h、1000mL/h	$U_{rel}=2.7\%$		
6	*Tester for Ductility of Bituminous Materials	Temperature	Verification Regulation of Tester for Ductility of Bituminous Materials JJG (JT) 023	(0~50)°C	$U=0.11^{\circ}\text{C}$		
		Speed		(10~50) mm/min	$U=0.02\text{mm/min}$		
		Length		(0~200)mm	$U=0.03\text{mm}$		
				(200~3000)mm	$U=1.1\text{mm}$		
Roughness	(0.1~10) $\mu\text{m}$	$U_{rel}=6.6\%$					
7	*Electric Compaction Instrument	Weight	Verification Regulation of Compaction Instrument of Soil JJG (JT) 058	(0~5000) g	$U=0.3\text{g}$	/	
		Length		(0~1000) mm	$U=1.0\text{mm}$		
		Length		(0~500) mm	$U=0.03\text{mm}$		
		Length		(0.05~14.80)mm	$U=0.02\text{mm}$		
8	*Apparatus for Softening Point of Bitumen	Weight	Verification Regulation of Apparatus for Softening Point of Bitumen JJG (JT) 057	(0~210) g	$U=0.02\text{g}$	/	
		Length		(0~200) mm	$U=0.03\text{mm}$		
		Temperature		(0~100) °C	$U=0.1^{\circ}\text{C}$		
		Volume		(0~1000) mL	$U=2.0\text{mL}$		
		Heating Rate		(0~10) °C/min	$U=0.4^{\circ}\text{C/min}$		



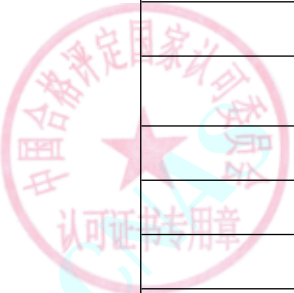
No. CNAS L0128

第 137 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
9	*Cement Consistency and Setting Time Detector	Weight	Verification Regulation for cement testing apparatus of the onrml consistency and setting time JJG (JC) 105	(0~500) g	U=0.3g	/	
		Angle		(0~120)°	U=3'		
		Length		(0~100) mm	U=0.04mm		
10	*Jolting Table for Compacting Mortars Specimen	Length	Calibration Specification for Jolting Table for Compacting Mortars Specimen JJF(JC) 124	(0.5~100) mm	U=0.12mm		
		Weight		(0~35000) g	U=0.3g		
		Time		(0~3600) s	U=0.12s		
11	*Biological, Chemical, Sterile Pharmaceutical Production Equipment	Temperature	Calibration Specification for Biological, Chemical, Sterile Pharmaceutical Production Equipment SQI/JL-JF-42	(-100~600)°C	U= (0.03~0.08) °C	/	
		Pressure		Element pressure gauges; (-0.1~60) MPa	U=0.68%FS		
		Pressure		Digital pressure gauges: (0~60) MPa	U=0.06%FS		
		Revolution Speed		(2.5~30000) r/min	U <sub>rel</sub> =0.3%		
		Flow		(0.5~38) m <sup>3</sup> /h	U=0.34%FS		
12	*Inspecting Instrument of Construction Engineering and Building Materials	Length	Calibration Specification for Inspecting Instrument of Construction Engineering and Building Materials SQI/JL-JF-41	Height:(0~1000) mm	U=0.2mm	/	
		Length		Amplitude:(0~10) mm	U=0.02mm		
		Length		Displacement:(0.5~291.8) mm	U=2.0mm		
		Length		(0~3.5) m	U= 2mm		
		Length		Diameter:(0~500) mm	U=0.04mm		
		Length		Gap Value:(0.05~2)mm	U=0.06mm		
		Vertical Degree		(0~200) mm	U= 0.03mm		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Revolution Speed		(2.5~30000) r/min	$U_{rel}=0.3\%$		
		Angle		(-120~120) °	$U=0.6'$		
		Pressure		Pressure Gauge (-0.1~60) MPa	$U=0.68\%FS$		
		Pressure		Digital Pressure Gauges (0~60) MPa	$U=0.06\%FS$		
		Temperature		(-100~600)°C	$U=0.08^{\circ}C$		
		Time		(0~10) h	$U=0.06s$		
		Weight		(0~35)kg	$U=1.5 g$		
13	*Board Compression Strength Tester	force	Verification Regulation of Board Compression Strength Tester JJG(QG)49	(0.5~6000)N	$U_{rel}=0.4\%$		
14	*Compression Strength Tester for Corrugated Box	force	Verification Regulation of Compression Strength Tester for Corrugated Box JJG(QG)115	(0.0005~50)kN	$U_{rel}=0.4\%$		
15	*MIT Type Folding Apparatus	force	Verification Regulation of MIT Type Folding Apparatus JJG(QG)59	15N	$U=0.1N$		
		Rotation Speed		175r/min	$U_{rel}=0.5\%$		
16	*Paper and Cardboard Bursting Strength Meter	Pressure	Calibration Specification for Bursting Strength Tester for Paper and Board JJF(QG) 116	(0.1~6)MPa	$U=3.9kPa$		
17	*Board Puncture Strength Tester	force	Verification Regulation of Board Puncture Strength Tester JJG(QG)56	(0.5~500)N	$U_{rel}=0.4\%$		



No. CNAS L0128

第 139 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
18	*Pendulum-type Paper Tensile Breaking Strength Testing Machine	Force	Calibration Specification for Tensile Strength Testing Machines for Paper and Board JJF(QG)115	0.5N~50kN	$U_{rel}=0.4\%$		
19	*Horizontal Tensile Breaking Strength Testing Machine	force	Verification Regulation of Horizontal Tensile Breaking Strength Testing Machine JJG(QG)58.2	(0.5~1000)N	$U_{rel}=0.4\%$		
20	*Paper and Cardboard Thickness Tester	Length	Verification Regulation of Paper and Cardboard Thickness Tester JJG(QG)50.1	(0.5~100)mm	$U=6.2 \mu m$		
21	*Corrugated Plate Thickness Tester	Length	Verification Regulation of Corrugated Plate Thickness Tester JJG(QG)50.2	(0.5~100)mm	$U=6.2 \mu m$		
22	*Configuration Fatigue Tester for Part of Bicycle	Static force value	Calibration Specification for Configuration Fatigue Tester for Part of Bicycle JJF(QG)106	(0.1~50000) N	$U_{rel}=0.2\%$		
		Dynamic force value		(50~10000) N	$U_{rel}=1.0\%$		
		Frequency		(10~10000) r/min	$U_{rel}=0.2\%$		
		Frequency		(100~10000) 次	$U=1$ 次		
23	*Static Load Tester for Part of Bicycle	Force value	Calibration Specification for Static Load Tester for Part of Bicycle JJF(QG)121	(10~50000) N	$U_{rel}=0.2\%$		
		Time		(0.01~3600) s	$U=0.13s$		
24	*Wearing Tester for Axle Bowl、Pedal and Axle of Bicycle	Force value	Calibration Specification for Wearing Tester for Axle Bowl、Pedal and Axle of Bicycle JJF(QG)123	(50~50000) N	$U_{rel}=0.4\%$		
		Rotation Speed		(10~5000) r/min	$U_{rel}=0.6\%$		
25	*Wheel Tires Fatigue Testing	force	Calibration Specification for Wheel Tires Fatigue Tester	1N~50kN	$U_{rel}=0.5\%$		



在线扫码获取验证

No. CNAS L0128

第 140 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Machine	speed	SQI/JL-JF-17	(0.1~10)m/s	$U_{rel}=3.2\%$		
		Length		(1~300)mm	$U=0.04\text{mm}$		
26	*Brake Performance Tester	force	Calibration Specification for Brake Performance Tester SQI/JL-JF-22	1N~50kN	$U_{rel}=0.69\%$		
		speed		(0.1~10)m/s	$U_{rel}=2.0\%$		
27	*Impact Tester for Part of Bicycle	Length	Calibration Specification for Impact Tester for Part of Bicycle JJF(QG)122	(0~600) mm	$U=0.02\text{mm}$		
				(600~5000) mm	$U=0.7\text{mm}$		
		Quality		10g~1000kg	$U_{rel}=0.2\%$		
		Hardness		(20~70) HRC	$U=0.7\text{HRC}$		
28	*Vibration Tester of Bicycle	Rotation speed	Calibration Specification for Vibration Tester of Bicycle JJF(QG)107	(10~10000) r/min	$U_{rel}=0.2\%$		
		Acceleration		(0.5~10) m/s <sup>2</sup>	$U_{rel}=1.0\%$		
		Force value		(50~50000) N	$U_{rel}=0.4\%$		
		Amplitude		(2~20) mm	$U_{rel}=0.5\%$		
29	*Steering force-steering angle detectors for steering wheels of motor vehicles	Torque	Calibration specification for Steering force-steering angle detectors for steering wheels of motor vehicles JJF1196	(1~1000) Nm	$U_{rel}=0.72\%$		
		Force		(0.5~1000) N	$U_{rel}=0.60\%$		
		Angle		(1~1000) °	$U=0.1^\circ$		
30	*Roller Type Speedmeter Tester	Speed	Roller Type Speedmeter Tester JJG909	(0.1~200) km/h	$U_{rel}=0.31\%$		
31	*Measurer for Adhesion Performance of Retroreflective Sheeting	Length	Verification Regulation of Measurer for Adhesion Performance of Retroreflective Sheeting JJG (JT) 083	(0~500)mm	$U=0.07\text{mm}$		
		Weight		(0~850)g	$U=0.2\text{g}$		



№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
32	*Measurer for Impact Resistance of Retroreflective Sheeting	Length	Verification Regulation of Measurer for Impact Resistance of Retroreflective Sheeting JJG (JT) 084	(0~500)mm	$U=0.08\text{mm}$		
		Weight		(0~1000)g	$U=0.2\text{g}$		
33	*Measurer for Resistance to Impact of Raised Pavement Markers	Length	Verification Regulation of Measurer for Resistance to Impact of Raised Pavement Markers JJG (JT) 080	(0~1500)mm	$U=1.0\text{mm}$		
		Weight		(0~2000)g	$U=0.6\text{g}$		
34	*Fibrics Bursting Tester	Pressure	Calibration Specification for Fabric Bursting Tester JJF (FZ) 048	(0~2.5)MPa	$U=0.003\text{MPa}$		
		Time		(0~60)s	$U=0.04\text{s}$		
		Length		Bursting Expansion: (0.5~100)mm	$U=0.02\text{mm}$		
		Length		Aperture: (0~500)mm	$U=0.06\text{mm}$		
35	*Yarn Twist Tester	Force	Calibration Specification for Yarn Twist Tester JJF (FZ) 010	(0.1~20)N	$U_{\text{rel}}=0.2\%$		
		Rotation Rate		(10~5000)r/min	$U_{\text{rel}}=0.3\%$		
		Length		(0~500)mm	$U=0.06\text{mm}$		
36	*Fibre Strength Tester	Length	Calibration Specification for Fibre Strength Tester JJF (FZ) 016	(0~40)mm	$U=0.03\text{mm}$		
		Force		(0.01~200)cN	$U_{\text{rel}}=0.6\%$		
		Mass		(0~100)g	$U=0.020\text{g}$		
		Velocity		(0.05~600)mm/min	$U_{\text{rel}}=0.2\%$		
37	*Sock Stretch Tester	Length	Calibration Specification for Sock Stretch Tester JJF (FZ) 017	(0~500)mm	$U=0.06\text{mm}$		
		Velocity		(1~200)mm/s	$U_{\text{rel}}=0.2\%$		
		Force		(1~100)N	$U_{\text{rel}}=0.2\%$		



No. CNAS L0128

第 142 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
38	*Wrap Reelers	Force	Calibration Specification for Yarn Wrap Reel Machines JJF (FZ) 019	(5~200)cN	$U_{rel}=0.4\%$		
		Length		(30~1000)mm	$U=0.3\text{mm}$		
39	*Textile Yarn Length Tester	Length	Calibration Specification for Textile Yarn Length Tester JJF (FZ) 021	(0~1000)mm	$U=0.06\text{mm}$		
		Force		(0.01~200)cN	$U_{rel}=0.6\%$		
40	*Roller Fiber Length Analyzer	Length	Calibration Specification for Roller Fiber Length Analyzer JJF (FZ) 024	(0~150)mm	$U=0.04\text{mm}$		
41	*Colour Fastness to Friction Testers	Rotation Rate	Calibration Specification for Colour Fastness to Friction Testers JJF (FZ) 027	(10~200) r/min	$U_{rel}=0.2\%$		
		Force		(0.5~100)N	$U_{rel}=0.4\%$		
		Length		(0~150)mm	$U=0.04\text{mm}$		
42	*Colour Fastness to Perspiration Testers	Mass	Calibration Specification for Colour Fastness to Perspiration Testers JJF (FZ) 028	(3000~6000) g	$U=0.20\text{g}$		
43	*Circular Locus Method Fuzzing and Pilling Testers	Speed	Calibration Specification for Circular Locus Method Fuzzing and Pilling Testers JJF (FZ) 031	(0.1~100) r/min	$U_{rel}=0.2\%$		
		Length		(0.1~5) mm	$U=0.03\text{mm}$		
				(5~150) mm	$U=0.04\text{mm}$		
		Force		(0.1~1000) cN	$U=0.64\text{cN}$		
44	*Vertical Fabric Crease Recovery Tester	Length	Calibration Specification for Vertical Fabric Crease Recovery Tester JJF (FZ) 032	(1~150)mm	$U=0.06\text{mm}$		
		Mass		1g~2kg	$U=0.15\text{g}$		
		Time		(1~600)s	$U=0.13\text{s}$		
		Angle		(0~200)°	$U=0.02^\circ$		



No. CNAS L0128

第 143 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
45	*Fabric Drapability Tester	Rotation Rate	Calibration Specification for Fabric Drapability Tester JJF (FZ) 033	(10~500)r/min	$U_{rel}=1.4\%$		
		Length		180mm, 120mm	$U=0.06\text{mm}$		
		Drape coefficient		30%~100%	$U_{rel}=1.5\%$		
		Time		(0~300)s	$U=0.4\text{s}$		
46	*Fabric Flat-Rubbing Tester	Rotation Rate	Calibration Specification for Fabric Flat-Rubbing Tester JJF (FZ) 036	(10~500)r/min	$U_{rel}=0.3\%$		
		Length		(0.1~150)mm	$U=0.04\text{mm}$		
		Mass		(0.1~600)g	$U=0.020\text{g}$		
				(600~1000)g	$U=0.13\text{g}$		
				(1000~2000)g	$U=0.15\text{g}$		
				(2000~3000)g	$U=0.20\text{g}$		
47	*Fuzzing and Pilling Tester	Length	Calibration Specification for Fuzzing and Pilling Tester JJF (FZ) 053	(0~300)mm	$U=0.05\text{mm}$		
		Friction Coefficient		0.4~1.0	$U_{rel}=0.2\%$		
		Rotation Rate		(10~100) r/min	$U_{rel}=1.4\%$		
		Mass		(0.1~100)g	$U=0.020\text{g}$		
		hardness		(20~80) HA	$U=1.2\text{HA}$		
48	*Tester of Filament Crimp Shrinkage	Force	Calibration Specification for Tester of Filament Crimp Shrinkage JJF (FZ) 057	(0.025~50)N	$U_{rel}=0.58\%$		
		Length		(0~1000)mm	$U=0.22\text{mm}$		
		Time		0.1s~1h	$U=0.18\text{s}$		



No. CNAS L0128

第 144 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
49	*Electronic Fabric Strength Machines	Time	Calibration Specification for Electronic Fabric Strength Machines JJF (FZ) 062	(0~3600)s	$U=0.13s$		
		Length		(0~500)mm	$U=0.06mm$		
		Force		(0.1~5000)N	$U_{rel}=1.3\%$		
		Mass		(0.1~3000)g	$U=0.15g$		
50	*Down-proof Properties of Fabrics(Rubbing Test)	Length	Calibration Specification for Down-proof Properties of Fabrics(Rubbing Test) JJF (FZ) 064	(0~500)mm	$U=0.06mm$		
		Rotation Rate		(10~500)r/min	$U_{rel}=0.3\%$		
51	*Fabric Shedding Testers	Length	Calibration Specification for Fabric Shedding Testers JJF (FZ) 084	(0~500)mm	$U=0.06mm$		
		Rotation Rate		(10~100)cpm	$U_{rel}=0.2\%$		
		Mass		(0.5~1200)g	$U=0.15g$		
52	*Fabric Induction Electrometer Meter	Time	Calibration Specification for Fabric Induction Electrometer Meter JJF (FZ) 070	(0~60)s	$U=0.16s$		
		Rotate speed		(50~2000) r/min	$U_{rel}=0.12\%$		
		Length		(0~300)mm	$U=0.03mm$		
		Voltage		(0.05~12)kV	$U_{rel}=0.6\%$		
53	*Rotary Friction Electrostatic Tester	Time	Calibration Specification for Rotary Friction Electrostatic Tester JJF (FZ) 069	(0~600)s	$U=0.16s$		
		Rotate speed		(50~500) r/min	$U_{rel}=0.12\%$		
		Length		(0~300)mm	$U=0.03mm$		
		Voltage		(0.01~1000)V	$U_{rel}=0.2\%$		
		Mass		(0~1000)g	$U=0.024g$		
54	*Textiles 45°	Length	Calibration Specification for	(0~150)mm	$U=0.04mm$		



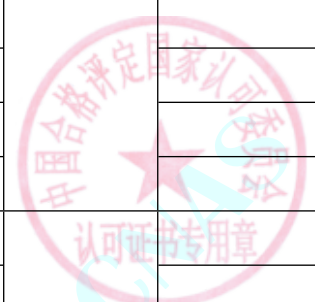
在线扫码获取验证

No. CNAS L0128

第 145 页 共 156 页


The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Combustion Tester	Length	Textiles 45° Combustion Tester JJF(FZ)087	(150~1000)mm	U=0.5mm		
		Time		(0~60)min	U=0.16s		
		Weight		(0~500)g	U=0.018g		
		Degree		(0~90)°	U=0.2°		
55	*Vertical Combustion Testers	Length	Calibration Specification for Vertical Combustion Testers JJF(FZ)068	(0~150)mm	U=0.06mm		
		Length		(150~900)mm	U=0.5mm		
		Time		(0~10)min	U=0.17s		
		weight		(0~500)g	U=0.012g		
		Degree		(0~90)°	U=0.2°		
		Speed		(0~60)mm/s	U=0.36mm/s		
56	*Textile Frictional Static Charges Tester	Static Charges	Calibration Specification for Textile Frictional Static Charges Tester JJF (FZ) 071	(0.05~1.1) μ C	U=0.002 μ C		
		Length		(0~1000)mm	U=0.5mm		
57	*Scorch and Sublimation Tester	temperature	Calibration Specification for Scorch and Sublimation Tester JJF (FZ) 029	deviation: (0~250) °C	U=1.3°C		
				volatility: (0~250) °C	U=0.5°C		
		Time		1ms~30s	U=0.40s		
		gravity value		(0.4~16) N	U=0.4N		
58	*Eight-Basket Oven	Temperature	Calibration Specification of Eight-Basket Oven JJF (Textile) 011	(0~300) °C	U=0.3°C		
		Basket quality		(1~500)g	U=2.0mg		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

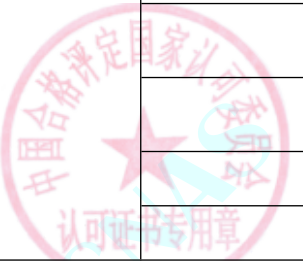
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
59	*Constant Temperature Humidity Chambers	Temperature	Calibration Specification of Constant Temperature Humidity Chamber JJF(Textile)060	(0~300) °C	U=0.22°C		
		Humidity		(10~90) %RH	U=1.2%RH		
		wind speed		(0.4~20) m/s	U=0.10m/s		
60	*Light and Weather Fastness Testers	temperature	Calibration Specification for Light and Weather Fastness Testers JJF (Textile) 051	Test chamber: (0~80) °C	U=0.5°C		
				Black plate: (20~150) °C	U=1.1°C		
				Black standard: (20~150) °C	U=0.9°C		
		humidity		(10~90)%RH	U=1.5%RH		
		Speed		(0.1~10) r/min	U <sub>rel</sub> =0.7%		
		Time		0.1s~1h	U=0.2s		
		Irradiance		300nm~400nm: (0.1~50.00) W/m <sup>2</sup>	U <sub>rel</sub> =10%		
420nm: (0.01~2.00) W/m <sup>2</sup>	U <sub>rel</sub> =10%						
61	*Textiles Solar Ultraviolet Radiation Protective Properties Testers	Wavelength	Calibration Specification for Textiles Solar Ultraviolet Radiation Protective Properties Testers JJF (FZ) 081	(200~500) nm	U=0.8nm		
		Transmittance		8%~35%	U <sub>rel</sub> =1.6%		
				0.8%~1.1%	U <sub>rel</sub> =14%		
62	*Medicinal Magnetic Resonance Imaging System (MRI)	Magnetic field strength	V. R. for Medicinal Magnetic Resonance Imaging System JJG (HU) 54	10mT~1900mT	U <sub>rel</sub> =1.5%		
		Length		0.5mm~100mm	U=0.3mm		



No. CNAS L0128

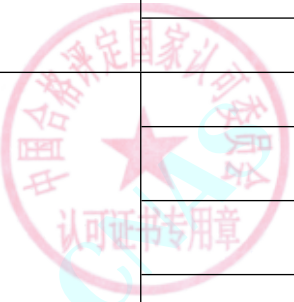
The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
63	*Voltage Dips, Short Interruptions and Voltage Variations Test Generators	Voltage	Calibration Specification for Voltage Dips, Short Interruptions and Voltage Variations Test Generators JJF 1673	10mV~360V	$U_{rel}=0.2\%$		
		Rising and falling time		Rise time (1~50) $\mu$ s, Descent time (1~50) $\mu$ s	$U_{rel}=4.0\%$		
		Time		1ms~60s	$U_{rel}=2.0\%$		
		Phase angle		(0~360) °	$U_{\pm}2^{\circ}$		
		Peak impulse current		(10~1200) A	$U_{rel}=3.2\%$		
64	*Oscilloscope Current Probes	DC Current	Calibration Specification of Oscilloscope Current Probes JJF (Electronics) 0036	$\pm(10mA\sim 100A)$	$U_{rel}=0.08\%$		
				$\pm(100A\sim 750A)$	$U_{rel}=0.8\%$		
		AC Current		10mA~100A	$U_{rel}=0.08\%$		
				100 A~500 A	$U_{rel}=0.8\%$		
		DC Current attenuation coefficient		1:1~1000:1 $\pm$ (10mA~100A)	$U_{rel}=0.08\%$		
				1:1~1000:1 $\pm$ (100A~750A)	$U_{rel}=0.8\%$		
		AC Current attenuation coefficient		1:1~1000:1 (10mA~100A)	$U_{rel}=0.08\%$		
				1:1~1000:1 (100 A~500 A)	$U_{rel}=0.8\%$		
		Bandwidth		DC~200MHz	$U=0.21dB$		
Rise/fall time	(1~50)ns	$U_{rel}=6.3\%$					
65	*Flow analyzers with Spectrophotograph	Wavelength	Calibration Specification for Flow analyzers with Spectrophotography JJF 1568	(360~800) nm	$U=1.6nm$		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	y	Detectionlimit	ilac-MKC	Cyanogen: (0~0.1) mg/L	U=0.0003mg/L		
		Detectionlimit		Volatile Phenol: (0~0.1) mg/L	U=0.0003mg/L		
		Detectionlimit		Hexavalent Chromimum: (0~1) mg/L	U=0.001mg/L		
		Detectionlimit		Sulfide: (0~1) mg/L	U=0.002mg/L		
		Detectionlimit		Total Phosphorus: (0~5) mg/L	U=0.002mg/L		
		Detectionlimit		Total Nitrogen : (0~5) mg/L	U=0.02mg/L		
		Detectionlimit		Ammonia Nitrogen: (0~5) mg/L	U=0.02mg/L		
		Detectionlimit		Anion Active Derergent: (0~5) mg/L	U=0.04mg/L		
66	*Calibration Specification of Top Open Washing Shrinkage Testers	water level	Calibration Specification of Top Open Washing Shrinkage Testers JJF(FZ) 092	(30~80)L	U=0.5L		
		Speed		(20~180)次/min	U=0.5 次/min		
		time		(180~3600)s	U=5.0s		
		rotation rate		(20~1000)r/min	U <sub>rel</sub> =0.3%		
67	*Down Filling Power Tester	Length	Calibration Secification for Down Filling Power Tester JJF (FZ) 074	Heigth (0~1000) mm	U=0.3mm		
				Inner diameter: (0~300) mm	U=0.10mm		
				Plate diameter: (0~300) mm	U=0.10mm		
		Quality		(1~500) g	U=0.020g		



在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
68	*Crimp Elastic Tester	Fixed length distance	Calibration Specification for Crimp Elastic Tester JJF (FZ) 040	Length: (0~50) mm	$U=0.04\text{mm}$		
				Descending stroke: (0~30) mm	$U=0.02\text{mm}$		
		Quality		(0~1000) mg	$U=1.7\text{mg}$		
		Time		(0~360) s	$U=0.4\text{s}$		
		Force	(0.1~100) mN	$U=0.01\text{mN}$ (0.2index)			
69	*Damped Oscillatory Wave Simulators	Voltage	Calibration Specification for Damped Oscillatory Wave Simulators JJF 2016	(0.25~4) kV	$U_{\text{rel}}=3.7\%$		
		Current		(1.25~80) A	$U_{\text{rel}}=3.5\%$		
		Time		10ns~10s	$U_{\text{rel}}=3.1\%$		
		Frequency		100kHz~30MHz	$U_{\text{rel}}=3.1\%$		
70	*Impulse voltage measurement system	Voltage	Calibration Regulation of impulse voltage measurement systems JJF(JX)1029	(1~300) kV	$U_{\text{rel}}=1.0\%$		
		Time		100ns~1s	$U_{\text{rel}}=2.0\%$		
71	Pitot tubes	Calibration coefficient	Verification Regulation of Pitot Tubes JJG 518	L-type : 0.99~1.01	$U_{\text{rel}}=2.7\%$	Except for L Standard Pitot Tube	
				S-type: 0.81~0.86	$U_{\text{rel}}=2.4\%$		
72	Thermo-anemoscopes	wind speed	Calibration Specification for Thermo-anemoscopes JJF 1939	(0.2~5) m/s	$U=0.10\text{m/s}$		
				(5~30) m/s	$U=(0.12\sim0.16)\text{m/s}$		
73	*Urine Analyzers	urine protein concentration	Calibration Specification of Urine Analyzers JJF 1129	(0.1~3.0) g/L	$U_{\text{rel}}=10\%$		
		pH		4.5~8.0	$U_{\text{rel}}=5\%$		
		urine glucose concentration		(0.1~56) mmol/L	$U_{\text{rel}}=6\%$		



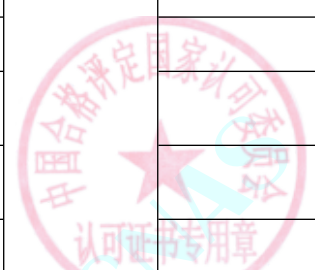
No. CNAS L0128

第 150 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		specific gravity		1.000~1.030	$U=0.007$		
		red blood cell concentration		(10~200) count/ $\mu$ L	$U_{rel}=11\%$		
		white blood cell concentration		(15~300) $\uparrow$ / $\mu$ L	$U_{rel}=12\%$		
74	*Current Coils	AC current voltage conversion value	Calibration Specification of Current Coils JJF (HuSuZheWan) 4008	0.01A~2kA (50Hz)	$U_{rel}=0.1\%$		
		DC current voltage conversion value		0.01A~2kA	$U_{rel}=0.02\%$		
75	*Cable Fault Flashover Tester	Distance	Calibration Specification for Cable Fault Flashover Tester JJF (Zhe) 1164	20m~170km	$U=1.2m$		
76	*High Temperature Dynamic IC Barn-in System	Temperature	Calibration Specification of High Temperature Dynamic IC Barn-in System JJF 1179	(20~150) $^{\circ}$ C	$U=0.20^{\circ}$ C		
		Pulse width		100ns~10s	$U_{rel}=3\%$		
		DC voltage		100mV~20V	$U_{rel}=0.1\%$		
		AC voltage		100mV~20V (1Hz~50Hz)	$U_{rel}=2.0\%$		
				100mV~20V (50Hz~32kHz)	$U_{rel}=0.12\%$		
		Frequency		1Hz~32kHz	$U_{rel}=0.3\%$		
77	Film Applicator Blades	Length	Calibration Specification for Film Applicator Blades JJF(SH)053	Gap depth: (25~200) $\mu$ m	$U=1.7 \mu$ m		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
78	Anti-Sag Meter	Length	Calibration Specification for Anti-Sag Meters JJF(SH)052	Gap depth: (200~1200) $\mu\text{m}$	$U=12 \mu\text{m}$		
				Gap length: (0~150) mm	$U=0.04\text{mm}$		
				Groove depth: (40~100) $\mu\text{m}$	$U_{\text{rel}}=2.4\%$		
				Groove depth: (100~1100) $\mu\text{m}$	$U_{\text{rel}}=1.7\%$		
79	*Non-invasive Ventilators	Airway pressure	Calibration Specification for Non-invasive Ventilators JJF 1997	(0.2~3.0) kPa	$U=0.2\text{kPa}$		
		Respiratory rate		(10~40) $\text{min}^{-1}$	$U_{\text{rel}}=3\%$		
		Inspiration flow oxygen		21%~100%	$U=3\%$		
80	*Emergency and transport Ventilators	Tidal volume	Calibration Specification for Emergency and transport Ventilators JJF 1998	(50~1000) L/min	$U_{\text{rel}}=5\%$		
		Pressure		Positive End-expiratory Pressure: (0.2~1.0) kPa	$U=0.2\text{kPa}$		
				Airway Peak Pressure: (1.0~3.0) kPa	$U=0.2\text{kPa}$		
		Respiratory rate		(10~40) $\text{min}^{-1}$	$U_{\text{rel}}=3\%$		
81	*Transmittance Meter of Automobile	Transmittance	Calibration Specification for Transmittance Meter of Automobile JJF 1225	(48~82) %	$U=0.7\%$		



No. CNAS L0128

第 152 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
82	*Manipulating Force Tester for Automotive Brake	Force	Calibration Specification for Manipulating Force Tester for Automotive Brake JJF 1169	(100~1000) N	$U_{rel}=0.2\%$		
83	*Automobile Brake Pedal Force Tester	Force	Verification Regulation of Automobile Brake Pedal Force Tester JJG(JT)008	(0.5~1000) N	$U_{rel}=0.2\%$		
84	*Flow Cytometers	Counting ratio	Calibration Specification for Flow Cytometers JJF 1665	60%~90%	$U_{rel}=10\%$		
85	*Battery Charge&Discharge Testers	DC Voltage	Calibration Specification for Battery Charge&Discharge JJF 2039	1V~1kV	$U_{rel}=0.01\%$	Charge and discharge time only for time interval measuring instrument method; temperature only for temperature secondary instruments calibration method; the DC current measured in the laboratory only for no more than 1000A.	
		DC Current		1mA~20A	$U_{rel}=0.02\%$		
				20A~500A	$U_{rel}=0.15\%$		
				500A~3kA	$U_{rel}=0.30\%$		
		DC Resistance		0.1 Ω ~100k Ω	$U_{rel}=0.05\%$		
		DC Power		1mW~1kW	$U_{rel}=0.04\%$		
				1kW~30kW	$U_{rel}=0.2\%$		
		Voltage period and random deviation		1mV~10V (20Hz~20MHz)	$U_{rel}=4.0\%$		
		Current period and random deviation		1mA~10A (20Hz~20MHz)	$U_{rel}=4.0\%$		
		Current rise time		10 μ s~100ms	$U_{rel}=4.0\%$		
Charge and discharge	60s~3600s	$U=0.2s$					



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		time	ilac-MRA CHINA NATIONAL ACCREDITATION CERTIFICATION CENTER FOR COMPETENCY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	3600s~36000s	$U=1.3s$		
				36000s~86400s	$U=3.1s$		
		Capacity		10mAh~720Ah	$U_{rel}=0.2\%$		
				720Ah~120kAh	$U_{rel}=0.5\%$		
		Temperature		-40℃~100℃	$U=0.2℃$		
86	*C-reactive Protein Analyzers	Concentration	Calibration Specification for C-reactive Protein Analyzers JJF 2057	(3~20)mg/L	$U_{rel}=12\%$		
				(20~85) mg/L	$U_{rel}=9\%$		
87	*Nucleic Acids Analyzers	Concentration	Calibration Specification for Nucleic Acids Analyzers JJF 1817	(0.1~40)ng/μL	$U_{rel}=7\%$		
88	*Clean Benches	Wind speed	Calibration Specification for Performance Parameters of Clean Benches JJF 2053	(0.20~1.00)m/s	$U=0.04 m/s$	Microbial culture for product protection (settle plate method) is conducted at No. 381, Cangwu Road.	
十、Gvometric sense							
1	GNSS receivers	consistency of antenna phase center	Verification Regulation of GNSS Receivers (Geodetic or Navigational Type) JJG1200	Antenna phase center consistency: (0~10) mm	$U=1.8mm$		
		length		(0~46.5) km	$U=(1.5~16) mm$		



No. CNAS L0128

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
2	Fineness of Grind Gage	length	Verification Regulation for Fineness of Grind Gage JJG905	(0~150) μm	$U=(0.5\sim 1.1)\mu m$		
十一、Engineering parameter							
1	*Extensometer	displacement	Verification Regulation of Extensometers JIG762, Standard Practice for Verification and Classification of Extensometer Systems ASTM E83	(0.02~0.3) mm	$U=0.72\mu m$		
				(0.3~50) mm	$U_{rel}=0.17\%$		
				(50~800) mm	$U_{rel}=0.20\%$		
十二、Ionizing radiation							
1	*X-ray Radiation Sources for Medical Computed Radiography System and Digital Radiography System	ESAK	Verification Regulation of X-ray Radiation Sources for Medical Computed Radiography System and Digital Radiography System JJG1078	0.1 μGy~999Gy	$U_{rel}=5.5\%$		
		Tube voltage		(50~120)kV	$U_{rel}=2.4\%$		
2	*X-ray radiation source of medical diagnostic digital subtraction angiography (DSA) system	air kerma rate	Verification regulation of X-ray radiation source of medical diagnostic digital subtraction angiography (DSA) system JJG 1067	60 μGy/min~1Gy/min	$U_{rel}=5.9\%$		
		tube voltage		(50~120)kV	$U_{rel}=2.4\%$		
3	*Medical Diagnostic X-ray Source for Dental Panorama	air kerma rate	Verification Regulation of Medical Diagnostic X-ray Source for Dental Panorama JIG 1101	60 μGy/min~1Gy/min	$U_{rel}=5.9\%$		
		tube voltage		(50~120)kV	$U_{rel}=2.4\%$		
		time		50ms~1s	$U_{rel}=1.2\%$		



No. CNAS L0128

第 155 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
4	*Medical X-ray Radiation Sources for Mammographic Equipment	average glandular dose	Verification Regulation of Medical X-ray Radiation Sources for Mammographic Equipment JJG 1145	0.1mGy~0.1Gy	$U_{rel}=9.3\%$		
		tube voltage		(22~40)kV	$U_{rel}=2.5\%$		
5	*Medical Diagnostic X-ray Radiation Source for Spiral Computed Tomography(CT)	CT Dose Index	Verification Regulation of Medical Diagnostic X-ray Radiation Source for Spiral Computed Tomography(CT) JJG 961	0.01mGy~300mGy	$U_{rel}=4.6\%$		
6	*X-ray Flaw Detectors	Air Kerma Rate	Verification Regulation of X-ray Flaw Detectors JJG 40	(0.001~10) Gy/min	$U_{rel}=5\%$		
7	*X、gamma-ray Densitometry for Bone Mineral Density	Bone width	Verification Regulation of X、gamma-ray Densitometry for Bone Mineral Density JJG 1050	0.8cm~1.6cm	$U_{rel}=0.9\%$		
		Bone mineral content		0.3g/cm~2.0 g/cm	$U_{rel}=0.9\%$		
		Bone density		0.5g/cm <sup>2</sup> ~1.5g/cm <sup>2</sup>	$U_{rel}=0.8\%$		



No. CNAS L0128

第 156 页 共 156 页

The scope of the accreditation in Chinese remains the definitive version.

在线扫码获取验证