

Name: Fangyuan Calibration & Test Technology (Fujian) Institute Co., Ltd.

Address: 5/F., No.886, Tonglong 2nd Road, Xiang'an Industrial Zone, Torch High-Tech Zone, Xiamen, Fujian, China

Registration No. CNAS L2157

Effective Date: 2024-08-05 Expiry Date: 2028-06-26

CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT
SCHEDULE OF ACCREDITATION CERTIFICATE
SCHEDULE 1 ACCREDITED KEY LOCATIONS OF THE LABORATORY

Locations Specified	Location Code	Address/Postal Code	Facilities Characteristic	Activity	Note	Effective Date
	A	5/F., No.886, Tonglong 2nd Road, Xiang'an Industrial Zone, Torch High-Tech Zone, Xiamen, Fujian, China/361100	I , II	(1),(2),(3),(4),(5)		2024-08-05
	B	5/F., 3# Plant, No.6, Dongling Road, Minhou Economic Development Zone, Minhou, Fuzhou, Fujian, China/350101	I	(2),(4),(5)		2024-08-05

Note:

- 1. Facilities Characteristics I: Fixed Facilities, II: Out of Fixed Facilities, III: Temporary Facilities, IV: Mobile Facilities, V: Others.
- 2. Activity (1): Testing, (2): Calibration, (3): Issue of Reports/Certificates, (4): Sample Receiving, (5): Contract Review, (6): Others.



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SCHEDULE 2 ACCREDITED SIGNATORIES AND SCOPE

No.	Name	Authorized Scope of Signature	Note	Effective Date
1	Li Qingxian	All testing items; Calibration: Electric, Radio, Time and frequency, Optical, Chemical, Meteorological, Marine special measuring instruments, Medical special measuring instruments, Acoustic measuring instruments.		2024-08-05
2	Zhu Maosheng	All testing items; Calibration: Geometric, Textile and leather measuring instruments (including footwear testing instruments), Construction and traffic measuring instruments.		2024-08-05
3	Xie Yuehua	Calibration of Mechanical, papermaking and paper measuring instruments.		2024-08-05
4	Chunmu.Cai	Calibration of Geometric and Mechanical.		2024-08-05
5	Guo jianglong	Calibration of Thermal, Electrical and electronic measuring instruments.		2024-08-05
6	Zheng zhiyong	Calibration of Geometric.		2024-08-05
7	He yuhui	Calibration of Chemical		2024-08-05



No. CNAS L2157

第 1 页 共 1 页

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SCHEDULE 2 ACCREDITED SIGNATORIES AND SCOPE

No.	Name	Authorized Scope of Signature	Note	Effective Date
1	Li Qingxian	Calibration of Thermal and Mechanical.		2024-08-05
2	Cai Chunmu	Calibration of Thermal and Mechanical.		2024-08-05
3	Zhang Bifu	Calibration of Thermal and Mechanical.		2024-08-05



No. CNAS L2157

第 1 页 共 1 页

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Registration No. CNAS L2157
Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS
Effective Date: 2024-08-05 Expiry Date: 2028-06-26

SCHEDULE 3 ACCREDITED TESTING SCOPE

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
1	Mechanical Part	1	Straightness	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.1、 Appendix C.2	Accredited only for Test Range: (0~1000)mm.	2024-08-05
		2	Flatness	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.1、 Appendix C.3	Accredited only for Test Range(Diagonal length): (150~3000)mm.	2024-08-05
		3	Parallelism	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.2、 Appendix C.8	Accredited only for test range: (0~	2024-08-05



No. CNAS L2157

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					1000)mm.	
		4	Perpendicularity	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.2、 Appendix C.9	Accredited only for Test Range: (0~500)mm.	2024-08-05
		5	Symmetry	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.2、 Appendix C.12	Accredited only for test range: (0~1000)mm.	2024-08-05
		6	Position accuracy	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.2、 Appendix C.13	Accredited only for Test Range: (0~1000)mm.	2024-08-05
		7	Roundness	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.1、 Appendix C.4		2024-08-05
		8	Cylindricity	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.1、 Appendix C.5		2024-08-05
		9	Coaxiality	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017 7.2、 Appendix C.11		2024-08-05
		10	Dimensional	Geometrical Product Specifications(GPS)- Inspection of plain workpiece sizes GB/T 3177-2009 4.5.6	Accredited only for Test Range: (0~1200)mm	2024-08-05
		11	Surface Roughness	Geometrical Product Specifications(GPS) -Surface texture: Profile method-Rules and procedures for the assessment of	Accredited only for	2024-08-05



No. CNAS L2157

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
				surface texture GB/T 10610-2009 7	test range: Ra(0.1~ 6.3)μm	
2	Vee blocks	1	Flatness of Working Face	Vee blocks JB/T 8047-2007 6.1		2024-08-05
		2	Parallelism	Vee blocks JB/T 8047-2007 6.2,6.3		2024-08-05
		3	Height difference	Vee blocks JB/T 8047-2007 6.7		2024-08-05
3	Clean Room	1	Air cleanliness grade	Code for construction and acceptance of cleanroom GB 50591-2010 Appendix E.4		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.1-2010 Appendix B		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-1:2015 Appendix A		2024-08-05
				Test method for airborne particles in clean room(zone) of the pharmaceutical industry GB/T 16292-2010 4, 5, 6		2024-08-05
		2	Wind speed wind volume	Code for construction and acceptance of cleanroom GB 50591-2010 Appendix E.1		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB 50591-2010 Appendix B.4.3.2		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.2.3.2		2024-08-05
		3	Temperature and humidity	Code for construction and acceptance of cleanroom GB 50591-2010 Appendix E.5		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.8,B.9		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.5,B.6		2024-08-05



No. CNAS L2157

第 3 页 共 9 页

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		4	Illumination	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.7		2024-08-05
		5	Unevenness of wind speed in one-way flow section	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.3		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.4.2.3		2024-08-05
		6	Static pressure difference	Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.2.2.3		2024-08-05
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.2		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.5		2024-08-05
		7	Airborne microbe	Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.1		2024-08-05
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.8.4		2024-08-05
		8	Sedimentation bacteria	Test method for airborne microbe in clean room(zone)of the pharmaceutical industry GB/T 16293-2010 4, 5, 6		2024-08-05
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.8.3		2024-08-05
		10	Clean-down time	Test method for settling microbe in clean room(zone)of the pharmaceutical industry GB/T 16294-2010 4,5		2024-08-05
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.6		2024-08-05
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.11		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix E.12		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.4		2024-08-05



No. CNAS L2157

第 4 页 共 9 页

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

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		11	Air Flow	Code for construction and acceptance of cleanroom GB 50591-2010 Appendix E.12		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.4		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.2		2024-08-05
		12	Scan for leaks	Code for construction and acceptance of cleanroom GB 50591-2010 Appendix D.2		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods GB 50591-2010 Appendix B.6		2024-08-05
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.7		2024-08-05
		13	Surface microorganisms	Code for construction and acceptance of cleanroom GB 50591-2010 Appendix E.8.5		2024-08-05
				Hygienic standard for disposable sanitary products GB15979-2002 Appendix E.2		2024-08-05
		14	Ultraviolet radiation intensity	Hygienic requirements for ultraviolet appliance of disinfection GB 28235-2020 Appendix A.1.2		2024-08-05
4	Clean workshop	1	Cleanliness	Code for design of clean room GB 50073-2013 Appendix A.3.5		2024-08-05
				Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.1		2024-08-05
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.4		2024-08-05
				Test method for airborne particles in clean room(zone) of the pharmaceutical industry GB/T 16292-2010 4, 5, 6		2024-08-05
		2	Wind speed wind volume	Code for design of clean room GB 50073-2013 Appendix A.3.1		2024-08-05
				Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.2		2024-08-05



No. CNAS L2157

第 5 页 共 9 页

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.1		2024-08-05
		3	Temperature and humidity	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.6,C.7 Code for of electronic industry clean room GB 50472-2008 Appendix D.3.6		2024-08-05
		4	Illumination	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.10 Code for of electronic industry clean room GB 50472-2008 Appendix D.3.8		2024-08-05
		5	Differential pressure	Code for design of clean room GB 50073-2013 A.3.2 Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.3 Code for of electronic industry clean room GB 50472-2008 Appendix D.3.2		2024-08-05
		6	Airborne microbe	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.16 Test method for airborne microbe in clean room(zone)of the pharmaceutical industry GB/T 16293-2010 4		2024-08-05
		7	Sedimentation bacteria	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.16 Test method for settling microbe in clean room(zone)of the pharmaceutical industry GB/T 16294-2010 4		2024-08-05
		8	Noise	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.9 Code for of electronic industry clean room GB 50472-2008 Appendix D.3.7		2024-08-05
		9	Air pattern	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.5		2024-08-05



No. CNAS L2157

第 6 页 共 9 页

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.5		2024-08-05
		10	Scan for leaks	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.4		2024-08-05
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.3		2024-08-05
				Code for design of clean room GB 50073-2013 Appendix A.3.3		2024-08-05
		11	Clean-down time	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.11		2024-08-05
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.10		2024-08-05
		12	Ultraviolet radiation intensity	Hygienic requirements for ultraviolet appliance of disinfection GB 28235-2020 Appendix A.1.2		2024-08-05
5	Clean workbench	1	Appearance and function	Clean bench JG/T 292-2010 7.1, 7.3		2024-08-05
		2	Cross section of Wind speed	Clean bench JG/T 292-2010 7.4.4.3		2024-08-05
		3	Non-one-way flow of clean table air volume	Clean bench JG/T 292-2010 7.4.4.5		2024-08-05
		4	Cleanliness	Clean bench JG/T 292-2010 7.4.4.6		2024-08-05
		5	Sedimentation bacteria	Clean bench JG/T 292-2010 7.4.4.7		2024-08-05
		6	Noise	Clean bench JG/T 292-2010 7.4.4.8		2024-08-05
		7	Illumination	Clean bench JG/T 292-2010 7.4.4.9		2024-08-05
		8	Operate the air flow state in space	Clean bench JG/T 292-2010 7.4.4.11		2024-08-05



No. CNAS L2157

第 7 页 共 9 页

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		9	Scanning leak detection	Clean bench JG/T 292-2010 7.4.4.1		2024-08-05
6	Class II biological safety cabinets	1	Cleanliness	Technical code for testing of biosafety cabinets DB52/T 1254-2017 5.3		2024-08-05
		2	Noise	Class II biological safety cabinets YY 0569-2011 6.3.3		2024-08-05
		3	Illumination	Class II biological safety cabinets YY 0569-2011 6.3.4		2024-08-05
		4	Inflow velocity	Class II biological safety cabinets YY 0569-2011 6.3.8		2024-08-05
		5	Downdraft velocity	Class II biological safety cabinets YY 0569-2011 6.3.7		2024-08-05
		6	Airflow mode	Class II biological safety cabinets YY 0569-2011 6.3.9		2024-08-05
		7	High efficiency filter integrity	Class II biological safety cabinets YY 0569-2011 6.3.2		2024-08-05
		8	Personnel, products and cross contamination protection	Class II biological safety cabinets YY 0569-2011 6.3.6		2024-08-05
		9	Ultraviolet lamp	Class II biological safety cabinets YY 0569-2011 6.3.14		2024-08-05
		10	Appearance and materials	Class II biological safety cabinets YY 0569-2011 6.1		2024-08-05
		11	vibration	Class II biological safety cabinets YY 0569-2011 6.3.5		2024-08-05
		12	Worktable anti deformation	Class II biological safety cabinets YY 0569-2011 6.3.11.5		2024-08-05
		13	Leakage in the collection tank	Class II biological safety cabinets YY 0569-2011 6.3.10		2024-08-05



No. CNAS L2157

第 8 页 共 9 页

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		14	temperature rise	Class II biological safety cabinets YY 0569-2011 6.3.12		2024-08-05
7	canned food	1	Heat Penetration	Method of Heat Penetration test for canned food GB/T 39945-2021 6,7,8		2024-08-05
8	food thermal sterilization equipments	1	Heat distribution	Method of Heat distribution test for food thermal sterilization equipments GB/T 39948-2021 7,8		2024-08-05



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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
Measuring instruments for geometric							
1	Micrometer	Length	Verification Regulation of Micrometer JJG 21	Outside Diameter Micrometer:(0~500)mm	$U=1.0\mu m+1\times 10^{-5}H$		
				Calibrate the Measuring Rod :(25~475)mm	$U=0.5\mu m+2\times 10^{-6}L$		
2	Dial Gauges	Length	Verification Regulation of Dial Gauges JJG 34	Graduation Value0.01mm:(0~50)mm	$U=4\mu m\sim 12\mu m$		
				Graduation Value0.001mm:(0~5)mm	$U=1.6\mu m\sim 2.8\mu m$		
				Resolution 0.01mm:(0~50)mm	$U=10\mu m\sim 20\mu m$		
				Resolution 0.001mm:(0~10)mm	$U=3\mu m$		



No. CNAS L2157

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
3	Height Caliper	Length	Verification Regulation of Height Caliper JJG 31	(0~300)mm	$U=0.01\text{mm}$		
				(300~500)mm	$U=0.02\text{mm}$		
				(500~1000)mm	$U=0.03\text{mm}$		
4	Current Calipers	Length	Verification Regulation of Current Calipers JJG 30	(0~300)mm	$U=0.01\text{mm}$		
				(300~500)mm	$U=0.02\text{mm}$		
				(500~1000)mm	$U=0.03\text{mm}$		
				(1000~2000)mm	$U=0.06\text{mm}$		
5	Internal Micrometers	length	Verification Regulation of Internal Micrometers JJG 22	(13~1000)mm	$U=1.0\text{ }\mu\text{m}+4\times 10^{-6}L$		
6	General Bevel Protractors	Angle	Calibration Specification for General Bevel Protractors JJF 1959	(0~360)°	$U=2'$		
7	Dial Test Indicator	Length	Verification Regulation of Dial Test Indicator JJG 35	Graduation Value 0.01mm: (0~1)mm	$U=3\text{ }\mu\text{m}$		
				Graduation Value 0.001mm/0.002mm: (0~0.4)mm	$U=1.2\text{ }\mu\text{m}$		
8	Depth Micrometers	Length	Verification Regulation of Depth Micrometers JJG 24	(0~300)mm	$U=1.0\text{ }\mu\text{m}+1\times 10^{-5}L$		
9	Micrometers with Dial Comparator and Indicating Snap Gauge	Length	Verification Regulation of Micrometers with Dial Comparator and Indicating Snap Gauge JJG 26	Micrometers with Dial Comparator: (0~100)mm	$U=1.2\text{ }\mu\text{m}$		
				Micrometers with Indicating Snap Gauge: (0~100)mm	$U=0.7\text{ }\mu\text{m}$		
10	Common Normal Micrometer	Length	Verification Regulation of Common Normal Micrometer JJG 82	(0~200)mm	$U=1.0\text{ }\mu\text{m}+1\times 10^{-5}L$		

No. CNAS L2157

第 2 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
11	Bore Dial Indicators	Length	Calibration Specification for Bore Dial Indicators JJF 1102	Graduation Value 0.01mm: (6~450)mm	$U=5\mu\text{m}$		
				Graduation Value 0.001mm: (6~450)mm	$U=1.8\mu\text{m}$		
12	Micrometers for Measuring Inside Dimension	Length	Calibration Specification for Micrometers of Measuring Inside Dimension JJF 1411	Inside Micrometer: (5~50)mm	$U=1.2\mu\text{m}$		
				Inside Micrometer: (50~100)mm	$U=1.6\mu\text{m}$		
				Inside Micrometer: (100~150)mm	$U=1.9\mu\text{m}$		
				Three-Point Internal Micrometer: (6~50)mm	$U=1.3\mu\text{m}$		
				Three-Point Internal Micrometer: (50~100)mm	$U=1.9\mu\text{m}$		
13	*Toolmaker's Microscope	length	Verification Regulation of Toolmaker's Microscope JJG 56	(0~500)mm	$U=0.3\mu\text{m}+5\times 10^{-6}L$	Except for Small Toolmaker's Microscope	
14	*Projector	length	Calibration Specification for Projectors JJF 1093	(0~500)mm	$U=1.0\mu\text{m}+5\times 10^{-6}L$		
15	*Height Measuring Instrument with Digital Display	Length	Calibration Specification for Height Measuring Instrument with Digital Display JJF 1254	H : (0~630)mm	$U=0.6\mu\text{m}+3\times 10^{-6}H$		
16	Thickness Gauges	Length	Calibration Specification for Thickness Gauges JJF 1255	Graduation Value 0.001mm: (0~1)mm	$U=1.0\mu\text{m}$		



No. CNAS L2157

第 3 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Graduation Value 0.01mm: (0~30)mm	$U=15 \mu m$		
				Resolution 0.01mm: (0~30)mm	$U=10 \mu m$		
				Resolution 0.001mm: (0~30)mm	$U=2 \mu m$		
17	Gear Tooth Calipers	Length	Calibration Specification for Gear Tooth Calipers JJF 1072	Module: (1~36)mm	$U=0.01mm$		
18	Wide Ranc Electronic Digital Display Dial Indicator	Length	Calibration Specification for Wide Ranc Electronic Digital Display Dial Indicator JJF(Zhe)1135	(0~100)mm	$U=2 \mu m \sim 4 \mu m$		
19	Dial Snap Gauges	Length	Calibration Specification for Dial Snap Gauges JJF 1253	Span: (5~100)mm	$U=6 \mu m$		
20	Depth Dial Gauge	Length	Verification Regulation of Depth Dial Gauge JJG 830	Graduation Value 0.01mm: (0~50)mm	$U=6 \mu m$		
				Graduation Value 0.001mm: (0~30)mm	$U=2.3 \mu m$		
				Resolution 0.01mm: (0~100)mm	$U=10 \mu m \sim 20 \mu m$		
				Resolution 0.001mm: (0~50)mm	$U=2 \mu m$		
21	Microcator	Length	Verification Regulation of Microcator JJG 118	Graduation Value $1 \mu m$: (-100~+100) μm	$U=0.2 \mu m$		
				Graduation Value $2 \mu m$: (-120~+120) μm	$U=0.5 \mu m$		



No. CNAS L2157

第 4 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Graduation Value $5 \mu\text{m}$: (-150 ~ +150) μm	$U=1 \mu\text{m}$		
22	Micrometers with Prismatically Arranged Measuring Faces	Length	Verification Regulation of Micrometers with Prismatically Arranged Measuring Faces JJG 182	(1 ~ 50)mm	$U=1.6 \mu\text{m}$	Except for Three Trench Micrometers	
23	Cylindrical Measuring Pin	Length	Calibration Specification for Cylindrical Measuring Pin JJF 1207	d : (0.1 ~ 25)mm	$U=0.4 \mu\text{m}$		
24	Plain Limit Gauges	Length	Verification Regulation of Plain Limit Gauges JJG 343	Ring Gauge D : (3 ~ 260)mm	$U=0.9 \mu\text{m} + 6 \times 10^{-6}D$		
				Plug Gauge D : (1 ~ 200)mm	$U=0.5 \mu\text{m} + 5 \times 10^{-6}D$		
				Caliper Gauge D : (3 ~ 200)mm	$U=1.0 \mu\text{m} + 7 \times 10^{-6}D$		
25	Standard Ring Gauge	Length	Verification Regulation of Standard Ring Gauge JJG 894	D : (4 ~ 200)mm	$U=0.7 \mu\text{m} + 6 \times 10^{-6}D$		
26	Cylindrical Thread Gauges	Length	Calibration Specification for Cylindrical Thread Gauges JJF 1345	Plug Gauge: (1 ~ 200)mm	$U=3 \mu\text{m}$	Except for Combination 1	
				Ring Gauge: (3 ~ 180)mm	$U=3.5 \mu\text{m}$		
27	Steel Rule	Length	Verification Regulation of Steel Rule JJG 1	(0 ~ 2000)mm	$U=0.04\text{mm} + 2 \times 10^{-5}L$		
28	Steel Measuring Tapes	Length	Verification Regulation of Steel Measuring Tapes JJG 4	(0 ~ 200)m	$U=0.05\text{mm} + 4 \times 10^{-5}L$		
29	*Imaging Probe Measuring Machines	Length	Calibration Specification for Imaging Probe Measuring Machines JJF 1318	E_{xy} : (0 ~ 500)mm	$U=0.8 \mu\text{m} + 4 \times 10^{-6}L$		
				E_{xy} : (500 ~ 1000)mm	$U=3 \mu\text{m} + 4 \times 10^{-6}L$		
				E_z : (0 ~ 100)mm	$U=2.4 \mu\text{m}$		
30	*Reading	Length	Verification Regulation of Reading Microscope and	Reading Microscope: (0 ~ 8)mm	$U=2 \mu\text{m}$		

No. CNAS L2157

第 5 页 共 108 页



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

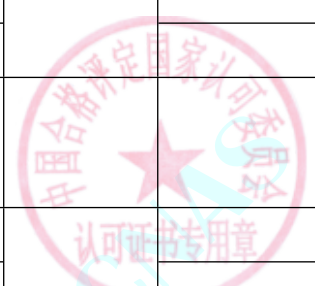
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Measuring Microscope		Measuring Microscope JJG 571	Measuring Microscope: (0~50)mm	$U=2 \mu m$		
31	*Length Measuring Instrument	Length	Calibration Specification for Length Measuring Instrument JJF 1189	(0~100)mm	$U=0.3 \mu m$		
				(100~1000)mm	$U=0.3 \mu m + 1.7 \times 10^{-6} L$		
32	*Optimeters	Length	Verification Regulation of Optimeters JJG 45	(-100~+100) μm	$U=0.1 \mu m$		
33	*Surface Plates	Flatness	Verification Regulation of Surface Plates JJG 117	160mm×100mm~ 400mm×400mm	$U=1.5 \mu m$		
				400mm×400mm~ 630mm×400mm	$U=2.0 \mu m$		
				630mm×400mm~ 1600mm×1600mm	$U=2.4 \mu m$		
				1600mm×1600mm~ 3000mm×3000mm	$U=10 \mu m$		
34	*Contact(Stylus) Instruments of Surface Roughness Measurement by the Profile Method	Roughness	Calibration Specification for Contact(Stylus) Instruments of Surface Roughness Measurement by the Profile Method JJF 1105	$Ra: (0.02 \sim 0.1) \mu m$	$U_{rel}=7\%$		
				$Ra: (>0.1 \sim 2.0) \mu m$	$U_{rel}=4.7\%$		
				$Ra: (>2.0 \sim 10.0) \mu m$	$U_{rel}=3.6\%$		
35	*Straight Edges	Straightness	Calibration Specification for Straight Edges JJF 1097	(300~1000)mm	$U=01.0 \mu m$		
				(1000~2000)mm	$U=1.8 \mu m$		
				(2000~3000)mm	$U=3.8 \mu m$		
36	Roughness Comparison Specimens	Roughness	Calibration Specification for Roughness Comparison Specimens JJF 1099	$Ra: (0.02 \sim 0.1) \mu m$	$U_{rel}=10\%$		
				$Ra: (0.1 \sim 10) \mu m$	$U_{rel}=6\%$		
37	Straight Edge	Straightness	Verification Regulation of Straight Edge JJG 63	(0~175)mm	$U=0.4 \mu m$		



No. CNAS L2157

第 6 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				(175~300)mm	$U=0.5 \mu m$		
				(300~500)mm	$U=0.8 \mu m$		
38	Squares	perpendicularity	Verification Regulation of Squares JJG 7	$H:(63\sim 500)\text{mm}$	$U=1.5 \mu m+2\times 10^{-6}H$	Except for Knife-Edge Square、Wide Seat Square、Triangle Square、Linear Steel Square	
39	Radius Gauges	Length	Verification Regulation of Radius Gauges JJG 58	$R:(1\sim 25)\text{mm}$	$U=7 \mu m$		
40	Screw Templates	Length	Verification Regulation of Screw Templates JJG 60	$P:(0.40\sim 6.00)\text{mm}$	$U=4 \mu m$		
41	Test Sieves	Length	Calibration Specification for Test Sieves JJF 1175	$W:(0.045\sim 4)\text{mm}$	$U=2 \mu m$		
				$W:(>4\sim 125)\text{mm}$	$U=0.04\text{mm}$		
42	*Coordinate Measuring Machine	Length	Calibration Specification for Coordinate Measuring Machine JJF 1064	(20~1000)mm	$U=0.5 \mu m+1\times 10^{-6}L$		
				(1000~3000)mm	$U=1 \mu m+1.4\times 10^{-6}L$		
43	*Articulated Arm Coordinate Measuring Machines	Length	Calibration Specification for Articulated Arm Coordinate Measuring Machines JJF 1408	(20~1000)mm	$U=13 \mu m$		
44	*Measuring Instrument for Coating Thickness	Length	Verification Regulation of Magnetic and Eddy Current Measuring Instrument for	$H:(0\sim 2000)\mu m$	$U=0.3\mu m+9\times 10^{-3}H$		
				Calibration Sheet $H:(0\sim 50) \mu m$	$U=0.4 \mu m$		



No. CNAS L2157

第 7 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
			Coating Thickness JJG 818	Calibration SheetH:($>50\sim 2000$) μm	$U_{\text{rel}}=0.8\%$		
45	Feeler Gauges	Length	Verification Regulation of Feeler Gauges JJG 62	$d:(0.02\sim 0.10)\text{mm}$ $d:(>0.10\sim 3.00)\text{mm}$	$U=2.0\ \mu\text{m}$ $U=2.7\ \mu\text{m}$		
46	*Biological Microscopes	Length	Calibration Specification for Biological Microscopes JJF 1402	($0\sim 10$)mm	$U=4\ \mu\text{m}$		
		Magnification		Objective:($4\sim 100$)X	$U_{\text{rel}}=1.5\%$		
47	Pi Tapes	Length	Calibration Specification for Pi Tapes JJF 1423	$D:(9\sim 300)\text{mm}$	$U=0.02\text{mm}$		
48	Fiber Tapes	Length	Verification Regulation of Fiber Tapes And Measuring Ropes JJG 5	($0\sim 200$)m	$U=0.2\text{mm}+2\times 10^{-4}L$		
49	*Moulds	Length	Calibration Specification for Moulds JJF 1307	($40\sim 100$)mm ($100\sim 300$)mm ($300\sim 500$)mm	$U=0.04\text{mm}$ $U=0.06\text{mm}$ $U=0.06\text{mm}$		
50	Frame Levels and Shaft Levels	Angle	Calibration Specification for Frame Levels and Shaft Levels JJF 1084	Graduation Value:($0.02\sim 0.10$)mm/m	$U_{\text{rel}}=9.0\%$		
51	Fineness of Grind Gage	Length	Verification Regulation of Fineness of Grind Gage JJG 905	($0\sim 150$) μm	$U=1.0\ \mu\text{m}$		
52	Gauge Blocks	Length	Verification Regulation of Gauge Blocks JJG 146	($0.5\sim 100$)mm ($>100\sim 1000$)mm	$U=0.15\ \mu\text{m}+1.5\times 10^{-6}L$ $U=0.37\ \mu\text{m}+3.7\times 10^{-6}L$		
53	Callipers for Welding Inspection	Angles	Verification Regulation of Callipers for Welding Inspection JJG 704	($30\sim 150$)°	$U=8'$		
		Length		Main Ruler:($0\sim 60$)mm	$U=0.03\text{mm}$		



No. CNAS L2157

第 8 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Width Ruler:(6~48)mm	$U=0.1\text{mm}$		
				Clearance Ruler:(1~5)mm	$U=0.06\text{mm}$		
54	Ultrasonic Thickness Instruments	Length	Calibration Specification for Ultrasonic Thickness Instruments JJF 1126	$H:(0\sim 10)\text{mm}$	$U=0.02\text{mm}$		
				$H:(>10\sim 200)\text{mm}$	$U=0.02\text{mm}+1\times 10^{-3}H$		
55	Combined Type Angle Rules	Length	Calibration Specification for Combined Type Angle Rules JJF 1132	$(0\sim 300)\text{mm}$	$U=0.05\text{mm}$		
		Angle		$(0\sim 180)^{\circ}$	$U=4'$		
56	*Measuring System of Coordinate Position	Length	Calibration Specification for Measuring System of Coordinate Position JJF 1251	$(0\sim 3000)\text{mm}$	$U=3\mu\text{m}+1\times 10^{-6}L$	Except for Calibration of Linear Axes	
57	Large Dimension Outside Micrometers	Length	Calibration Specification for Large Dimension Outside Micrometers JJF 1088	$(500\sim 1000)\text{mm}$	$U=5.2\mu\text{m}+2\times 10^{-6}L$		
				Micrometer head:(0~50)mm	$U=1.5\mu\text{m}$		
				Setting Bar:(500~1000)mm	$U=0.3\mu\text{m}+2\times 10^{-6}L$		
58	*Laser Diameter Measuring Gauges	Length	Calibration Specification for Laser Diameter Measuring Gauges JJF 1250	$d:(1\sim 30)\text{mm}$	$U=0.8\mu\text{m}+2.2\times 10^{-6}d$		
59	Lens Clock	Refractive Power	Calibration Specification for Lens Clock JJF(Min)1073	$+20\text{m}^{-1}\sim -20\text{m}^{-1}$	$U=0.08\text{m}^{-1}$		
60	Rubber and Plastic Film Gage	Length	Calibration Specification for Rubber and Plastic Film Gage JJF 1488	Graduation Value0.001mm:(0~1)mm	$U=1.0\mu\text{m}$		
				Graduation Value0.01mm:(0~30)mm	$U=5\mu\text{m}$		



No. CNAS L2157

第 9 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Resolution 0.01mm: (0~30)mm	$U=10\text{ }\mu\text{m}$		
				Resolution 0.001mm: (0~30)mm	$U=2\text{ }\mu\text{m}$		
61	*X-ray Fluorescence Coating Thickness Instruments	Length	Calibration specification for X-ray Fluorescence Coating Thickness Instruments JJF 1306	(1~11) μm	$U_{\text{rel}}=7\%$		
62	*Linear Displacement Sensors	Length	Calibration Specification for Linear Displacement Sensors JJF 1305	(0.1~500)mm	$U=2\text{ }\mu\text{m}+3\times 10^{-6}L$	Except for The Output is Length Size	
63	*Levels Calibrators	Angle	Verification Regulation of calibrators for the Levels JJG 191	Graduation Value: 0.005mm/m	$U_{\text{rel}}=2.5\%$		
64	*Level zero Calibrator	Perpendicularity	Calibration Specification for Frame Levels and Shaft Levels JJF 1084	90°	$U=1.3''$		
65	*Gauge Block Comparators	Length	Calibration Specification for Gauge Block Comparators JJF 1304	(-10~+10) μm	$U=0.02\text{ }\mu\text{m}$		
66	Surface Profile Gauges	Length	Calibration Specification for Surface Profile Gauges JJF 1476	(0~6.5)mm	$U=1.7\text{ }\mu\text{m}$		
67	Wet Film Thickness Gauges	Length	Calibration Specification for Wet Film Thickness Gauges JJF 1484	Comb Gauge: (5~100) μm	$U=1.2\text{ }\mu\text{m}$		
				Comb Gauge: (100~3000) μm	$U_{\text{rel}}=1.3\%$		
68	Snap Gauges Reading in 0.01mm	Length	Verification Regulation of Snap Gauges Reading in 0.01mm JJG 109	(0~150)mm	$U=3.3\text{ }\mu\text{m}$		



No. CNAS L2157

第 10 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
69	Wooden Rule(Wooden Folded Rule)	Length	Verification Regulation of Wooden Rule(Wooden Folded Rule) JJG 2	(0~3000)mm	$U=0.3\text{mm}+1\times 10^{-4}L$		
70	Digital Step Gauge	Length	Calibration Specification for Digital Step Gauge JJF(Zhe)1130	(-50~+50)mm	$U=0.01\text{mm}$		
71	*Grating Micrometers	Length	Calibration Specification for Grating Micrometers JJF 1682	(0~100)mm	$U=1\text{ }\mu\text{m}$	Accredited Only for 1 μm Class~10 μm Class	
72	*Stereomicroscope	Magnification	Calibration Specification of Stereomicroscope JJF(Min)1063	Objective:(0.5~5)X	$U_{\text{rel}}=1.5\%$		
73	*Tool Presetting and Measuring Instruments	Length	Verification Regulation of Tool Presetting and Measuring Instruments JJG 938	(0~1000)mm	$U=1.6\text{ }\mu\text{m}+3\times 10^{-6}L$		
74	Gauge for conical thread	Length	Calibration Specification for OCTG Thread Working Gauges JJF 1108	Base Diameter of Plug Gauge:(1~100)mm	$U=3\text{ }\mu\text{m}$		
				Base Diameter of Ring Gauge :(5~100)mm	$U=5\text{ }\mu\text{m}$		
75	Plugs and Socket-outlets Guages for Household and Similar Purposes	Length	Calibration Specification for Plugs and Socket-outlets Guages for Household and Similar Purposes JJF (Zhe)1119	(0~100)mm	$U=0.01\text{mm}$		
		Angle		(0~360)°	$U=5'$		
76	Step Gauges	Length	Calibration Specification for Step Gauges JJF 1258	(0~500)mm	$U=2.6\mu\text{m}+1.5\times 10^{-6}L$	Accredited only for feature feature is plane.	



No. CNAS L2157

第 11 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
77	*Projectors for Detecting The Notch of Test Sample	Length	Calibration Specification for Projectors for Detecting The Notch of Test Sample JJF(Zhe)1133	Radius of Arc:(0.225~0.275)mm	$U=0.03\text{mm}$		
		Angle		$(43\sim 47)^{\circ}$	$U=4'$		
		Magnification		Objective:50X	$U_{\text{rel}}=0.5\%$		
78	Brick Calipers	Length	Calibration Specification for Brick Calipers JJF (Zhe) 1109	Bend Gauge:(-15~+30)mm	$U=0.03\text{mm}$		
				Main Ruler:(45~500)mm	$U=0.14\text{mm}$		
79	*Instrument for Measuring Contact Angle	Angle	Calibration Specification for Instrument for Measuring Contact Angle with image method JJF(Su)219	$(3\sim 120)^{\circ}$	$U=0.1^{\circ}$		
80	Ultrasonic Testing Blocks	Length	Calibration Specification for Blocks used in Ultrasonic Testing JJF 1487	$(0\sim 300)\text{mm}$	$U=5\text{ }\mu\text{m}$		
		Angle		$(0\sim 180)^{\circ}$	$U=3'$		
81	*Conductor Percentage Elongation Instrument	Length	Verification Regulation of Conductor Percentage Elongation Instrument JJG (Yue) 005	Distance:(10~500)mm	$U=0.06\text{mm}$		
				Elongation:(0~100)%	$U=0.1\%$		
		Speed		5mm/s	$U=0.2\text{mm/s}$		
82	*Metallurgical Microscopes	Length	Calibration Specification for Metallurgical Microscopes JJF 1914	$(0\sim 1)\text{mm}$	$U=1.2\text{ }\mu\text{m}$		
				$(>1\sim 10)\text{mm}$	$U=5\text{ }\mu\text{m}$		
		Magnification		Objective:(1~100)X	$U_{\text{rel}}=1.5\%$		
83	*Extensometer	length	Verification Regulation of Extensometer JJG 762	$(0\sim 0.3)\text{mm}$	$U=0.9\text{ }\mu\text{m}$		
				$(>0.3\sim 25)\text{mm}$	$U_{\text{rel}}=0.3\%$		
				Gauge Distance:(10~200)mm	$U=0.04\text{mm}$		



No. CNAS L2157

第 12 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
84	Digital Dipmeter	Angles	Calibration Specification for Clinometers JJF 1915	(-90~+90)°	U=0.05°		
85	Joint Goniometer	length	Calibration Specification for Joint Goniometer JJF(Zhe) 1173	(0~500)mm	U=0.3mm		
		angle		(0~360)°	U=0.5°		
86	*Optical 3D Measuring Systems Based on Structured Light Scanning	Length	Calibration Specification for Optical 3D Measuring Systems Based on Structured Light Scanning JJF 1951	(100~1100)mm	U=6 μ m+7×10 ⁻⁶ L		
87	*Scanning Probe Microscopes	Length	Calibration Specification for Scanning Probe Microscopes JJF 1351	X、Y:1 μ m	U=8nm		
				X、Y:10 μ m	U=50nm		
		Length		Z:100nm	U=4.5nm		
88	Standard Thickness Blocks	Length	Calibration Specification for Standard Thickness Blocks JJF(gan)021	H:(0.5~10)mm	U=3 μ m		
		Length		H:(>10~75)mm	U=5 μ m		
				H:(>75~200)mm	U=10 μ m		
89	*Solder Paste Inspection Instruments	Length	Calibration Specification for Solder Paste Inspection Instruments JJF 1965	H:(75~200) μ m	U=1.5 μ m		
90	Standard Ball Bars	Length	Calibration Specification for Standard Ball Bars JJF 1859	Ball DiameterD:(10~70)mm	U=3.2 μ m		
				Distance from The Centre of The Ball:(10~1100)mm	U=3 μ m+5×10 ⁻⁶ L		
Measuring instruments for thermology							
1	*Asphalt Oven	Temperature	Verification Regulation of Asphalt Oven JJG (Traffic)	(0~200)°C	U=0.3°C		

No. CNAS L2157

第 13 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Time	056	(0~200)min	$U=0.05\text{min}$		
		Rotating velocity		(0~20)r/min	$U=0.2\text{r/min}$		
		Size		(0~200)mm	$U=0.1\text{mm}$		
		Flow rate		(3500~4500)mL/min	$U=60\text{mL/min}$		
2	Digital Thermometer	Temperature	Calibration Specification for Digital Thermometer JJF (Su)95	(-80~300)°C	$U=0.05^{\circ}\text{C}$		
				(300~1000)°C	$U=0.6^{\circ}\text{C}$		
3	*Thermostat	Temperature	Measurement and Test Norm of Metrological Characteristics of Thermostatic Baths for Temperature Calibration JJF 1030	Volatility:(-80~300)°C	$U=0.005^{\circ}\text{C}$		
				Homogeneity:(-80~300)°C	$U=0.008^{\circ}\text{C}$		
4	Thermal Imagers	Temperature	Calibration Specification for Thermal Imagers JJF 1187	(50~500)°C	$U=(1.0\sim 2.3)^{\circ}\text{C}$		
5	Temperature Indicators and Simulators by Electrical Simulation and Measurement	Temperature	Calibration Specification of Temperature Indicators and Simulators by Electrical Simulation and Measurement JJF 1309	Thermocouple measurement :(-200~1800)°C	$U=0.11^{\circ}\text{C}$		
				Thermal resistance measurement :(-200~850)°C	$U=0.03^{\circ}\text{C}$		
				Thermocouple output :(-200~1800)°C	$U=0.2^{\circ}\text{C}$		
				Thermal resistance output :(-200~850)°C	$U=0.06^{\circ}\text{C}$		
6	*Stream Sterilizer	Temperature	Calibration Specification for Temperature and Pressure of Stream Sterilizer JJF (Zhe)	(0~135)°C	$U=0.4^{\circ}\text{C}$		



No. CNAS L2157

第 14 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Pressure	1120	(50~300)kPa	U=1.4kPa		
7	Working Noble Metal Thermocouples	Temperature	Verification Regulation of Working Noble Metal Thermocouples JJG 141	(400~1100)°C	U=0.6°C		
8	Temperature Itinerant Detecting Instrument	Temperature	Calibration Specification for Temperature Itinerant Detecting Instrument JJF 1171	(-80~300)°C	U=0.06°C		
9	Industry Platinum and Copper Resistance Thermometers	Temperature	Verification Regulation of Industry Platinum and Copper Resistance Thermometers JJG 229	(-80~300)°C	U=0.06°C		
10	Radiation Thermometers	Temperature	Verification Regulation of Radiation Thermometers JJG 856	(50~550)°C	U=(1.2~2.7)°C		
11	*Box-type Resistance Furnace	Temperature	Calibration Specification for Box-type Resistance Furnace JJF 1376	(300~1100)°C	U=3°C		
12	*Thermometers of Clinic Autoclave	Temperature	Calibration Specification for Thermometers of Clinic Autoclave JJF 1308	(50~135)°C	U=0.4°C		
13	*Salt mist testing chambers	Temperature	Calibration Specification for salt mist testing chambers JJF (Zhe)1125	(30~70)°C	U=0.4°C		
		Settlement rate		(0.5~5)mL/(h • 80cm ²)	U _{rel} =6%		
14	Thermistor Thermometers	Temperature	Calibration Specification of Thermistor Thermometers JJF 1379	(-30~200)°C	U=0.3°C		
15	Temperature Data Acquisition Instruments	Temperature	Calibration Specification of Temperature Data Acquisition Instruments JJF 1366	Built-in probe (-40~100)°C	U=0.5°C		

No. CNAS L2157

第 15 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date	
				External probe (-80～300)℃	<i>U</i> =0.06℃			
16	Process Calibrators	Temperature	Calibration Specification for Process Calibrators JJF 1472	Thermocouple measurement:(-200～1800)℃	<i>U</i> =0.11℃			
				Thermal resistance measurement:(-200～850)℃	<i>U</i> =0.03℃			
				Thermocouple output :(-200～1800)℃	<i>U</i> =0.2℃			
				Thermal resistance output:(-200～850)℃	<i>U</i> =0.06℃			
		Voltage		DCV measurement:(0.01～300)V	<i>U</i> _{rel} =0.014%			
				ACV measurement:(0.01～300)V (45Hz～1kHz)	<i>U</i> _{rel} =0.09%			
				DCV Output:(0.001～100)V	<i>U</i> _{rel} =0.015%			
		Current		DCA measurement :(1～100)mA	<i>U</i> _{rel} =0.018%			
				DCA Output :(1～100)mA	<i>U</i> _{rel} =0.011%			
				ACA measurement :(1～200)mA(45Hz～1kHz)	<i>U</i> _{rel} =0.14%			
Resistance	Resistance measurement :(0.01～100)kΩ	<i>U</i> _{rel} =0.13%						



No. CNAS L2157

第 16 页 共 108 页

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

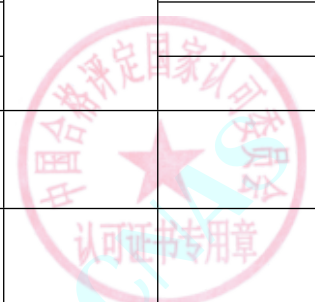
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Resistance Output : 1 Ω ~ 10k Ω	$U_{rel}=0.015\%$		
17	Standard Mercury-in-Glass Thermometers	Temperature	Verification Regulation of Standard Mercury-in-Glass Thermometers JJG 161	$(-60\sim 300)^{\circ}\text{C}$	$U=0.05^{\circ}\text{C}$		
18	*Thermocouple Calibration Furnaces	Temperature	Testing Specification of Temperature Uniformity in Thermocouple Calibration Furnaces JJF 1184	$(300\sim 1200)^{\circ}\text{C}$	$U=0.4^{\circ}\text{C}$		
19	*Temperature Block Calibrators	Temperature	Calibration Guideline of the Temperature Block Calibrators JJF 1257	$(-80\sim 400)^{\circ}\text{C}$	$U=0.4^{\circ}\text{C}$		
				$(400\sim 1200)^{\circ}\text{C}$	$U=1.5^{\circ}\text{C}$		
20	Thermometers of WBGT-index Meters	Temperature	Calibration Specification for Thermometers of WBGT-index Meters JJF 1407	$(5\sim 120)^{\circ}\text{C}$	$U=0.2^{\circ}\text{C}$		
21	*Temperature Indicators	Temperature	Calibration Specification for Temperature Indicators JJF 1664	Digital thermal resistance : $(-80\sim 800)^{\circ}\text{C}$	$U=0.1^{\circ}\text{C}$		
				Digital and Thermocouple : $(-100\sim 1800)^{\circ}\text{C}$	$U=0.4^{\circ}\text{C}$		
				Analogue Thermal resistance : $(-80\sim 800)^{\circ}\text{C}$	$U=(0.2\sim 0.4)^{\circ}\text{C}$		
				Analogue thermocouple: $(-100\sim 1800)^{\circ}\text{C}$	$U=(1.0\sim 2.0)^{\circ}\text{C}$		
22	Cold Boxes	Temperature	Calibration Specification for Temperature Parameter of Passive Medical Cold Boxes JJF 1676	$(-20\sim 20)^{\circ}\text{C}$	$U=0.2^{\circ}\text{C}$		
23	Sheathed Thermocouples	Temperature	Calibration Specification for Sheathed Thermocouples JJF 1262	$(0\sim 300)^{\circ}\text{C}$	$U=0.6^{\circ}\text{C}$		
				$(300\sim 1100)^{\circ}\text{C}$	$U=0.8^{\circ}\text{C}$		



No. CNAS L2157

第 17 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
24	Copper/Copper-Nickel Thermocouple	Temperature	Verification Regulation of the Working Copper/Copper-Nickel Thermocouple JJG 368	$(-80\sim 300)^{\circ}\text{C}$	$U=0.6^{\circ}\text{C}$		
25	*Tablet Disintegration Device	Temperature	Specification of Calibration for Tablet Disintegration Device JJF (Zhe)1077	$(30\sim 40)^{\circ}\text{C}$	$U=0.25^{\circ}\text{C}$		
		Length		$(0\sim 150)\text{mm}$	$U=0.4\text{mm}$		
26	*Ventilated Textile Oven	Temperature	Calibration Specification for Ventilated Textile Oven JJF (Textile)059	$(0\sim 150)^{\circ}\text{C}$	$U=0.8^{\circ}\text{C}$		
27	*Environmental Testing Equipment	Temperature	Calibration Specification of Environmental Testing Equipment for Temperature and Humidity Parameters JJF 1101	$(-80\sim 0)^{\circ}\text{C}$	$U=(0.3\sim 0.12)^{\circ}\text{C}$		
				$(0\sim 300)^{\circ}\text{C}$	$U=(0.12\sim 0.8)^{\circ}\text{C}$		
		Relative humidity		$20\%\sim 95\%$	$U=2\%$		
28	Mechanical Thermo-hygrometers	Temperature	Verification Regulation of Mechanical Thermo-hygrometers JJG 205	$(5\sim 50)^{\circ}\text{C}$	$U=0.5^{\circ}\text{C}$		
		Relative humidity		$30\%\sim 95\%$	$U=2\%$		
29	Liquid-in-Glass Thermometer for Working	Temperature	Verification Regulation of Liquid-in-Glass Thermometers for Working JJG 130	$(-80\sim 100)^{\circ}\text{C}$	$U=0.11^{\circ}\text{C}$		
				$(100\sim 200)^{\circ}\text{C}$	$U=0.16^{\circ}\text{C}$		
				$(200\sim 300)^{\circ}\text{C}$	$U=0.19^{\circ}\text{C}$		
30	Bimetallic Thermometer	Temperature	Calibration Specification for Bimetallic Thermometers JJF 1908	$(-80\sim 300)^{\circ}\text{C}$	$U=0.6^{\circ}\text{C}$		
31	Filled System Thermometer	Temperature	Calibration Specification for Filled System Thermometers JJF 1909	$(-80\sim 300)^{\circ}\text{C}$	$U=(0.4\sim 0.6)^{\circ}\text{C}$		
32	Base Metal	Temperature	Calibration Specification for	$(-40\sim 300)^{\circ}\text{C}$	$U=0.2^{\circ}\text{C}$		



No. CNAS L2157

第 18 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Thermocouple		Base Metal Thermocouples JJF 1637	(300~1100)°C	U=1.2°C		
33	*Digital Temperature Indicator and Controller	Temperature	Verification Regulation of Digital Temperature Indicators and Controllers JJG 617	Thermal Resistance:(- 100~300)°C	U=0.2°C		
				Thermocouple:(-100~ 1800)°C	U=(0.2~0.4)°C		
34	*Analogue Temperature Indicator and Controller	Temperature	Verification Regulation of Analogue Temperature Indicators and Controllers JJG 951	Thermal Resistance:(- 50~300)°C	U=(0.4~1.2)°C		
				Thermocouple:(-50~ 1800)°C	U=(1.0~2.0)°C		
35	*Shelf Balance Display Instrument	Temperature	Verification Regulation of Recorders for Industrial- Process Measurement JJG 74	Thermal Resistance:(- 50~300)°C	U=0.2°C		
				Thermocouple:(-50~ 1800)°C	U=0.8°C		
36	Temperature Transmitter	Temperature	Calibration Specification for the Temperature Transmitter JJF 1183	No sensor with thermal resistance:(-80~300)°C	U=0.4°C		
				No sensor with Thermocouple:(-50~ 1800)°C	U=0.9°C		
				Tape sensor thermal Resistance:(-80~300)°C	U=0.10°C		
				Tape sensor thermocouple:(-50~ 1800)°C	U=1.3°C		
37	*Temperature/Hu midity/Vibration Combined Environmental Testing System	Temperature	Calibration Specification for Temperature/Humidity/Vibrat ion Combined Environmental Testing System JJF 1270	(-80~300)°C	U=0.4°C		
		Relative humidity		20%~95%	U=2%RH		
		Acceleration		(1~1500)m/s ²	U _{rel} =4%		



No. CNAS L2157

第 19 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
38	Temperature Calibration Devices for Polymerase Chain Reaction Analyzers	temperature	Calibration Specification for Temperature Calibration Devices for Polymerase Chain Reaction Analyzers JJF 1821	(0~120)°C	$U=0.07^{\circ}\text{C}$		
39	Insulating Glass Dew Point Analyzer	temperature	Calibration Specification for Insulating Glass Dew Point Analyzer JJF(Min)1112	(-70~0)°C	$U=0.3^{\circ}\text{C}$		
40	*Temperature Alternating and Temperature Shock Testing Equipments	Temperature	Calibration Specification for Temperature Alternating and Temperature Shock Testing Equipments JJF(Min)1121	(-80~300)°C	$U=0.4^{\circ}\text{C}$		
		time		(0~60)min	$U=0.05\text{min}$		
		Speed		(0~30)°C/min	$U=0.3^{\circ}\text{C/min}$		
41	*Drug Stability Illumination Test Chambers	Temperature	Calibration Specification for Drug Stability Illumination Test Chambers JJF(Chuan)175	(10~65)°C	$U=0.4^{\circ}\text{C}$		
		Relative humidity		20%~90%	$U=2\%$		
		illuminance		(10~10000)lx	$U_{\text{rel}}=9\%$		
		Ultraviolet illuminance		(50~100) $\mu\text{W/cm}^2$	$U_{\text{rel}}=25\%$		
42	Digital Temperature-hygrometers	Temperature	Calibration Specification for Digital Temperature-hygrometers JJF 1076	(5~50)°C	$U=0.5^{\circ}\text{C}$		
		Relative humidity		10%~95%	$U=1.5\%\sim 1.7\%$		
43	*Temperature and Humidity Standard Chambers	Temperature	Calibration Specification for Temperature and Humidity Standard Chambers JJF 1564	Uniformity:(0~50)°C	$U=0.05^{\circ}\text{C}$		
				Volatility:(0~50)°C	$U=0.02^{\circ}\text{C}$		
		Temperature change rate		(0~5)°C/min	$U=0.03^{\circ}\text{C/min}$		
		Relative		Uniformity:10%~95%	$U=0.5\%$		



No. CNAS L2157

第 20 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		humidity		Volatility:10%~95%	$U=0.1\%$		
		Relative humidity change rate		1%~10%/min	$U=0.2\%/min$		
44	Short Base Metal Thermocouples	Temperature	Calibration Specification for Short Base Metal Thermocouples JJF 1991	(-40~300)°C	$U=0.6^{\circ}\text{C}$		
				(300~1000)°C	$U=1.4^{\circ}\text{C}$		
45	the Surface Thermometers	Temperature	Calibration Specification for the Surface Thermometers JJF 1409	(50~300)°C	$U=0.6^{\circ}\text{C}$		
				(300~400)°C	$U=1.0^{\circ}\text{C}$		
46	*Surface temperature source	Temperature	Calibration Specification for the Surface Thermometers (Appendix D) JJF 1409	Stability:(50~400)°C	$U=0.3^{\circ}\text{C}$		
				Uniformity:(50~400)°C	$U=0.4^{\circ}\text{C}$		
47	*Liquid Constant Temperature Testing Equipment	Temperature	Measurement Specification for Temperature Performance of Liquid Constant Temperature Testing Equipment JJF 2019	(-80~300)°C	$U=0.3^{\circ}\text{C}$		
				Volatility:(-80~300)°C	$U=0.1^{\circ}\text{C}$		
				Uniformity:(-80~300)°C	$U=0.1^{\circ}\text{C}$		
48	*Constant Temperature and Humidity Laboratories	Temperature	Calibration Specification for Environment Parameters of Constant Temperature and Humidity Laboratories JJF 2058	(15~30)°C	$U=0.5^{\circ}\text{C}$		
		Relative humidity		20%~90%	$U=2\%$		
		illuminance		(10~1000)lx	$U_{\text{rel}}=2.0\%$		
		Wind Speed		(0.1~10)m/s	$U=0.6\text{m/s}$		
		Noise		A-weighting:(0~100)dB	$U=1.0\text{dB}$		
		Static pressure difference		(0.1~200)Pa	$U=1.0\%\text{FS}$		



No. CNAS L2157

第 21 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Cleanliness		0.5 μ m:(100~35200000)individual/m³	<i>U</i> _{rel} =25%		
49	*Large Steam Sterilizers	Temperature	Calibration Specification for Temperature,Pressure and Time Parameters of Large Steam Sterilizers JJF 2088	(0~140)°C	<i>U</i> =0.3°C		
		Pressure		(100~400)kPa	<i>U</i> =1.0kPa		
		time		(0~3600)s	<i>U</i> =1s		
50	*Vacuum Ovens	Temperature	Calibration Specification for Vacuum Ovens JJF(min)1093	(0~300)°C	<i>U</i> =0.8°C		
		Pressure		(-100~0)kPa	<i>U</i> =1.2kPa		
51	*Carbon Dioxide Incubator	Temperature	Calibration Specification for Carbon Dioxide Incubator JJF(liao)463	(0~100)°C	<i>U</i> =0.2°C		
		Concentration		Carbon Dioxide :(0~10)%	<i>U</i> _{rel} =2.6%		
52	*Rotary Evaporators	Temperature	Calibration Specification of Rotary Evaporators JJF(E) 80	(20~200)°C	<i>U</i> =0.5°C		
		Rotating Velocity		(10~280)r/min	<i>U</i> =1.0r/min		
		Pressure		(-100~0)kPa	<i>U</i> =0.3kPa		
53	*Ozone Aging Test Chambers	Concentration	Calibration Specification for Ozone Aging Test Chambers JJF 2051	(1~400) μ mol/mol	<i>U</i> _{rel} =7%		
		temperature		(0~100)°C	<i>U</i> =0.5°C		
		Relative humidity		20%~90%	<i>U</i> =2%		
Measuring instruments for mechanics							
1	*Tension,Compression and Universal Testing Machines	Force value	Verification Regulation of Tension,Compression and Universal Testing Machines JJG 139	1cN~1kN	<i>U</i> _{rel} =0.3%		
				1kN~5MN	<i>U</i> _{rel} =0.4%		
		Length		(0.1~10)mm	<i>U</i> =0.03mm		



No. CNAS L2157

第 22 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(10~1000)mm	U _{rel} =0.3%		
2	*Electronic Universal Testing Machine	Force value	Verification Regulation of Electronic Universal Testing Machine JJG 475	1cN~1kN	U _{rel} =0.3%		
				1kN~5MN	U _{rel} =0.4%		
		Speed		(0.1~500)mm/min	U _{rel} =0.4%		
				Length	(0.1~10)mm		U=0.03mm
		(10~1000)mm			U _{rel} =0.3%		
3	Torque Wrenches	Torque	Verification Regulation of Torque Wrenches JJG 707	(0.1~1000)Nm	U _{rel} =1.2%		
4	Weights	Mass	Verification Regulation of Weights JJG 99	(1~500)mg	U=(0.02~0.08)mg	Accredited only for Grade F2 and below	
				(0.5~20)g	U=(0.08~0.25)mg		
				(20~200)g	U=(0.25~1.0)mg		
				(0.2~1)kg	U=(1.0~5)mg		
				(1~5)kg	U=(5~25)mg		
				(5~25)kg	U=25mg~0.3g		
				Working weights: (25~50)kg	U=0.02kg		
				Working weights: (50~150)kg	U=0.05kg		
5	*Digital Indicating Weighting Instruments	Mass	Verification Regulation of Digital Indicating Weighting Instruments JJG 539	(1~600)g, e=0.1g	U=(0.02~0.04)g		
				(2~600)g, e=0.2g	U=(0.04~0.05)g		
				(5~1500)g, e=0.5g	U=(0.10~0.14)g		



No. CNAS L2157

第 23 页 共 108 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
				(10~3000)g, e=1g	$U=(0.20\sim0.28)g$		
				(20~6000)g, e=2g	$U=(0.38\sim0.55)g$		
				(0.05~15)kg, e=5g	$U=(1.0\sim1.4)g$		
				(0.1~30)kg, e=10g	$U=(2.0\sim2.8)g$		
				(0.2~75)kg, e=20g	$U=(4\sim7)g$		
				(0.5~150)kg, e=50g	$U=(10\sim15)g$		
				(1~300)kg, e=100g	$U=(20\sim30)g$		
				(2~600)kg, e=200g	$U=(40\sim60)g$		
				(5~1000)kg, e=500g	$U=(0.1\sim0.13)kg$		
				(10~3000)kg, e=1kg	$U=(0.1\sim0.6)kg$		
				(3000~5000)kg, e=1kg	$U=1.0kg$		
6	*Electronic Balance	Mass	Verification Regulation of Electronic Balance JJG 1036, Calibration Specification for Electronic Balances JJF 1847	0.1mg~20g, e=0.01mg	$U=(0.004\sim0.025)mg$	JJG 1036 only for $e \geq 1mg$	
				1mg~120g, e=0.1mg	$U=(0.01\sim0.2)mg$		
				10mg~500g, e=1mg	$U=(0.1\sim0.3)mg$		
				20mg~2000g, e=10mg	$U=(1.0\sim2.6)mg$		
				0.2g~5kg, e=0.1g	$U=(0.01\sim0.02)g$		
				5g~35kg, e=1g	$U=(0.1\sim0.2)g$		
				50g~100kg, e=10g	$U=(0.7\sim1.5)g$		
				500g~1000kg, e=100g	$U=(6\sim24)g$		



No. CNAS L2157

第 24 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
7	Working Glass Container	Capacity	Verification Regulation of Working Glass Container JJG 196	(0.01~5)mL	$U=0.003\text{mL}$		
				(5~25)mL	$U=0.01\text{mL}$		
				(25~100)mL	$U=0.02\text{mL}$		
				(100~500)mL	$U=0.05\text{mL}$		
				(500~2000)mL	$U=0.2\text{mL}$		
8	Locomotive Pipette	Capacity	Verification Regulation of Locomotive Pipette JJG 646	(1~10) μL	$U_{\text{rel}}=2.0\%$		
				(10~50) μL	$U_{\text{rel}}=1.0\%$		
				(50~300) μL	$U_{\text{rel}}=0.5\%$		
				(300~10000) μL	$U_{\text{rel}}=0.1\%$		
9	*Elastic Element Pressure Gauges, Pressure-Vacuum Gauges, Pressure-Vacuum Gauges and Vacuum Gauges for General Use	Pressure	Verification Regulation of Elastic Element Pressure Gauges, Pressure-Vacuum Gauges, Pressure-Vacuum Gauges and Vacuum Gauges for General Use JJG 52	(-0.1~100)MPa	$U=0.7\%\text{FS}$		
10	Test-tube for Determining Density of Asphalt	Capacity	Verification Regulation of Test-tube for Determining Density of Asphalt JJG(JT) 119	(1~25)mL	$U_{\text{rel}}=1.5\%$		
				(25~100)mL	$U_{\text{rel}}=1.7\%$		
11	Calibration Instrument for Torque Wrenches	Torque	Verification Regulation of Calibration Instrument for Torque Wrenches JJG 797	(0.1~500)Nm	$U_{\text{rel}}=0.4\%$		
12	Tachometer	Tacho	Verification Regulation of Tachometer JJG 105	(30~40000)r/min	$U_{\text{rel}}=0.02\%$		



No. CNAS L2157

第 25 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
13	*Analogue Indicating Weighing Instruments	Mass	Verification Regulation of Analogue Indicating Weighing Instruments JJG 13	(0.1~4)kg, $e=10g$	$U=4g$		
				(0.2~10)kg, $e=20g$	$U=6g$		
				(5~160)kg, $e=500g$	$U=0.3kg$		
14	*Pointer Type Micro-differential Pressure Gauge	Pressure	Verification Regulation of Pointer Type Micro-differential Pressure Gauge JJG(Yue)020	(-2500~2500)Pa	$U=0.7\%FS$		
15	Tilting Tube Micromanometers	Pressure	Verification Regulation of Tilting Tube Micromanometers JJG 172	Inclined tube: (0~2)kPa	$U=0.5\%FS$		
				Curved tube: (-10~700)Pa	$U=(2~6)Pa$		
16	*Elastic Element Precise Pressure Gauges and Vacuum Gauges	Pressure	Verification Regulation of Elastic Element Precise Pressure Gauges and Vacuum Gauges JJG 49	(-0.1~100)MPa	$U=0.08\%FS$	Accredited only for Grade 0.25 and below during field calibration	
17	*Cantilever-Beam Impact Testing Machine	Energy	Verification Regulation of Cantilever-Beam(Izod-Type) Impact Testing Machine JJG 608	(1~100)J	$U_{rel}=0.5\%$		
18	*Electrodynamic Vibration Testing Systems	Frequency	Verification Regulation of Electrodynamic Vibration Testing Systems JJG 948	5Hz~2kHz	$U_{rel}=0.5\%$		
		Acceleration		(2~1000)m/s ²	$U_{rel}=5\%$		
19	Pressure Controllers	Pressure	Verification Regulation of Pressure Controllers JJG 544	(-0.1~60)MPa	$U=0.12\%FS$		
20	Pressure Regulators with Bourdon Tube Pressure Gauge	Pressure	Calibration Specification for Pressure Regulators with Bourdon Tube Pressure Gauge JJF 1328	(0~25)MPa	$U=0.7\%FS$		



No. CNAS L2157

第 26 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
21	*Pressure Transmitter	Pressure	Verification Regulation of Pressure Transmitter JJG 882	(6~100)MPa	$U=0.06\%FS$	Accredited only for Grade 0.2 and below during field calibration	
				(0.1~6)MPa	$U=0.015\%FS$		
				(-0.1~0.1)MPa	$U=0.025\%FS$		
22	Pressure Transducer (Static)	Pressure	Verification Regulation of Pressure Transducer (Static) JJG 860	(-0.1~60)MPa	$U=0.15\%FS$		
23	*Digital Pressure Gauges	Pressure	Verification Regulation of Digital Pressure Gauges JJG 875	(6~100)MPa	$U=0.06\%FS$	Accredited only for Grade 0.2 and below during field calibration	
				(0.1~6)MPa	$U=0.015\%FS$		
				(-0.1~0.1)MPa	$U=0.025\%FS$		
24	*Automatic Gravimetric Filling Instruments	Mass	Verification Regulation of Automatic Gravimetric Filling Instruments JJG 564	30g~2kg	$U=0.47g$		
				(2~5)kg	$U=3.1g$		
				(5~50)kg	$U=0.1kg$		
				((50~1000)kg	$U=0.4kg$		
25	*Steelyard Scales	Mass	Verification Regulation of Steelyard Scales JJG 17	20g~10kg	$U=1.5g$		
26	*Relative Density Balance for Liquid	Relative density	Verification Regulation of Relative Density Balance for Liquid JJG 171	0.0000~2.0000	$U=0.0004$		
27	*Working Torque-meters	Torque	Verification Regulation of Working Torque-meters JJG 1146	(0.1~500)Nm	$U_{rel}=0.4\%$		



No. CNAS L2157

第 27 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
28	*Testing Machines of Resistance to Internal Pressure of Plastics Pipe	Pressure	Calibration Specification for Testing Machines of Resistance to Internal Pressure of Plastics Pipe JJF 1628	(0.1~25)MPa	$U=0.04\text{MPa}$		
29	Tyre Pressure Gauges	Pressure	Verification Regulation of Tyre Pressure Gauges JJG 927	(0~6)MPa	$U=0.7\%\text{FS}$		
30	Hand Saccharimeter (Content-meter) and Hand Refractometer	Concentration	Verification Regulation of Hand Saccharimeter (Content-meter) and Hand Refractometer JJG 820	0~80%	$U=0.3\%$		
31	Shore A Durometers	Length	Verification Regulation of Shore A Durometers JJG 304	(0~10)mm	$U=0.003\text{mm}\sim 0.01\text{mm}$		
		Hardness		(0~100)HA	$U=0.3\text{HA}$		
		Angle		(0~45)°	$U=0.2^\circ$		
32	*Working Force Measuring Machines for Special Purposes	Force value	Calibration Specification for Working Force Measuring Machines for Special Purposes JJF 1134	1cN~1kN	$U_{\text{rel}}=0.3\%$		
				1kN~2MN	$U_{\text{rel}}=0.4\%$		
33	*Flexure Testing Machines	Force value	Verification Regulation of Flexure Testing Machines JJG 476	(0.1~10)kN	$U_{\text{rel}}=0.4\%$		
		Applying test force speed		(40~60)N/s	$U_{\text{rel}}=1.0\%$		
34	*Table Balances	Mass	Verification Regulation of Table Balances JJG 156	0.1g~5kg	$U=(0.03\sim 3)\text{g}$		
35	*Mechanical Balance	Mass	Verification Regulation of Mechanical Balance JJG 98	1mg~1g	$U=0.05\text{mg}$		
				(1~200)g	$U=0.9\text{mg}$		



No. CNAS L2157

第 28 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
36	*Non-self-indicating Weighting Instruments	Mass	Verification Regulation of Non-self-indicating Weighting Instruments JJG 14	50g~10kg, $e=5g$	$U=1.5g$		
				500g~100kg, $e=50g$	$U=16g$		
				(1~500)kg, $e=200g$	$U=53g$		
				(5~1000)kg, $e=500g$	$U=0.15kg$		
37	*Metallic Rockwell Hardness Testing Machines(Scales A,B,C,D,E,F,G,H,K,N,T)	Hardness	Verification Regulation of Metallic Rockwell Hardness Testing Machines(Scales A,B,C,D,E,F,G,H,K,N,T) JJG 112	(20~88)HRA	$U=0.8HRA$		
				(20~100)HRBW	$U=0.9HRBW$		
				(20~70)HRC	$U=0.8HRC$		
				(89~91)HR15N	$U=0.8HRN$		
				(42~80)HR30N	$U=0.8HRN$		
				(32~61)HR45N	$U=0.8HRN$		
				(88~93)HR15TW	$U=1.0HRTW$		
				(70~82)HR30TW	$U=1.0HRTW$		
38	*Metallic Vickers Hardness Testers	Hardness	Verification Regulation of Metallic Vickers Hardness Testers JJG 151	(100~1000)HV(HV2~HV50)	$U_{rel}=2.5\%$		
				(50~1000)HV (HV0.1~HV1)	$U_{rel}=3.0\%$		
39	*Metallic Brinell Hardness Tester	Hardness	Verification Regulation of Metallic Brinell Hardness Testers JJG 150	(8~125) HBW	$U_{rel}=2.0\%$		
				(125~225)HBW	$U_{rel}=1.5\%$		
				(225~650)HBW	$U_{rel}=1.0\%$		



No. CNAS L2157

第 29 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
40	Hydraulic Jacks	Force value	Verification Regulation of Hydraulic Jacks JJG 621	0.5kN~5MN	$U_{rel}=0.6\%$		
41	*Working Dynamometers	Force value	Verification Regulation of Working Dynamometers JJG 455	1cN~1kN	$U_{rel}=0.3\%$		
				(1~100)kN	$U_{rel}=0.4\%$		
				(650~1040)kg/m ³	$U=0.3\text{kg/m}^3$		
				(1080~1400)kg/m ³	$U=0.3\text{kg/m}^3$		
42	Working Glass Hydrometer	Density	Verification Regulation of Working Glass Hydrometers JJG 42	(1440~1830)kg/m ³	$U=0.3\text{kg/m}^3$	Don't work saccharometer and seawater densitometer; Accredited only for Direct comparison method	
				(0.01~10)mL	$U_{rel}=0.03\%$		
				(10~50)mL	$U_{rel}=0.04\%$		
				(50~100)mL	$U_{rel}=0.05\%$		
				(100~200)mL	$U_{rel}=0.06\%$		
43	Special Glassware	Capacity	Verification Regulation of Special Glassware JJG 10				
44	*Electrodynamic Horizontal Vibration Generator for Testing	Frequency	Verification Regulation of Electrodynamic Horizontal Vibration Generator for Testing JJG 1000	5Hz~2kHz	$U_{rel}=0.5\%$		
		Acceleration		(2~1000)m/s ²	$U_{rel}=5\%$		
45	*Online Liquid Flowmeter	Flow rate	Calibration Specification for Online Liquid Flow Measurement System JJF(Liao)84	Weighing method: (0.03~0.8)m ³ /h, DN3~DN50	$U_{rel}=1.0\%$		



No. CNAS L2157

第 30 页 共 108 页

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

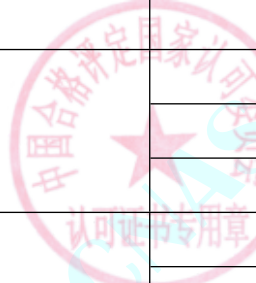
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Standard flowmeter method: (0.8~1500)m ³ /h, $U_{rel}=1.5\%$ DN25~DN300			
46	Gas Rotameter	Flow rate	Verification Regulation of Float Meter JJG 257	(0.1~100)L/min (1~100)mL/min	$U=0.7\%FS$ $U=1.2\%FS$		
47	*Open Channel Weirs and Flumes for Flow Measurement	Flow rate	Verification Regulation of Open Channel Weirs and Flumes for Flow Measurement JJG(SL)004	(5~5000)m ³ /h	$U_{rel}=1.5\%$	Accredited only for geometric method	
48	*Leeb Hardness Tester	Hardness	Verification Regulation of Equotip Hardness tester JJG 747	(490~830)HLD	$U=7HLD$		
49	Shore D Durometer	Hardness		(0~100)HD	$U=0.3HD$		
		Length	Verification Regulation of Shore D Durometer JJG 1039	(0~10)mm	$U=0.003mm\sim0.01mm$		
		Angle		(0~45)°	$U=0.2^\circ$		
50	*Wechsler hardness tester	Hardness	Verification Regulation of Metallic Webster Hardness Testing Machines JJG 944	(8~19)HW	$U=0.5HWA$		
51	Shore AO Durometers	Hardness		(0~100)HAO	$U=0.3HAO$		
		Angle	Calibration Specification for Shore AO Durometers JJF 1312	(0~45)°	$U=0.2^\circ$		
		Length		(0~10)mm	$U=0.003mm\sim0.01mm$		
52	Interface Tensiometers	Tension	Calibration Specification for Interface Tensiometers JJF 1464	(4~100)mN/m	$U_{rel}=0.14\%$		
53	*Equipment of Power Measuring	Torque	Verification Regulation of Equipment of Power	(1~3000)Nm	$U_{rel}=0.4\%$		



No. CNAS L2157

第 31 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Rotating velocity	Measuring JJG 653	(30~40000)r/min	$U_{rel}=0.2\%$		
54	*Helium Mass Spectrometer Leak Detector	Leak rate	Calibration Specification for Helium Mass Spectrometer Leak Detector JJF(JG)186	$(4 \times 10^{-10} \sim 2 \times 10^{-8})\text{Pa} \cdot \text{m}^3/\text{s}$	$U_{rel}=20\%$	Accredited only for vacuum standard leak group method	
		Calibration factor		0.5~1.5	$U_{rel}=20\%$		
55	Micro Sampling Syringe	Capacity	Verification Regulation of Micro Sampling Syringe JJG(Ji)166	(1~10) μ L	$U_{rel}=2.0\%$		
				(10~50) μ L	$U_{rel}=1.0\%$		
				(50~300) μ L	$U_{rel}=0.5\%$		
				(300~1000) μ L	$U_{rel}=0.1\%$		
56	Special Plastific Container	Capacity	Calibration Specification for Special Plastific Container JJF(Chuan)179	(0.001~5)mL	$U=0.003\text{mL}$		
				(5~25)mL	$U=0.01\text{mL}$		
				(25~100)mL	$U=0.02\text{mL}$		
				(100~500)mL	$U=0.05\text{mL}$		
				(500~2000)mL	$U=0.2\text{mL}$		
57	*Oedometers	Force value	Calibration Specification for Oedometers JJF 1311	10N~12kN	$U_{rel}=0.4\%$		
		Length		(0~10)mm	$U=0.003\text{mm}$		
				(10~150)mm	$U=0.03\text{mm}$		
58	*Building Material Testing Machine of Constant Loading Speed	Force value	Verification Regulation of Building Material Testing Machine of Constant Loading Speed JJG 1025	10N~5MN	$U_{rel}=0.4\%$		
		Loading speed		(0.1~50)kN/s	$U_{rel}=0.5\%$		



No. CNAS L2157

第 32 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
59	*Strain-Controlled Triaxial Apparatus	Force value	Code for Calibration of Strain-Controlled Triaxial Apparatus SL 118	(0.1~60)kN	$U_{rel}=0.4\%$		
		Length		(1~50)mm	$U=0.01\text{mm}$		
		Speed		(0.01~20)mm/min	$U_{rel}=1.4\%$		
		Pressure		(0~2.5)MPa	$U=0.5\%\text{FS}$		
		Volume		(0~50)mL	$U=0.4\%\text{FS}$		
60	*Strain-Controlled Unconfined Compression Apparatus	Force value	Code for Calibration of Strain-Controlled Unconfined Compression Apparatus SL 117	(0.1~1.5)kN	$U_{rel}=0.4\%$		
		Length		(1~50)mm	$U=0.01\text{mm}$		
		Speed		(0.01~20)mm/min	$U_{rel}=1.4\%$		
61	*Strain-Controlled Direct Shear Apparatus	Force value	Calibrating Methods for Strain-Controlled Direct Shear Apparatus SL 116	(0.1~10)kN	$U_{rel}=0.4\%$		
		Length		(1~50)mm	$U=0.01\text{mm}$		
62	*Anchorage Testing Machines	Force value	Verification Regulation of Anchorage Testing Machines JJG 1083	100N~5MN	$U_{rel}=0.4\%$		
		Length		(0~300)mm	$U=0.05\text{mm}$		
63	*Pendulum Impact Testing Machines	Energy	Verification Regulation of Pendulum Impact Testing Machines JJG 145	Static: (1~300)J	$U_{rel}=0.5\%$		
				Dynamic: (10~300)J	$U_{rel}=(2.5\sim2)\%$		
64	*Cupping Testing Machine	Force value	Verification Regulation of Cupping Testing Machine JJG 583	(0.2~10)kN	$U_{rel}=0.5\%$		
		Length		(0~150)mm	$U=0.04\text{mm}$		
		IE		(0~16)mm	$U=0.01\text{mm}$		
65	*Digital Weighted-method Liquid Density Meters	Density	Verification Regulation of Digital Weighted-method Liquid Density Meters JJG 999	(650~1800)kg/m ³	$U=0.3\text{kg/m}^3$		

No. CNAS L2157

第 33 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
66	*High Strength Bolt Testers	Force value	Calibration Specification for High Strength Bolt Testers JJF 1478	(5~500)kN	$U_{rel}=0.4\%$		
		Torque		(50~2000)Nm	$U_{rel}=0.4\%$		
67	*Continuous Totalizing Automatic Weighing Instruments (Belt Weighers)	Flowrate	Verification Regulation of Continuous Totalizing Automatic Weighing Instruments (Belt Weighers) JJG 195	(0.01~200)t/h	$U_{rel}=0.3\%$		
68	*Discontinuous Totalizing Automatic Weighing Instruments (Totalizing Hopper Weighers)	Mass	Verification Regulation of Discontinuous Totalizing Automatic Weighing Instruments (Totalizing Hopper Weighers) JJG 648	0.1kg~20t	$U_{rel}=0.08\%$		
69	*Mechanical Vibration Genetator for Testing	Frequency	Verification Regulation of Mechanical Vibration Genetator for Testing JJG 189	5Hz~2kHz	$U_{rel}=0.5\%$		
		Acceleration		(2~1000)m/s ²	$U_{rel}=4\%$		
70	*Simulation Test-bed for Road Transportation	Frequency	Calibration Specification for Simulation Test-bed for Road Transportation JJF 1271	5Hz~1kHz	$U_{rel}=0.5\%$		
		Acceleration		(2~100)m/s ²	$U_{rel}=3\%$		
71	*Peristaltic Pumps	Flow rate	Calibration Specification for Peristaltic Pumps JJF(Min)1115	0.1mL/min~10L/min	$U_{rel}=1.5\%$		
		Rotating velocity		(20~600)r/min	$U_{rel}=1.0\%$		
72	Screen Tension Meters	Wire mesh tension	Calibration Specification for Screen Tension Meters JJF 1465	(7~50)N/cm	$U=1.0\%FS$		



No. CNAS L2157

第 34 页 共 108 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
73	*Quantitative Filling Machine for Liquid Material	Mass	Verification Regulation of Quantitative Filling Machine for Liquid Material JJG 687	(0.01~150)kg	$U=(0.01\sim0.05)\text{kg}$	Accredited only for mass quota filling machine	
74	*Wire Bending Testing Machine	Angle	Verification Regulation of Wire Bending Testing Machine JJG(Yue)022	(10~150)°	$U=0.3^\circ$		
		Frequency		(5~100)times/min	$U=0.3\text{times/min}$		
		Mass		(10~2000)g	$U_{\text{rel}}=0.3\%$		
75	Aneroid Barometer & Aneroid Barograph	Pressure	Verification Regulation of Aneroid Barometer & Aneroid Barograph JJG 272	(500~1100)hPa	$U=0.8\text{hPa}$		
76	Digital Barometers	Pressure	Verification Regulation of Digital Barometers JJG 1084	(500~1100)hPa	$U=0.8\text{hPa}$		
77	Water Meter	Capacity	Calibration Specification for Water Meter JJF(Xin)48	(1~300)mL	$U=0.05\text{mL}$		
78	*Shock and Bump Testing Machines	Pulse duration	Verification Regulation of Shock and Bump Testing Machines JJG 1174	(0.2~30)ms	$U_{\text{rel}}=5\%$		
		Acceleration		(100~50000)m/s ²	$U_{\text{rel}}=6\%$		
79	Laboratory Oscillation-type Liquid Density meters	Density	Verification Regulation of Laboratory Oscillation-type Liquid Density meters JJG 1058	working level: (650~1650)kg/m ³	$U=0.3\text{kg/m}^3$	Accredited only for method of Standard Density Meter (Grade I)	
80	Pressure Regulators with Flowmeter	Pressure	Calibration Specification for Pressure Regulators with Flowmeter JJF(ji)177	(0~25)MPa	$U=0.6\%\text{FS}$		
		Flow		(0~25)L/min	$U=1.2\%\text{FS}$		
81	*Halogen Leak Detectors	Leak rate	Calibration Specification for Halogen Leak Detectors JJF	(1~10)g/a	$U_{\text{rel}}=18\%$	Accredited only for gas	



No. CNAS L2157

第 35 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Time	1964	(0.3~10)s	$U=0.2s$	R410a	
82	Reference Leaks by Soap Film Flowmeter	Leak rate	Calibration Specification for Reference Leaks by Soap Film Flowmeter JJF 1627	1mL/min~100mL/min	$U_{rel}=3\%$		
83	*Differential Pressure Air Leakage Testers	Leak rate	Calibration Specification for Differential Pressure Air Leakage Testers JJF 1986	(0.5~30)mL/min	$U_{rel}=5\%$		
		Pressure		(0.5~700)kPa	$U=0.5\%FS$		
		Different Pressure		(0~2500)Pa	$U=0.5\%FS$		
84	*Constant Revolution Speed Source	Rotating Velocity	Calibration Specification for Constant Revolution Speed Source JJF(Ji)146	(50~500)r/min	$U=0.3r/min$		
85	*Medical Centrifuge	Rotating Velocity	Calibration Specification for Medical Centrifuge JJF 2004	(20~100000)r/min	$U_{rel}=0.3\%$		
		Time		(0~3600)s	$U=1s$		
		Temperature		(-20~70)°C	$U=0.6^{\circ}C$		
86	*Wireless Electronic Scales	Mass	Calibration Specification for Wireless Electronic Scales JJF 2050	(1~600)g, $e=0.1g$	$U=(0.02\sim0.04)g$		
				(2~600)g, $e=0.2g$	$U=(0.04\sim0.05)g$		
				(5~1500)g, $e=0.5g$	$U=(0.10\sim0.14)g$		
				(10~3000)g, $e=1g$	$U=(0.20\sim0.28)g$		
				(20~6000)g, $e=2g$	$U=(0.38\sim0.55)g$		
				(0.05~15)kg, $e=5g$	$U=(1.0\sim1.4)g$		
				(0.1~30)kg, $e=10g$	$U=(2.0\sim2.8)g$		
				(0.2~75)kg, $e=20g$	$U=(4\sim7)g$		



No. CNAS L2157

第 36 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
				(0.5~150)kg, e=50g	<i>U</i> =(10~15)g		
				(1~300)kg, e=100g	<i>U</i> =(20~30)g		
				(2~600)kg, e=200g	<i>U</i> =(40~60)g		
				(5~1000)kg, e=500g	<i>U</i> =(0.1~0.13)kg		
				(10~3000)kg, e=1kg	<i>U</i> =(0.1~0.6)kg		
				(3000~5000)kg, e=1kg	<i>U</i> =1.0kg		
87	Standard Glass Hydrometers	Density	Verification Regulation of Standard Glass Hydrometers JJG 86	Grade II : (650~1800)kg/m³	<i>U</i> =0.20kg/m³	Accredited only for Direct comparison method	
		alcohol by volume		Grade II : <i>q</i> :0~100%	<i>U</i> =0.10%		
88	*Electric and Pneumatic Torque wrenches	Torque	Calibration Specification for Electric and Pneumatic Torque wrenches JJF 1610	(1~50)Nm	<i>U</i> _{rel} =1.2%		
89	Pynometers	Capacity	Calibration Specification for Pynometers JJF(Ji)107	(1~200)mL	<i>U</i> _{rel} =0.3%		
90	*Gasoline Vapor Recovery Detector	pressure	Calibration Specification for Gasoline Vapor Recovery Detectors JJF 1948	(0.01~5)kPa	<i>U</i> =0.1%FS		
		flow		(1~60)L/min	<i>U</i> _{rel} =1.5%		
Measuring Instruments for Electromagnetic							
1	*D.C. low Resistance Meters	Resistance	V.R. of D.C. Low Resistance Meters JJG 837	(1~20) μ Ω	<i>U</i> _{rel} =1.2%		
				(20~200) μ Ω	<i>U</i> _{rel} =0.6%		
				(0.2~2)m Ω	<i>U</i> _{rel} =0.15%		
				(2~20)m Ω	<i>U</i> _{rel} =0.08%		



No. CNAS L2157

第 37 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				20m Ω ~ 20k Ω	$U_{rel}=0.02\%$		
				(20~100)k Ω	$U_{rel}=0.12\%$		
2	*DC Stabilized Power Supplies	DC Voltage	C.S. for DC Stabilized Power Supplies JJF 1597	(0.1~1000)V	$U_{rel}=0.05\%$		
		DC Current		(0.01~1000)A	$U_{rel}=0.07\%$		
3	Power factor table	Power Factor	V.R. of Industry Frequency Single-Phase Phase Meter JJG 440	0.01~1	$U=0.002$		
4	D.C.Resistance Box	Resistance	V.R. of D.C. Resistance Boxes JJG 982	1m Ω ~ 10m Ω	$U_{rel}=1.0\%$		
				10m Ω ~ 100m Ω	$U_{rel}=0.4\%$		
				0.1 Ω ~ 1 Ω	$U_{rel}=0.1\%$		
				1 Ω ~ 10 Ω	$U_{rel}=0.01\%$		
				10 Ω ~ 10M Ω	$U_{rel}=0.006\%$		
5	*Clamp Ammeters	AC Current	C.S. for Clamp Ammeters JJF 1075	(0.1~20)A,50Hz	$U_{rel}=0.2\%$		
				(20~1000)A,50Hz	$U_{rel}=0.6\%$		
		DC Current		(0.1~20)A	$U_{rel}=0.2\%$		
				(20~1000)A	$U_{rel}=0.6\%$		
6	*Surface Resistance Tester	Resistance	C.S. for Surface Resistance Tester JJF 1285	($10^2 \sim 10^7$) Ω	$U_{rel}=0.6\%$		
				($10^7 \sim 10^8$) Ω	$U_{rel}=1.2\%$		
				($10^8 \sim 10^9$) Ω	$U_{rel}=2.4\%$		
				($10^9 \sim 10^{12}$) Ω	$U_{rel}=6\%$		



No. CNAS L2157

第 38 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Voltage		(9~250)V	$U_{rel}=0.3\%$		
7	*Earth-Continuity Testers	DC Resistance	V.R. of Earth-Continuity Testers JJG 984	(10~20)m Ω	$U_{rel}=0.7\%$		
				(20~500)m Ω	$U_{rel}=0.2\%$		
		AC Resistance		(10~20)m Ω , 50Hz	$U_{rel}=0.7\%$		
				(20~500)m Ω , 50Hz	$U_{rel}=0.3\%$		
		DC Current		(1~30)A	$U_{rel}=0.12\%$		
		AC Current		(1~30)A, 50Hz	$U_{rel}=0.2\%$		
8	*Electronic Insulation Resistance Meters	Resistance	V.R. of Electronic Insulation Resistance Meters JJG 1005	100 Ω ~ 10M Ω	$U_{rel}=0.24\%$		
				(10~100)M Ω	$U_{rel}=0.6\%$		
				(0.1~1)G Ω	$U_{rel}=1.3\%$		
				(1~10)G Ω	$U_{rel}=2.4\%$		
				(10~100)G Ω	$U_{rel}=6\%$		
		Voltage		(0.01~5)kV	$U_{rel}=1.6\%$		
9	*Clamp Earth Resistance Meters	Resistance	V.R. of Clamp Earth Resistance Meters JJG 1054	(0.01~0.1) Ω	$U_{rel}=2.4\%$		
				(0.1~1) Ω	$U_{rel}=0.7\%$		
				(1~2000) Ω	$U_{rel}=0.2\%$		
10	DC Standard Resistors	Resistance	V.R. of DC Standard Resistors JJG 166	0.001 Ω	$U_{rel}=0.5\%$		
				0.01 Ω 、0.1 Ω	$U_{rel}=0.07\%$		



No. CNAS L2157

第 39 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				1 Ω、10 Ω、100 Ω、1k Ω、10k Ω、100k Ω、1M Ω、10M Ω	$U_{rel}=0.006\%$		
11	*AC Digital Powermeter	AC Power	V.R. of AC Digital Powermeter JJG 780	1W~12kW,50Hz	$U_{rel}=0.16\%$		
12	D.C.Bridges	Resistance	V.R. of D.C. Bridges JJG 125	(1~10)m Ω 10m Ω ~ 1k Ω	$U_{rel}=0.06\%$ $U_{rel}=0.015\%$		
13	*Amperemeters, Voltmeters, Wattmeters and Ohmmeter	Resistance	V.R. of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	1 Ω ~ 1M Ω	$U_{rel}=0.5\%$		
		DC Power		1W~12kW	$U_{rel}=0.4\%$		
		AC Power		1W~12kW,50Hz	$U_{rel}=0.6\%$		
		DC Voltage		20mV~1000V	$U_{rel}=0.2\%$		
		DC Current		100 μ A~20A	$U_{rel}=0.4\%$		
		AC Current		100 μ A~20A,50Hz	$U_{rel}=0.5\%$		
		AC Voltage		20mV~1000V,50Hz	$U_{rel}=0.3\%$		
14	*High Insulation Resistance Meters	Resistance	V.R. of High Insulation Resistance Meters JJG 690	100 Ω ~ 10M Ω	$U_{rel}=0.24\%$		
				(10~100)M Ω	$U_{rel}=0.6\%$		
				(0.1~1)G Ω	$U_{rel}=1.3\%$		
				(1~10)G Ω	$U_{rel}=2.4\%$		
				(10~1000)G Ω	$U_{rel}=6\%$		
		Voltage		(10~1000)V	$U_{rel}=1.6\%$		
15	*Loop Resistance	Resistance	V.R. of Loop Resistance	(1~400) μ Ω	$U=0.07\%R_x+0.03 μ Ω$		



No. CNAS L2157

第 40 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Tester and DC Resistance Meters		Tester and DC Resistance Meters JJG 1052	400 $\mu\Omega$ ~ 200 Ω	$U_{rel}=0.07\%$		
		Current		(1~500)A	$U_{rel}=0.07\%$		
16	*Megohmmeter	Resistance	V.R. of Megohmmeter JJG 622	(0.1~10)M Ω	$U_{rel}=0.3\%$		
				(10~100)M Ω	$U_{rel}=0.6\%$		
				(100~1000)M Ω	$U_{rel}=1.8\%$		
				(1~10)G Ω	$U_{rel}=3\%$		
		Voltage		10V~1kV	$U_{rel}=1.6\%$		
17	*Safety Parameter Tester	Withstanding Voltage DC Voltage		(0.2~6)kV	$U_{rel}=0.24\%$		
		Withstanding Voltage AC Voltage		(0.2~5)kV,50Hz	$U_{rel}=0.24\%$		
		DC Breakdown Alarm Current		(0.1~50)mA	$U_{rel}=0.3\%$		
		AC Breakdown Alarm Current	C.S. for Safety Parameter Tester JJF(DZ) 0004	(0.1~50)mA,50Hz	$U_{rel}=0.32\%$		
		Time		(1~60)s	$U_{rel}=1.2\%$		
		Insulation Resistance		(1~10)M Ω	$U_{rel}=0.24\%$		
				(10~100)M Ω	$U_{rel}=0.6\%$		
				(100~1000)M Ω	$U_{rel}=1.2\%$		



No. CNAS L2157

第 41 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
			ilac-MRA INTERNATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	(1~5)G Ω	<i>U</i> _{rel} =2.4%		
		Insulation Test Voltage		(10~1000)V	<i>U</i> _{rel} =2%		
		DC Earth-Continuity Test Current		(1~30)A	<i>U</i> _{rel} =0.1%		
		AC Earth-Continuity Test Current		(1~30)A ,50Hz	<i>U</i> _{rel} =0.2%		
		DC Earth-Continuity Resistance		(10~20)m Ω	<i>U</i> _{rel} =0.7%		
				(20~500)m Ω	<i>U</i> _{rel} =0.2%		
		AC Earth-Continuity Resistance		(10~20)m Ω ,50Hz	<i>U</i> _{rel} =0.7%		
				(20~500)m Ω ,50Hz	<i>U</i> _{rel} =0.3%		
		DC Leakage Current		(0.1~10)mA	<i>U</i> _{rel} =0.05%		
		AC Leakage Current		(0.1~10)mA,50Hz	<i>U</i> _{rel} =0.2%		
		DC Leakage Test Voltage		(10~500)V	<i>U</i> _{rel} =0.4%		
		AC Leakage Test Voltage		(10~500)V,50Hz	<i>U</i> _{rel} =0.4%		
		18		*Digital AC Electrical Parameters Meter	AC Voltage		C.S. for Digital AC Electrical Parameters Meter JJF 1491
AC Current	(1~3)mA,50Hz		<i>U</i> _{rel} =0.15%				
	3mA~3A,50Hz		<i>U</i> _{rel} =0.1%				
	(3~10)A,50Hz		<i>U</i> _{rel} =0.15%				



No. CNAS L2157

第 42 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
			C.S. for Wrist Strap and Footwear Tester JJF(DZ) 31502	(10~20)A,50Hz	$U_{rel}=0.2\%$		
		AC Power		1W~12kW,50Hz	$U_{rel}=0.16\%$		
		Frequency		(45~65)Hz	$U_{rel}=0.06\%$		
		Power Factor		0~1	$U=0.002$		
19	*Wrist Strap and Footwear Tester	Resistance	C.S. for Wrist Strap and Footwear Tester JJF(DZ) 31502	(0.5~100)M Ω	$U_{rel}=1.8\%$		
20	*Withstanding Voltage Testers	AC voltage	V.R. of Withstanding Voltage Testers JJG 795	200V~15kV,50Hz	$U_{rel}=0.6\%$		
		AC current		(0.1~200)mA,50Hz	$U_{rel}=0.32\%$		
		DC Voltage		200V~15kV	$U_{rel}=0.6\%$		
		DC Current		(0.1~200)mA	$U_{rel}=0.3\%$		
		Time		(1~60)s	$U_{rel}=1.2\%$		
21	*Earth Resistance Meters	Resistance	V.R. of Earth Resistance Meters JJG 366	(0.1~1) Ω	$U_{rel}=0.6\%$		
				(1~1000) Ω	$U_{rel}=0.12\%$		
22	*Single Phase AC Constant Voltage Power Supply	AC voltage	C.S. for Single Phase AC Constant Voltage Power Supply JJF(Liao) 194	(10~350)V,(50~400)Hz	$U_{rel}=0.05\%$		
		Frequency		(50~400)Hz	$U_{rel}=0.02\%$		
23	*Leakage Current Tester	DC Current	V.R. of Leakage Current Tester JJG 843	(0.1~20)mA	$U_{rel}=0.05\%$		
		AC Current		(0.1~20)mA,50Hz	$U_{rel}=0.2\%$		
		DC Voltage		(10~500)V	$U_{rel}=0.06\%$		
		AC Voltage		(10~500)V,50Hz	$U_{rel}=0.1\%$		



No. CNAS L2157

第 43 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
24	*Multimeters	DC Voltage	C.S. for Multimeters JJF 1587	20mV~330mV	$U=0.004\%V_x+1\text{ }\mu\text{ V}$		
				0.33V~3.3V	$U=0.002\%V_x+2\text{ }\mu\text{ V}$		
				3.3V~33V	$U=0.003\%V_x+20\text{ }\mu\text{ V}$		
				33V~330V	$U=0.003\%V_x+0.15\text{mV}$		
				330V~1000V	$U=0.003\%V_x+1.5\text{mV}$		
		AC Voltage		20mV~33mV,(45Hz~10kHz)	$U=0.02\%V_x+6\text{ }\mu\text{ V}$		
				20mV~33mV,(10kHz~20kHz)	$U=0.03\%V_x+6\text{ }\mu\text{ V}$		
				20mV~33mV,(20kHz~50kHz)	$U=0.15\%V_x+6\text{ }\mu\text{ V}$		
				20mV~33mV,(50kHz~100kHz)	$U=0.5\%V_x+12\text{ }\mu\text{ V}$		
				33mV~330mV,(45Hz~20kHz)	$U=0.02\%V_x+8\text{ }\mu\text{ V}$		
				33mV~330mV,(20kHz~50kHz)	$U=0.05\%V_x+8\text{ }\mu\text{ V}$		
				33mV~330mV,(50kHz~100kHz)	$U=0.1\%V_x+0.04\text{mV}$		
				0.33V~3.3V,(45Hz~10kHz)	$U=0.02\%V_x+0.03\text{mV}$		
				0.33V~3.3V,(10kHz~20kHz)	$U=0.03\%V_x+0.05\text{mV}$		
				0.33V~3.3V,(20kHz~50kHz)	$U=0.04\%V_x+0.05\text{mV}$		



No. CNAS L2157

第 44 页 共 108 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
				0.33V~3.3V,(50kHz~100kHz)	$U=0.1\%V_x+0.15\text{mV}$		
				3.3V~33V,(45Hz~10kHz)	$U=0.02\%V_x+0.03\text{mV}$		
				3.3V~33V,(10kHz~20kHz)	$U=0.03\%V_x+0.6\text{mV}$		
				3.3V~33V,(20kHz~50kHz)	$U=0.05\%V_x+0.6\text{mV}$		
				3.3V~33V,(50kHz~100kHz)	$U=0.12\%V_x+1.6\text{mV}$		
				33V~330V,(45Hz~1kHz)	$U=0.03\%V_x+2\text{mV}$		
				33V~330V,(1kHz~20kHz)	$U=0.03\%V_x+6\text{mV}$		
				33V~330V,(20kHz~50kHz)	$U=0.04\%V_x+6\text{mV}$		
				33V~330V,(50kHz~100kHz)	$U=0.3\%V_x+0.05\text{V}$		
				330V~1000V,(45Hz~10kHz)	$U=0.04\%V_x+0.01\text{V}$		
		DC Current		10 μA ~330 μA	$U=0.03\%I_x+0.02\text{ }\mu\text{A}$		
				0.33mA~3.3mA	$U=0.02\%I_x+0.05\text{ }\mu\text{A}$		
				3.3mA~33mA	$U=0.02\%I_x+0.2\text{ }\mu\text{A}$		
				33mA~330mA	$U=0.02\%I_x+2\text{ }\mu\text{A}$		
				0.33A~1.1A	$U=0.03\%I_x+0.04\text{mA}$		
				1.1A~3A	$U=0.05\%I_x+0.04\text{mA}$		



No. CNAS L2157

第 45 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				3A~11A	$U=0.06\%I_x+0.4\text{mA}$		
				11A~20A	$U=0.12\%I_x+1\text{mA}$		
				30 μ A~330 μ A, (45Hz~1kHz)	$U=0.2\%I_x+0.2 \mu$ A		
				30 μ A~330 μ A, (1kHz~5kHz)	$U=0.43\%I_x+0.15 \mu$ A		
				30 μ A~330 μ A, (5kHz~10kHz)	$U=1\%I_x+0.2 \mu$ A		
				0.33mA~ 3.3mA,(45Hz~1kHz)	$U=0.12\%I_x+0.2 \mu$ A		
				0.33mA~ 3.3mA,(1kHz~5kHz)	$U=0.3\%I_x+0.3 \mu$ A		
				0.33mA~ 3.3mA,(5kHz~10kHz)	$U=0.6\%I_x+0.4 \mu$ A		
				3.3mA~33mA,(45Hz~ 1kHz)	$U=0.05\%I_x+3 \mu$ A		
				3.3mA~33mA,(1kHz~ 5kHz)	$U=0.1\%I_x+3 \mu$ A		
				3.3mA~33mA,(5kHz~ 10kHz)	$U=0.25\%I_x+4 \mu$ A		
				33mA~330mA,(45Hz~ 1kHz)	$U=0.05\%I_x+0.03\text{mA}$		
				33mA~330mA,(1kHz~ 5kHz)	$U=0.12\%I_x+0.06\text{mA}$		
				33mA~330mA,(5kHz~ 10kHz)	$U=0.25\%I_x+0.12\text{mA}$		
				0.33A~3A,(45Hz~ 1kHz)	$U=0.06\%I_x+0.12\text{mA}$		
		DC Current					



No. CNAS L2157

第 46 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Resistance	C.S. for Multifunction Standard Sources JJF 1638	0.33A~3A,(1kHz~5kHz)	$U=0.8\%I_x+0.12\text{mA}$		
				0.33A~3A,(5kHz~10kHz)	$U=3\%I_x+6\text{mA}$		
				3A~11A,(45Hz~1kHz)	$U=0.12\%I_x+0.3\text{mA}$		
				3A~11A,(1kHz~5kHz)	$U=4\%I_x+2.5\text{mA}$		
				11A~20A,(45Hz~1kHz)	$U=0.2\%I_x+6\text{mA}$		
				11A~20A,(1kHz~5kHz)	$U=4\%I_x+6\text{mA}$		
				1 Ω ~ 110 Ω	$U=0.02\%R_x+0.02 \Omega$		
				110 Ω ~ 1.1k Ω	$U=0.03\%R_x+0.03 \Omega$		
				1.1k Ω ~ 11k Ω	$U=0.02\%R_x+0.3 \Omega$		
				11k Ω ~ 110k Ω	$U=0.02\%R_x+1.2 \Omega$		
				110k Ω ~ 1.1M Ω	$U=0.02\%R_x+12 \Omega$		
				1.1M Ω ~ 3.3M Ω	$U=0.02\%R_x+0.2\text{k} \Omega$		
				3.3M Ω ~ 11M Ω	$U=0.02\%R_x+0.3\text{k} \Omega$		
				11M Ω ~ 33M Ω	$U=0.03\%R_x+3\text{k} \Omega$		
				33M Ω ~ 100M Ω	$U=0.05\%R_x+4\text{k} \Omega$		
25	*Multifunction Standard Sources	DC Voltage	C.S. for Multifunction Standard Sources JJF 1638	20mV~200mV	$U=0.0006\%V_x+0.5 \mu \text{V}$		
				0.2V~2V	$U=0.0004\%V_x+5 \mu \text{V}$		
				2V~200V	$U=0.0005\%V_x+0.05\text{mV}$		



No. CNAS L2157

第 47 页 共 108 页

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

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		AC Voltage	ilac-MEA CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	200V~1000V	$U=0.0007\%V_x+0.5\text{mV}$		
				20mV~200mV,(50Hz~10kHz)	$U=0.016\%V_x+4\text{ }\mu\text{ V}$		
				0.2V~2V,(50Hz~10kHz)	$U=0.012\%V_x+0.02\text{mV}$		
				2V~20V,(50Hz~10kHz)	$U=0.012\%V_x+0.2\text{mV}$		
				20V~200V,(50Hz~10kHz)	$U=0.012\%V_x+2\text{mV}$		
				200V~1000V,(50Hz~10kHz)	$U=0.016\%V_x+0.02\text{V}$		
		DC Current		10 $\mu\text{ A}$ ~200 $\mu\text{ A}$	$U=0.004\%I_x+0.001\text{ }\mu\text{ A}$		
				0.2mA~2mA	$U=0.003\%I_x+0.01\text{ }\mu\text{ A}$		
				2mA~20mA	$U=0.003\%I_x+0.1\text{ }\mu\text{ A}$		
				20mA~200mA	$U=0.004\%I_x+1\text{ }\mu\text{ A}$		
				200mA~2A	$U=0.022\%I_x+0.02\text{mA}$		
				2A~20A	$U=0.05\%I_x+0.5\text{mA}$		
		AC Current		30 $\mu\text{ A}$ ~200 $\mu\text{ A}$, (50Hz~10kHz)	$U=0.05\%I_x+0.02\text{ }\mu\text{ A}$		
				0.2mA~2mA,(50Hz~10kHz)	$U=0.05\%I_x+0.2\text{ }\mu\text{ A}$		
				2mA~20mA,(50Hz~10kHz)	$U=0.05\%I_x+2\text{ }\mu\text{ A}$		
				20mA~200mA,(50Hz~10kHz)	$U=0.05\%I_x+0.02\text{mA}$		



No. CNAS L2157

第 48 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Resistance		0.2A~2A,(50Hz~10kHz)	$U=0.09\%I_x+0.2\text{mA}$		
				2A~20A,(50Hz~2kHz)	$U=0.1\%I_x+2\text{mA}$		
				2A~20A,(2kHz~10kHz)	$U=0.3\%I_x+2\text{mA}$		
				1 Ω ~ 20 Ω	$U=0.006\%R_x+0.02\text{m}\Omega$		
				20 Ω ~ 200 Ω	$U=0.006\%R_x+0.06\text{m}\Omega$		
				0.2k Ω ~ 2k Ω	$U=0.001\%R_x+0.6\text{m}\Omega$		
				2k Ω ~ 20k Ω	$U=0.001\%R_x+6\text{m}\Omega$		
				20k Ω ~ 200k Ω	$U=0.001\%R_x+0.06\Omega$		
				0.2M Ω ~ 2M Ω	$U=0.001\%R_x+1.2\Omega$		
				2M Ω ~ 20M Ω	$U=0.003\%R_x+12\Omega$		
				20M Ω ~ 200M Ω	$U=0.02\%R_x+1.2\text{k}\Omega$		
				200M Ω ~ 1000M Ω	$U=0.24\%R_x+0.12\text{M}\Omega$		
26	*Eddy Current Conductivity Meters	Conductivity	C.S. for Eddy Current Conductivity Meters JJF 1692	1%IACS~10%IACS	$U=0.5\%IACS$		
				10%IACS~101%IACS	$U=1.5\%IACS$		
27	Contactless Electrostatic Voltage Measuring Instruments	Voltage	C.S. for Contactless Electrostatic Voltage Measuring Instruments JJF 1517	(0.1~20)kV	$U_{\text{rel}}=0.5\%$		
28	*Welding Power Sources of DC Electric Welding	No load voltage	C.S. for Welding Power Sources of DC Electric Welding JJF 1985	(20~141)V	$U_{\text{rel}}=1.0\%$		
		Load voltage		(10~44)V	$U_{\text{rel}}=1.0\%$		



No. CNAS L2157

第 49 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Current		(1~1000)A	$U_{rel}=0.4\%$		
29	*Power Analyzers	AC Voltage	C.S. for Power Analyzers JJF 2040	(10~330)mV,(10Hz~1000Hz)	$U_{rel}=0.10\%$		
		AC Voltage		(0.33~1000)V,(10Hz~1000Hz)	$U_{rel}=0.05\%$		
		AC Current		1mA~11A,(10Hz~1000Hz)	$U_{rel}=0.14\%$		
		AC Current		11A~20A,(10Hz~1000Hz)	$U_{rel}=0.23\%$		
		AC Power		0.5W~20kW,(10Hz~1000Hz)	$U_{rel}=0.24\%$		
		DC Voltage		(10~330)mV	$U_{rel}=0.015\%$		
		DC Voltage		(0.33~1000)V	$U_{rel}=0.01\%$		
		DC Current		1mA~3A	$U_{rel}=0.05\%$		
		DC Current		3A~11A	$U_{rel}=0.08\%$		
		DC Current		11A~20A	$U_{rel}=0.13\%$		
		DC Power		0.5W~3kW	$U_{rel}=0.05\%$		
		DC Power		3kW~20kW	$U_{rel}=0.14\%$		
		Frequency		40Hz~10kHz	$U_{rel}=0.005\%$		
		Phase Angle		0° ~360°	$U=0.12^\circ$		
30	Electrical Meters for Measuring Alternating-current	Electric Energy	V.R. of Electrical Meters for Measuring Alternating-current Electrical Energy JJG 596	$3 \times (57.7 \sim 380)V, 3 \times (0.05 \sim 20)A, \cos \phi = 1.0$	$U_{rel}=0.08\%$	Accredited only for Electrical Meters for	
				$3 \times (57.7 \sim 380)V, 3 \times (0.05 \sim 20)A, \cos \phi = 0.5L$	$U_{rel}=0.10\%$		



No. CNAS L2157

第 50 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
	Electrical Energy			$3 \times (57.7 \sim 380)\text{V}, 3 \times (0.05 \sim 20)\text{A}, \cos \phi = 0.8\text{C}$	$U_{\text{rel}}=0.10\%$	Measuring Alternating-current Electrical Energy without timing functionality	
Measuring instruments for radio							
1	*LCR Meter	Capacitance	V.R. of wide range digital RLC meter GJB 8817	0.1nF,1kHz	$U_{\text{rel}}=0.24\%$		
				1nF、 1 μ F,1kHz	$U_{\text{rel}}=0.12\%$		
				10nF、 0.1 μ F,1kHz	$U_{\text{rel}}=0.06\%$		
		Inductance		0.1mH,1kHz	$U_{\text{rel}}=0.24\%$		
				1mH、 10mH、 100mH,1kHz	$U_{\text{rel}}=0.12\%$		
				Resistance	$(0.01 \sim 1) \Omega$,1kHz		$U_{\text{rel}}=0.10\%$
		$(1 \sim 100) \Omega$,1kHz			$U_{\text{rel}}=0.07\%$		
		$(0.1 \sim 100)\text{k} \Omega$,1kHz			$U_{\text{rel}}=0.08\%$		
Loss Factor	0.001~1	$U=0.12\%D_x+0.00012$					
2	*Standard Capacitor	Capacitance	V.R. of Standard Capacitors JJG 183	100pF~1nF,1kHz	$U_{\text{rel}}=0.3\%$		
				1nF~1 μ F,1kHz	$U_{\text{rel}}=0.1\%$		
		Loss Factor		0.0001~1	$U_{\text{rel}}=0.2\%$		
3	*Standard Inductor	Inductance	V.R. of Standard Inductors JJG 726	0.1mH~1mH,1kHz	$U_{\text{rel}}=0.3\%$		



No. CNAS L2157

第 51 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
				1mH~1000mH,1kHz	<i>U</i> _{rel} =0.1%		
4	*Analogue Oscilloscope	Voltage	V.R. of Analogue Oscilloscope JJG 262	10mV~20V	<i>U</i> _{rel} =0.7%		
		Time		2ns~5s	<i>U</i> _{rel} =0.4%		
		Bandwidth		(20~600)MHz	<i>U</i> _{rel} =4%		
		Rise time		150ps~200ns	<i>U</i> _{rel} =6%		
5	*Digital Storage Oscilloscope	Voltage	C.S. for Digital Storage Oscilloscope JJF 1057	10mV~20V	<i>U</i> _{rel} =0.2%		
		Time		2ns~5s	<i>U</i> _{rel} =0.04%		
		Bandwidth		20MHz~2GHz	<i>U</i> _{rel} =4%		
		Rise time		150ps~200ns	<i>U</i> =0.2ns		
6	*Function Generators	DC Voltage	V.R. of Function Generators JJG 840	1mV~20V	<i>U</i> _{rel} =0.1%		
		Output waveform amplitude		10mV~60V,1kHz	<i>U</i> _{rel} =0.5%		
		Frequency		1Hz~250MHz	<i>U</i> _{rel} =1×10 ⁻⁵		
		Rise time		1ns~1 μ s	<i>U</i> _{rel} =5%		
		Void Ratio		5%~95%	<i>U</i> _{rel} =0.1%		
7	A.C.Resistance Boxes	Resistance	C.S. for A.C. Resistance Boxes JJF 1636	(1~10) Ω ,1kHz	<i>U</i> _{rel} =0.2%		
				10 Ω ~100k Ω ,1kHz	<i>U</i> _{rel} =0.08%		
Time and frequency							
1	Stopwatches	Time	V.R. of Stopwatches JJG 237	Mechanical Stopwatch:(1~1800)s	<i>U</i> =0.06s		



No. CNAS L2157

第 52 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Electronic stopwatch:(1~3600)s	$U=0.01s$		
				Electronic stopwatch:(1~24)h	$U=0.03s$		
2	*Electronic time relay	Time	C.S. for Electronic time relay JJF 1282	(0.09~10)s	$U=0.004s$		
				10s~2h	$U_{rel}=0.04\%$		
Measuring instruments for optical							
1	*Abbe Refractometer	Refractive Index	Verification Regulation of Abbe Refractometer JJG 625	1.47~1.68	$U=6 \times 10^{-5}$		
2	*Standard Light Sources Boxes	Illuminance	Calibration Specification for Standard Light Sources Boxes JJF(Textile)055	(100~3000)lx	$U_{rel}=9\%$		
		Color Temperature		(2300~7000)K	$U=1.2 \times 10^2 K$		
3	*Clarity Test Equipment	Illuminance	Calibration Specification for Clarity Test Equipment JJF 1287	(1000~4000)lx	$U_{rel}=12\%$		
4	*Colorimeters and Color Difference Meters	Color	Verification Regulation of Colorimeters and Color Difference Meters JJG 595	Y:(2~90)	$U=1.0$		
				x,y All color gamut	$U=0.008$		
5	*Whiteness Meter	Whiteness	Verification Regulation of the Whiteness Meter JJG 512	60~95	$U=2.0$	Don't work the whiteboard	
6	*Hazemeter	Hazemeter	Calibration Specification for Hazemeter JJF 1303	1~30	$U=0.4$		
		Transmittance		0.1~0.95	$U=0.01$		
7	*Specular Gloss Meters	Gloss	Verification Regulation of Specular Gloss Meters and Gloss Plates JJG 696	(1~100)GU	$U=1.8GU$		



No. CNAS L2157

第 53 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
8	*Reflectometers	Reflector	Calibration Specification for Reflectometers JJF 1232	60~95	$U=1.6$	Don't work the whiteboard and blackboard	
9	Illuminance Meter	Illuminance	Verification Regulation of Illuminance Meter JJG 245	(4~4000) lx	$U_{rel}=2.0\%$		
10	Luminance Meter	Luminance	Verification Regulation of Luminance meter JJG 211	(10~1000)cd/m ²	$U_{rel}=3.0\%$		
		Chroma		x,y:0~1	$U=0.006$		
11	*UV Analyzer	Illuminance	Calibration Specification for UV analyzer JJF1936	(150~1000) μ W/cm ²	$U_{rel}=22\%$		
12	Colour Temperature Meters	Color temperature	Verification Regulation of Colour Temperature Meters JJG 212	(2300~6600)K	$U_{rel}=1.0\%$		
13	*Diffuse Transmission Visual Densitometers	Density	Verification Regulation of Diffuse Transmission Visual Densitometers JJG 920	0.0~2.0	$U=0.02$		
				>2.0~4.0	$U=0.025$		
14	*Artificial Accelerated Weathering Apparatus of Xenon Arc Lamp	Illumination	Calibration Specification for Artificial Accelerated Weathering Apparatus of Xenon Arc Lamp JJF 1525	(0.1~10)mW/cm ²	$U_{rel}=25\%$		
Measuring instruments for chemistry							
1	*Gas Chromatographs	Detection limit	Verification Regulation of Gas Chromatographs JJG 700	NPD ≤ 5 pg/s(N); NPD ≤ 10 pg/s(P);	$U_{rel}=11\%$		
				FID: ≤ 0.5 ng/s	$U_{rel}=11\%$		
				ECD: ≤ 5 pg/mL	$U_{rel}=11\%$		



No. CNAS L2157

第 54 页 共 108 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
				FPD: $\leq 0.5 \text{ ng/s(S)}, \leq 0.1 \text{ ng/s (P)}$	$U_{\text{rel}}=11\%$		
		Sensitivity		TCD: $\geq 800\text{mV} \cdot \text{mL/mg}$	$U_{\text{rel}}=11\%$		
2	*Verification Regulation of Gel Permeation Chromatographs	formula weight	Verification Regulation of Gel Permeation Chromatographs JJG 342	Inorganic phase : $(10^4 \sim 10^6)\text{g/mol}$	$U_{\text{rel}}=14\%$		
				organic phase : $(10^3 \sim 10^6)\text{g/mol}$	$U_{\text{rel}}=11\%$		
3	*Thin Layer Chromatography Scanners	Concentration	Calibration Specification for Thin Layer Chromatography Scanners JJF 1712	$(0.01 \sim 0.04)\text{mg/mL}$	$U=0.0013\text{mg/mL}$		
4	Verification Regulation of Wood Moisture Content Measuring Meters	Moisture content	Verification Regulation of Wood Moisture Content Measuring Meters JJG 986	$6\% \sim 28\%$	$U=1.0\%$		
5	*Thermogravimetric moisture meters	Mass	Verification regulation of Thermogravimetric Moisture Meters JJG 658	$1\text{mg/division}:(0 \sim 200)\text{g}$	$U=(0.8 \sim 4)\text{mg}$		
				$0.01\text{g/division}:(0 \sim 200)\text{g}$	$U=(0.02 \sim 0.03)\text{g}$		
		Moisture content		$94.98\% \sim 95.02\%$	$U=0.10\%$		
6	*Melting-point Measurement Instrument	Melting-point	Verification Regulation of Melting-point Measurement Instruments JJG 701	$(40 \sim 300)^{\circ}\text{C}$	$U=0.24^{\circ}\text{C}$		
7	*Laboratory pH Meters	pH	Verification Regulation of Laboratory pH Meters JJG 119	Electrometer:pH: $0 \sim 14$	$U=0.01$		
				Instrument:pH: $3 \sim 10$	$U=0.02$		
		Potential		$(-2000 \sim 2000)\text{mV}$	$U=0.4\text{mV}$		
	*Ultraviolet	Wavelength	Verification Regulation of Ultraviolet ,Visible,Near-	$(190 \sim 900)\text{nm}$	$U=0.7\text{nm}$		



No. CNAS L2157

第 55 页 共 108 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
	Infrared Spectrophotometers		Infrared Spectrophotometers JJG 178	(900~2600)nm	$U=1.5\text{nm}$		
		Transmission Ratio		(5~35) %	$U=0.6\%$		
9	*Liquid Chromatograph	Minimum Detection Concentration	Verification Regulation of Liquid Chromatographs JJG 705	Ultraviolet,Visible Detector: $\leq 5 \times 10^{-8}\text{g/mL}$	$U_{\text{rel}}=5.1\%$		
				Diode Array Detector: $\leq 5 \times 10^{-8}\text{g/mL}$	$U_{\text{rel}}=5.1\%$		
				Evaporative Light-scattering Detector : $\leq 5 \times 10^{-6}\text{g/mL}$	$U_{\text{rel}}=6.4\%$		
				Refractive Index Detector: $\leq 5 \times 10^{-6}\text{g/mL}$	$U_{\text{rel}}=6.2\%$		
				Fluorescence Detector: $\leq 5 \times 10^{-9}\text{g/mL}$	$U_{\text{rel}}=5.4\%$		
10	*Electrolytic Conductivity Meter	Conductivity	Verification Regulation of Electrolytic Conductivity Meters JJG 376	Electronic Unit:(0.05~1) $\mu\text{S/cm}$	$U_{\text{rel}}=1.2\%$		
				Electronic Unit:(1~2 $\times 10^5$) $\mu\text{S/cm}$	$U_{\text{rel}}=0.3\%$		
				Instrument:(100~1500) $\mu\text{S/cm}$	$U_{\text{rel}}=0.4\%$		
11	*Quadrupole Inductively Coupled Plasma Mass Spectrometer	Detection Limit	Calibration Specification for Quadrupole Inductively Coupled Plasma Mass Spectrometers JJF 1159	Be: $\leq 30\text{ng/L}$	$U=0.3\text{ ng/L}$		
				In: $\leq 10\text{ng/L}$	$U=0.1\text{ ng/L}$		
				Bi: $\leq 10\text{ng/L}$	$U=0.3\text{ ng/L}$		
12	*Liquid Chromatography-Mass Spectrometer	Signal-noise Ratio	Calibration Specification for Liquid Chromatography-Mass Spectrometers JJF 1317	Triple quadrupole:ESI- $\geq 10:1$	$U_{\text{rel}}=11\%$		



No. CNAS L2157

第 56 页 共 108 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
				Triple quadrupole: (ESI+, APCI+) $\geq$ 30:1	$U_{rel}=11\%$		
				Ion trap, single quadrupole: (ESI+, ESI-, APCI+) $\geq 10:1$	$U_{rel}=11\%$		
13	*Gas Chromatography-Mass Spectrometries	Signal-noise Ratio	Calibration Specification for Gas Chromatography-Mass Spectrometries JJF 1164	Ion trap, single quadrupole(EI ⁺): S/N $\geq$ 10: 1(100pg/ μ L OFN)	$U_{rel}=15\%$		
				Ion trap, single quadrupole(CI ⁺): S/N $\geq$ 10: 1(10ng/ μ L Benzophenone)	$U_{rel}=15\%$		
				Ion trap, single quadrupole(CI ⁻): S/N $\geq$ 10: 1(10pg/ μ L OFN)	$U_{rel}=15\%$		
				Triple quadrupole(EI ⁺): S/N $\geq$ 10: 1(10pg/ μ L OFN)	$U_{rel}=15\%$		
				Triple quadrupole(CI ⁺): S/N $\geq$ 10: 1(1ng/ μ L Benzophenone)	$U_{rel}=15\%$		
				Time of flight, electrostatic orbit(EI ⁺): S/N $\geq$ 50: 1(10pg/ μ L OFN)	$U_{rel}=15\%$		
14	*Ion Chromatograph	Minimum Detection Concentration	Verification Regulation of Ion Chromatographs JJG 823	Conductivity Detector(Cl ⁻): $\leq 0.02 \mu$ g/mL	$U_{rel}=5.8\%$		



No. CNAS L2157

第 57 页 共 108 页

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

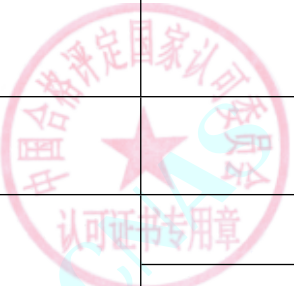
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Conductivity Detector(Li ⁺): ≤0.02 μg/mL	U _{rel} =5.8%		
				UV-vis Detector(NO ₂ ⁻): ≤0.02 μg/mL	U _{rel} =10%		
				Electrochemical Detector(I ⁻): ≤0.02 μg/mL	U _{rel} =10%		
15	*ICP Emission Spectrometer	Detection Limit	Verification Regulation of Emission Spectrometer JJG 768	Cu: ≤0.02mg/L	U=0.004mg/L		
				Cr: ≤0.02mg/L	U=0.002 mg/L		
				Zn: ≤0.01mg/L	U=0.002 mg/L		
				Ni: ≤0.03mg/L	U=0.007 mg/L		
				Mn、Ba: ≤0.005mg/L	U=0.001 mg/L		
16	*Air Sampler	Flow	Verification Regulation of Air Samplers JJG 956	(0.1~1.0)L/min	U _{rel} =1.2%		
				(>1.0~5.0)L/min	U _{rel} =1.3%		
17	*Dust Sampler	Flow	Verification Regulation of Dust Sampler JJG 520	(0.1~1.0)L/min	U _{rel} =1.2%		
				(1.0~5.0)L/min	U _{rel} =1.3%		
				(5~100)L/min	U _{rel} =1.5%		
18	*Polarimeter	Optical Rotation	Verification Regulation of Polarimeter and Polarimetric Saccharimeters JJG 536	(-45~45)°	U=0.005°		
19	*Chemical Oxygen Demand (COD) Meter	Concentration	Verification Regulation of Chemical Oxygen Demand (COD) Meters JJG 975	Type A: (50~1000)mg/L	U _{rel} =4%		
		Temperature		(100~200) °C	U=0.9°C		



No. CNAS L2157

第 58 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
20	*Atomic Fluorescence Spectrophotometer	Detection Limit	Verification Regulation for Atomic Fluorescence Spectrophotometers JJG 939	As: $\leq 0.4\text{ng}$	$U=0.02\text{ ng}$		
				Sb: $\leq 0.4\text{ng}$	$U=0.02\text{ ng}$		
21	*Atomic Absorption Spectrophotometer	Detection Limit	Verification Regulation for Atomic Absorption Spectrophotometer JJG 694	Cu: $\leq 0.02\mu\text{g/mL}$	$U=0.004\text{ }\mu\text{g/mL}$		
				Cd: $\leq 4\text{pg}$	$U=0.3\text{ pg}$		
22	*Automatic Potentiometric Titrator	Potential	Verification Regulation for Automatic Potentiometric Titrators JJG 814	$(-2000\sim 2000)\text{mV}$	$U=0.3\text{mV}$		
		concentration		0.1mol/L	$U_{\text{rel}}=1\%$		
		Capacity		$(1\sim 100)\text{mL}$	$U=(0.003\sim 0.03)\text{mL}$		
23	*Total suspended particulates sampler	Flow	Verification Regulation of Total Suspended Particulates Sampler JJG 943	$(1\sim 1200)\text{L/min}$	$U_{\text{rel}}=1.7\%$		
24	*Samplers for Stack Dust	Flow	Verification Regulation of Samplers for Stack Dust JJG 680	$(0.1\sim 100)\text{L/min}$	$U_{\text{rel}}=1.5\%$		
		Time		$(1\sim 600)\text{s}$	$U=0.6\text{s}$		
		Temperature		$(0\sim 250)^{\circ}\text{C}$	$U=0.8^{\circ}\text{C}$		
		Pressure		$(0\sim 50)\text{kPa}$	$U=0.6\%\text{FS}$		
25	Rotation Viscometer	Dynamic viscosity	Verification Regulation of Rotational Viscometers JJG 1002	$(2\sim 10^5)\text{mPa}\cdot\text{s}$	$U_{\text{rel}}=2.5\%$		
26	Electrode Salinometer	Salinity	Verification Regulation of Electrode Salinometer JJG 761	Grade 0.01:2~42	$U=0.01$		
27	*Total Organic Carbon Analyzer	Concentration	Verification Regulation of Total Organic Carbon Analyzer JJG 821	Organic carbon : $(0.1\sim 1000)\text{mg/L}$	$U_{\text{rel}}=2.4\%$		
				Inorganic carbon : $(0.1\sim 1000)\text{mg/L}$	$U_{\text{rel}}=2.2\%$		



No. CNAS L2157

第 59 页 共 108 页

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

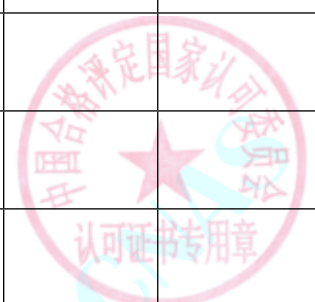
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
28	*Semiautomatic Clinical Chemistry Analyzers	Absorbance	Verification Regulation of Semiautomatic Clinical Chemistry Analyzers JJG 464	0.1~1.0	$U=0.006$		
29	Flow cup viscometers	Correction Factor	Verification Regulation of Flow Cup Viscometers JJG 743	0.95~1.05	$U_{rel}=1.0\%$		
30	*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 phosphorus: (0.1~5)mg/L	$U=0.08\text{mg/L}$		
				Total phosphorus: (5~100)mg/L	$U_{rel}=4.0\%$		
				Total nitrogen: (0.1~2)mg/L	$U=0.04\text{mg/L}$		
				Total nitrogen: (2~100)mg/L	$U_{rel}=3.5\%$		
31	*Alarmer Detectors of Combustible Gas	Concentration	Verification Regulation of Alarmer Detectors of Combustible Gas JJG 693	CH ₄ : (0.1~3.5)×10 ⁻² mol/mol	$U_{rel}=1.5\%$		
				H ₂ : (0.01~2.5)×10 ⁻² mol/mol	$U_{rel}=2.0\%$		
				propane: (0.1~1.5)×10 ⁻² mol/mol	$U_{rel}=2.0\%$		
				isobutane: (0.1~1.5)×10 ⁻² mol/mol	$U_{rel}=2.0\%$		
32	*Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer	Concentration	Verification Regulation of Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer JJG 635	(0.1~2000) μmol/mol	$U_{rel}=2\%$		
				CO ₂ : (0.1~0.5)×10 ⁻² mol/mol	$U_{rel}=3\%$		
33	*Paramagnetic Oxygen Analyzer	Concentration	Verification Regulation of Paramagnetic Oxygen Analyzer JJG 662	(0.1~100)×10 ⁻² mol/mol	$U_{rel}=3\%$		



No. CNAS L2157

第 60 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
34	*Electrochemical Oxygen Meter	Concentration	Verification Regulation of Electrochemical Oxygen Meter JJG 365	$(0.1 \sim 100) \times 10^{-2} \text{ mol/mol}$	$U_{\text{rel}}=3\%$		
35	*Micro Oxygen Analyzers	Concentration	Verification Regulation of Micro Oxygen Analyzers JJG 945	$(1 \sim 10) \mu \text{ mol/mol}$	$U_{\text{rel}}=4\%$		
				$(10 \sim 1000) \mu \text{ mol/mol}$	$U_{\text{rel}}=3\%$		
36	*Sulfur Hydrogen Gas Detectors	Concentration	Verification Regulation of Sulfur Hydrogen Gas Detectors JJG 695	$(0.1 \sim 100) \mu \text{ mol/mol}$	$U_{\text{rel}}=3\%$		
37	*Sulfur Dioxide Gas Detectors	Concentration	Verification Regulation of Sulfur Dioxide Gas Detectors JJG 551	$(0.1 \sim 2000) \mu \text{ mol/mol}$	$U_{\text{rel}}=3\%$		
38	*Carbon Monoxide Detectors	Concentration	Verification Regulation of Carbon Monoxide Detectors JJG 915	$(0.1 \sim 2000) \mu \text{ mol/mol}$	$U_{\text{rel}}=3\%$		
39	*Ammonia Gas Detectors	Concentration	Verification Regulation of Ammonia Gas Detectors JJG 1105	$(10 \sim 100) \mu \text{ mol/mol}$	$U_{\text{rel}}=3\%$		
40	*Air biological samplers	Flow	Calibration Specification for Air biological samplers JJF(Su)188	$(1 \sim 100) \text{ L/min}$	$U_{\text{rel}}=1.5\%$		
41	*Alarmer Detectors of Benzene	Concentration	Calibration Specification for Alarmer Detectors of Benzene JJF 1674	$(0.1 \sim 100) \mu \text{ mol/mol}$	$U_{\text{rel}}=5\%$		
42	*Chlorine Alarm Detectors	Concentration	Calibration Specification for Chlorine Alarm Detectors JJF 1433	$(0.1 \sim 100) \mu \text{ mol/mol}$	$U_{\text{rel}}=4\%$		
43	*The Alarmer Detector of Sulfur Hexafluoride	Concentration	Calibration Specification for the Alarmer Detector of Sulfur Hexafluoride JJF 1263	$(1 \sim 1000) \mu \text{ mol/mol}$	$U_{\text{rel}}=3\%$		



No. CNAS L2157

第 61 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
44	*Volatile Organic Compounds Photo Ionization Detectors	Concentration	Calibration Specification for Volatile Organic Compounds Photo Ionization Detectors JJF 1172	isobutylene: (0.1~2000) μ mol/mol	$U_{rel}=3\%$		
45	*Flue Gas Analyzers	Concentration	Verification Regulation of Flue Gas Analyzers JJG 968	SO ₂ : (0.1~2000) μ mol/mol	$U_{rel}=3\%$		
				CO: (0.1~2000) μ mol/mol	$U_{rel}=3\%$		
				O ₂ : (0.1~20) $\times 10^{-2}$ mol/mol	$U_{rel}=3\%$		
				NO: (0.1~2000) μ mol/mol	$U_{rel}=3\%$		
				NO ₂ : (0.1~2000) μ mol/mol	$U_{rel}=3\%$		
46	*Ammonia Nitrogen for Water Quality	Concentration	Verification Regulation of Ammonia-Nitrogen for Automatic Analyzers JJG 631	Type A: (0.05~2)mg/L	$U=0.05\text{mg/L}$		
				Type A: (2~100)mg/L	$U_{rel}=4.0\%$		
				Type B: (0.05~100)mg/L	$U_{rel}=3.5\%$		
47	*Extrusion Plastometer	Meltflow velocity	Verification Regulation for Extrusion Plastometer JJG 878	polyethylene: (1~8)g/10min	$U=(0.30\sim 0.50)\text{g}/10\text{min}$		
48	*Flame Photometer	Detection limit	Verification Regulation of Flame Photometer JJG 630	K: $\leq 0.004\text{mmol/L}$	$U=0.0015\text{mmol/L}$		
				Na: $\leq 0.008\text{mmol/L}$	$U=0.0017\text{mmol/L}$		
49	*Phosphate Analyzers	Concentration	Calibration Specification for Phosphate Analyzers JJF 1567	(1~100) $\mu\text{g/mL}$	$U_{rel}=1.8\%$		
50	*Turbidimeters	Turbidity	Verification Regulation of Turbidimeters JJG 880	(0.1~400)NTU	$U_{rel}=3.3\%$		



No. CNAS L2157

第 62 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
51	*One-line Turbidimeters	Turbidity	Verification Regulation of On-Line Turbidimeters JJG(Zhe)105	(0.1~400)NTU	$U_{rel}=3.3\%$		
52	*On-line pH Meters	pH	Calibration Specification for On-line pH Meters JJF 1547	Electrometer :0~14	$U=0.01$		
				Instrument:3~10	$U=0.02$		
		Potential		(-2000~2000)mV	$U=0.4mV$		
53	*On-line Automatic Determinator of Chemical Oxygen Demand	Concentration	Verification Regulation of On-line Automatic Determinator of Chemical Oxygen Demand (COD) JJG 1012	(16~1000)mg/L	$U_{rel}=3.4\%$		
54	*Residual Chlorine Meters	Concentration	Calibration Specification for Residual Chlorine Meters JJF 1609	(0.01~50)mg/L	$U_{rel}=3.2\%$		
55	Routine Capillary Viscometer	Motion viscosity	Verification Regulation of Routine Capillary Viscometer JJG 155	(2~10 ⁵)mm ² /s	$U_{rel}=0.7\%$		
56	*Laboratory Ion meters	pX	Verification Regulation of Laboratory Ion meters JJG 757	Electrometer :0~14	$U=0.005$		
				Instrument: 2~4	$U=0.02$		
		Potential		(-2000~2000)mV	$U=0.4mV$		
57	Dissolved oxygen meter	Concentration	Verification Regulation of Dissolved Oxygen Meters JJG 291	(5~12)mg/L	$U=0.2mg/L$		
58	*Silicate Analyzers	Concentration	Calibration Specification for Silicate Analyzers JJF 1539	(0.1~100)mg/L	$U_{rel}=2.4\%$		
59	*Analyzers for Oil Content in Water	Concentration	Verification Regulation of Analyzers for Oil Content in Water JJG 950	(0.1~10)mg/L	$U_{rel}=0.4mg/L$		



No. CNAS L2157

第 63 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				(10~100)mg/L	$U_{rel}=3.6\%$		
60	*Particulate Analyzer	Particle count	Calibration Specification for Particulate Analyzer JJF 1290	(10~3000)pieces/mL	$U_{rel}=5\%$		
61	*Static Light Scattering Particle Size Analyzers	Particle size	Calibration Specification for Static Light Scattering Particle Size Analyzers JJF 1211	(1~20) μ m (20~120) μ m	$U_{rel}=5\%$ $U_{rel}=4\%$		
62	*Energy Dispersive X-Ray Fluorescence	Detection limit	Calibration Specification for Energy Dispersive X-Ray Fluorescence Spectrometers JJF(Min)1047	≤ 40 mg/kg	$U=8$ mg/kg		
63	*Fourier Transform Infrared Spectrometers	Wave number	Calibration Specification for Fourier Transform Infrared Spectrometers JJF 1319	(400~4000) cm^{-1}	$U=0.8\text{cm}^{-1}$		
64	*Mercury Analyzers	Detection limit	Verification Regulation of Mercury Analyzers JJG 548	Absorption type: ≤ 1.0 ng Fluorescence type: ≤ 0.1 ng	$U=0.4$ ng $U=0.04$ ng		
65	*Water Quality On-line Analyzers of Heavy Metals	Concentration	Calibration Specification for Water Quality On-line Analyzers of Heavy Metals JJF 1565	Hg:(0.01~100)mg/L Pb:(0.01~100)mg/L Cd:(0.01~100)mg/L As:(0.01~100)mg/L Cr:(0.01~100)mg/L Cr ⁶⁺ :(0.01~100)mg/L Cu:(0.01~100)mg/L Zn:(0.01~100)mg/L	$U_{rel}=4\%$ $U_{rel}=4\%$ $U_{rel}=4\%$ $U_{rel}=4\%$ $U_{rel}=4\%$ $U_{rel}=4\%$ $U_{rel}=4\%$ $U_{rel}=4\%$		



No. CNAS L2157

第 64 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Ni:(0.01~100)mg/L	$U_{rel}=4\%$		
				Mn:(0.01~100)mg/L	$U_{rel}=4\%$		
				Fe:(0.01~100)mg/L	$U_{rel}=4\%$		
66	*Karl Fischer Coulometry Titration	Moisture content	Verification Regulation of Instrument for KF Coulometry Titration JJG 1044	(10~5000) μ g	$U_{rel}=2\%$		
67	*Karl Fischer Volumetric Titration for Water Content	Moisture content	Verification Regulation of Karl Fischer Volumetric Titration for Water Content JJG 1154	1mg~20mg	$U_{rel}=1.5\%$		
68	Airborne Particle Counter	Concentration	Calibration Specification for Airborne Particle Counter JJF 1190	(1000~100000)Pieces/28.3L	$U_{rel}=16\%$		
		Particle size distribution		(0.1~10) μ m	$U_{rel}=12\%$		
69	*The Differential Scanning Calorimeters	heat of fusion	Verification Regulation of the Differential Scanning Calorimeters JJG 936	(20~100)J/g	$U_{rel}=2.0\%$		
		Temperature		(120~450)°C	$U=0.9^{\circ}\text{C}$		
70	*Thermogravimetric Analyzers	Temperature	Verification Regulation of Thermogravimetric Analyzers JJG 1135	Curie : (150~800)°C	$U=2.1^{\circ}\text{C}$		
				Melting : (150~500)°C	$U=(0.7\sim1.5)^{\circ}\text{C}$		
		Mass		(1~20)mg	$U=(0.008\sim0.05)\text{mg}$		
71	*Bomb Calorimeters	Calorific Value	Verification Regulation of Bomb Calorimeters JJG 672	(26430~26490)J/g	$U=45\text{J/g}$		
72	*Water Colorimeter	Chroma	Calibration Specification for Water Colorimeters JJF 1689	Digital display: (1~70)PCU	$U=(1\sim2)\text{PCU}$		
				Visual: (1~70)PCU	$U=(2\sim9)\text{PCU}$		



No. CNAS L2157

第 65 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
73	*Polymerase Chain Reaction Analyzers	Temperature	Calibration Specification for Polymerase Chain Reaction Analyzers JJF 1527	(10~100)°C	$U=(0.4\sim 1.0)^{\circ}\text{C}$		
		Concentration		(100~1×10 ⁹)copies/μL	$U_{\text{rel}}=6\%$		
74	*Liquid Chromatograph-Atomic Fluorescence Spectrometers	Detection limit	Verification Regulation of Liquid Chromatograph-Atomic Fluorescence Spectrometers JJG 1151	MMA: <0.7 ng	$U=0.08\text{ ng}$		
				DMA: <0.7 ng	$U=0.06\text{ ng}$		
				As (V) : <1.0 ng	$U=0.10\text{ ng}$		
75	*Osmometers	Osmolarity	Verification Regulation of Osmometers JJG 1089	(1~400) mOsmol/kg	$U=1.8\text{ mOsmol/kg}$		
				(>400~700) mOsmol/kg	$U_{\text{rel}}=0.9\%$		
76	*Elemental Analyzers	Content	Calibration Specification for Elemental Analyzers JJF 1321	C:(0.1~80)%	$U_{\text{rel}}=1.0\%$		
				H:(0.1~50)%	$U_{\text{rel}}=1.2\%$		
				N:(0.01~50)%	$U_{\text{rel}}=2.0\%$		
				O:(0.001~50)%	$U_{\text{rel}}=1.8\%$		
				S:0.001%~20%	$U_{\text{rel}}=1.8\%$		
77	*Fluorescence Spectrophotometer	Detection limit	Verification Regulation of Fluorescence Spectrophotometer JJG 537	Class A: $\leq 5 \times 10^{-10}\text{g/mL}$	$U=2.9 \times 10^{-10}\text{g/mL}$		
				Class B: $\leq 1 \times 10^{-8}\text{g/mL}$	$U=6 \times 10^{-9}\text{g/mL}$		
78	*Open/Closed Cup Flash Point Testers	Temperature	Calibration Specification for Open/Closed Cup Flash Point Testers JJF 1384	Closed Cup : (70~200) °C	$U=(3.2\sim 5.0)^{\circ}\text{C}$		
				Open Cup (100~230) °C	$U=(6.1\sim 8.5)^{\circ}\text{C}$		
79	*Flow Analyzers with Spectrophotograph	Detection limit	Calibration Specification for Flow Analyzers with Spectrophotography JJF 1568	Cyanide: $\leq 0.002\text{ mg/L}$	$U_{\text{rel}}=25\%$		
				Volatile phenol in water: $\leq 0.002\text{ mg/L}$	$U_{\text{rel}}=25\%$		



No. CNAS L2157

第 66 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	y			Hexavalent chromium: ≤ 0.004 mg/L	$U_{\text{rel}}=25\%$		
				Sulphide: ≤ 0.005 mg/L	$U_{\text{rel}}=25\%$		
				Total phosphorus: ≤ 0.01 mg/L	$U_{\text{rel}}=25\%$		
				Total nitrogen: ≤ 0.04 mg/L	$U_{\text{rel}}=25\%$		
				Ammonia-nitrogen: ≤ 0.04 mg/L	$U_{\text{rel}}=25\%$		
				Anionic surfactant: ≤ 0.05 mg/L	$U_{\text{rel}}=25\%$		
80	*Wavelength Dispersive X-Ray Fluorescence Spectrometers	Content	Verification Regulation of Wavelength Dispersive X-Ray Fluorescence Spectrometers JJG 810	(1~5000)kcps	$U_{\text{rel}}=2.3\%$		
81	*Monitoring Instrument(Electrical Conductivity) of Pure & Ultrapure Water System	Conductivity	Calibration Specification for Monitoring Instrument(Electrical Conductivity) of Pure & Ultrapure Water System JJF(Xiang)09	(0.01~200) μ S/cm	$U_{\text{rel}}=1.6\%$		
82	*Carbon-Sulfur Analyzers	Concentration	Verification Regulation of Carbon-Sulfur Analyzers JJG 395	C:0.005%~4.0%	$U_{\text{rel}}=2.5\%$		
				S: 0.003%~0.2%	$U_{\text{rel}}=2.5\%$		
83	*Polycrystalline X-Ray Diffractometers	2 θ angle	Verification Regulation of Polycrystalline X-Ray Diffractometers JJG 629	15° ~125°	$U=0.005^\circ$		
84	Engler Viscosimeter	Time	Verification Regulation of Engler Viscosimeter JJG 742	(40~60)s	$U=0.2$ s		



No. CNAS L2157

第 67 页 共 108 页

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

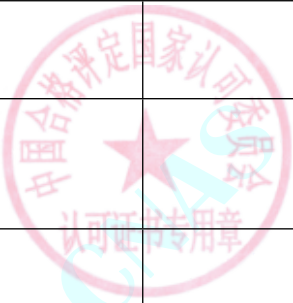
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
85	*Direct reading spectrometer	Detection Limit	Verification Regulation of Emission Spectrometer JJG 768	C: $\leq 0.02\%$	$U_{\text{rel}}=15\%$		
				Si: $\leq 0.02\%$	$U_{\text{rel}}=15\%$		
				Mn: $\leq 0.02\%$	$U_{\text{rel}}=15\%$		
				Cr: $\leq 0.01\%$	$U_{\text{rel}}=15\%$		
				Ni: $\leq 0.02\%$	$U_{\text{rel}}=15\%$		
				V: $\leq 0.01\%$	$U_{\text{rel}}=15\%$		
86	*Induction Salinometer	Salinity	Verification Regulation of Induction Salinometer JJG 392	2~42	$U=0.005$		
87	*Industrial Analyzers	Mass	Verification Regulation of Industrial Analyzers JJG 1140	(0~10)g	$U=0.3 \text{ mg}$		
		temperature		(0~1000)°C	$U=(1.0\sim 3.0)^\circ\text{C}$		
		Ash content		(0~40)%	$U=0.26\%$		
		Volatile matter		(0~40)%	$U=0.40\%$		
88	*Milk Quantitative Compositon Analyzers	Concentration	Calibration Specification for Milk Quantitative Compositon Analyzers JJF 1820	(1~5)g/100g	$U_{\text{rel}}=6.5\%$		
89	*Micro-Spectrophotometers	Concentration	Calibration Specification for Micro-Spectrophotometers JJF 1836	(5~2200) mg/L	$U_{\text{rel}}=13\%$		
90	*Bacterial Endotoxin Anslyzers	temperature	Calibration Specification for Bacterial Endotoxin Anslyzers JJF 1529	(2~50)°C	$U=0.3 \text{ }^\circ\text{C}$		
91	*Flue Gas Samplers	Flow	Verification Regulation of Flue Gas Samplers JJG 1169	(0.1~2)L/min	$U_{\text{rel}}=1.5\%$		



No. CNAS L2157

第 68 页 共 108 页

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

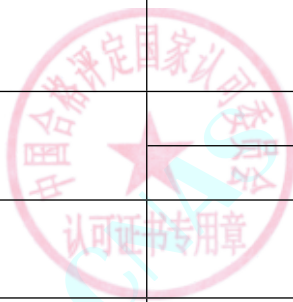
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		pressure		(-40～106)kPa	<i>U</i> =0.1 kPa		
		Temperature		(0～50)℃	<i>U</i> =0.5 °C		
		Times		(0～3600)s	<i>U</i> =0.5 s		
92	*Zirconia Oxygen Analyzers	Concentration	Verification Regulation of Zirconia Oxygen Analyzers JJG 535	0.1%～100%	<i>U</i> _{rel} =2.4%		
93	*Oxygen Index Instrument	Oxygen index	Calibration Specification for Oxygen Index Instrument JJF(Jungong)16	(10～30)%	<i>U</i> _{rel} =3.5%		
		Concentration		(>30～50)%	<i>U</i> _{rel} =4.5%		
				(0.1～50)%	<i>U</i> _{rel} =2%		
94	*Liquid-borne Particle Counters	Particle size	Verification Regulation of Liquid-borne Particle Counters JJG 1061	(2～120) μ m	<i>U</i> _{rel} =5%		
		Particle count		(10～10000)pieces/mL	<i>U</i> _{rel} =5%		
95	*Ultraviolet Fluorescence Sulfur analyzers	Content	Calibration Specification for Ultraviolet Fluorescence Sulfur analyzers JJF 1685	(0.1～5)mg/L	<i>U</i> =0.20mg/L		
				(>5～50)mg/L	<i>U</i> =0.3mg/L		
				(>50～100)mg/L	<i>U</i> =1.5mg/L		
96	*Total Dissolved Solids Meters	Concentration	Calibration Specification for Total Dissolved Solids Meters JJF(Min)1097	(1～1000)mg/L	<i>U</i> _{rel} =0.5%		
97	*On-line Gas Chromatograph	Concentration	Verification Regulation of ON-LINE Automatic Analyzer of Total Organic Carbon JJG(Zhe)132	(0.1～1000)mg/L	<i>U</i> _{rel} =2.5%		
98	*Total Organic Carbon Analyzer With Conductivity Measurement	Concentration	Verification Regulation of Total Organic Carbon Analyzer With Conductivity Measurement JJG(Zhe)98	(0.001～2.5)mg/L	<i>U</i> _{rel} =1.5%		

No. CNAS L2157

第 69 页 共 108 页



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

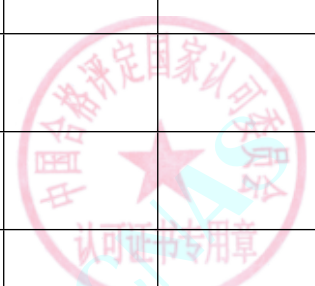
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
99	*Water Activity Meters	Water Activity	Verification Regulation of Water Activity Meters JJG(Yue)052	0.0~1.0	$U=0.007$		
100	*Genetic Analyzers	Detection Limit	Calibration Specification for Genetic Analyzers JJF 1838	$\leq 0.6 \mu\text{g/g}$	$U_{\text{rel}}=10\%$		
101	*Hydrogen Chloride Gas Detectors and Alarms	concentration	Calibration Specification for Hydrogen Chloride Gas Detectors and Alarms JJF 1888	$(0.1\sim 100) \mu\text{mol/mol}$	$U_{\text{rel}}=5\%$		
102	*McFarland Bacterial Turbidity Analyzers	Bacterial Turbidity	Calibration Specification for McFarland Bacterial Turbidity Analyzers JJF 1825	$(0.50\sim 4.00)\text{MCF}$	$U=(0.04\sim 0.24)\text{MCF}$		
103	Verifying Meter for pH Meters	Potential	Verification Regulation of Verifying Meter for pH Meters JJG 919	$(-2000\sim -1)\text{mV}$	$U_{\text{rel}}=0.008\%$		
				$(1\sim 2000)\text{mV}$	$U_{\text{rel}}=0.008\%$		
		pH		$0\sim 14.0000$	$U=0.0006$		
104	*Dynamic Light Scattering Particle Size Analyzers	Particle size	Verification Regulation of Dynamic Light Scattering Particle Size Analyzers JJG 1104	$(50\sim 1300)\text{nm}$	$U_{\text{rel}}=2.0\%$		
		Temperature		$(0\sim 100)^{\circ}\text{C}$	$U=0.2^{\circ}\text{C}$		
105	*Automatic Amino Acid Analyzer	Detection Limit	Verification Regulation of Automatic Amino Acid Analyzer JJG 1064	$\leq 1\text{nmol}(\text{histidine})$	$U_{\text{rel}}=8\%$		
106	*Electrochemical Workstations	Voltage	Calibration Specification for Electrochemical Workstations JJF 1910	$(0.01\sim 10)\text{V}$	$U=0.002\text{V}$		
		Current		$(0.01\sim 10) \mu\text{A}$	$U=2\text{nA}$		
107	*Determinators for Total Sulfur in Coal	Content	Verification Regulation of Determinators for Total Sulfur in Coal JJG 1006	$0.10\%\sim 6.00\%$	$U=(0.06\sim 0.20)\%$		
108	*Petroleum Products Coulomb	Content	Calibration Specification for Petroleum Products Coulomb	$(0.5\sim 10)\text{mg/L}$	$U=0.20\text{mg/L}$		

No. CNAS L2157

第 70 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Sulfur Analyzers	Content	Sulfur Analyzers JJF(lu)115	(10~100)mg/L	$U_{rel}=4\%$		
109	*Petroleum Products Coulomb Chlorine Analyzers	Content	Calibration Specification for Petroleum Products Coulomb Chlorine Analyzers JJF(lu)116	(0.5~10)mg/L	$U=0.20\text{mg/L}$		
		Content	Verification Regulation of Ozone Gas Analyzers JJG 1077	(10~100)mg/L	$U_{rel}=4\%$		
110	Ozone Gas Analyzers	Concentration	Verification Regulation of Ozone Gas Analyzers JJG 1077	(1~400) $\mu\text{mol/mol}$	$U=4\%\text{FS}$		
111	*Nitric Oxide Gas Detectors	Concentration	Calibration Specification for Nitric Oxide and Nitrogen Dioxide Gas Detectors JJF(ji)111	NO:(1~2000) $\mu\text{mol/mol}$	$U_{rel}=3\%$		
112	*Nitrogen Dioxide Gas Detectors	Concentration	Calibration Specification for Nitric Oxide and Nitrogen Dioxide Gas Detectors JJF(ji)111	NO ₂ :(1~2000) $\mu\text{mol/mol}$	$U_{rel}=3\%$		
113	*Pesticide Residue Detectors	Wavelength	Calibration Specification for Pesticide Residue Detectors JJF 1729	(330~450)nm	$U=3.0\text{nm}$		
		Transmission Ratio		(7~33)%	$U=0.6\%$		
		Sensitivity		(0~100)%	$U=7\%$		
114	*Gel Documentation Systems	Illuminance	Calibration Specification for Gel Documentation Systems JJF 1530	(30~5000)lx	$U_{rel}=5\%$		
115	*Time-of-Flight Mass Spectrometers	Mass to charge ratio	Calibration Specification for Time-of-Flight Mass Spectrometers JJF 1528	(150~4200)u	$U=2.2 \times 10^{-5}$		
116	*Platinum-Cobalt Colorimeters	Chroma	Calibration Specification for Platinum-Cobalt Colorimeters JJF 1947	(1~500)PCU	$U_{rel}=3\%$		



No. CNAS L2157

第 71 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
117	*Gold Gauge Utilizing X-ray Fluorescence Spectrometry	Content	Calibration Specification of Gold Gauge Utilizing X-ray Fluorescence Spectrometry JJF 1133	35%~100%	$U=0.05\%$		
118	*Plate Electrophoresis Apparatus	Voltage	Calibration Specification for Plate Electrophoresis Apparatus JJF 1654	(0.1~1000)V	$U_{rel}=0.6\%$		
		Current		0.1mA~3.0A	$U_{rel}=0.4\%$		
119	*On-line Automatic Monitors of Permanganate Index	Concentration	Calibration Specification for On-line Automatic Monitors of Permanganate Index JJF 1875	(0.1~5)mg/L	$U=0.30\text{mg/L}$		
		Concentration		(5~200)mg/L	$U_{rel}=4.4\%$		
120	*Sulfur X-ray Fluorescence Spectrometry Analyzers	Content	Calibration Specification for Sulfur X-ray Fluorescence Spectrometry Analyzers JJF 1952	(0.05~5)%	$U_{rel}=2.5\%$		
121	*Oxidation-reduction Potential Meters	Potential	Calibration Specification for Oxidation-reduction Potential Meters JJF(liao)474	electrometer:(-1000~1000)mV	$U=0.5\text{mV}$		
		Potential		instrument:(30~230)mV	$U=0.7\text{mV}$		
122	*Direct Reading Calcuim Analyzer	Potential	Calibration Specification for Direct Reading Calcuim Analyzer JJF(min)1075	(-2000~2000)mV	$U=0.5\text{mV}$		
		Concentration		(0~100)%	$U=1.0\%$		
123	*Water Hardness Meters	Concentration	Calibration Specification for Water Hardness Meters JJF 1949	(0.1~4500)mg/L	$U_{rel}=3\%$		
		Temperature		(5~50)°C	$U=0.1\text{°C}$		
124	*Energy Dispersive X-Ray Fluorescence Spectrometers	Concentration	Calibration Specification for Energy Dispersive X-Ray Fluorescence Spectrometers JJF 2024	Cr:(80~1200)mg/kg	$U_{rel}=9\%$		
				Cd:(5~200)mg/kg	$U_{rel}=9\%$		
				Hg:(80~1200)mg/kg	$U_{rel}=9\%$		



No. CNAS L2157

第 72 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Pb:(80~1200)mg/kg	$U_{rel}=9\%$		
125	*Acid Number Testers	Acid Number	Calibration Specification for Acid Number Testers JJF(jin)3030	(0.05~0.10)mg/g	$U=0.015\text{mg/g}$		
				(0.10~3.0)mg/g	$U_{rel}=5.6\%$		
126	*Specific Surface Area Analyzer	Specific surface area	Calibration Specification for the Specific Surface Area Analyzer based on Nitrogen Adsorption Method JJF(Xiang)70	(8.0~110.0)m ² /g	$U_{rel}=4.0\%$		
127	*Gas Chromatographs with Discharge Helium Ionization Detector	Detection Limit	Calibration Specification for Gas Chromatographs with Discharge Helium Ionization Detector JJF(Chuan)167	CH ₄ : $\leq 10\text{pg/s}$	$U_{rel}=22\%$		
128	*Oscilloscopic Polarograph	Detection Limit	Verification Regulation of Oscilloscopic Polarograph JJG 748	Cd: $\leq 20 \mu\text{g/L}$	$U_{rel}=3\%$		
129	*Scanning Electronic Microscopes	length	Calibration Specification for Scanning Electronic Microscopes JJF 1916	(1~10) μm	$U_{rel}=1.0\%$	Accredited only for magnification times 10000X and below	
130	Ringelmann Somke Telescope	Blackness	Calibration Specification for Ringelmann Somke Telescope JJF(ji)144	Class A:0~5	$U=0.05$		
Special measuring instruments for textiles and leather (including footwear)							
1	*Textile Dryer of the Rotary Tumble	Rotating velocity	Calibration Specification for Textile Dryer of the Rotary Tumble JJF (FZ)072	(0~60)r/min	$U=0.5\text{r/min}$		
		Temperature		(0~100)°C	$U=2.0^\circ\text{C}$		

No. CNAS L2157

第 73 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Length		(50~700)mm	$U=0.2\text{mm}$		
		Volume		(50~250)L	$U=1\text{L}$		
		Time		(5~60)min	$U=0.2\text{min}$		
2	*FabricFlat-Rubbing Tester	Rotating velocity	Calibration Specification for FabricFlat-Rubbing Tester JJF (FZ)036	(1~60)r/min	$U_{\text{rel}}=0.2\%$		
		Mass		(0.5~4000)g	$U=0.6\text{g}$		
		Length		(0~10)mm	$U=0.02\text{mm}$		
3	*Color Fastness to Scorch and Sublimation Testers	Temperature	Calibration Specification for Scorch and Sublimation Tester JJF (FZ)029	(50~200)°C	$U=0.8^{\circ}\text{C}$		
		Force		(1~20)N	$U_{\text{rel}}=0.2\%$		
		Time		(1~60)s	$U=0.5\text{s}$		
4	*Fibre Strength Tester	Force	Calibration Specification for Fibre Strength Tester JJF (FZ) 016	(1~200)cN	$U_{\text{rel}}=0.4\%$		
		Speed		(0.1~500)mm/min	$U_{\text{rel}}=0.4\%$		
		Length		(0~10)mm	$U=0.02\text{mm}$		
5	*Pendulum Tear Instruments	Force	Calibration Specification for Pendulum Tear Instruments JJF 1553	(0.05~1000)N	$U_{\text{rel}}=0.5\%$		
		Length		(0~300)mm	$U=0.06\text{mm}$		
6	*Rotating Cylindrical Drum Abrasion Machine	Length	Calibration Specification for Rotating Cylindrical Drum Abrasion Machine JJF(Min)1067	(50~400)mm	$U=0.2\text{mm}$		
		Rotating velocity		(30~60)r/min	$U_{\text{rel}}=0.5\%$		
		Force		(1~20)N	$U_{\text{rel}}=0.4\%$		
		Time		(100~150)s	$U=0.2\text{s}$		



No. CNAS L2157

第 74 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Angle		1° ~ 4°	U=0.3°		
7	*Combustion Tester	Length	Calibration Specification for Vertical Combustion Tester JJF (FZ) 068	(0~1000)mm	U=0.5mm		
		Flame height		(0~100)mm	U=0.1mm		
		Time		0.1s~1h	U=0.2s		
		Mass		(1~1000)g	U _{rel} =0.3%		
		Angle		0° ~ 320°	U=0.2°		
8	*Fabric Shrinkage Testers	Rotating velocity	Calibration Specification for Fabric Shrinkage Testers JJF (FZ)052	(40~600)r/min	U _{rel} =0.2%		
		Temperature		(10~100)°C	U=0.3°C		
		Time		(10~60)min	U=0.05min		
		Length		(0~600)mm	U=0.5mm		
9	*Fabrics Bursting Tester	Length	Calibration Specification for Fabrics Bursting Tester JJF (FZ) 048	(10~300) mm	U=(0.02~0.05)mm		
		Pressure		(0.1~10)MPa	U _{rel} =0.3%		
		Time		(55~65)s	U=0.2s		
10	*Corlour fastness to Friction Testers	Rotating velocity	Calibration Specification for Corlour fastness to Friction Testers JJF (FZ)027	(50~70)r/min	U _{rel} =0.2 %		
		Length		(0~200)mm	U=0.03mm		
		Force		(0.1~20)N	U=0.02N		
11	*Fuzzing and Pilling Tester	Rotating velocity	Calibration Specification for Fuzzing and Pilling Tester JJF (FZ) 053	(40~70)r/min	U=0.3r/min		
		Length		(0~300)mm	U=0.05mm		



No. CNAS L2157

第 75 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Mass	Calibration Specification for Flexing Resistance Instruments JJF (Zhe) 1072	(40~60)g	$U=0.06\text{g}$		
		Friction Coefficient		0~1	$U=0.1$		
		Hardness		(30~50)HA	$U=2\text{HA}$		
12	*Flexing Resistance Instruments	Rotation Rate	Calibration Specification for Flexing Resistance Instruments JJF (Zhe) 1072	(0~300)r/min	$U=0.5\text{r/min}$		
		Angle		0° ~90°	$U=0.2^\circ$		
13	*Yarn abrasion measuring instrument	Speed	Calibration Specification for Yarn Abrasion Measuring Instrument JJF (FZ) 050	(10~60)times/min	$U_{\text{rel}}=0.2\%$		
		Length		(60~80)mm	$U=0.5\text{mm}$		
		Mass		(1~1000)g	$U_{\text{rel}}=0.3\%$		
14	*Falling Weight Impact Testing Machines	Mass	Calibration Specification for Falling Weight Impact Testing Machines JJF 1445	(5~30000)g	$U=1.0\text{g}$		
		Length		(0~3)m	$U=(2\sim5)\text{mm}$		
15	*Light and Weather Fastness Testers	Rotating velocity	Calibration Specification for Light and Weather Fastness Testers JJF (FZ) 051	(0.1~60)r/min	$U_{\text{rel}}=0.5\%$	Uncalibrate Project AATCC16 Exposure to Sunlight	
		Time		(1~3600)s	$U=1\text{s}$		
		Temperature		(0~100)°C	$U=0.4^\circ\text{C}$		
		Relative Humidity		10%~95%	$U=2\%$		
		irradiance		(0.1~500)W/m ²	$U_{\text{rel}}=22\%$		
16	*Fabrics Mace Snagging Resistance Tester	Mass	Calibration Specification for Fabrics Mace Snagging Resistance Tester JJF (FZ)076	(0~200)g	$U=0.1\text{g}$		
		Rotating velocity		(0~70)r/min	$U=0.3\text{r/min}$		
		Length		(0~130)mm	$U=(0.04\sim0.5)\text{mm}$		



No. CNAS L2157

第 76 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
17	*Abrasion Resistance Instruments	Length	Calibration Specification for Abrasion Resistance Instruments JJF (Zhe) 1070	(0~40)mm	$U=0.01\text{mm}$		
		Mass		(0~2000)g	$U=1\text{g}$		
		Rotating velocity		(100~300)r/min	$U=0.5\text{r/min}$		
		Time		(100~1200)s	$U=1\text{s}$		
		Angle		$80^\circ \sim 100^\circ$	$U=1^\circ$		
18	*Peeling Strength Instruments	Length	Calibration Specification for Peeling Strength Instruments JJF (Zhe) 1071	(0~300)mm	$U=0.03\text{mm}$		
		Force		(0.1~1000)N	$U_{\text{rel}}=0.4\%$		
		Speed		(0~30)mm/min	$U=0.2\text{mm/min}$		
19	*Capillary Effect Tester	Length	Calibration Specification for Capillary Effect Tester JJF (FZ) 056	(0~200) mm	$U=0.04\text{mm}$		
		Time		(0~30)min	$U=0.2\text{s}$		
		Mass		(0~10)g	$U=0.06\text{g}$		
20	*Impact Testing Machines For Footwear	Length	Calibration Specification for Impact Testing Machines For Footwear JJF(Min)1065	(0~200)mm	$U=0.05\text{mm}$		
				(200~1000)mm	$U=0.1\text{mm}$		
		Moment		(0~50)Nm	$U=0.05\text{Nm}$		
		Force		(0.1~100)N	$U_{\text{rel}}=0.4\%$		
		Frequency		(0.1~100)times/min	$U_{\text{rel}}=0.4\%$		
		Angle		$10^\circ \sim 320^\circ$	$U=5'$		
21	*Tester for Down-proof Properties of Fabrics (Rubbing)	Length	Calibration Specification of Tester for Down-proof Properties of Fabrics	(0~300)mm	$U=0.06\text{mm}$		



No. CNAS L2157

第 77 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Test)	Rotating velocity	(Rubbing Test) JJF (FZ)064	(0~500)r/min	$U=0.5r/min$		
		Parallelism		(0~1)mm	$U=0.02mm$		
22	*Textile Yarn Length Tester	Length	Calibration Specification for Textile Yarn Length Tester JJF (FZ) 021	(0~1000) mm	$U=0.08mm$		
		Force		(0.1~200)cN	$U_{rel}=1.4\%$		
23	*Fiber Diameter Analyzer	Length	Calibration Specification for Fiber Diameter Analyzer JJF (FZ) 065	(0~1000) μm	$U=0.8 \mu m$		
24	*Zipper Closed Gently Slip Testers	Length	Calibration Specification for Zipper Closed Gently Slip Testers JJF (Zhe) 1114	(0~200) mm	$U=0.2mm$		
		Force		(0.1~50)N	$U_{rel}=0.3\%$		
		Speed		(1000~1500)mm/min	$U=10mm/min$		
25	*Electronic Fabric Strength Machines	Force	Calibration Specification for Electronic Fabric Strength Machines JJF (FZ) 062	(0.01~1000)N	$U_{rel}=0.4\%$	Accredited only for static force	
		Speed		(0.1~500)mm/min	$U_{rel}=0.4\%$		
		Displacement		(0.1~1000)mm	$U_{rel}=0.2\%$		
		Time		(0~30)min	$U=0.2s$		
26	*Eight-Basket Oven	Temperature	Calibration Specification for Eight-Basket Oven JJF (FZ)011	(0~300)°C	$U=0.3^{\circ}C$		
		Mass		(0~300)g	$U=10mg$		
		Time		(0~30)min	$U=0.2s$		
27	*Circular Locus Method Fuzzing and Pilling Testers	Length	Calibration Specification for Circular Locus Method Fuzzing and Pilling Testers JJF (FZ)031	(0~200)mm	$U=(0.01\sim0.04)mm$		
		Rotating velocity		(0~100)r/min	$U=0.5r/min$		
		Force		(1~500)N	$U_{rel}=0.3\%$		



No. CNAS L2157

第 78 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
28	*Fabric Stiffness Tester	Length	Calibration Specification for Fabric Stiffness Tester JJF (FZ)054	(1~500)mm	$U=(0.02\sim0.04)\text{mm}$		
		Angle		$0.5^{\circ} \sim 50^{\circ}$	$U=0.2^{\circ}$		
		Speed		(10~300)mm/min	$U_{\text{rel}}=1\%$		
29	*Color Fastness to Light Yellowing Tester	Temperature	Calibration Specification for Color Fastness to Light Yellowing Tester JJF (FZ)079	(0~150) $^{\circ}\text{C}$	$U=0.4^{\circ}\text{C}$		
		Rotating velocity		(0.1~60)r/min	$U_{\text{rel}}=0.5\%$		
		Irradiance		(0.1~100)W/m ²	$U_{\text{rel}}=22\%$		
		Time		(0~30)min	$U=0.2\text{s}$		
30	*Thermal and Water-vapour Resistance Retaining Instrument (Sweating Guarded Hotplate)	Temperature	Calibration Specification for Thermal and Water-vapour Resistance Retaining Instrument (Sweating Guarded Hotplate) JJF (FZ) 063	(0~50) $^{\circ}\text{C}$	$U=0.6^{\circ}\text{C}$		
		Relative Humidity		30%~90%	$U=1.7\%$		
		Airflow velocity		(0~10)m/s	$U_{\text{rel}}=2.5\%$		
		Length		(1~150)mm	$U=0.05\text{mm}$		
31	*Fabric's Water Impermeability Tester	Length	Calibration Specification for Fabric's Water Impermeability Tester JJF (FZ)077	(30~200) mm	$U=0.04\text{mm}$		
		Pressure		(0.1~2.5)MPa	$U_{\text{rel}}=0.3\%$		
		Time		(0~600)s	$U=0.2\text{s}$		
32	*Corlour Fastness to Washing Testers	Rotating velocity	Calibration Specification for Corlour Fastness to Washing Testers JJF (FZ) 026	(30~50)r/min	$U_{\text{rel}}=0.2\%$		
		Temperature		(10~100) $^{\circ}\text{C}$	$U=0.3^{\circ}\text{C}$		
		Time		(10~60)min	$U=0.05\text{min}$		
		Length		(1~300) mm	$U=3\text{mm}$		



No. CNAS L2157

第 79 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
33	*Wrap Reelers	Rotating Velocity	Calibration Specification for Wrap Reelers JJF (FZ)019	(30~250)r/min	$U_{rel}=0.2\%$		
		Length		(0~3)m	$U=0.3\text{mm}$		
		Force		(0.01~50)N	$U_{rel}=0.4\%$		
		Time		(0~3600)s	$U=0.2\text{s}$		
34	*Fabric Thickness Instruments	Mass	Calibration Specification for Fabric Thickness Instruments JJF (FZ)020	(0.1~500)g	$U=0.13\text{g}$		
		Time		(0~180)s	$U=0.3\text{s}$		
		Force		(50~200)cN	$U=0.2\text{cN}$		
		Length		(0~10)mm	$U=(2\sim30)\mu\text{m}$		
35	*Circle Sample Cutters	Length	Calibration Specification for Circle Sample Cutters JJF(FZ)061	(0~300)mm	$U=0.2\text{mm}$		
36	*Traveling Counting Glasses	Length	Calibration Specification for Traveling Counting Glasses JJF(FZ)023	(0~50)mm	$U=0.05\text{mm}$		
37	*Textile Needle Detector	Length	Calibration Specification for Textile Needle Detector JJF (FZ)080	(0~2000)mm	$U=2\text{mm}$		
				(0.8~3)mm	$U=0.1\text{mm}$		
		Rotating Velocity		(2~100)r/min	$U_{rel}=0.2\%$		
38	*Vertical Fabric Crease Recovery Tester	Angle	Calibration Specification for Vertical Fabric Crease Recovery Tester JJF (FZ) 032	$0^\circ \sim 180^\circ$	$U=0.2^\circ$		
		Force		(5~20)N	$U=0.015\text{N}$		
		Time		(0.01~3600)s	$U=0.2\text{s}$		
		Length		(10~30)mm	$U=0.1\text{mm}$		



No. CNAS L2157

第 80 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Parallelism		(0.01~0.1)mm	$U=1.5 \mu m$		
39	*Yarn Twist Tester	Rotating velocity	Calibration Specification for Yarn Twist Tester JJF (FZ) 010	(1~1000)r/min	$U_{rel}=0.2 \%$		
		Length		(0~500)mm	$U=0.1mm$		
		Force		(0.1~500)cN	$U_{rel}=0.5\%$		
40	*Akron Abrasion Machine for Rubber	Force	Calibration Specification for Rubber Akron Abrasion Machine JJF (SH) 039	(1~100)N	$U_{rel}=0.4\%$		
		Rotating velocity		(30~300)r/min	$U_{rel}=0.2\%$		
		Angle		$5^{\circ} \sim 35^{\circ}$	$U=0.2^{\circ}$		
41	*Down Filling Power Tester	Length	Calibration Specification for Down Filling Power Tester JJF (FZ)074	(0~300)mm	$U=0.05mm$		
				(300~600)mm	$U=0.3mm$		
		Mass		(0~100)g	$U=0.1g$		
42	*Perspiration Fastness Instruments	Length	Calibration Specification for Perspiration Fastness Instruments JJF (FZ)028	(0~300)mm	$U=(0.02\sim0.05)mm$		
		Force		(1~50)N	$U_{rel}=0.3\%$		
43	*Single Yarn Strength Machines	Force	Calibration Specification for Electronic Single Yarn Strength Machines JJF (FZ) 047	(1~2000)N	$U_{rel}=0.3\%$	Accredited only for static force	
		Speed		(0.1~500)mm/min	$U_{rel}=0.4\%$		
		Length		(0~500)mm	$U=0.2mm$		
44	*Down-Proof Properties of Fabrics(Tumble Test)	length	Calibration Specification for Down-Proof Properties of Fabrics(Tumble Test) JJF(FZ) 091	(0~650)mm	$U=0.5mm$		
		speed		(40~50)r/min	$U=0.3r/min$		
		Revolutions		(0~2000)r	$U=1r$		



No. CNAS L2157

第 81 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		mass		(0~150)g	<i>U</i> =1g		
		hardness		(0~100)HA	<i>U</i> =2HA		
45	*Textiles Horizontal Burning Rate Testers	time	Calibration Specification for Textiles Horizontal Burning Rate Testers JJF(FZ) 094	(0~60)s	<i>U</i> =0.5s		
		length		(0~400)mm	<i>U</i> =(0.1~0.5)mm		
				(0~25)mm	<i>U</i> =0.05mm		
46	*Corlour Fastness to Rotary Crocking Testers	length	Calibration Specification for Corlour Fastness to Rotary Crocking Testers JJF(FZ) 096	(0~40)mm	<i>U</i> =0.03mm		
		force		(0.1~20)N	<i>U</i> =0.1N		
		angle		0° ~410°	<i>U</i> =1°		
47	*Textile Frictional Static Charges Tester	Amount of charge	Calibration Specification for Textile Frictional Static Charges Tester JJF (FZ) 071	(0~20) μ C	<i>U</i> =0.003 μ C		
		Length		(100~1000)mm	<i>U</i> =0.1mm		
48	*Fabrics Water Spray Testers	length	Calibration Specification for Fabrics Water Spray Testers JJF(FZ) 083	(0~1)mm	<i>U</i> =0.05mm		
				(1~25)mm	<i>U</i> =0.1mm		
				(25~200)mm	<i>U</i> =1mm		
		time		(0~60)s	<i>U</i> =1s		
		angle		0° ~90°	<i>U</i> =0.3°		
49	*Leather Water Resistance Tester	Length	Calibration Specification for Leather Water Resistance Tester JJF(QG)140	(0~50)mm	<i>U</i> =0.1mm		
				(0~7)mm	<i>U</i> =0.03mm		
		Rotation speed		(45~55)r/min	<i>U</i> =0.3r/min		



No. CNAS L2157

第 82 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		count		(0~1000)times	$U=1\text{time}$		
50	*Flexing Resistance Tester	count	Calibration Specification for Flexing Resistance Tester JJF(QG)141	(0~1000)times	$U=1\text{time}$		
		Rotation Speed		(50~400)r/min	$U=1\text{r/min}$		
		angle		$0^\circ \sim 90^\circ$	$U=0.2^\circ$		
		Amplitude		(0~1.50)mm	$U=0.05\text{mm}$		
		Noise		A weighted: (35~120)dB	$U=1.0\text{dB}$		
51	*Leather Flex Resistance Tester	count	Calibration Specification for Leather Flex Resistance Tester JJF(QG)142	(0~1100)times	$U=1\text{time}$		
		Speed		(50~400)r/min	$U=1\text{r/min}$		
		angle		$0^\circ \sim 50^\circ$	$U=0.2^\circ$		
		Length		(0~100)mm	$U=0.1\text{mm}$		
52	*Leather Abrasion Resistance Tester	count	Calibration Specification for Leather Abrasion Resistance Tester JJF(QG)143	(0~5000)times	$U=(1\sim3)\text{time}$		
		Speed		(50~100)r/min	$U=1\text{r/min}$		
		force		(0.1~10)N	$U=0.01\text{N}$		
		Length		(0~100)mm	$U=0.05\text{mm}$		
53	*Leather Bursting Strength Tester	Length	Calibration Specification for Leather Bursting Strength Tester JJF(QG)144	(0~30)mm	$U=0.01\text{mm}$		
				(30~50)mm	$U=0.03\text{mm}$		
		force		(1~1000)N	$U_{\text{rel}}=0.4\%$		
		Speed		(0~30)mm/min	$U=0.5\text{mm/min}$		
54	*Coefficient of Friction tester	Force	Calibration Specification for Coefficient of Friction tester	(0.1~200)N	$U_{\text{rel}}=0.3\%$		

No. CNAS L2157

第 83 页 共 108 页



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

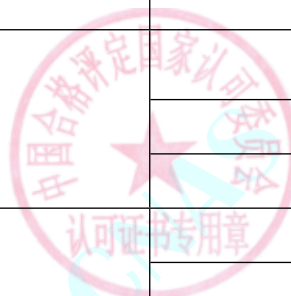
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Mass	JJF(Ji) 125	(50~5000)g	$U=0.1\text{g}$		
		Speed		(5~300)mm/min	$U=1\text{mm/min}$		
		Elastic coefficient		(0~3)N/cm	$U=0.3\text{N/cm}$		
55	*Textiles 45° Combustion Testers	Length	Calibration Specification for Textiles 45° Combustion Testers JJF(FZ) 087	(0~40)mm	$U=0.04\text{mm}$		
				(40~1000)mm	$U=0.6\text{mm}$		
		Time		0.1s~1h	$U=0.2\text{s}$		
		Mass		(1~500)g	$U=1\text{g}$		
		Angle		0° ~90°	$U=0.3^\circ$		
56	*Horizontal Water Spray Testers	Length	Calibration Specification for Horizontal Water Spray Testers JJF(FZ)093	(100~3000)mm	$U_{\text{rel}}=0.3\%$		
				(13~35)mm	$U=0.1\text{mm}$		
				(0~1)mm	$U=0.004\text{mm}$		
		Temperature		(0~50)°C	$U=0.5^\circ\text{C}$		
		Time		(1~600)s	$U=0.5\text{s}$		
57	*Geotextiles Products-Dynamic Perforation Testers	Length	Calibration Specification for Geotextiles Products-Dynamic Perforation Testers JJF (FZ)102	(0~50)mm	$U=0.03\text{mm}$		
				(50~500)mm	$U=0.1\text{mm}$		
		Angle		0° ~90°	$U=4'$		
		Mass		(0~1100)g	$U=0.5\text{g}$		
58	*Geotextiles Abrasion Testers	Length	Calibration Specification for Geotextiles Abrasion Testers JJF (FZ)095	(20~220)mm	$U=0.3\text{mm}$		
		Mass		(5950~6050)g	$U=2\text{g}$		



No. CNAS L2157

第 84 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Rotation Speed		(80~100)times/min	<i>U</i> =0.6times/min		
59	*Fabric Water Impact Penetration Testers	Angle	Calibration Specification for Fabric Water Impact Penetration Testers JJF(FZ)112	40° ~60°	<i>U</i> =0.3°		
		Length		Aperture:(0.9~1.1)mm	<i>U</i> =3 μ m		
				Center Distance:(10~40)mm	<i>U</i> =0.1mm		
				Distance:(600~620)mm	<i>U</i> =0.5mm		
		Mass		(440~470)g	<i>U</i> =2g		
60	Sharp-point Testers	Length	Calibration Specification for Sharp-point Testers JJF(FZ)113	Test Slot Opening Size:(1.00~1.20)mm	<i>U</i> =6 μ m		
				Induction Depth:(0.4~0.6)mm	<i>U</i> =0.01mm		
		Mass		(4~5)N	<i>U</i> =0.05N		
61	*Sharp Edge Tester	Length	Calibration Specification for Sharp Edge Tester JJF(Xiang)88	(9~10)mm	<i>U</i> =0.04mm		
		Rotating velocity		(18~28)mm/s	<i>U</i> =1mm/s		
		Force value		(5~7)N	<i>U</i> =0.1N		
62	*Gas Transmittance Meter	Transmittance	Calibration Specification for Gas Transmittance Meter JJF(Qian)42	11.2cm³/(m²•24h•0.1MPa)	<i>U</i> =2.6cm³/(m²•24h•0.1MPa)		
				4.7cm³/(m²•24h•0.1MPa)	<i>U</i> =1.8cm³/(m²•24h•0.1MPa)		
		Temperature		(0~50)°C	<i>U</i> =0.3°C		
63	*Oxygen Transmittance Meter	Transmittance	Calibration Specification for Oxygen Transmittance Meter JJF(Qian)41	12.3cm³/(m²•24h)	<i>U</i> =2.0cm³/(m²•24h)		
				62.8cm³/(m²•24h)	<i>U</i> =4.0cm³/(m²•24h)		



No. CNAS L2157

第 85 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Temperature		(0~50)℃	U=0.3℃		
64	*Water Vapor Transmission Rate Testor	Transmittance	Calibration Specification for Water Vapor Transmission Rate Testor JJF(Ji)191	1.8g/(m²•24h)	U=0.5g/(m²•24h)		
		Temperature		4.4g/(m²•24h)	U=1.0g/(m²•24h)		
		Humidity		(0~50)℃	U=0.2℃		
				10%~90%	U=1.5%		
65	*Paint Film Scrub Resistance Testers	Speed	Calibration Specification for Paint Film Scrub Resistance Testers JJF(SH)001	(35~39) times/min	U=0.5 times/min		
		Mass		(440~460)g	U=1 g		
		Length		(15~320)mm	U=0.3mm		
Special measuring instruments for meteorology and ocean							
1	Bucket Thermometers	Temperature	Verification Regulation of Bucket Thermometers JJG 289	(0~40)℃	U=0.1℃		
2	Portabel 3-cup Anemometers	wind speed	Verification Regulation of Portabel 3-cup Anemometers JJG 431	(0.4~30)m/s	U=1.5%FS		
3	Thermo- anemoscopes	wind speed	Calibration Specification for Thermo-anemoscopes JJF 1939	(2~30)m/s	U=1.5%FS		
4	Fanning Mill Anemometers	Wind Speed	Calibration Specification for Fanning Mill Anemometers JJF 1971	(2~30)m/s	U=2.0%FS		
Special measuring instruments for papermaking and paper							
1	*Alterable Compression Thickness Tester	Length	Verification Regulation of Alterable Compression Thickness Tester JJG (QG)	(0~3)mm	U=1.3 μ m		
		Parallelism		(0~0.1)mm	U=1.2 μ m		



No. CNAS L2157

第 86 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Flatness	50.3	$(0\sim 1)\mu\text{m}$	$U=0.01\mu\text{m}$		
		Roughness		$(0.01\sim 1)\mu\text{m}$	$U_{\text{rel}}=0.8\%$		
2	*Thickness Tester for Corrugated Fibreboard	Length	Verification Regulation of Thickness Tester for Corrugated Fibreboard JJG (QG) 50.2	$(0\sim 20)\text{mm}$	$U=0.01\text{mm}$		
		Parallelism		$(0\sim 0.1)\text{mm}$	$U=1.2\mu\text{m}$		
3	*Grammage Tester for Paper and Board	Mass	Verification Regulation of Grammage Tester for Paper and Board JJG (QG) 54.2	$(1\sim 50)\text{g}$	$U=0.004\text{g}$		
4	*Tear Tester for Paper and Board	Length	Verification Regulation of Tear Tester for Paper and Board JJG (QG) 63	$(0\sim 150)\text{mm}$	$U=0.05\text{mm}$		
		Force		$(1\sim 100)\text{N}$	$U_{\text{rel}}=0.5\%$		
5	*Absorption Tester for Paper and Board	Area	Verification Regulation of Absorption Tester for Paper and Board JJG (QG) 55	$(95\sim 105)\text{cm}^2$	$U_{\text{rel}}=0.08\%$		
		Length		$(190\sim 210)\text{mm}$	$U=0.05\text{mm}$		
		Mass		$(9\sim 11)\text{kg}$	$U=0.05\text{kg}$		
6	*Beating Degree Tester for Pulps	Time	Verification Regulation of Beating Degree Tester for Pulps JJG (QG) 53	$(0\sim 149)\text{s}$	$U=0.2\text{s}$		
		Volume		$(0\sim 10)\text{mL}$	$U=0.2\text{mL}$		
7	*Compression Strength Tester for Corrugated Box	Force	Verification Regulation of Compression Strength Tester for Corrugated Box JJG (QG) 115	$(0.1\sim 50)\text{kN}$	$U_{\text{rel}}=0.4\%$		
		Speed		$(0.1\sim 60)\text{mm/min}$	$U_{\text{rel}}=0.4\%$		
		Length		$(0\sim 300)\text{mm}$	$U=0.1\text{mm}$		
8	*Thickness Tester for Paper and Board	Length	Verification Regulation of Thickness Tester for Paper and Board JJG (QG) 50.1	$(0\sim 4)\text{mm}$	$U=1.3\mu\text{m}$		
		Parallelism		$(0\sim 0.1)\text{mm}$	$U=1.2\mu\text{m}$		
9	*MIT Type Folding Endurance	Force	Verification Regulation of MIT Type Folding Endurance	$(0.1\sim 20)\text{N}$	$U_{\text{rel}}=0.4\%$		

No. CNAS L2157

第 87 页 共 108 页



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

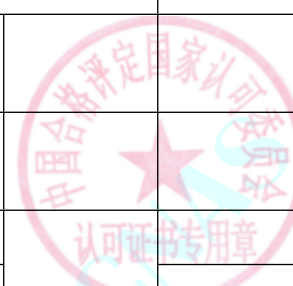
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Tester	Angle	Tester JJG (QG) 59	$0^{\circ} \sim 180^{\circ}$	$U=0.4^{\circ}$		
		Frequency		$(10 \sim 200) \text{ tims/min}$	$U_{\text{rel}}=2\%$		
10	*Ink Absorbeny Tester for Paper and Board	Speed	Verification Regulation of Ink Absorbeny Tester for Paper and Board JJG (QG) 68	$(10 \sim 20) \text{ cm/min}$	$U=0.3 \text{ cm/min}$		
		Length		$(0 \sim 200) \text{ mm}$	$U=0.04 \text{ mm}$		
		Time		$(0 \sim 60) \text{ min}$	$U=0.5 \text{ s}$		
11	*Bursting Strength Testers for Paper (Board)	Pressure	Calibration Specification for Bursting Strength Testers for Paper (Board) JJF 1811	$(0 \sim 6) \text{ MPa}$	$U=0.1\% \text{ FS}$		
Special measuring instruments for medicine							
1	*Dry Block Digester	Temperature	Verification Regulation of Dry Block Digester JJG (Yue) 029	$(25 \sim 400)^{\circ} \text{ C}$	$U=0.6^{\circ} \text{ C}$		
		Time		600s	$U=0.5 \text{ s}$		
2	*Dissolution Testers	Temperature	Calibration Specification for Dissolution Testers JJF (Zhe) 1096	$(35 \sim 40)^{\circ} \text{ C}$	$U=0.2^{\circ} \text{ C}$		
		Rotating velocity		$(50 \sim 200) \text{ r/min}$	$U_{\text{rel}}=1.6\%$		
3	*ELISA Analytical Instrument	Absorbance	Verification Regulation of ELISA Analytical Instruments JJG 861	$0.2 \sim 1.5$	$U=0.01$		
		Wavelength		$(405 \sim 630) \text{ nm}$	$U=1.1 \text{ nm}$		
4	*Friability Surveymeter	Speed	Verification Regulation of Friability Surveymeter JJF (Lu) 92	$(50 \sim 100) \text{ r/min}$	$U_{\text{rel}}=1.6\%$		
		Length		$(0.01 \sim 300) \text{ mm}$	$U=0.3 \text{ mm}$		
		Time		$(235 \sim 245) \text{ s}$	$U=0.7 \text{ s}$		
5	*Antibiotics Potency Analyzers	Length	Calibration Specification for Antibiotics Potency Analyzers JJF 1614	$(13 \sim 22) \text{ mm}$	$U=0.05 \text{ mm}$	Accredited only for tube-disc instrument	

No. CNAS L2157

第 88 页 共 108 页



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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
6	*Blood Cell Analyzers	concentration	Verification Regulation of Blood Cell Analyzers JJG 714	RBC: $(2 \sim 6) \times 10^{12}$ 个/L	$U_{\text{rel}}=2.5\%$		
				WBC: $(3 \sim 15) \times 10^9$ 个/L	$U_{\text{rel}}=3.0\%$		
				PLT: $(0 \sim 360) \times 10^9$ 个/L	$U_{\text{rel}}=3.5\%$		
				HGB: $(50 \sim 140)$ g/L	$U_{\text{rel}}=2.5\%$		
7	*Urine Analyzers	concentration	Calibration Specification for Urine Analyzers JJF 1129	Urine sugar: $(0.01 \sim 42)$ mmol/L	$U_{\text{rel}}=7\%$		
				Urine protein: $(0.01 \sim 3.0)$ g/L	$U_{\text{rel}}=8\%$		
				pH: $5.0 \sim 8.0$	$U_{\text{rel}}=5\%$		
				Specific gravity of urine: $1.005 \sim 1.030$	$U=0.004$		
8	*Airtightness Tester for Mask	Pressure	Verification Regulation of Resistance of Respiration and Airtightness Tester for Mask JJG(Yue)060	$(0.01 \sim 25)$ kPa	$U_{\text{rel}}=0.3\%$	Accredited only for Airtightness Tester for Mask	
Special measuring instruments for construction and transportation							
1	*Coating Flexibility Testers	Length	Calibration Specification for Coating Flexibility Testers JJF(Petrifaction)006	$(0.5 \sim 25)$ mm	$U=0.003$ mm		
2	*Drop Test Machine	Length	Verification Regulation of Drop Test Machine for Cement Sacks JJG(Meng)013	$(1 \sim 1510)$ mm	$U=0.5$ mm		
3	*Mechanical Sieve Shaker	Frequency	Calibrating code for mechanical sieve shaker SL 411	$(0 \sim 2000)$ cpm	$U=1$ cpm		
		Length		$(5 \sim 20)$ mm	$U=0.1$ mm		



No. CNAS L2157

第 89 页 共 108 页

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

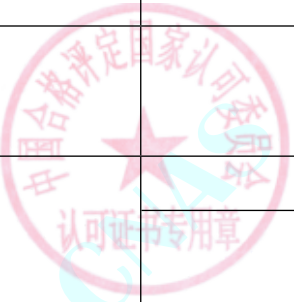
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
4	Rapid Measuring Instrument for Chloride Ion of Concrete	Concentration	Verification Regulation of Rapid Measuring Instrument for Chloride Ion of Concrete JJG(Traffic)134	(0.001~0.100)mol/L	$U_{rel}=4\%$		
5	*Nonmetal Building Materials Plastic Limit Measuring Instruments	Temperature	Calibration Specification for Nonmetal Building Materials Plastic Limit Measuring Instruments JJF 1090	(1~48)°C	$U=0.2^{\circ}\text{C}$		
		Length		(1~182)mm	$U=0.06\text{mm}$		
		Angle		(8~32)°	$U=0.4^{\circ}$		
		Mass		(48~305)g	$U=0.06\text{g}$		
6	*Flow Time Tester for Fine Aggregate	Length	Verification Regulation of Flow Time Tester for Fine Aggregate JJG(Traffic) 109	(10~130)mm	$U=0.03\text{mm}$		
		Angle		(58~62)°	$U=0.07^{\circ}$		
7	*Asphalt Mixture's Mixing Machine	Volume	Verification Regulation of Asphalt Mixture's Mixing Machine JJG(Traffic) 064	(10~20)L	$U=0.05\text{L}$		
		Rotating velocity		(48~85)r/min	$U=0.9\text{r/min}$		
		Temperature		(40~200)°C	$U=0.5^{\circ}\text{C}$		
		Time		(1~999)s	$U=0.3\text{s}$		
8	*Marshall Test Machine for Bituminous Mixtures	Length	Verification Regulation of Marshall Test Machine for Bituminous Mixtures JJG(Traffic) 066	(0.5~10)mm	$U=0.01\text{mm}$		
				(14~78)mm	$U=0.06\text{mm}$		
		Force		(5~50)kN	$U_{rel}=0.4\%$		
9	*Instrument for Steel Bar Gauge Length	Length	Verification Regulation of Instrument for Steel Bar Gauge Length JJG(Su) 67	(0~350)mm	$U=0.05\text{mm}$		
10	*Los Angeles Testing Machine	Rotating velocity	Verification Regulation of Los Angeles Testing Machine	(30~33)r/min	$U_{rel}=0.2\%$		



No. CNAS L2157

第 90 页 共 108 页

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

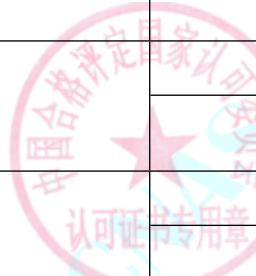
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Mass	JJG(Traffic) 108	(2450~5000)g	U=0.6g		
		Length		(90~720)mm	U=0.3mm		
11	*Benkelman Beam Pavement Deflectometer	Length	Verification Regulation of Benkelman Beam Pavement Deflectometer JJG(Traffic) 025	(8~202)mm	U=0.06mm		
12	Construction Quality Tester Sets	Perpendicularity	Calibration Specification for Construction Quality Tester Sets JJF 1110	Verticality Measuring Ruler: (0~15)mm/2m	U=0.5mm/2m		
				Inside and Outside Right Angle Detection Ruler: (0~7)mm/150mm	U=0.5mm/150mm		
				Slope Ruler: (0~30)mm/m	U=0.2mm/m		
				Diagonal measuring tape: (-5~5)mm	U=0.2mm		
		Length		Grille screen: (0~240)mm	U=0.2mm		
13	*Needle and Flake Gages	Length	Calibration Specification for Needle and Flake Gages JJF 1593	(2~90)mm	U=0.05mm		
14	Concrete Crack Width Instruments	Length	Calibration Specification for Concrete Crack Width and Depth Measuring Instruments JJF 1334	(0.01~10)mm	U=0.01mm		
15	*Cement Testing Apparatus of the Onrml Consistency and Setting Time	Mass	Verification Regulation for Cement Testing Apparatus of the Onrml Consistency and Setting Time JJG(Building materials) 105	(295~305)g	U=0.2g		
		Length		(0~80)mm	U=0.04mm		



No. CNAS L2157

第 91 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
16	*California Bearing Ratio Instrument	Force	Verification Regulation of California Bearing Ratio Instrument JJG(Traffic) 106	(0.1～50)kN	<i>U</i> _{rel} =0.4%		
		Mass		(1245～1255)g	<i>U</i> =0.6g		
		Length		(45～55)mm	<i>U</i> =0.03mm		
		Speed		(1.00～1.25)mm/min	<i>U</i> =0.03mm/min		
17	*Sand-cone Density Apparatus	Length	Verification Regulation of Sand-cone Density Apparatus JJG(Traffic) 120	(1～460)mm	<i>U</i> =0.08mm		
18	Paint film Scriber	Length	Calibration Specification for Paint film Scriber JJF(Wan) 53	(0.5～3)mm	<i>U</i> =3 μ m		
19	*Compaction Instrument of Soil	Mass	Verification Regulation of Compaction Instrument of Soil JJG(Traffic) 058	(2490～4510)g	<i>U</i> =0.3g		
		Length		(295～455)mm	<i>U</i> =0.3mm		
				(45～55)mm	<i>U</i> =0.06mm		
20	*Measure for Adhesion Performance of Retroreflective Sheeting	Length	Verification Regulation of Measure for Adhesion Performance of Retroreflective Sheeting JJG(Traffic) 083	(35～500)mm	<i>U</i> =0.08mm		
		Mass		(795～805)g	<i>U</i> =0.6g		
21	*The Emulsified Bitumen Stability Test-tube	Length	Verification Regulation of The Emulsified Bitumen Stability Test-tube JJG(Traffic) 116	(1～181)mm	<i>U</i> =0.05mm		
				(290～300)mm	<i>U</i> =0.3mm		
22	Apparatus for Determining Penetration of	Temperature	Calibration Specification for Apparatus for Determining Penetration of Bituminous	(0～55)℃	<i>U</i> =0.2℃		
		Length		Displacement: (0～40)mm	<i>U</i> =0.04mm		



No. CNAS L2157

第 92 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Bituminous Materials		Materials JJF 1208	Standard needle: (0.1~1.1)mm	$U=0.01\text{mm}$		
		Mass		(48~102)g	$U=0.02\text{g}$		
23	*Air Entrainment Meter of Freshly Mixed Concrete by The Volumetric Method	Volume	Verification Regulation of Air Entrainment Meter of Freshly Mixed Concrete by The Volumetric Method JJG(Traffic) 094	(6.8~7.2)L	$U=2\text{mL}$		
		Pressure		(0~0.25)MPa	$U=0.3\text{kPa}$		
24	*Asphalt Mixture Rut-depth Testing Instrument	Displacement	Calibration Specification for Asphalt Mixture Rut-depth Testing Instrument JJF(Zhe) 1094	Deformation:(0~30)mm	$U=0.003\text{mm}$		
		Length		(210~250)mm	$U=0.2\text{mm}$		
		Temperature		(58~62)°C	$U=0.2^{\circ}\text{C}$		
		frequency		(40~44)cpm	$U=0.2\text{cpm}$		
		Pressure		(0.6~0.8)MPa	$U=0.01\text{MPa}$		
25	*Cement Mortars Mixer	Time	Verification Regulation of Cement Mortars Mixer JJG(Building materials) 102	(10~300)s	$U=0.2\text{s}$		
		Rotating velocity		(50~320)r/min	$U=0.3\text{r/min}$		
		Length		(1~300)mm	$U=0.06\text{mm}$		
26	*Mixer for Mixing Mortars	Time	Calibration Specification for Mixer for Mixing Mortars JJF(Building materials)123	(10~300)s	$U=0.2\text{s}$		
		Velocity		(50~320)r/min	$U=0.3\text{r/min}$		
		Length		(1~300)mm	$U=0.06\text{mm}$		
27	*Mixer for Cement Paste	Time	Calibration Specification for Mixer Cement Paste JJF(Building materials)104	(10~300)s	$U=0.2\text{s}$		
		Velocity		(50~320)r/min	$U=0.3\text{r/min}$		



No. CNAS L2157

第 93 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Length		(1~300)mm	$U=0.06\text{mm}$		
28	*Consistency Testing Instrument for Concrete Mixing	Amplitude	Verification Regulation of Consistency Testing Instrument for Concrete Mixing JJG(Su) 50	(0~1)mm	$U=0.04\text{mm}$		
		Frequency		(40~60)Hz	$U_{\text{rel}}=0.5\%$		
		Length		(1~300)mm	$U=0.06\text{mm}$		
29	*Boiling Testing Box for Soundness of the Portland Cement	Length	Verification Regulation for Boiling Testing Box for Soundness of the Portland Cement JJG(Building materials) 109	(8~420)mm	$U=0.3\text{mm}$		
		Power		(900~4400)W	$U=2.4\text{W}$		
		Time		(20~195)min	$U=0.3\text{min}$		
		Temperature		60℃	$U=0.3\text{℃}$		
30	*Measurer for Resistance to Impact of Raised Pavement Markers	Length	Verification Regulation of Measurer for Resistance to Impact of Raised Pavement Markers JJG(Traffic) 080	(995~1005)mm	$U=0.3\text{mm}$		
		Mass		(995~1005)g	$U=0.6\text{g}$		
31	*Steel Bar Tarnish Measuring Instruments	Current	Calibration Specification for Steel Bar Tarnish Measuring Instruments JJF 1341	(-200~200)mA	$U=0.2\text{mA}$		
		Voltage		(-2000~2000)mV	$U=1\text{mV}$		
32	*Apparatus of Abrasion Resistance for Cement Mortar and Concrete	Force	Verification Regulation of Apparatus of Abrasion Resistance for Cement Mortar and Concrete JJG (Traffic) 097	(50~500)N	$U_{\text{rel}}=0.4\%$		
		Rotating velocity		(10~650)r/min	$U=0.8\text{r/min}$		
		Revolution		(0~999)r	$U=0.8\text{r}$		
		Length		(1~70)mm	$U=0.03\text{mm}$		
33	*Measurer for Impact Resistance of Retroreflective Sheeting	Length	Verification Regulation of Measurer for Impact Resistance of Retroreflective Sheeting JJG(Traffic) 084	(52~258)mm	$U=0.05\text{mm}$		
		Mass		(445~455)g	$U=0.6\text{g}$		



No. CNAS L2157

第 94 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
34	*Apparatus to Determine Chloride Coulomb Electric Flux and Rapid Chloride Migration Coefficient of Concrete	Current	Calibration Specification for Apparatus to Determine Chloride Coulomb Electric Flux and Rapid Chloride Migration Coefficient of Concrete JJF(Min)1053	(0.1~1000)mA	$U_{rel}=0.1\%$		
		Voltage		(10~60)V	$U_{rel}=0.05\%$		
		Temperature		(4~96)°C	$U=0.1^{\circ}\text{C}$		
35	Instrument of Testing Mortar-strength by Penetration Resistance Method	Length	Calibration Specification for Instrument of Testing Mortar-strength by Penetration Resistance Method JJF 1372	(0~50)mm	$U=0.05\text{mm}$		
		Force		(780~820)N	$U_{rel}=0.4\%$		
36	*Sand Equivalent Tester	Length	Verification Regulation of Sand Equivalent Tester JJG(Traffic)137	(1~380)mm	$U=0.06\text{mm}$		
		Mass		(955~1005)g	$U=0.2\text{g}$		
		Frequency		(175~185)cpm	$U=0.2\text{cpm}$		
		Time		25s~35min	$U=0.2\text{s}$		
37	*Film hardness of pencil Scratch Test	Angle	Calibration Specification for Pencil Hardness Testers JJF(Petrifaction) 007	(40~50)°	$U=0.2^{\circ}$		
		Mass		(10~1050)g	$U=0.2\text{g}$		
38	*Apparatus for Time of Setting of Concrete Mixture by Penetration Resistance	Force	Verification Regulation of Apparatus for Time of Setting of Concrete Mixture by Penetration Resistance JJG(Traffic) 095	(50~1200)N	$U_{rel}=0.4\%$		
		Length		(4~154)mm	$U=0.06\text{mm}$		
39	*Wet Track Abrasion Tester Asphalt Emulsion	Rotating velocity	Verification Regulation of Wet Track Abrasion Tester for Asphalt Emulsion Slurry	(55~150)r/min	$U_{rel}=0.2\%$		
		Mass		(2200~2340)g	$U=0.3\text{g}$		



No. CNAS L2157

第 95 页 共 108 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
	Slurry Mixture	Length	Mixture JJG(Traffic) 090	(1~185)mm	U=0.06mm		
40	*Cement Fineness Vacuum Sieving	Pressure	Calibration Specification for Cement Fineness Negative Pressure Screen Analyzers JJF1827	(-100~0)hPa	U=1hPa		
41	*Heat Distortion and Vicat Softening Temperature Apparatus	Temperature	Calibration Specification for Heat Distortion and Vicat Softening Temperature Apparatus JJF(Zhe) 1051	(40~300)°C	U=0.4°C		
		Length		(0.5~1)mm	U=0.01mm		
		Mass		(1~5000)g	U=0.3g		
42	*Cement Mortar Specimen Jolting Tabler Complying	Length	Verification Regulation of Cement Mortar Specimen Jolting Tabler Complying JJG(Zhe) 115	(799~801)mm	U=0.3mm		
		Time		(55~65)s	U=0.2s		
		Mass		(13.5~14)kg	U=0.02kg		
43	*Consistency Tester for Asphalt Emulsion Slurry Mixture	Length	Verification Regulation of Consistency Tester for Asphalt Emulsion Slurry Mixture JJG(Traffic) 114	(1~235)mm	U=0.05mm		
44	*Apparatus of Fluidity of Cement Mortar	Time	Verification Regulation of Flow Table for Determine Cement Mortar Fluidity JJG(Traffic) 096	(20~35)s	U=0.2s		
		Length		(1~300)mm	U=0.06mm		
		Mass		(3400~4600)g	U=0.2g		
45	*Testing Apparatus for Asphalt Content by Burning Method	Temperature	Verification Regulation of Testing Apparatus for Asphalt Content by Burning Method JJG(Traffic) 072	(500~900)°C	U=0.5°C		
		Mass		(100~3000)g	U=0.02g		
		Length		(1~340)mm	U=0.5mm		
		Time		(1~25)min	U=0.2s		



No. CNAS L2157

第 96 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
46	Wedge-Shape Filler Gauges	Length	Calibration Specification for Wedge-Shape Filler Gauges JJF 1548	(0~60) mm	$U=11 \mu m$		
47	Carbonization Testers	Length	Calibration Specification for Carbonization Testers JJF(Yu)162	(0~10)mm	$U=0.10mm$		
48	Lee Density Bottle	Capacity	Verification Regulation of Lee Density Bottles JJG(Traffic)092	(1~24)mL	$U_{rel}=1.6\%$		
49	*Bituminous Materials' Determining Ductility	Length	Verification Regulation of Bituminous Materials' Determining Ductility JJG(Traffic) 023	Indication:(0~1500)mm	$U=0.3mm$		
				The size and location of the test mold: (8~78)mm	$U=0.04mm$		
		Temperature		(4~28)°C	$U=0.2^{\circ}C$		
		Speed		(10~60)mm/min	$U_{rel}=2.0\%$		
50	*Film Impact Testers	Length	Calibration Specification for Film Impact Testers JJF(Petrifaction) 002	(90~510)mm	$U=0.08mm$		
		Mass		(995~1005)g	$U=0.2g$		
51	*Asphalt Centrifugal Extractor	Rotating velocity	Verification Regulation of Asphalt Centrifugal Extractor JJG(Traffic) 132	(2800~10000) r/min	$U_{rel}=0.2\%$		
		Length		(0~1)mm	$U=2 \mu m$		
52	*Asphalt Mixture's Marshall Compaction Test Apparatus	Length	Verification Regulation of Asphalt Mixture's Marshall Compaction Test Apparatus JJG(Traffic) 065	(48~154)mm	$U=0.06mm$		
		frequency		(50~60)cpm	$U=1cpm$		
		Mass		(0~30)kg	$U=1g$		
53	*Liquid & Plastic Limit Gauge	Angle	Verification Regulation of Liquid & Plastic Limit Gauge JJG (Traffic)069	(28~32)°	$U=4'$		
		Length		(0~50)mm	$U=0.03mm$		



No. CNAS L2157

第 97 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Mass		(74~102)g	$U=0.06\text{g}$		
		Time		(4~6)s	$U=0.2\text{s}$		
54	*Vibrator for Compacting Mortar Specimen	Amplitude	Calibration Specification for Cement Mortar Vibration Compaction Equipment JJF 1867	(0.70~0.80)mm	$U=0.006\text{mm}$		
		Mass		(2.0~6.5)kg	$U=0.03\text{kg}$		
		Frequency		(40~60)Hz	$U_{\text{rel}}=0.4\%$		
		Time		(3~125)s	$U=0.2\text{s}$		
		Length		(38~162)mm	$U=0.06\text{mm}$		
55	*Load Wheel Tester for Asphalt Emulsion Slurry Mixture	Length	Verification Regulation of Load Wheel Tester for Asphalt Emulsion Slurry Mixture JJG(Traffic) 091	(0~160)mm	$U=0.06\text{mm}$		
				(375~385)mm	$U=0.2\text{mm}$		
		Frequency		(40~50)cpm	$U=0.3\text{cpm}$		
		Mass		(50~60)kg	$U=0.1\text{kg}$		
56	*Testing Instrument for Sand Equivalent	Length	Verification Regulation of Testing Instrument for Crushing Value JJG(Su) 54	(10~155)mm	$U=0.05\text{mm}$		
57	*Tester for Determining Expansion of Le Chatelier Needles	Length	Verification Regulation of Le Chatelier Tester for Determining Expansion of Le Chatelier Needles JJG(Traffic) 093	(140~185)mm	$U=0.06\text{mm}$		
				(18~28)mm	$U=0.3\text{mm}$		
		Mass		(0.2~500)g	$U=0.02\text{g}$		
58	*Cone Dynamic Penetrometer	Length	Verification Regulation of Cone Dynamic Penetrometer JJG(Traffic) 169	(0~300)mm	$U=0.1\text{mm}$		
		angle		(50~70)°	$U=0.3^\circ$		
		Mass		(0~150)kg	$U=0.06\text{kg}$		



No. CNAS L2157

第 98 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
59	*Dynamic Elastic Modulus Measurement Instruments	Frequency	Calibration Specification for Dynamic Elastic Modulus Measurement Instruments JJF 1373	(20~5000)Hz	$U_{rel}=1.0\%$		
		Dynamic elastic modulus		(0.1~200)GPa	$U_{rel}=0.3\%$		
60	*Rebar Gauge Punching Machine	Length	Verification Regulation of Rebar Gauge Punching Machine JJG(Traffic) 158	(0~600)mm	$U=0.06\text{mm}$		
61	*Pavement Texture Depth Manual Sanding Device	Length	Verification Regulation of Pavement Texture Depth Manual Sanding Device JJG(Traffic) 117	(0~100)mm	$U=0.03\text{mm}$		
		Roughness		(0.1~100) μm	$U_{rel}=6\%$		
62	*Abrasion Tester for Paint Films	Tacho	Verification Regulation of Abrasion Tester for Paint Films JJG(Traffic) 125	(50~70)r/min	$U=0.4\text{r/min}$		
		Length		(0~100)mm	$U=0.1\text{mm}$		
		Mass		(0~1000)g	$U=0.03\text{g}$		
63	Rebound Tester Hammer	Rigidity	Verification Regulation of Rebound Tester Hammer JJG 817	(50~1200)N/m	$U=0.2\text{N/m}$		
		Rating		72~90	$U=1$		
		Length		(1~150)mm	$U=0.05\text{mm}$		
		force		(0.4~1)N	$U=0.03\text{N}$		
64	Rebound Tester Hammer Calibrators	Length	Verification Regulation of Rebound Tester Hammer Calibrators JJG(Zhe)135	(0~300)mm	$U=0.03\text{mm}$		
		Mass		(1~50)kg	$U=0.02\text{kg}$		
		force		(5~200)N	$U_{rel}=0.05\%$		
		Hardness		(50~70)HRC	$U=2.0\text{HRC}$		
		Displacement		(1~100)mm	$U=0.01\text{mm}$		



No. CNAS L2157

第 99 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
65	*Apparatus to Measure Water Permeability of Concrete	pressure	Calibration Specification for Apparatus to Measure Water Permeability of Concrete JJF 1812	(0~6)MPa	$U=0.006\text{MPa}$		
66	*Apparatus for Blaine Method	length	Verification Regulation of Apparatus for Blaine Method JJG(Yue) 030	diameter:(0~25)mm (25~300)mm	$U=0.003\text{mm}$ $U=0.03\text{mm}$		
67	*Apparatus for Softening Point of Bitumen	Length	Verification Regulation of Apparatus for Softening Point of Bitumen JJG(Traffic)057	(0~150)mm	$U=0.03\text{mm}$		
		temperature		(0~200)°C	$U=0.2^\circ\text{C}$		
		up and down speed		(0~10)°C/min	$U=0.2^\circ\text{C/min}$		
		Mass		(0~100)g	$U=0.02\text{g}$		
68	*Mud Density Meters	Density	Verification Regulation of Mud Density Meters JJG 1045	(0.960~3.000)g/cm ³	$U=0.003\text{g/cm}^3$		
69	*Tester for Separating Emulsified Bitumen Particle Ions	Voltage	Verification Regulation of Tester for Separating Emulsified Bitumen Particle Ions JJG(Traffic)115	(5~7)V	$U=0.1\text{V}$		
		Time		(170~190)s	$U=0.3\text{s}$		
		Length		(0.8~110)mm	$U=0.05\text{mm}$		
70	*Pile Static Load Test Analyzer	pressure	Calibration Specification for Pile Static Load Test Analyzer JJF(Min)1035	(0~60)MPa	$U=0.1\text{MPa}$		
		Displacement		(0~51)mm	$U=0.05\text{mm}$		
71	*Relative Density Meter	Mass	Verification Regulation of Relative Density Meter JJD 1021	(1000~1500)g	$U=0.5\text{g}$		
		Length		(0~300)mm	$U=0.03\text{mm}$		
72	*Concrete Batching Scales	mass	Verification Regulation of Concrete Batching Scales JJG 1171	(5~5000)kg	$U_{\text{rel}}=0.15\%$		



No. CNAS L2157

第 100 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
73	*Putty Film Flexibility Testers	length	Calibration Specification for Putty Film Flexibility Testers JJF(Petrifaction) 003	radius:(0~60)mm	$U=0.1\text{mm}$		
				width:(0~100)mm	$U=0.5\text{mm}$		
74	*Standard Viscometer of Bituminous Materials	Temperature	V. R. of Standard Viscometer of Bituminous Materials JJG(Traffic) 055	(0~100)°C	$U=0.10^{\circ}\text{C}$		
		Length		(0~100)mm	$U=0.005\text{mm}$		
		Volume		(10~100)mL	$U=0.02\text{mL}$		
75	*Cement Length Comparator	Length	Calibration Specification for Cement Length Comparator JJF(wan)140	(0~30)mm	$U=0.008\text{mm}$		
				Standard rod:(0~600)mm	$U=0.010\text{mm}$		
76	*Vibrators for Concrete Testing	Frequency	Calibration Specification for Vibrators for Concrete Testing JJG(yue)071	(45~55)Hz	$U=0.6\text{Hz}$		
		Displacement		(0.4~0.6)mm	$U=0.010\text{mm}$		
		Length		(0~1000)mm	$U=1\text{mm}$		
		Time		(0~10)s	$U=0.5\text{s}$		
77	*Methylene Blue Mixer	Rotating velocity	Calibration Specification for Methylene Blue Mixer JJF(Gui)82	(20~1000)r/min	$U=1\text{r/min}$		
		Length		(10~100)mm	$U=0.05\text{mm}$		
		Time		(0~3600)s	$U=1.0\text{s}$		
78	*the Thickness of Geosynthetics Determinator	Aera	Calibration Specification for the Thickness of Geosynthetics Determinator JJF(min)1125	(20~30)cm ²	$U=0.04\text{cm}^2$		
		Length		(0.5~10)mm	$U=0.01\text{mm}$		
		Pressure		(2~200)kPa	$U_{\text{rel}}=0.4\%$		
79	*Lever Pressure Instrument	Force value	Verification Regulation of Lever Pressure Instrument JJG(Traffic) 107	5N~5kN	$U_{\text{rel}}=0.4\%$		



No. CNAS L2157

第 101 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Length		(0~100)mm	$U=0.03\text{mm}$		
80	*Cutting Ring	Length	Verification Regulation of Cutting Ring JJG(Traffic) 194	(0~200)mm	$U=0.05\text{mm}$		
81	*Reinforced Concrete Covermeter	Length	Calibration Specification for Reinforced Concrete Covermeter and Floorslab Thickness Tester JJF 1224	(1~50)mm	$U=0.7\text{mm}$		
82	*Coating Drying Time Testers	Length	Calibration Specification for Coating Drying Time Testers JJF(Petrifaction)028	(10~15)mm	$U=0.04\text{mm}$		
		Mass		(100~300)g	$U=0.10\text{g}$		
83	*Vane Shear Apparatus	Torque	Calibration Specification for Vane Shear Apparatus JJF(min)1111	(1~100)Nm	$U_{\text{rel}}=0.4\%$		
		Length		(1~180)mm	$U=0.04\text{mm}$		
84	*Test Apparatus for Theoretical Maximum Specific Gravity of Asphalt Mixtures	Pressure	Verification Regulation of Test Apparatus for Theoretical Maximum Specific Gravity of Asphalt Mixtures JJG(Traffic)105	(-100~0)kPa	$U=0.7\%\text{FS}$		
				(0~1.6)MPa	$U=0.1\%\text{FS}$		
		Time		(1~120)s	$U=0.1\text{s}$		
85	*Portable Drawing Instruments Used in Building	Force value	Calibration Specification for Portable Drawing Instruments Used in Building JJF(Building materials)142	10N~1MN	$U_{\text{rel}}=0.4\%$		
86	*Water Transport Engineering-Instrument for Testing Coating Adhesion	Force value	Verification Regulation of Water Transport Engineering-Instrument for Testing Coating Adhesion JJG(Traffic)147	10N~100kN	$U_{\text{rel}}=0.4\%$		
Special measuring instruments for electrical and electronic appliances							



No. CNAS L2157

第 102 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
1	*Oscilloscope Voltage Probes	DC Voltage Attenuation Ratio	C.S. for Oscilloscope Voltage Probes JJF 1437	1:1~1000:1	$U_{rel}=0.2\%$		
		Input Resistance		50 Ω ~ 100M Ω	$U_{rel}=0.5\%$		
		Rise time		0.3ns ~ 10ms	$U_{rel}=10\%$		
		Bandwidth		50kHz~100MHz	$U_{rel}=12\%$		
2	*Power Frequency Cable and Wire Spark Tester	AC Voltage	C.S. for Power Frequency Cable and Wire Spark Tester JJF(Min) 1083	(0.2~15)kV,50Hz	$U_{rel}=0.6\%$		
3	*Oscilloscope Current Probes	DC Current	C.S. for Oscilloscope Current Probes JJF(DZ) 0036	(0.01~1000)A	$U_{rel}=0.4\%$		
		AC Current		(0.01~1000)A,(50Hz~ 1kHz)	$U_{rel}=0.6\%$		
		Attenuation Coefficient		1:1~1000:1	$U_{rel}=1\%$		
4	*Impulse Voltage Testers for Winding Interturn Insulation	Peak Value of Impulse Voltage	C.S. for Impulse Voltage Testers for Winding Interturn Insulation JJF 1691	(0.5~15)kV	$U_{rel}=3.5\%$		
		Wavefront time		(0.1~10) μ s	$U=0.02 \mu$ s		
5	*Proof Tracking Index Testers	AC Voltage	C.S. for Proof Tracking Index Testers JJF(Zhe) 1087	(100~600)V,50Hz	$U_{rel}=0.4\%$		
		AC Current		(0.01~1)A,50Hz	$U_{rel}=0.4\%$		
		Time		(10~60)s	$U=0.4$ s		
6	*DC Electronic Loads	DC Voltage	C.S. for DC Electronic Loads JJF 1462	1V~1000V	$U_{rel}=0.08\%$		
		DC Current		0.2A~1000A	$U_{rel}=0.1\%$		
		Power		10W~30kW	$U_{rel}=0.15\%$		



No. CNAS L2157

第 103 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Resistance		0.1 Ω ∼ 100k Ω	<i>U</i> _{rel} =0.15%		
7	*Battery Internal Resistance Testers	DC Voltage	C.S. for Battery Internal Resistance Testers JJF 1620	(0.1 ∼ 800)V	<i>U</i> _{rel} =0.08%		
		Resistance		(1 ∼ 10)m Ω ,1kHz	<i>U</i> _{rel} =0.24%		
				10m Ω ∼ 3k Ω ,1kHz	<i>U</i> _{rel} =0.06%		
8	Charged Plate Monitor	DC Voltage	C.S. for Charged Plate Monitor JJF(Electronics) 31003	(1 ∼ 1000)V	<i>U</i> _{rel} =0.5%		
		Time		(1 ∼ 60)s	<i>U</i> _{rel} =2%		
9	*Coil Number Testing Instructing	Coil Number	C.S. for Coil Number Testing Instructing JJF(Zhe) 1065	(10 ∼ 20000)	<i>U</i> _{rel} =0.2%		
10	*Glow-wire Apparatus	Temperature	C.S. for Glow-wire Apparatus JJF(Zhe) 1050	(900 ∼ 1000)℃	<i>U</i> =1.6℃		
		Time		(5 ∼ 3600)s	<i>U</i> =0.3s		
		Length		(0 ∼ 25)mm	<i>U</i> =6 μ m		
				(25 ∼ 100)mm	<i>U</i> =0.05mm		
		Force Value		(1 ∼ 10)N	<i>U</i> =0.15N		
11	*Cable Testers	Insulation Alarm Resistance	C.S. for Cable Testers JJF 1457	10k Ω ∼ 10M Ω	<i>U</i> _{rel} =0.24%		
				(10 ∼ 100)M Ω	<i>U</i> _{rel} =0.6%		
				(100 ∼ 200)M Ω	<i>U</i> _{rel} =1.2%		
		Open Circuit Measurement Voltage		(0.1 ∼ 1.5)kV	<i>U</i> _{rel} =1.6%		
		AC Voltage		(0.2 ∼ 1.5)kV,50Hz	<i>U</i> _{rel} =0.24%		
		AC Current		(0.1 ∼ 2)mA,50Hz	<i>U</i> _{rel} =0.3%		



No. CNAS L2157

第 104 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Capacitance		0.1nF~1 μ F, 1kHz	$U_{rel}=0.3\%$		
		DC Resistance		0.1 Ω ~ 1M Ω	$U_{rel}=0.6\%$		
12	*Battery Charge & Discharge Testers	Charge Current	C.S. for Battery Charge & Discharge Testers JJF 2039	1mA~1000A	$U_{rel}=0.01\%$		
		Charge Voltage		1V~1000V	$U_{rel}=0.005\%$		
		Discharge Current		1mA~1000A	$U_{rel}=0.01\%$		
		Discharge Resistance		0.1 Ω ~ 100k Ω	$U_{rel}=0.02\%$		
		Discharge Power		0.5W~30kW	$U_{rel}=0.02\%$		
		Charge & Discharge time		1min~60min	$U_{rel}=0.02\%$		
		Current rising time		10 μ s~100ms	$U_{rel}=4\%$		
		Charge Capacity		1mAh~1000kAh	$U_{rel}=0.13\%$		
		Discharge Capacity		1mAh~1000kAh	$U_{rel}=0.13\%$		
		Temperature		-30 $^{\circ}$ C~100 $^{\circ}$ C	$U=0.4^{\circ}$ C		
		Charging termination voltage		1V~1000V	$U_{rel}=0.005\%$		
		Discharging termination voltage		1V~1000V	$U_{rel}=0.005\%$		



No. CNAS L2157

第 105 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Charging termination current		1mA~10A	<i>U</i> _{rel} =0.01%		
Measuring instruments for acoustics							
1	Personal Sound Exposure Meters	frequency weighting	Verification Regulation of Personal Sound Exposure Meters JJG 980	(10~130)dB,(63~8000)Hz	<i>U</i> =0.6dB		
		Absolute Acoustic sensitivity		(0.1~99.9)Pa² h,1000Hz	<i>U</i> _{rel} =9%		
2	Sound Level Meters	Sound pressure level	Verification Regulation of Sound Level Meters JJG 188	(10~130)dB,(10~4000)Hz	<i>U</i> =0.6dB		
				(10~130)dB,(4~10)kHz	<i>U</i> =0.7dB		
				(10~130)dB,(10~20)kHz	<i>U</i> =1.0dB		
		1kHz frequency weighting sound levels		94dB, 1000Hz	<i>U</i> =0.2dB		
		Level linearity		(10~130)dB, 8000Hz	<i>U</i> =0.3dB		
		F and S time weighting		F:(31~38.5)dB/s	<i>U</i> =3.5dB/s		
				S:(3.6~5.1)dB/s	<i>U</i> =0.4dB/s		
		Toneburst response		(10~130)dB,(0.25~1000)ms	<i>U</i> =0.3dB		
		Overload indication		130dB, 31.5Hz~12.5kHz	<i>U</i> =0.2dB		

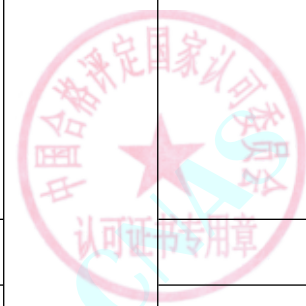


No. CNAS L2157

第 106 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		C weighting peak sound level		(110~120)dB, 31.5Hz、500Hz、8000Hz	$U=0.3\text{dB}$		
3	Sound Calibrators	Sound pressure level	Verification Regulation of Sound Calibrators JJG 176	94dB、114dB、1000Hz	$U=0.15\text{dB}$	Except for LS level	
		frequency		(160~1250)Hz	$U_{\text{rel}}=0.3\%$		
		Distortion degree		1%~20%	$U_{\text{rel}}=7\%$		
4	Noise Dosimeters	Sound pressure level	Verification Regulation of Noise Dosimeters JJG 655	(10~130)dB, (63~400)Hz	$U=0.6\text{dB}$		
				(10~130)dB, (500~8000)Hz	$U=0.7\text{dB}$		
5	Noise Level Statistical Analyzers	Sound pressure level	Verification Regulation of Noise Level Statistical Analyzers JJG 778	(10~130)dB, (10~4000)Hz	$U=0.6\text{dB}$		
				(10~130)dB, (4~10)kHz	$U=0.7\text{dB}$		
				(10~130)dB, (10~20)kHz	$U=1.0\text{dB}$		
		At 1 kHz, C and Z frequency weighting sound levels are relative to A frequency weighting sound levels		94dB, 1000Hz	$U=0.2\text{dB}$		
		Level linearity		(10~130)dB, 8000Hz	$U=0.3\text{dB}$		
		F and S time weighting		F: (31~38.5)dB/s	$U=3.5\text{dB/s}$		



No. CNAS L2157

第 107 页 共 108 页

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
			ilac-MEASUREMENTS INTERNATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	S:(3.6~5.1)dB/s	$U=0.4\text{dB/s}$		
		Toneburst response		(10~130)dB,(0.25~200)ms	$U=0.3\text{dB}$		
		A weighted time average sound level and cumulative percentage sound level		(50~130)dB	$U=0.4\text{dB}$		
6	Sonic Belt Tension Meters	Frequency	Calibration Specification for Sonic Belt Tension Meters JJF 1216	(10~1000)Hz	$U_{\text{rel}}=0.5\%$		
7	Testing Sound Sources	Sound Pressure Level	Calibration Specification for Testing Sound Sources JJF 1970	(10~150)dB,(50Hz~20kHz)	$U=0.5\text{dB}$		
		Total Distortion		0.01%~100%	$U_{\text{rel}}=3.0\%$		
		Frequency Response		(10~150)dB,(50Hz~20kHz)	$U=0.5\text{dB}$		
		Sound Source Stability		(10~150)dB,(50Hz~20kHz)	$U=0.2\text{dB}$		



No. CNAS L2157

第 108 页 共 108 页

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

Name: Fangyuan Calibration & Test Technology (Fujian) Institute Co., Ltd.
Address: 5/F., 3# Plant, No.6, Dongling Road, Minhou Economic Development Zone, Minhou, Fuzhou, Fujian, China
Registration No. CNAS L2157
Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS
Effective Date: 2024-08-05 Expiry Date: 2028-06-26

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

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

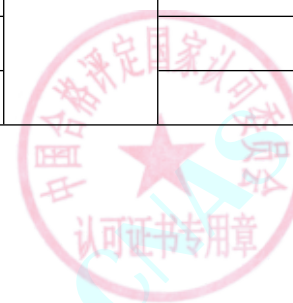
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
Measuring instruments for thermology							
1	Digital Thermometer	Temperature	Calibration Specification for Digital Thermometer JJF (Su)95	(-30~300)℃	U=0.20℃		
2	Liquid-in-Glass Thermometer for Working	Temperature	Verification Regulation of Liquid-in-Glass Thermometers for Working JJG 130	(-30~300)℃	U=0.20℃		
3	Bimetallic Thermometer	Temperature	Calibration Specification for Bimetallic Thermometers JJF 1908	(-30~300)℃	U=0.6℃		
4	Filled System Thermometer	Temperature	Calibration Specification for Filled System Thermometers JJF 1909	(-30~300)℃	U=0.6℃		
Measuring instruments for mechanics							



No. CNAS L2157

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

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
1	Working Glass Container	Volume	Verification Regulation of Working Glass Container JJG 196	(0.01~5)mL	$U=0.003\text{mL}$		
				(>5~25)mL	$U=0.01\text{mL}$		
				(>25~100)mL	$U=0.03\text{mL}$		
				(>100~500)mL	$U=0.05\text{mL}$		
				(>500~1000)mL	$U=0.2\text{mL}$		
2	Locomotive Pipette	Volume	Verification Regulation of Locomotive Pipette JJG 646	(0.1~0.5) μL	$U_{\text{rel}}=5.0\%$		
				(>0.5~2) μL	$U_{\text{rel}}=3.0\%$		
				(>2~10) μL	$U_{\text{rel}}=2.0\%$		
				(>10~50) μL	$U_{\text{rel}}=1.0\%$		
				(>50~300) μL	$U_{\text{rel}}=0.5\%$		
				(>300~10000) μL	$U_{\text{rel}}=0.1\%$		
3	Special Glassware	Capacity	Verification Regulation of Special Glassware JJG 10	(0.01~5)mL	$U=0.003\text{mL}$		
				(>5~25)mL	$U=0.01\text{mL}$		
				(>25~100)mL	$U=0.03\text{mL}$		
				(>100~200)mL	$U=0.05\text{mL}$		



No. CNAS L2157

第 2 页 共 2 页

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