

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

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

Registration No. CNAS L2157

Effective Date: 2020-09-25      Expiry Date: 2022-06-26

CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT

SCHEDULE 1 ACCREDITED KEY LOCATIONS OF THE LABORATORY

Locations Specified	Location Code	Address/Postal Code	Facilities Characteristic	Activity	Note	Effective Date
	A	No.886, Tonglong 2nd Road, Xiang'an Industrial Zone, Torch Hi-Tech Zone, Xiamen, Fujian, China/361100	I , II	(1),(2),(3),(4),(5)		2020-09-25

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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Effective Date: 2020-09-25 Expiry Date: 2022-06-26

SCHEDULE 2 ACCREDITED SIGNATORIES AND SCOPE

No.	Name	Authorized Scope of Signature	Note	Effective Date
1	Li Qingxian	All Testing and Calibration items		2020-09-25
2	Zhu Maosheng	All Testing items. Geometric, Thermology, Mechanics, Time and frequency, Special measuring instruments for textiles and leather, Special measuring instruments for meteorology and ocean, Special measuring instruments for papermaking and paper, Special measuring instruments for medicine, Special measuring instruments for civil aviation and aviation Calibration items.		2020-09-25
3	Zeng Moushou	Thermology, Electromagnetic, Radio, Special measuring instruments for meteorology and ocean, Special measuring instruments for medicine, Special measuring instruments for electrical and electronic appliances Calibration items.		2020-09-25
4	Xie Yuehua	Mechanics, Special measuring instruments for papermaking and paper, Special measuring instruments for construction and transportation Calibration items.		2020-09-25
5	Liu Yanmin	Chemistry, Optical, Special measuring instruments for medicine Calibration items.		2020-09-25



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Registration No. CNAS L2157

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

Effective Date: 2020-09-25 Expiry Date: 2022-06-26

SCHEDULE 3 ACCREDITED TESTING SCOPE

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
1	Mechanical Part	1	Geometrical Tolerance	Geometrical Product Specifications(GPS) -Geometrical tolerance-Verification GB/T 1958-2017	Accredited only for straightness , flatness, parallelism, perpendicularity, symmetry and test range ≤500mm.	2020-09-25
				Measurement of departures from straightness GB/T 11336-2004		2020-09-25
				Measurement of departures form flatness GB/T 11337-2004	Accredited only for test range (diagonal length):	2020-09-25

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					(150~3000) mm	
		2	Dimensional Tolerance	Geometrical Product Specifications(GPS)- Inspection of plain workpiece sizes GB/T 3177-2009	Accredited only for test range: (0~1000)mm	2020-09-25
		3	Surface Roughness	Geometrical Product Specifications(GPS) -Surface texture: Profile method-Rules and procedures for the assessment of surface texture GB/T 10610-2009	Accredited only for test range: Ra(0.1~6.3)μm	2020-09-25
2	Vee blocks	1	Flatness	Vee blocks JB/T 8047-2007 6.1		2020-09-25
		2	Parallelism	Vee blocks JB/T 8047-2007 6.2,6.3		2020-09-25
		3	Degree of symmetry	Vee blocks JB/T 8047-2007 6.4		2020-09-25
		4	Vertical degree	Vee blocks JB/T 8047-2007 6.5, 6.6		2020-09-25
		5	Height difference	Vee blocks JB/T 8047-2007 6.7		2020-09-25
3	Clean Room	1	Air cleanliness grade	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.4		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.1-2010 Appendix B		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-1:2015 Appendix A		2020-09-25
				Test method for airborne particles in clean room(zone) of the pharmaceutical industry GB/T 16292-2010 4, 5, 6		2020-09-25



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		2	Wind speed wind volume	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.1		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods GB 50591-2010 Appendix B.4.3.2		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.2.3.2		2020-09-25
		3	Temperature and humidity	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.5		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.8,B.9		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.5,B.6		2020-09-25
		4	Illumination	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.7		2020-09-25
		5	Unevenness of wind speed in one-way flow section	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.3		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.4.2.3		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.2.2.3		2020-09-25
		6	Static pressure difference	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.2		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.5		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.1		2020-09-25
		7	Airborne microbe	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.8.4		2020-09-25
Test method for airborne microbe in clean room(zone)of the pharmaceutical industry GB/T 16293-2010 4, 5, 6				2020-09-25		



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		8	Sedimentation bacteria	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.8.3		2020-09-25
				Test method for settling microbe in clean room(zone)of the pharmaceutical industry GB/T 16294-2010 4, 5		2020-09-25
		9	Noise	Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.6		2020-09-25
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.11		2020-09-25
		10	Clean-down time	Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix E.12		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.4		2020-09-25
				Code for construction and acceptance of cleanroom GB 50591-2010 AppendixE.12		2020-09-25
		11	Air Flow	Cleanrooms and associated controlled environments-Part3:Test methods GB/T 25915.3-2010 Appendix B.4		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.2		2020-09-25
				Code for construction and acceptance of cleanroom GB 50591-2010 Appendix D.2		2020-09-25
		12	Scan for leaks	Cleanrooms and associated controlled environments-Part3:Test methods GB 50591-2010 Appendix B.6		2020-09-25
				Cleanrooms and associated controlled environments-Part3:Test methods ISO 14644-3:2019 Appendix B.7		2020-09-25
				Code for construction and acceptance of cleanroom GB 50591-2010 Appendix E.8.5		2020-09-25
13	Surface microorganisms	Code for design of clean room GB 50073-2013 AppendixA.3.5		2020-09-25		
		Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.1		2020-09-25		
4	Clean workshop	1	Cleanliness	Code for design of clean room GB 50073-2013 AppendixA.3.5		2020-09-25
				Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.1		2020-09-25



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date		
		№	Item/ Parameter					
		2	Wind speed wind volume	Code for of electronic industry clean room GB 50472-2008 Appendix D.3.4		2020-09-25		
				Test method for airborne particles in clean room(zone) of the pharmaceutical industry GB/T 16292-2010 4, 5, 6		2020-09-25		
				Code for design of clean room GB 50073-2013 AppendixA.3.1		2020-09-25		
				Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.2		2020-09-25		
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.1		2020-09-25		
				3	Temperature and humidity	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.6,C.7		2020-09-25
						Code for of electronic industry clean room GB 50472-2008 Appendix D.3.6		2020-09-25
				4	Illumination	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.10		2020-09-25
						Code for of electronic industry clean room GB 50472-2008 Appendix D.3.8		2020-09-25
				5	Differential pressure	Code for design of clean room GB 50073-2013 A.3.2		2020-09-25
						Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.3		2020-09-25
						Code for of electronic industry clean room GB 50472-2008 Appendix D.3.2		2020-09-25
				6	Airborne microbe	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.16		2020-09-25
						Test method for airborne microbe in clean room(zone)of the pharmaceutical industry GB/T 16293-2010 4		2020-09-25
7	Sedimentation bacteria	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.16		2020-09-25				



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date		
		№	Item/ Parameter					
				Test method for settling microbe in clean room(zone)of the pharmaceutical industry GB/T 16294-2010 4		2020-09-25		
		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		2020-09-25		
		9	Air pattern	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.5		2020-09-25		
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.5		2020-09-25		
		10	Scan for leaks	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.4		2020-09-25		
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.3		2020-09-25		
				Code for design of clean room GB 50073-2013 Appendix A.3.3		2020-09-25		
		11	Clean-down time	Code for construction and quality acceptance of industrial cleanroom GB 51110-2015 Appendix C.11		2020-09-25		
				Code for of electronic industry clean room GB 50472-2008 Appendix D.3.10		2020-09-25		
		5	Clean workbench	1	Appearance and function	Clean bench JG/T 292-2010 7.1, 7.3		2020-09-25
				2	Cross section of Wind speed	Clean bench JG/T 292-2010 7.4.4.3		2020-09-25
3	Non-one-way flow of clean table air volume			Clean bench JG/T 292-2010 7.4.4.5		2020-09-25		
4	Cleanliness			Clean bench JG/T 292-2010 7.4.4.6		2020-09-25		
5	Sedimentation			Clean bench JG/T 292-2010 7.4.4.7		2020-09-25		

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
			bacteria			
		6	Noise	Clean bench JG/T 292-2010 7.4.4.8		2020-09-25
		7	Illumination	Clean bench JG/T 292-2010 7.4.4.9		2020-09-25
		8	Operate the air flow state in space	Clean bench JG/T 292-2010 7.4.4.11		2020-09-25
6	Class II biological safety cabinets	1	Cleanliness	Technical code for testing of biosafety cabinets DB52/T 1254-2017 5.3		2020-09-25
		2	Noise	Class II biological safety cabinets YY 0569-2011 6.3.3		2020-09-25
		3	Illumination	Class II biological safety cabinets YY 0569-2011 6.3.4		2020-09-25
		4	Inflow velocity	Class II biological safety cabinets YY 0569-2011 6.3.8		2020-09-25
		5	Downdraft velocity	Class II biological safety cabinets YY 0569-2011 6.3.7		2020-09-25



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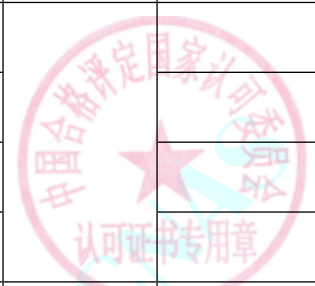
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CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT  
SCHEDULE OF ACCREDITATION CERTIFICATE

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

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

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
几何量测量仪器							
1	Micrometer	Length	Verification Regulation of Micrometer JJG 21	(0~500)mm	$U=(1.3\sim 6.3)\mu m$		
				digital: (0~500)mm	$U=(1.0\sim 6.0)\mu m$		
				Setting bars:(0~500)mm	$U=0.5\mu m+2\times 10^{-6}L$		
2	Dial Gauges	Length	Verification Regulation of Dial Gauges(dial and digital) JJG 34	scale interval 0.01mm:(0~10)mm	$U=(2.0\sim 3.9)\mu m$		
				scale interval 0.001mm:(0~10)mm	$U=(1.2\sim 2.3)\mu m$		
				resolution 0.01mm:(0~10)mm	$U=6\mu m$		
				resolution 0.001mm:(0~10)mm	$U=(1.4\sim 2.5)\mu m$		
3	Wide Range Duges Reading	Length	Verification Regulation of Wide Range Duges Reading	dial:(0~50)mm	$U=4.0\mu m$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	0.01mm		in 0.01mm JIG 379	digital:(0~50)mm	U=0.01mm		
4	Height Caliper	Length	Verification Regulation of Height Caliper JIG 31	(0~1000)mm	U= (0.01~0.04) mm		
5	Current Calipers	Length	Verification Regulation of Current Calipers JIG 30	(0~2000)mm	U= (0.01~0.08) mm		
6	Internal Micrometers	length	Verification Regulation of Internal Micrometers JIG 22	(13~1000)mm	U=(1~5) $\mu$ m		
7	Universal Bevel Protractors	Angle	Verification Regulation of Universal Bevel Protractors JIG 33	scale interval 2' : (0~320) $^{\circ}$	U=1'		
				scale interval 5' : (0~360) $^{\circ}$	U=3'		
8	Dial Test Indicator	Length	Verification Regulation of Dial Test Indicator JIG 35	scale interval 0.01mm:(0~1)mm	U=3 $\mu$ m		
				scale interval 0.001mm:(0~0.4)mm	U=1.2 $\mu$ m		
9	Depth Micrometers	Length	Verification Regulation of Depth Micrometers JIG 24	(0~300)mm	U=(1.0~2.4) $\mu$ m		
10	Micrometers with Dial Comparator and Indicating Snap Gauge	Length	Verification Regulation of Micrometers with Dial Comparator and Indicating Snap Gauge JIG 26	(0~100)mm	U=(0.7~1.2) $\mu$ m		
11	Common Normal Micrometer	Length	Verification Regulation of Common Normal Micrometer JIG 82	(0~200)mm	U=(0.9~2.0) $\mu$ m		
12	Bore Dial Indicators	Length	Calibration Specification for Bore Dial Indicators JJF 1102	(4~250)mm, for reeding in 0.01mm.	U=4.0 $\mu$ m		
				(4~250)mm, for reeding in 0.001mm.	U=1.8 $\mu$ m		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
13	Micrometers for Measuring Inside Dimension	Length	Calibration Specification for Micrometers of Measuring Inside Dimension JJF 1411	inside micrometer:(5~150)mm	$U=(1.0\sim 1.9)\mu\text{m}$		
				aperture micrometer:(6~100)mm	$U=(0.8\sim 1.9)\mu\text{m}$		
14	*Toolmaker's Microscope	length	Verification Regulation of Toolmaker's Microscope JJG 56	(0~200)mm	$U=0.3\mu\text{m}+5\times 10^{-6}L$		
15	*Projector	length	Calibration Specification for Projectors JJF 1093	Projection screen diameter: (250~800)mm	$U=1.0\mu\text{m}+5\times 10^{-6}L$		
16	*Height Measuring Instrument with Digital Display	Length	Calibration Specification for Height Measuring Instrument with Digital Display JJF 1254	(0~1000)mm	$U=(0.6\sim 3.5)\mu\text{m}$		
17	Thickness Gauges	Length	Calibration Specification for Thickness Gauges JJF 1255	scale interval 0.001mm:(0~30)mm	$U=(1.0\sim 3)\mu\text{m}$		
				scale interval 0.01mm:(0~30)mm	$U=(0.01\sim 0.05)\text{mm}$		
18	Gear Tooth Calipers	Length	Calibration Specification for Gear Tooth Calipers JJF 1072	(1~50)mm	$U=0.01\text{mm}$		
19	Wide Range Electronic Digital Display Dial Indicator	Length	Calibration Specification for Wide Range Electronic Digital Display Dial Indicator JJF(Zhe)1135	(0~50) mm	$U=(1.8\sim 3.6)\mu\text{m}$		
20	Dial Snap Gauges	Length	Calibration Specification for Dial Snap Gauges JJF 1253	(0~100) mm	$U=1\mu\text{m}\sim 0.02\text{mm}$		
21	Depth Dial Gauge	Length	Verification Regulation of Depth Dial Gauge JJG 830	(0~300) mm	$U=(1\sim 5)\mu\text{m}$		
22	Comparators of Machine Type	Length	Verification Regulation of Comparators of Machine Type JJG 39	(-150~+150) $\mu\text{m}$	$U=(0.2\sim 1.4)\mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ( $k=2$ )	Note	Effective Date
23	Microcator	Length	Verification Regulation of Microcator JJG 118	$(-50 \sim +50) \mu\text{m}$	$U = (0.2 \sim 1.0) \mu\text{m}$		
24	Micrometers with Prismatically Arranged Measuring Faces	Length	Verification Regulation of Micrometers with Prismatically Arranged Measuring Faces JJG 182	$(0 \sim 50) \text{mm}$	$U = (1.3 \sim 1.6) \mu\text{m}$		
25	Cylindrical Measuring Pin	Length	Calibration Specification for Cylindrical Measuring Pin JJF 1207	$(0 \sim 25) \text{mm}$	$U = 0.4 \mu\text{m}$		
26	Plain Limit Gauges	Length	Verification Regulation of Plain Limit Gauges JJG 343	Ring gauge: $(3 \sim 300) \text{mm}$	$U = 0.9 \mu\text{m} + 6 \times 10^{-6}L$		
				Plug gauge: $(0 \sim 200) \text{mm}$	$U = 0.5 \mu\text{m} + 5 \times 10^{-6}L$		
				Caliper Gauge: $(3 \sim 200) \text{mm}$	$U = 1.0 \mu\text{m} + 7 \times 10^{-6}L$		
27	Standard Ring Gauge	Length	Verification Regulation of Standard Ring Gauge JJG 894	$(4 \sim 200) \text{mm}$	$U = 1.0 \mu\text{m} + 7 \times 10^{-6}L$		
28	Cylindrical Thread Gauges	Length	Calibration Specification for Cylindrical Thread Gauges JJF 1345	Plug gauge: $(1 \sim 200) \text{mm}$	$U = (2.0 \sim 4.0) \mu\text{m}$ , (Simple pitch diameter)		
				Ring Gauge: $(5 \sim 180) \text{mm}$	$U = (2.5 \sim 4.5) \mu\text{m}$ , (Simple pitch diameter)		
				Ring gauge: $(1 \sim 5) \text{mm}$	$U = 4 \mu\text{m}$		
29	Steel Rule	Length	Verification Regulation of Steel Rule JJG 1	$(0 \sim 2000) \text{mm}$	$U = (0.04 + 0.02L) \text{mm}$ , ( $L: \text{m}$ )		
30	Steel Measuring Tapes	Length	Verification Regulation of Steel Measuring Tapes JJG 4	$(0 \sim 200) \text{m}$	$U = (0.05 + 0.04L) \text{mm}$ , ( $L: \text{m}$ )		
31	*Imaging Probe Measuring Machines	Length	Calibration Specification for Imaging Probe Measuring Machines JJF 1318	Exy: $(0 \sim 500) \text{mm}$	$U = 0.8 \mu\text{m} + 4 \times 10^{-6}L$		
				Ez: $(0 \sim 100) \text{mm}$	$U = 2.4 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
32	*Reading Microscope and Measuring Microscope	Length	Verification Regulation of Reading Microscope and Measuring Microscope JJG 571	Reading Microscope: (0~8)mm	$U=0.8 \mu\text{m}$		
				Measuring Microscope: (0~50)mm	$U=1.0 \mu\text{m}$		
33	*Length Measuring Instrument	Length	Calibration Specification for Length Measuring Instrument JJF 1189	(0~100)mm	$U=0.3 \mu\text{m}$		
				(100~1000) mm	$U=0.3 \mu\text{m}+1.7 \times 10^{-6}L$		
34	*Optimeters	Length	Verification Regulation of Optimeters JJG 45	(-100~+100) $\mu\text{m}$	$U=0.1 \mu\text{m}$		
35	*Surface Plates	Flatness	Verification Regulation of Surface Plates JJG 117	Diagonal Length $\leq$ 3000mm	$U=(1.0\sim 3.8)\mu\text{m}$		
36	*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:(0.1~6) $\mu\text{m}$	$U_{\text{rel}}=(7\%\sim 3.6\%)$		
37	*Straight Edges	Straightness	Calibration Specification for Straight Edges JJF 1097	(0~1) m	$U=0.6 \mu\text{m}$		
				(>1~2)m	$U=0.9 \mu\text{m}$		
				(>2~5)m	$U=1.3 \mu\text{m}$		
38	Roughness Comparison Specimens	Roughness	Calibration Specification for Roughness Comparison Specimens JJF 1099	Ra:(0.025~25) $\mu\text{m}$	$U_{\text{rel}}=(10\%\sim 6.0\%)$		
39	Straight Edge	Length	Verification Regulation of Straight Edge JJG 63	(0~175)mm	$U=0.4 \mu\text{m}$		
				(>175~300)mm	$U=0.5 \mu\text{m}$		
				(>300~500)mm	$U=0.8 \mu\text{m}$		
40	Squares	Length	Verification Regulation of Squares JJG 7	(0~500)mm	$U=1.5 \mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
41	Radius Gauges	Length	Verification Regulation of Radius Gauges JJG 58	(0~25)mm	$U=7 \mu\text{m}$		
42	Screw Templates	Length	Verification Regulation of Screw Templates JJG 60	(0~6)mm	$U=5 \mu\text{m}$		
43	Test Sieves	Length	Calibration Specification for Test Sieves JJF 1175	Mesh: (0.02~5)mm	$U=2 \mu\text{m}$		
				Mesh: (5~125)mm	$U=0.03\text{mm}$		
				perforated plate:(0.02~5)mm			
				perforated plate:(5~125)mm			
44	*Coordinate Measuring Machine	Length	Calibration Specification for Coordinate Measuring Machine JJF 1064	(0~3)m	$U=(0.6+0.4L) \mu\text{m}$ (L: m)		
45	*Articulated Arm Coordinate Measuring Machines	Length	Calibration Specification for Articulated Arm Coordinate Measuring Machines JJF 1408	(0~1600)mm	$U=(6+4L) \mu\text{m}$ (L: m)		
46	*Measuring Instrument for Coating Thickness	Length	Verification Regulation of Magnetic and Eddy Current Measuring Instrument for Coating Thickness JJG 818	Measuring Instrument: (0~2)mm	$U=(0.5~4) \mu\text{m}$		
				calibration sheet:(0~2)mm	$U=(0.3~2) \mu\text{m}$		
47	Feeler Gauges	Length	Verification Regulation of Feeler Gauges JJG 62	(0.02~0.1)mm	$U=2.0 \mu\text{m}$		
				(>0.1~3)mm	$U=2.7 \mu\text{m}$		
48	*Biological Microscopes	Length	Calibration Specification for Biological Microscopes JJF 1402	(0~10)mm	$U=0.6 \mu\text{m}$		
		Magnification		$4\times \sim 100\times$	$U_{\text{rel}}=1.5\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
49	*metallographic microscope	Length	Verification Regulation of metallographic microscope JJG(JW)012	(0~1)mm	$U=0.6 \mu\text{m}$		
50	Pi Tapes	Length	Calibration Specification for Pi Tapes JJF 1423	(9~16000)mm	$U=(0.05+0.04L)\text{mm}$ , (L:m)		
51	Fiber Tapes	Length	Verification Regulation of Fiber Tapes And Measuring Ropes JJG 5	(0~200) m	$U=(0.6+2L/1000)\text{mm}$ , (L:m)		
52	*Moulds	Length	Calibration Specification for Moulds JJF 1307	(0~600)mm	$U=(0.02\sim0.11) \text{mm}$		
53	Frame Levels and Shaft Levels	Angle	Calibration Specification for Frame Levels and Shaft Levels JJF 1084	(0.02~0.1)mm/m	$U_{\text{rel}}=9.0\%$		
54	*Reinforced Concrete Covermeter	Length	Calibration Specification for Reinforced Concrete Covermeter and Floorslab Thickness Tester JJF 1224	(0~200)mm	$U=0.7\text{mm}$		
55	Fineness of Grind Gage	Length	Verification Regulation of Fineness of Grind Gage JJG 905	(0~150) $\mu\text{m}$	$U=1.0 \mu\text{m}$		
56	Gauge Blocks	Length	Verification Regulation of Gauge Blocks JJG 146	(0.5~100) mm	$0.20\mu\text{m}+2 \times 10^{-6}L$		
				(>100~1000)mm	$0.50\mu\text{m}+5 \times 10^{-6}L$		
57	Callipers for Welding Inspection	Angles	Verification Regulation of Callipers for Welding Inspection JJG 704	(0~ 360)°	$U=8'$		
		Length		(0~ 60)mm	$U=0.03\text{mm}$		
58	Level Rules	Angle	Calibration Specificaiton for Level Rules JJF 1085	Scale interval: (0.5~10)mm/m	$U_{\text{rel}}=6\%$		
59	Ultrasonic Thickness Instruments	Length	Calibration Specification for Ultrasonic Thickness Instruments JJF 1126	(0~200)mm	$U=(0.02\sim0.2)\text{mm}$		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
60	Combined Type Angle Rules	Length	Calibration Specification for Combined Type Angle Rules JJF 1132	(0~300)mm	U=0.05mm		
		Angle		0° ~ 180°	U=4'		
61	Dipmeter	Angles	Calibration Specificaiton for Dipmeter JJF (zhe) 1057	(0~180) °	U=0.01°		
62	*Measuring System of Coordinate Position	Length	Calibration Specification for Measuring System of Coordinate Position JJF 1251	(0~3)m	U=5 μ m		
63	Box Plates	Length	Verification Regulation of Box Plates JJG 194	(100~400)mm	U=3.5 μ m		
64	Electronic Level Meter	Angle	Calibration Specification for Electronic Level Meter JJF 1119	( - 180~ + 180)°	U=0.07°	Accredited only for 0.05 ° 、 0.1° resolution	
65	Large Dimension Outside Micrometers	Length	Calibration Specification for Large Dimension Outside Micrometers JJF 1088	(500~1000)mm	U=(5.2~7.2) μ m		
				测微头:(0~50)mm	U=(1.3~1.5) μ m		
				Setting Bar:(500~ 1000)mm	U=0.3 μ m+2×10 <sup>-6</sup> L		
66	*Laser Diameter Measuring Gauges	Length	Calibration Spectification for Laser Diameter Measuring Gauges JJF 1250	(0~30)mm	U=(0.6~1.5) μ m		
67	Lens Clock	Diopter	Calibration Specification for Lens Clock JJF (Min) 1073	+ 20m <sup>-1</sup> ~ - 20m <sup>-1</sup>	U=0.08m <sup>-1</sup>		
68	Rubber and Plastic Film Gage	Length	Calibration Specification for Rubber and Plastic Film Gage JJF 1488	(0~30)mm	U=(1.0~5.0) μ m		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
69	*X-ray Fluorescence Coating Thickness Instruments	Length	Calibration specification for X-ray Fluorescence Coating Thickness Instruments JJF 1306	(1~10) μ m	$U_{rel}=5.5\% \sim 7\%$		
70	Hand-held Laser Distance Meters	Length	Verification Regulation of Hand-held Laser Distance Meters JJG 966	(0~50)m	$U=0.7\text{mm}$		
71	*Roundness Instrument	Roundness	Verification Regulation for Measurement Standard Instrument of Roundness and Cylindricity JJG 429	(0.5~20) μ m	$U_{rel}=6.0\%$		
72	*Linear Displacement Sensors	Length	Calibration Specification for Linear Displacement Sensors JJF 1305	(0.1~100)mm	$U_{rel}=0.06\%$		
73	Tape for Measuring Circumference and Diameter of Flexible Part	Length	Verification Regulation of Tape for Measuring Circumference and Diameter of Flexible Part JJG 670	(0~3)m	$U=(0.11 \sim 0.17)\text{mm}$		
74	*Levels Calibrators	Angle	Verification Regulation of calibrators for the Levels JJG 191	(0.1~1.5)mm/m	$U_{rel}=2.5\%$	Except for scale interval 0.001mm/m	
75	*Level zero Calibrator	Perpendicularity	Calibration Specification for Frame Levels and Shaft Levels JJF 1084	(0~2)''	$U=1.3''$		
76	*Gauge Block Comparators	Length	Calibration Specification for Gauge Block Comparators JJF 1304	( - 50 ~ + 50) μ m	$U=0.02 \mu \text{m}$		
77	(Meter)Code Table	Length	Verification Regulation of Cable Length Meter JJG 987	(0.001~50)m	$U_{rel}=0.2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
78	Surface Profile Gauges	Length	Calibration Specification for Surface Profile Gauges JJF 1476	(0~6.5)mm	$U=1.7 \mu m$		
79	Wet Film Thickness Gauges	Length	Calibration Specification for Wet Film Thickness Gauges JJF 1484	Comb gauge (5~100) $\mu m$	$U=0.5 \mu m$		
				Comb gauge (100~3000) $\mu m$	$U=2.4 \mu m$		
				Wheel gauge (0~125) $\mu m$	$U=0.6 \mu m$		
				Wheel gauge (125~1500) $\mu m$	$U=6 \mu m$		
80	Snap Gauges Reading in 0.01mm	Length	Verification Regulation of Snap Gauges Reading in 0.01mm JJG 109	(0~150) mm	$U=3.3 \mu m$		
81	Wooden Rule(Wooden Folded Rule)	Length	Verification Regulation of Wooden Rule(Wooden Folded Rule) JJG 2	(0~3000)mm	$U=(0.3\sim0.6)mm$		
82	Digital Step Gauge	Length	Calibration Specification for Digital Step Gauge JJF (Zhe) 1130	(-50~+50)mm	$U=(0.01\sim0.03)mm$		
83	*Grating Micrometers	Length	Calibration Specification for Grating Micrometers JJF 1682	(0~100)mm	$U=(0.3\sim2.0) \mu m$	Accredited only for $\leq 1 \mu m$ grade	
84	*Stereomicroscope	Magnification	Calibration Specification of Stereomicroscope JJF (Min) 1063	0.5X~5X	$U_{rel}=0.9\%$		
85	*Tool Presetting and Measuring Instruments	Length	Verification Regulation of Tool Presetting and Measuring Instruments JJG 938	(0~1000)mm	$U=(1.6\sim4.7) \mu m$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
86	Gauge for conical thread	Length	Calibration Specification for OCTG Thread Working Gauges JJF 1108	Pitch diameter of external thread base (1~100)mm	$U=3 \mu\text{m}$		
				Ring gauge pitch diameter(5~100)mm	$U=5 \mu\text{m}$		
87	*Contour Tester	Length	Calibration Specification for Contact (Stylus) Surface Contour Tester JJF (Min) 1043	Vertical: (-50~+50)mm	$U=1.5 \mu\text{m}$		
				Level:(0~100)mm	$U=1.0 \mu\text{m}$		
				Radius;(0~25)mm	$U=1.1 \mu\text{m}$		
88	Plug and socket gauge	Length	Calibration Specification for Plugs and Socket-outlets Gauges for Household and Similar Purposes JJF (Zhe)1119	(0~100)mm	$U=0.01\text{mm}$		
		Angle		$0^\circ \sim 360^\circ$	$U=5'$		
89	Step Gauges	Length	Calibration Specification for Step Gauges JJF 1258	(0~500)mm	$0.5\mu\text{m}+1.5 \times 10^{-6}L$		
90	Square Gauge	Perpendicularity	Verification Regulation of Square Gauge JJG 1046	(100~500)mm	$U=(1.2 \sim 2.9) \mu\text{m}$	Accredited only for 0、1 grade	
91	*Electrolytic Coating Thickness Instruments	Length	Calibration Specification for Electrolytic (Coulometric) Coating Thickness Instruments JJF 1707	(0.1~20) $\mu\text{m}$	$U_{\text{rel}}=5.3\%$		
92	*Projectors for Detecting The Notch of Test Sample	Length	Calibration Specification for Projectors for Detecting The Notch of Test Sample JJF (Zhe) 1133	(0.225~0.275)mm	$U=5\mu\text{m}$		
		Angle		$43^\circ \sim 47^\circ$	$U=2'$		
		Magnification		50times	$U_{\text{rel}}=0.5\%$		
93	Brick Calipers	Length	Calibration Specification for Brick Calipers JJF (Zhe) 1109	(0~500)mm	$U=0.1\text{mm}$		



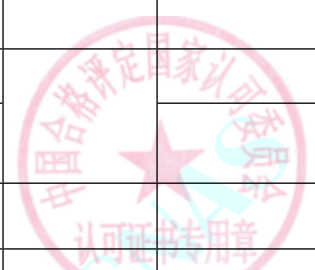
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
94	Tire Tread Depth Gauges	Length	Calibration Specification for Tire Tread Depth Gauges JJF 1477	(0~70)mm	U=(0.02~0.03)mm		
95	*Instrument for Measuring Contact Angle	Angle	Calibration Specification for Instrument for Measuring Contact Angle with image method JJF (Su) 219	3° ~120°	U=0.3°		
热学测量仪器							
1	*Asphalt Oven	Temperature	V.R.of Asphalt Oven JJG (Traffic) 056	(0~200)°C	U=0.3°C		
		Time		(0~200)min	U=0.05min		
		Rotating velocity		(0~20)r/min	U=0.2r/min		
		Size		(0~200)mm	U=0.1mm		
2	Digital Thermometer	Temperature	Calibration Specification for Digital Thermometer JJF (Su)95	(-30~300)°C	U=(0.05~0.1)°C		
				(300~1000)°C	U=0.6°C		
3	Digital Thermo-hygrometers	Temperature	Verification Regulation of Digital Thermo-hygrometers JJG (Su)99	(-10~50)°C	U=0.5°C		
		Humidity		30%RH~95%RH			
4	*Thermostat	Temperature	Measurement and Test Norm of Thermostatic Bath's Metrological Characteristics JJF 1030	Volatility:(-30~300)°C	U=0.005°C		
				Homogeneity:(-30~300)°C	U=0.008°C		
5	Thermal Imagers	Temperature	Calibration Specification for Thermal Imagers JJF 1187	(50~550)°C	U=(1.0~2.3)°C		
6	Temperature Indicators and	Temperature	Calibration Specification of Temperature Indicators and Simulators by Electrical	Thermocouple measurement :(-200~1800)°C	U=0.11°C		

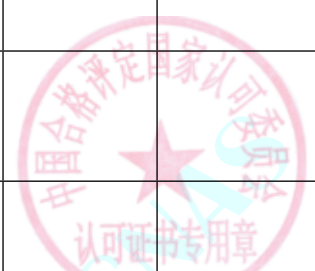


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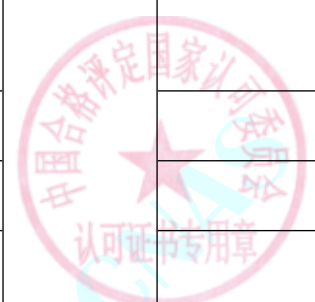
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Electrical Simulation and Measurement		Simulation and Measurement JIF 1309	Thermal resistance measurement :(-200~850)°C	$U=0.03^{\circ}\text{C}$		
				Thermocouple output :(-200~1800)°C	$U=0.2^{\circ}\text{C}$		
				Thermal resistance output :(-200~850)°C	$U=0.06^{\circ}\text{C}$		
7	*Stream Sterilizer	Temperature	Calibration Specification for Temperature and Pressure of Stream Sterilizer JIF (Zhe) 1120	(0~135)°C	$U=0.4^{\circ}\text{C}$		
		Pressure		(50~300)kPa	$U=1.4\text{kPa}$		
8	Working Noble Metal Thermocouples	Temperature	Verification Regulation of Working Noble Metal Thermocouples JJG 141	(400~1100)°C	$U=0.6^{\circ}\text{C}$		
9	Temperature Itinerant Detecting Instrument	Temperature	Calibration Specification for Temperature Itinerant Detecting Instrument JIF 1171	(-30~300)°C	$U=0.2^{\circ}\text{C}$		
10	Industry Platinum and Copper Resistance Thermometers	Temperature	Verification Regulation of Industry Platinum and Copper Resistance Thermometers JJG 229	(0~100)°C	$U=0.1^{\circ}\text{C}$		
11	*Water bath	Temperature	Calibration Specification of Electrically-heated Thermostatic Water bath JIF (Liao) 118	(0~100)°C	$U=0.3^{\circ}\text{C}$		
12	Radiation Thermometers	Temperature	Verification Regulation of Radiation Thermometers JJG 856	(50~550)°C	$U=(1.2\sim 2.7)^{\circ}\text{C}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
13	*Box-type Resistance Furnace	Temperature	Calibration Specification for Box-type Resistance Furnace JJF 1376	(200~800)°C	U=3°C		
14	*Thermometers of Clinic Autoclave	Temperature	Calibration Specification for Thermometers of Clinic Autoclave JJF 1308	(50~135)°C	U=0.4°C		
15	*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 <sup>2</sup> )	U <sub>rel</sub> =6%		
16	Thermistor Thermometers	Temperature	Calibration Specification of Thermistor Thermometers JJF 1379	(-30~200)°C	U=0.3°C		
17	Temperature Data Acquisition Instruments	Temperature	Calibration Specification of Temperature Data Acquisition Instruments JJF 1366	Built-in probe (-40~100)°C	U=0.5°C		
				External probe (-30~300)°C	U=0.06°C		
18	Process Calibrators	Temperature	Calibration Specification for Process Calibrators JJF 1472	Thermocouple measurement:(-200~1800)°C	U=0.11°C		
				Thermal resistance measurement:(-200~850)°C	U=0.03°C		
				Thermocouple output :(-200~1800)°C	U=0.2°C		
				Thermal resistance output:(-200~850)°C	U=0.06°C		
		Voltage		DCV measurement: ±(0.01~300)V	U <sub>rel</sub> =0.014%		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Current	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE	ACV measurement:(0.01~300)V (45Hz~1kHz)	$U_{rel}=0.09\%$		
				DCV Output: $\pm(0.001\sim100)$ V	$U_{rel}=0.015\%$		
				DCA measurement : $\pm(1\sim100)$ mA	$U_{rel}=0.018\%$		
				DCA Output : $\pm(1\sim100)$ mA	$U_{rel}=0.011\%$		
				ACA measurement : (1~200)mA(45Hz~1kHz)	$U_{rel}=0.14\%$		
		Resistance		Resistance measurement : (0.01~100)k $\Omega$	$U_{rel}=0.13\%$		
				Resistance Output : 1 $\Omega$ ~ 10k $\Omega$	$U_{rel}=0.015\%$		
19	Standard Mercury-in-Glass Thermometers	Temperature	Verification Regulation of Standard Mercury-in-Glass Thermometers JJG 161	(-30~50) $^{\circ}$ C	$U=0.03^{\circ}$ C		
				(50~150) $^{\circ}$ C	$U=0.04^{\circ}$ C		
				(150~300) $^{\circ}$ C	$U=0.05^{\circ}$ C		
20	*Temperature Indication controller	Temperature	Verification Regulation of Temperature Indication controller JJG 874	(-30~300) $^{\circ}$ C	$U=0.2^{\circ}$ C		
21	*Thermocouple Calibration Furnaces	Temperature	Testing Specification of Temperature Uniformity in Thermocouple Calibration Furnaces JJF 1184	(300~1200) $^{\circ}$ C	$U=0.4^{\circ}$ C		
22	*Temperature Block Calibrators	Temperature	Calibration Guideline of the Temperature Block Calibrators JJF 1257	(-30~400) $^{\circ}$ C	$U=0.4^{\circ}$ C		
				(400~1200) $^{\circ}$ C	$U=1.5^{\circ}$ C		

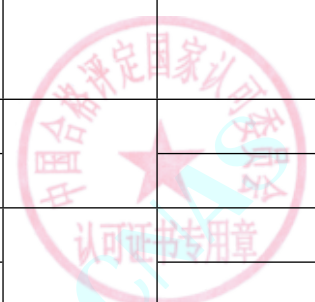


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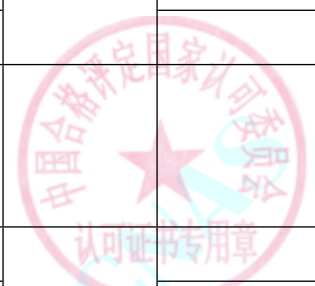
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
23	Thermometers of WBGT-index Meters	Temperature	Calibration Specification for Thermometers of WBGT-index Meters JJF 1407	(5~120)°C	U=0.2°C		
24	*Temperature Indicators	Temperature	Calibration Specification for Temperature Indicators JJF 1664	Digital thermal resistance :(-50~800)°C	U=0.2°C		
				Digital and Thermocouple : (50~1800)°C	U=0.6°C		
				Analogue Thermal resistance :(-50~800)°C	U=(0.2~0.4)°C		
				Analogue thermocouple:(50~1800)°C	U=(1.0~2.0)°C		
25	Cold Boxes	Temperature	Calibration Specification for Temperature Parameter of Passive Medical Cold Boxes JJF 1676	(-20~20)°C	U=0.2°C		
26	Sheathed Thermocouples	Temperature	Calibration Specification for Sheathed Thermocouples JJF 1262	(0~300)°C	U=0.6°C		
				(300~1100)°C	U=0.8°C		
27	Copper/Copper-Nickel Thermocouple	Temperature	Verification Regulation of the Working Copper/Copper-Nickel Thermocouple JJG 368	(0~300)°C	U=0.6°C		
28	*Tablet Disintegration Device	Temperature	Specification of Calibration for Tablet Disintegration Device JJF (Zhe)1077	(30~40)°C	U=0.25°C		
		Length		(0~150)mm	U=0.4mm		
29	Temperature and humidity recorder	Temperature	Calibration Specification of the Data Logger for Temperature and Humidity JJF (Zhe)1049	(-30~5)°C	U=(1.0~1.2)°C		
				(5~55)°C	U=0.5°C		
		Humidity		(30~95)%RH	U=1.7%RH		



No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
30	*Ventilated Textile Oven	Temperature	Calibration Specification for Ventilated Textile Oven JJF (Textile)059	(0~150)°C	U=0.8°C		
31	*Dry Box (Infrared、Hot Air Circulation)	Temperature	Calibration Specification of Environmental Testing Equipment for Temperature and Humidity Parameters JJF 1101	(0~300)°C	U=(0.18~0.8)°C		
32	*Incubator	Temperature	Calibration Specification of Environmental Testing Equipment for Temperature and Humidity Parameters JJF 1101	(0~70)°C	U=(0.12~0.3)°C		
33	*Vacuum Dry Box	Temperature	Calibration Specification of Environmental Testing Equipment for Temperature and Humidity Parameters JJF 1101	(0~300)°C	U=(0.18~0.8)°C		
34	*Temperature and Humidity Test Box	Temperature	Calibration Specification of Environmental Testing Equipment for Temperature and Humidity Parameters JJF 1101	(-80~0)°C	U=(0.3~0.12)°C		
				(0~300)°C	U=(0.12~0.8)°C		
		Humidity		(10~95)%RH	U=2%RH		
35	*Aging Test Box	Temperature	Calibration Specification of Environmental Testing Equipment for Temperature and Humidity Parameters JJF 1101	(0~300)°C	U=(0.12~0.8)°C		
36	Mechanical Thermo-hygrometers	Temperature	Verification Regulation of Mechanical Thermo-hygrometers JJG 205	(5~50)°C	U=0.5°C		
		Humidity		30%RH~95%RH	U=2%RH		



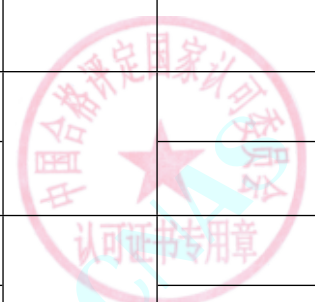
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
37	Liquid-in-Glass Thermometer for Working	Temperature	Verification Regulation of Liquid-in-Glass Thermometers for Working JJG 130	(-30~100)°C	U=0.11°C		
				(>100~200)°C	U=0.16°C		
				(>200~300)°C	U=0.19°C		
38	Bimetallic Thermometer	Temperature	Verification Regulation of Bimetallic Thermometers JJJ 226	(0~300)°C	U=0.6°C		
39	Filled System Thermometer	Temperature	Verification Regulation of Filled System Thermometers JJJ 310	(0~300)°C	U=(0.4~0.6)°C		
40	Base Metal Thermocouple	Temperature	Calibration Specification for Base Metal Thermocouples JJF 1637	(0~300)°C	U=0.2°C		
				(300~1100)°C	U=1.2°C		
41	*Digital Temperature Indicator and Controller	Temperature	Verification Regulation of Digital Temperature Indicators and Controllers JJJ 617	Thermal Resistance:(-50~300)°C	U=0.2°C		
				Thermocouple:(-50~1800)°C	U=(0.2~0.4)°C		
42	*Analogue Temperature Indicator and Controller	Temperature	Verification Regulation of Analogue Temperature Indicators and Controllers JJJ 951	Thermal Resistance:(-50~300)°C	U=(0.4~1.2)°C		
				Thermocouple:(-50~1800)°C	U=(1.0~2.0)°C		
43	*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		
44	*Temperature Transmitter	Temperature	Calibration Specification for the Temperature Transmitter JJF 1183	Thermal Resistance:(-50~300)°C	U=0.6°C		
				Thermocouple:(-50~1800)°C	U=1.3°C		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
				(-30~300) °C	U=0.18°C			
45	Humidity Sensors	Humidity	Calibration Specification of Humidity Sensors JJF 1076	(30~95)%RH	U=(1.5~1.7)%RH			
力学测量仪器								
1	*Tension, Compression and Universal Testing Machines	force	Verification Regulation of Tension, Compression and Universal Testing Machines JJG 139	(0.01~100)N	U <sub>rel</sub> =0.3%			
				(0.1~10)kN	U <sub>rel</sub> =0.3%			
				(10.01~2000)kN	U <sub>rel</sub> =0.4%			
		Speed		(0.1~500)mm/min	U <sub>rel</sub> =0.4%			
		Length		(0.1~1000)mm	U <sub>rel</sub> =0.2%			
2	*Electronic Universal Testing Machine	Force	Verification Regulation of Electronic Universal Testing Machine JJG 475	(0.01~1)N	U <sub>rel</sub> =0.3%			
				1N~10kN	U <sub>rel</sub> =0.3%			
				(10.01~2000)kN	U <sub>rel</sub> =0.4%			
		Speed		(0.1~500)mm/min	U <sub>rel</sub> =0.4%			
		Length		(0.1~1000)mm	U <sub>rel</sub> =0.2%			
3	Torque Wrenches	Torque	Verification Regulation of Torque Wrenches JJG 707	(0.5~300)N·m	U <sub>rel</sub> =0.36%			
					(2~1130)cNm			U <sub>rel</sub> =1.2%
					(300.01~1000)Nm			U <sub>rel</sub> =0.4%
4	Weights	Mass	Verification Regulation of Weights JJG 99	1mg~500mg	U=(0.04~0.2)mg	accredited only for grade below M1		
					500.01mg~50g			U=(0.2~0.4)mg
					50.01g~500g			U=(0.6~17)mg

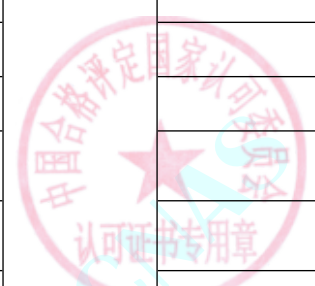


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				500.01g~1kg	U=17mg		
				1.01kg~2kg	U=20mg		
				2.01kg~10kg	U=0.18g		
				10.01kg~20kg	U=0.21g		
5	*Digital Indicating Weighting Instruments	Mass	Verification Regulation of Digital Indicating Weighting Instruments JJG 539	0.1g/division:(0~600)g	U=(0.02~0.04) g		
				0.2g/division:(0~600)g	U=0.05g		
				0.5g/division:(0~1500)g	U=0.10~0.14) g		
				1g/division:(0~3000)g	U=(0.20~0.28)g		
				2g/division:(0~6000)g	U=(0.38~0.55)g		
				5g/division:(0~15)kg	U=(1.0~1.4)g		
				10g/division:(0~30)kg	U=(2.0~2.8)g		
				20g/division:(0~75)kg	U=(4~7)g		
				50g/division:(0~150)kg	U=(10~15)g		
				100g/division:(0~300)kg	U=(20~30)g		
				200g/division:(0~600)kg	U=(40~60)g		
				500g/division:(0~1000)kg	U=(0.1~0.13)kg		
				Dividing value 1kg:(0~3000)kg	U=(0.1~0.6)kg		
Dividing value 1kg:(3000~5000)kg	U=1.0kg						



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
6	*Electronic Balance	Mass	Verification Regulation of Electronic Balance JJG 1036	Dividing value 0.01mg:(0~120)g	$U=(0.01\sim 0.2)\text{mg}$		
				Dividing value 0.1mg:(0~500)g	$U=(0.1\sim 0.3)\text{mg}$		
				Dividing value 0.01g:(0~5000)g	$U=(0.01\sim 0.02)\text{g}$		
				Dividing value 0.1g:(0~35)kg	$U=(0.1\sim 0.2)\text{g}$		
				Dividing value 1mg:(0~2000)g	$U=(1.0\sim 2.6)\text{mg}$		
				Dividing value 1g:(0~35)kg	$U=(0.7\sim 1.1)\text{g}$		
7	Working Glass Container	Volume	Verification Regulation of Working Glass Container JJG 196	(0~5mL)	$U=0.003\text{mL}$		
				(5.01mL~25mL)	$U=0.01\text{mL}$		
				(25.01mL~100mL)	$U=0.02\text{mL}$		
				(100.01mL~500mL)	$U=0.05\text{mL}$		
				(500.01mL~2000mL)	$U=0.2\text{mL}$		
8	Locomotive Pipette	Volume	Verification Regulation of Locomotive Pipette JJG 646	(0.1~0.5) $\mu\text{L}$	$U_{\text{rel}}=5.0\%$		
				(0.51~2) $\mu\text{L}$	$U_{\text{rel}}=3.0\%$		
				(2.01~10) $\mu\text{L}$	$U_{\text{rel}}=2.0\%$		
				(10.01~50) $\mu\text{L}$	$U_{\text{rel}}=1.0\%$		
				(50.01~300) $\mu\text{L}$	$U_{\text{rel}}=0.5\%$		
				(300.01~10000) $\mu\text{L}$	$U_{\text{rel}}=0.1\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
9	*Elastic Element Pressure Gauges, Pressure-Vacuum Gauges, Pressure-Vacuum Gauges and Vacuum Gauges for General Use	pressure	V. R of Elastic Element Pressure Gauges, Pressure-Vacuum Gauges, Pressure-Vacuum Gauges and Vacuum Gauges for General Use JJG 52	(-0.1~100)MPa	$U=0.7\%FS$		
10	Test-tube for Determining Density of Asphalt	Volume	V.R of Test-tube for Determining Density of Asphalt JJG (Traffic)119	(1~25)mL	$U_{rel}=1.5\%$		
				(25.01~100)mL	$U_{rel}=1.7\%$		
11	*Standard Metal Tank	Volume	V.R of Standard Metal Tank JJG 259	(1~100)L	$U_{rel}=0.04\%$	Accredited only for class 3	
12	*Medical Centrifuge	Rotating velocity	C.S for Medical Centrifuge JJF (Zhe)1117	(1~20000)r/min	$U_{rel}=0.2\%$		
13	Static Torque Measuring Devices	Torque	V.R for Static Torque Measuring Devices JJG 995	(0.1~500)Nm	$U_{rel}=0.12\%$		
14	Calibration Instrument for Torque Wrenches	Torque	V.R of Calibration Instrument for Torque Wrenches JJG 797	(0.1~500)Nm	$U_{rel}=0.12\%$		
15	Tachometer	Tacho	V.R of Tachometer JJG 105	(20~40000)r/min	$U_{rel}=0.02\%$		
16	*Analogue Indicating Weighing Instruments	Mass	V.R of Analogue Indicating Weighing Instruments JJG 13	Dividing value10g(0.1~4)kg	$U=4g$		
				Dividing value20g(0.2~10)kg	$U=6g$		
				Dividing value500g(5~160)kg	$U=0.3kg$		

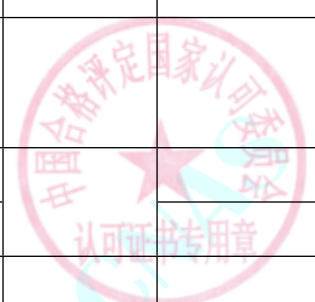


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
17	*Pointer Type Micro-differential Pressure Gauge	Pressure	V.R of Pointer Type Micro-differential Pressure Gauge JJG (Yue) 020	(-1500~1500)Pa	U=0.7%FS		
18	*Tilting tube micromanometers	Pressure	V.R of Tilting tube micromanometers JJG 172	Inclined tube :(0~2)kPa	U=0.5%FS		
				Curved tube :(-10~700)Pa	U=(2~6)Pa		
19	*Elastic Element Precise Pressure Gauges and Vacuum Gauges	Pressure	V.R of Elastic Element Precise Pressure Gauges and Vacuum Gauges JJG 49	(-0.1~100)MPa	U=0.08%FS		
20	*Cantilever-Beam Impact Testing Machine	Moment	V.R of Cantilever-Beam(Izod-Type) Impact Testing Machine JJG 608	(0.1~100)Nm	U <sub>rel</sub> =0.36%		
		Length		(0.02~1) m	U <sub>rel</sub> =0.1%		
		Potential energy		(0.1~100) J	U <sub>rel</sub> =0.5%		
21	*Electrodynamic Vibration Testing Systems	Frequency	Verification Regulation of Electrodynamic Vibration Testing Systems JJG 948	1Hz~2kHz	U <sub>rel</sub> =0.5%		
		Acceleration		(1~1000)m/s <sup>2</sup>	U <sub>rel</sub> =5%		
22	Pressure Controllers	Pressure	V.R of Pressure Controllers JJG 544	(-0.1~60)MPa	U=0.12%FS		
23	Pressure Regulators with Bourdon Tube Pressure Gauge	Pressure	C.S for Pressure Regulators with Bourdon Tube Pressure Gauge JJF 1328	(0~25)MPa	U=0.7%FS		
24	*Pressure Transmitter	Pressure	V.R of Pressure Transmitter JJG 882	(-0.1~100)MPa	U=0.05%FS		
		Current		(4~20)mA	U=0.01mA		
25	Pressure Transducer (Static)	Pressure	V.R of Pressure Transducer (Static) JJG 860	(-0.1~60)MPa	U=0.15%FS		



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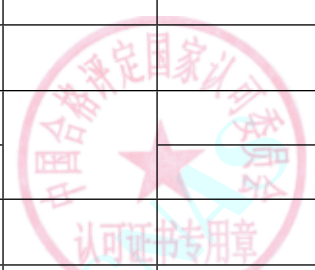
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
26	*Precision Liquid Manometers for Cistern and U-tube	Pressure	V.R of Precision Liquid Manometers for Cistern and U-tube JJG 241	(0.6~30)kPa	$U_{rel}=0.20\%$		
27	*Digital Pressure Gauges	Pressure	V.R of Digital Pressure Gauges JJG 875	(-0.1~100)MPa	$U=0.06\%FS$		
28	*Automatic Gravimetric Filling Instruments	Mass	Verification Regulation of Automatic Gravimetric Filling Instruments JJG 564	30g~2kg	$U=0.47g$		
				(2.01~5)kg	$U=3.1g$		
				(5.01~50)kg	$U=0.1kg$		
				(50.01~1000)kg	$U=0.4kg$		
29	*Steelyard Scales	Mass	V.R of Steelyard Scales JJG 17	20g~10kg	$U=1.5g$		
30	*Relative Density Balance for Liquid	Relative density	V.R of Relative Density Balance for Liquid JJG 171	0.0000~2.0000	$U=0.0004$		
31	*Working Torque-meters	Torque	V.R of Working Torque-meters JJG 1146	(0.1~500)Nm	$U_{rel}=0.3\%$		
32	*Testing Machines of Resistance to Internal Pressure of Plastics Pipe	Pressure	C.S for Testing Machines of Resistance to Internal Pressure of Plastics Pipe JJF 1628	(0.1~25)MPa	$U=0.01MPa$		
33	*The Liquid Level Measuring Devices	Length	V.R of the Liquid Level Measuring Devices JJG 971	(0~20)m	$U=2mm$		
34	*Special weight	Mass	V.R of Weights JJG 99	(0.01~30)kg	$U=0.1g$		
				(30.01~150)kg	$U=0.05kg$		
35	Tyre Pressure Gauges	Pressure	V.R of Tyre Pressure Gauges JJG 927	(0~6)MPa	$U=0.7\%FS$		
36	*Test Apparatus for Theoretical Maximum Specific Gravity of Asphalt	Pressure	V.R.of Test Apparatus for Theoretical Maximum Specific Gravity of Asphalt	(-100~0)kPa	$U=0.7\%FS$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Gravity of Asphalt Mixtures		Mixtures JIG (Traffic)105	(0~1.6) MPa	U=0.1%FS		
		Time		(1~120)s	U=0.1s		
37	Hand Saccharimeter (Content-meter) and Hand Refractometer	Concentration	V.R of Hand Saccharimeter (Content-meter) and Hand Refractometer JIG 820	(0~80)%	U=1.0%		
38	*Shore A Durometers	Length	Verification Regulation of Shore A Durometers JIG 304	(0~3)mm	U=3 μ m		
		Hardness		(0~100)HA	U=0.3HA		
39	*Working Force Measuring Machines for Special Purposes	Force	Calibration Specification for Working Force Measuring Machines for Special Purposes JJF 1134	(0.01~1)N	U <sub>rel</sub> =0.3%		
				1N~10kN	U <sub>rel</sub> =0.3%		
				(10~2000)kN	U <sub>rel</sub> =0.4%		
40	*Flexure Testing Machine	Force	Verification Regulation of Flexure Testing Machine JIG 476	(0.1~10)kN	U <sub>rel</sub> =0.3%		
				(10.01~2000)kN	U <sub>rel</sub> =0.4%		
41	*Table Balances	Mass	Verification Regulation for Table Balances JJG 156	0.1g~5kg	U=0.3e (e 为检定分度值)		
42	*Mechanical Balance	Mass	Verification Regulation of Mechanical Balance JJG 98	1mg~1g	U=0.05mg	合格评定 国家认 证 认 证 书 专 用 章	
				1.01g~200g	U=0.9mg		
43	*Non-self-indicating Weighting Instruments	Mass	Verification Regulation of Non-self-indicating Weighting Instruments JJG 14	5g/division: (0~10)kg	U=1.5g		
				50g/division: (0~100)kg	U=16g		
				200g/division: (0~500)kg	U=53g		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				500g/division: (0~1000)kg	$U=0.15\text{kg}$		
44	*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	$U=0.8\text{HRA}$		
				(20~100)HRB	$U=0.9\text{HRB}$		
				(20~70)HRC	$U=0.8\text{HRC}$		
				(89~91)HR15N	$U=0.8\text{HRN}$		
				(42~54)HR30N	$U=0.8\text{HRN}$		
				(32~61)HR45N	$U=0.8\text{HRN}$		
				(88~93)HR15T	$U=1.0\text{HRT}$		
				(70~82)HR30T	$U=1.0\text{HRT}$		
			(34~54)HR45T	$U=1.0\text{HRT}$			
45	*Metallic Vickers Hardness Testers	Hardness	Verification Regulation of Metallic Vickers Hardness Testers JJG 151	(100~1000)HV(HV2~HV50)	$U_{\text{rel}}=2.5\%$		
				(50~1000)HV (HV0.1~HV1)	$U_{\text{rel}}=3.0\%$		
46	*Metallic Brinell Hardness Tester	Hardness	Verification Regulation of Metallic Brinell Hardness Testers JJG 150	$\leq 125\text{HBW}$	$U_{\text{rel}}=2.0\%$		
				$125 < \text{HBW} \leq 225$	$U_{\text{rel}}=1.5\%$		
				$\text{HBW} > 225$	$U_{\text{rel}}=1.0\%$		
47	*Hydraulic Jacks	Force	Verification Regulation of Hydraulic Jacks JJG 621	(0.5~5000)kN	$U_{\text{rel}}=0.6\%$		
48	*Working Dynamometers	Force	Verification Regulation of Working Dynamometers JJG 455	(0.01~0.1)N	$U_{\text{rel}}=0.5\%$		
				(0.1~40)N	$U_{\text{rel}}=0.4\%$		



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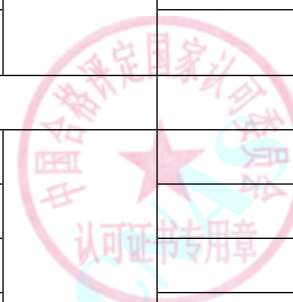
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(40.01~200)N	$U_{rel}=0.2\%$		
				(200.01~1000)N	$U_{rel}=0.1\%$		
49	Working Glass Hydrometer(Density Meter)	Density	Verification Regulation of Working Glass Hydrometers JJG 42	(650~1040)kg/m <sup>3</sup>	$U=0.3\text{kg/m}^3$		
				(1080~1400)kg/m <sup>3</sup>	$U=0.3\text{kg/m}^3$		
				(1440~1830)kg/m <sup>3</sup>	$U=0.3\text{kg/m}^3$		
50	Special Glassware	Capacity	Verification Regulation of Special Glassware JJG 10	(0.01~10)mL	$U_{rel}=0.03\%$		
				(10.01~50)mL	$U_{rel}=0.04\%$		
				(50.01~100)mL	$U_{rel}=0.05\%$		
				(100.01~200)mL	$U_{rel}=0.06\%$		
51	Weights	Mass	Verification Regulation of Weights JJG 99	Class 2:1g~500g	$U=0.11\text{mg}\sim 3.0\text{mg}$		
52	*Electrodynamic Horizontal Vibration Generator for Testing	Frequency	Verification Regulation for Electrodynamic Horizontal Vibration Generator for Testing JJG 1000	1Hz~2kHz	$U_{rel}=0.5\%$		
		Acceleration		(1~1000)m/s <sup>2</sup>	$U_{rel}=5\%$		
53	*Online Liquid Flowmeter	Flow	Calibration Specification for Online Liquid Flow Measurement System JJF (Liao) 84	(0.8~54600)m <sup>3</sup> /h	$U_{rel}=1.0\%$	Standard Flowmeter Method, Weighing method	
				(0.8~54600)m <sup>3</sup> /h	$U_{rel}=1.5\%$		
54	Gas Rotameter	Flow	Verification Regulation of Float Meter JJG 257	(0.1~100)L/min	$U=0.7\%FS$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
55	*Open Channel Weirs and Flumes for Flow Measurement	Flow	Verification Regulation of Open Channel Weirs and Flumes for Flow Measurement JJG (Water Conservancy) 004	(5~5000)m <sup>3</sup> /h	$U_{rel}=1.5\%$	Geometric method	
56	*Leeb Hardness Tester	Hardness	Verification Regulation of Equotip Hardness tester JJG 747	(490~830)HLD (460~630)HLG	$U=7HLD$ $U=7HLG$		
57	*Shore D Durometer	Hardness	Verification Regulation of Shore D Durometer JJG 1039	(0~100)HD	$U=0.3HD$		
58	*Wechsler hardness tester	Hardness	Verification Regulation of Metallic Webster Hardness Testing Machines JJG 944	(4~19)HW	$U=0.5HW$		
59	Shore AO Durometers	Hardness	Calibration Specification for Shore AO Durometers JJF 1312	(0~100)HAO	$U=0.3HAO$		
60	*Interface Tensiometers	Tensio	Calibration Specification for Interface Tensiometers JJF 1464	(0.1~100)mN/m	$U_{rel}=0.14\%$		
61	*Equipment of Power Measuring	Torque	Verification Regulation of Equipment of Power Measuring JJG 653	(0.001~3)kNm	$U_{rel}=0.4\%$		
		Rotating velocity		(10~50000)r/min	$U_{rel}=0.2\%$		
电磁学测量仪器							
1	*DC low Resistance Meters	Resistance	Verification Regulation of D.C. Low Resistance Meters JJG 837	(1~10)mΩ	$U_{rel}=0.10\%$		
				(10~200)mΩ	$U_{rel}=0.08\%$		
				(0.2~1)Ω	$U_{rel}=0.3\%$		
				(1~100)Ω	$U_{rel}=0.2\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(0.1~100)k $\Omega$	$U_{rel}=0.1\%$		
2	*DC Voltage Stable Source	DC voltage	Calibration Specification for DC Stabiized Power Supplies JJF1597	(0.1~1000)V	$U_{rel}=0.05\%$		
		DC current		(0.01~500)A	$U_{rel}=0.07\%$		
3	*Industry Frequency Single-Phase Meter	Power Factor	Verification Regulation of Industry Frequency Single-Phase Meter JJG 440	0.01~1	$U_{rel}=0.5\%$		
4	D.C.Resistance Box	Resistance	Verification Regulation of D.C. Resistance Box JJG 982	(1~20)m $\Omega$	$U_{rel}=0.058\%$		
				(20~200)m $\Omega$	$U_{rel}=0.065\%$		
				200m $\Omega$ ~ 10M $\Omega$	$U_{rel}=0.006\%$		
5	*Clamp Ammeters	DC Current	Calibration Specification for Clamp Ammeters JJF 1075	(0.1~1)A (45Hz~400Hz)	$U_{rel}=0.6\%$		
				(1~1000)A (45Hz~400Hz)	$U_{rel}=0.4\%$		
		DC Current		(0.1~1)A	$U_{rel}=0.4\%$		
				(1~1000)A	$U_{rel}=0.2\%$		
6	*Surface Resistance Tester	Resistance	Calibration Specification for Surface Resistance Tester JJF 1285	(9~250)V	$U_{rel}=0.3\%$		
				(10 <sup>2</sup> ~10 <sup>4</sup> ) $\Omega$	$U_{rel}=1.5\%$		
				10 <sup>4</sup> ~10 <sup>7</sup> ) $\Omega$	$U_{rel}=0.6\%$		
				(10 <sup>7</sup> ~10 <sup>8</sup> ) $\Omega$	$U_{rel}=1.2\%$		
				(10 <sup>8</sup> ~10 <sup>9</sup> ) $\Omega$	$U_{rel}=2.4\%$		
				(10 <sup>9</sup> ~10 <sup>12</sup> ) $\Omega$	$U_{rel}=5.8\%$		
7	*Earth-Continuity AC		Verification Regulation of	(10~20)m $\Omega$ (50Hz)	$U_{rel}=0.7\%$		

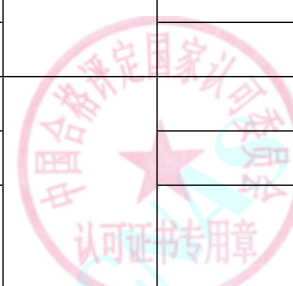
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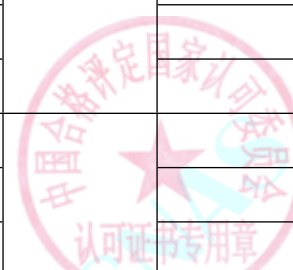
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Testers	Resistance	Earth-Continuity Testers JJG 984	(20~500)mΩ (50Hz)	$U_{rel}=0.3\%$		
		DC Current		(1~30)A	$U_{rel}=0.1\%$		
		DC Current		(1~30)A (50Hz)	$U_{rel}=0.2\%$		
		DC Resistance		(10~20)mΩ (20~500)mΩ	$U_{rel}=0.7\%$ $U_{rel}=0.2\%$		
8	*Electronic Insulating Resistance Meters	Voltage	Verification Regulation of Electronic Insulating Resistance Meters JJG 1005	(0.01~5)kV	$U_{rel}=1.6\%$		
		Resistance		100Ω ~ 10MΩ	$U_{rel}=0.24\%$		
				(10~100)MΩ	$U_{rel}=0.58\%$		
				(0.1~1)GΩ	$U_{rel}=1.3\%$		
				(1~10)GΩ	$U_{rel}=2.4\%$		
				(10~100)GΩ	$U_{rel}=5.9\%$		
9	*Clamp Earth Resistance Meters	Resistance	Verification Regulation of Clamp Earth Resistance Meters JJG 1054	(0.01~0.1)Ω	$U_{rel}=2.4\%$		
				(0.1~1)Ω	$U_{rel}=0.7\%$		
				(1~1900)Ω	$U_{rel}=0.2\%$		
10	D.C.Resistors	Resistance	Verification Regulation of D.C. Resistors JJG 166	0.001Ω, 0.01Ω	$U_{rel}=0.058\%$		
				0.1Ω	$U_{rel}=0.065\%$		
				1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ, 100kΩ, 1MΩ, 10MΩ	$U_{rel}=0.006\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
11	*AC、DC Digital Powermeter	AC Power	Verification Regulation of AC Digital Powermeter JJG 780	0.1W~12kW (45Hz~60Hz)	$U_{rel}=0.13\%$		
12	D.C.Bridges	Resistance	Verification Regulation of D.C Bridges JJG 125	(0.001~100) Ω	$U_{rel}=0.015\%$		
				(0.1~1)k Ω	$U_{rel}=0.015\%$		
13	*Ohmmeters	Resistance	Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	1 Ω ~ 10M Ω	$U_{rel}=0.5\%$		
14	*Wattmeters	DC Power	Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	1W~12kW	$U_{rel}=0.4\%$		
		AC Power		1W~12kW (45Hz~60Hz)	$U_{rel}=0.6\%$		
15	*High Insulation Resistance Meters	Voltage	Verification Regulation of High Insulation Resistance Meters JJG 690	(10~1000)V	$U_{rel}=1.6\%$		
		Resistance		100 Ω ~ 10M Ω	$U_{rel}=0.24\%$		
				(10~100)M Ω	$U_{rel}=0.58\%$		
				(0.1~1)G Ω	$U_{rel}=1.3\%$		
				(1~10)G Ω	$U_{rel}=2.4\%$		
				(10~1000)G Ω	$U_{rel}=5.9\%$		
16	*Loop Resistance Tester and DC Resistance Meters	Resistance	Verification Regulation of Loop Resistance Tester and DC Resistance Meters JJG 1052	(1~20) μ Ω	$U=0.07\%R_x+0.023 μ Ω$		
				20 μ Ω ~ 200 Ω	$U_{rel}=0.07\%$		
		Current		(1~500)A	$U_{rel}=0.07\%$		
17	Verifying Meter for pH	Potential	Verification Regulation of Verifying Meter for pH	(-2000~-1)mV	$U_{rel}=0.008\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ( $k=2$ )	Note	Effective Date
	Meters		Meters JJG 919	(1~2000)mV	$U_{rel}=0.008\%$		
		pH		0~14 (pH)	$U=0.0006$ (pH)		
18	*DC Digital Voltmeter	DC voltage	Calibration Specification for Multimeters JJF 1587	(20~200)mV	$U=0.004\%V_x+1 \mu V$		
				(0.2~2)V	$U=0.002\%V_x+2 \mu V$		
				(2~20)V	$U=0.003\%V_x+20 \mu V$		
				(20~1000)V	$U=0.003\%V_x+0.15mV$		
19	*AC Digital Voltmeter	AC voltage	Calibration Specification for Multimeters JJF 1587	(20~200)mV(50Hz~1kHz)	$U=0.02\%V_x+6 \mu V$		
				(0.2~20)V(50Hz~1kHz)	$U=0.02\%V_x+8 \mu V$		
				(20~1000)V(50Hz~1kHz)	$U=0.04\%V_x+8 \mu V$		
20	*DC Digital Amperemeter	DC current	Calibration Specification for Multimeters JJF 1587	(10~200) $\mu A$	$U=0.03\%I_x+0.02 \mu A$		
				(0.2~200)mA	$U=0.02\%I_x+0.05 \mu A$		
				(0.2~2)A	$U=0.02\%I_x+2.5 \mu A$		
				(2~20)A	$U=0.12\%I_x+5 \mu A$		
21	*AC Digital current meter	AC current	Calibration Specification for Multimeters JJF 1587	(30~200) $\mu A$ (50Hz~1kHz)	$U=0.02\%I_x+0.2 \mu A$		
				(0.2~2)mA(50Hz~1kHz)	$U=0.12\%I_x+0.1 \mu A$		
				2mA~2A(50Hz~1kHz)	$U=0.05\%I_x+2 \mu A$		
				(2~20)A(50Hz~1kHz)	$U=0.2\%I_x+2 \mu A$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ( $k=2$ )	Note	Effective Date
22	*DC Voltmeter(Needle Indication)	DC voltage	Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	(20~200)mV	$U_{rel}=(0.33\sim 0.13)\%$		
				(0.2~2)V	$U_{rel}=(0.33\sim 0.13)\%$		
				(2~10)V	$U_{rel}=(0.33\sim 0.13)\%$		
				(10~50)V	$U_{rel}=(0.33\sim 0.13)\%$		
				(50~200)V	$U_{rel}=(0.33\sim 0.13)\%$		
		(200~1000)V	$U_{rel}=(0.33\sim 0.13)\%$				
23	*DC Amperemeter(Needle Indication)	DC current	Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	100 $\mu$ A~20A	$U_{rel}=0.67\%$		
24	*AC Amperemeter(Needle Indication)	AC current	Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	100 $\mu$ A~20A(50Hz)	$U_{rel}=0.67\%$		
25	*AC Voltmeter (Needle Indication)	AC voltage	Verification Regulation of Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	(20~200)mV(50Hz)	$U_{rel}=(0.33\sim 0.13)\%$		
				(0.2~2)V(50Hz)	$U_{rel}=(0.33\sim 0.13)\%$		
				(2~10)V(50Hz)	$U_{rel}=(0.33\sim 0.13)\%$		
				(10~50)V(50Hz)	$U_{rel}=(0.33\sim 0.13)\%$		
				(50~200)V(50Hz)	$U_{rel}=(0.33\sim 0.13)\%$		
		(200~1000)V(50Hz)	$U_{rel}=(0.33\sim 0.13)\%$				
26	*Megohmmeter	Resistance	Verification Regulation of Megohmmeter JJG 622	0.1M $\Omega$	$U_{rel}=5.8\%$		
				0.2M $\Omega$	$U_{rel}=2.8\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Voltage		(0.5~1000)M $\Omega$	$U_{rel}=1.8\%$		
				(1000~10000)M $\Omega$	$U_{rel}=2.8\%$		
				10V~1kV	$U_{rel}=0.6\%$		
27	*Security integration tester	AC voltage	Calibration specification for safety tester JJF(electron)0004	(0.2~15)kV	$U_{rel}=0.24\%$		
		AC current		(0.1~200)mA	$U_{rel}=0.32\%$		
		Resistance		(2~10)M $\Omega$	$U_{rel}=0.24\%$		
				(10~100)M $\Omega$	$U_{rel}=0.58\%$		
				(100~1000)M $\Omega$	$U_{rel}=1.2\%$		
				(1000~5000)M $\Omega$	$U_{rel}=2.4\%$		
28	*Instrument of Electronic Parameter Measure	AC voltage	Calibration Specification for Digital AC Electrical Parameters Meter JJF 1491	(0.1~1000)V(50Hz)	$U_{rel}=0.07\%$		
		AC current		1mA~1A(50Hz)	$U_{rel}=0.1\%$		
				(1~30)A(50Hz)	$U_{rel}=0.08\%$		
		AC Power		(0.1~200)W(50Hz)	$U_{rel}=0.16\%$		
				200W~11kW(50Hz)	$U_{rel}=0.06\%$		
		frequency		(45~65)Hz	$U_{rel}=0.06\%$		
		power factor		0~1	$U=0.02$		
29	*Wrist Strap/ Footwear Tester (Static Voltage Tester)	Resistance	Calibration specification of wrist strap and footwear tester JJF(electron) 31502	(0.5~100)M $\Omega$	$U_{rel}=1.8\%$		
		AC voltage	Verification Regulation of	200V~15kV(50Hz)	$U_{rel}=0.24\%$		

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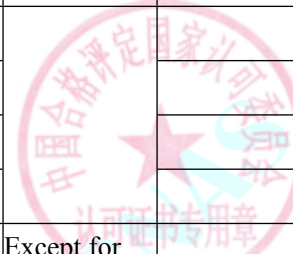
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Withstanding Voltage Testers	AC current	Withstanding Voltage Testers JIG 795, Verification Regulation of High Insulation Resistance Meters JIG 690	(0.1~200)mA(50Hz)	$U_{rel}=0.32\%$		
		DC voltage		200V~15kV	$U_{rel}=0.24\%$		
		DC current		(0.1~200)mA	$U_{rel}=0.3\%$		
		Time		(1~60)s	$U=0.2s$		
		Resistance		(1~10)MΩ	$U_{rel}=0.24\%$		
				(10~100)MΩ	$U_{rel}=0.58\%$		
				(100~1000)MΩ	$U_{rel}=1.2\%$		
31	*Withstanding Voltage Testers	AC voltage	Verification Regulation of Withstanding Voltage Testers JIG 795	200V~15kV(50Hz)	$U_{rel}=0.24\%$		
		AC current		(0.1~200)mA(50Hz)	$U_{rel}=0.32\%$		
		DC voltage		200V~15kV	$U_{rel}=0.24\%$		
		DC current		(0.1~200)mA	$U_{rel}=0.3\%$		
		Time		(1~60)s	$U=0.2s$		
32	*Earth Resistance Meters	Resistance	Verification Regulation of Earth Resistance Meters JIG 366	(1~10)mΩ	$U_{rel}=12\%$		
				(10~100)mΩ	$U_{rel}=2.3\%$		
				(0.1~1)Ω	$U_{rel}=0.58\%$		
				(1~1111.1)Ω	$U_{rel}=0.12\%$		
33	*EB Analyzer	AC voltage	Verification Regulation of EB Analyzer JIG(zhe) 63	(10~1000)V(50Hz)	$U_{rel}=0.07\%$	Except for output characteristic	
		AC current		10mA~5A(50Hz)	$U_{rel}=0.10\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC Power		(0.1~200)W(50Hz)	$U_{rel}=0.16\%$	s of calibration	
				>200W~1500W(50Hz)	$U_{rel}=0.06\%$		
34	*Precise AC Voltage Test Source	AC voltage AC current	Verification regulation of precision AC Voltage test source JJG(Zhe) 102	10V~1000V(10Hz~400Hz) 0.5A~100A(10Hz~400Hz)	$U_{rel}=0.05\%$ $U_{rel}=0.24\%$		
35	*Leakage Current Tester	Current	Verification Regulation of Leakage Current Tester JJG 843	AC(50Hz):(0.1~20)mA DC:(0.1~20)mA	$U_{rel}=0.2\%$ $U_{rel}=0.05\%$		
36	*Cable Tester	Insulation resistance AC voltage Leakage Current	Calibration Specification for Cable Testers JJF 1457	10k $\Omega$ ~10M $\Omega$ (10~100)M $\Omega$ (100~200)M $\Omega$ (0.2~1.5)kV (0.1~2)mA	$U_{rel}=0.24\%$ $U_{rel}=0.58\%$ $U_{rel}=1.2\%$ $U_{rel}=0.24\%$ $U_{rel}=0.30\%$	Except for continuity resistance	
37	*Multimeters	DC Voltage AC Voltage	Calibration Specification for Multimeters JJF 1587	20mV~200mV 0.2V~2V 2V~20V 20V~1000V 20mV~200mV(45Hz~100kHz) 0.2V~20V(45Hz~100kHz)	$U=0.004\%V_x+1\mu V$ $U=0.002\%V_x+2\mu V$ $U=0.003\%V_x+20\mu V$ $U=0.003\%V_x+0.15mV$ $U=0.02\%V_x+6\mu V$ $U=0.02\%V_x+8\mu V$		

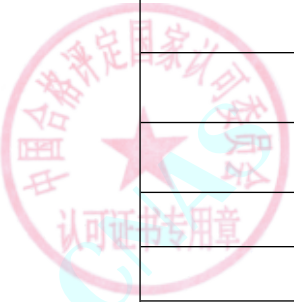


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
		DC Current		20V~1000V(45Hz~100kHz)	$U=0.04\%V_x+8\mu V$			
					10 $\mu$ A~200 $\mu$ A	$U=0.03\%I_x+0.02\mu A$		
					0.2mA~200mA	$U=0.02\%I_x+0.05\mu A$		
					200mA~2A	$U=0.05\%I_x+2.5\mu A$		
					2A~20A	$U=0.12\%I_x+5\mu A$		
		DC Current		30 $\mu$ A~200 $\mu$ A(10Hz~1kHz)	$U=0.2\%I_x+0.2\mu A$			
					0.2mA~2mA(45Hz~1kHz)	$U=0.12\%I_x+0.1\mu A$		
					2mA~2A(45Hz~1kHz)	$U=0.05\%I_x+2\mu A$		
					2A~20A(45Hz~1kHz)	$U=0.2\%I_x+2\mu A$		
					30 $\mu$ A~200 $\mu$ A (1kHz~10kHz)	$U=0.43\%I_x+0.15\mu A$		
					0.2mA~2mA(1kHz~10kHz)	$U=0.5\%I_x+0.3\mu A$		
					2mA~20mA(1kHz~10kHz)	$U=0.2\%I_x+3\mu A$		
					20mA~200mA(1kHz~10kHz)	$U=0.2\%I_x+100\mu A$		
					200mA~2A(1kHz~10kHz)	$U=1.6\%I_x+100\mu A$		
					2A~20A(1kHz~5kHz)	$U=3.5\%I_x+5mA$		
		Resistance		1 $\Omega$ ~200 $\Omega$	$U=0.02\%R_x+0.0002\Omega$			
					0.2k $\Omega$ ~2k $\Omega$	$U=0.03\%R_x+0.002\Omega$		

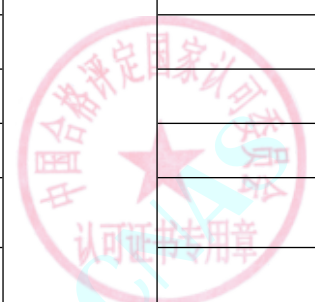


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
38	*Multifunction Standard Sources		Calibration Specification for Multifunction Standard Sources JJF 1638	2k Ω ~ 20k Ω	$U=0.02\%R_x+0.02 \Omega$		
				20k Ω ~ 2M Ω	$U=0.02\%R_x+0.2 \Omega$		
				2M Ω ~ 20M Ω	$U=0.05\%R_x+2 \Omega$		
				20M Ω ~ 100M Ω	$U=0.07\%R_x+20 \Omega$		
		DC Voltage		20mV ~ 200mV	$U=0.0006\%V_x+0.5 \mu V$		
				0.2V ~ 2V	$U=0.0004\%V_x+5 \mu V$		
				2V ~ 200V	$U=0.0005\%V_x+0.05mV$		
				200V ~ 1000V	$U=0.0007\%V_x+0.5mV$		
		AC Voltage		20mV ~ 20V(50Hz ~ 10kHz)	$U=0.016\%V_x+4mV$		
				20V ~ 200V(50Hz ~ 10kHz)	$U=0.012\%V_x+0.2mV$		
				200V ~ 1000V(50Hz ~ 100kHz)	$U=0.016\%V_x+10mV$		
				10 μ A ~ 200 μ A	$U=0.004\%I_x+0.001 \mu A$		
		DC Current		0.2mA ~ 200mA	$U=0.003\%I_x+0.01 \mu A$		
				200mA ~ 2A	$U=0.006\%I_x+0.1 \mu A$		
2A ~ 20A	$U=0.05\%I_x+1 \mu A$						
30 μ A ~ 200 μ A(50Hz ~ 10kHz)	$U=0.05\%I_x+0.002 \mu A$						
AC Current	0.2mA ~ 2mA(50Hz ~ 10kHz)	$U=0.05\%I_x+0.02 \mu A$					

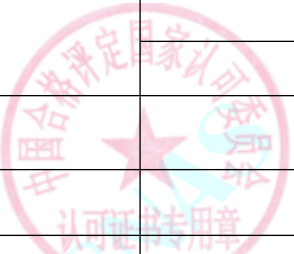


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		Resistance		2mA~2A(50Hz~10kHz)	$U=0.05\%I_x+0.2 \mu A$		
				2A~20A(50Hz~10kHz)	$U=0.1\%I_x+2 \mu A$		
				1 $\Omega$ ~ 200 $\Omega$	$U=0.006\%R_x+0.01m \Omega$		
				0.2k $\Omega$ ~ 2k $\Omega$	$U=0.001\%R_x+0.01m \Omega$		
				2k $\Omega$ ~ 2M $\Omega$	$U=0.001\%R_x+0.1m \Omega$		
				2M $\Omega$ ~ 20M $\Omega$	$U=0.003\%R_x+1m \Omega$		
				20M $\Omega$ ~ 200M $\Omega$	$U=0.02\%R_x+0.1 \Omega$		
				200M $\Omega$ ~ 1000M $\Omega$	$U=0.24\%R_x+1 \Omega$		
39	*Eddy Current Conductivity Meters	Conductivity	Calibration Specification for Eddy Current Conductivity Meters JJF 1692	(1~101)%IACS	$U=0.5\%IACS\sim 1.5\%IACS$		
无线电测量仪器							
1	*RLC meter	Capacitance	Verification regulation for wide range digital RLC meter GJB 8817	0.01 $\mu F$ , 0.1 $\mu F$ , 1 $\mu F$ , (1kHz)	$U_{rel}=0.26\%$		
		Inductance		0.001H, 0.01H, 0.1H, (1kHz)	$U_{rel}=0.26\%$		
		Resistance		(0.01~100)k $\Omega$ , (1kHz)	$U_{rel}=0.26\%$		
2	*Capacitors	Capacitance	Verification Regulation of Standard Capacitors JJG 183	0.0001 $\mu F$ , 0.001 $\mu F$ , 0.01 $\mu F$ , 0.1 $\mu F$ , 1 $\mu F$ , (1kHz)	$U_{rel}=0.26\%$		
3	*Inductors	Inductance	Verification Regulation of Standard Inductors JJG 726	1mH, 10mH, 100mH, (1kHz)	$U_{rel}=0.26\%$		
4	*Oscilloscope	Vertical deviation	Verification Regulation of Analogue Oscilloscope JJG 262, Calibration Specification	1mV~20V	$U_{rel}=0.58\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Scanning Time	for Digital Storage Oscilloscope JJF 1057	2ns~50s	$U_{rel}=0.36\%$		
5	*Function Generators	Voltage	Verification Regulation of Function Generators JJG 840	1mV~20V	$U_{rel}=0.7\%$		
		Frequency		1Hz~3GHz	$U_{rel}=1 \times 10^{-5}$		
6	A.C.Resistance Boxes	Resistance	Calibration Specification for A.C. Resistance Boxes JJF 1636	(0.01~1)Ω,(1kHz)	$U_{rel}=0.5\%$		
				(1~100)Ω,(1kHz)	$U_{rel}=0.3\%$		
				(0.1~100)kΩ,(1kHz)	$U_{rel}=0.2\%$		
时间和频率测量仪器							
1	Mechanical stopwatches	Time	Verification Regulation of Stopwatches JJG 237	(0.1~3600)s	$U=0.1s(\text{division } 0.1s)$		
2	Electronic stopwatches	Time	Verification Regulation of Stopwatches JJG 237	(0~24)h	$U= (0.01\sim 0.03) s$		
光学测量仪器							
1	Abbe Refractometer	Refractive Index	V. R. of Abbe Refractometer JJG 625	1.47~1.68	$U=6 \times 10^{-5}$		
2	*Standard Light Sources Boxes	Illuminance	C. S. for Standard Light Sources Boxes JJF(Fangzhi)055	(50~3000)lx	$U_{rel}=9\%$		
		Color Temperature		(2000~9000)K	$U=116K$		
3	*Clarity Test Equipment	Illuminance	C. S. for Clarity Test Equipment JJF 1287	(1000~4000)lx	$U_{rel}=12\%$		
4	*Colorimeters and Color Difference Meters	Color	V. R. of Colorimeters and Color Difference Meters JJG 595	Y:(0~100)	$U=1.0$		
				x,y All color gamut	$U=0.008$		
5	*Whiteness Meter	Whiteness	V. R. of the Whiteness Meter JJG 512	0~100	$U=2.0$		

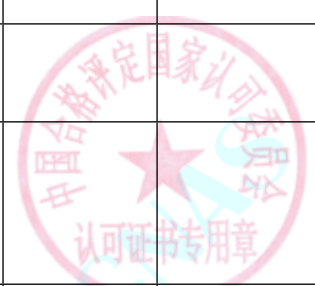


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
6	*Hazemeter	Hazemeter	C. S. for Hazemeter JJF 1303	0.1~30	U=0.4		
		Transmittance		0~1	U=0.010		
7	*Specular Gloss Meters	Gloss	V. R. of Specular Gloss Meters and Gloss Plates JJG 696	(0~100)GU	1.8GU		
化学测量仪器 <span style="float: right;">SCHEDULE OF ACCREDITATION CERTIFICATE</span>							
1	*Gas Chromatographs	Detection limit	Verification Regulation of Gas Chromatographs JJG 700	NPD ≤ 5pg/s(N); NPD ≤ 10pg/s(P);	U <sub>rel</sub> =5%		
				FID: ≤ 0.5 ng/s	U <sub>rel</sub> =6.2%		
				ECD: ≤ 5 pg/mL	U <sub>rel</sub> =5%		
				FPD: ≤ 0.5 ng/s(S), ≤ 0.1 ng/s (P)	U <sub>rel</sub> =5.5%		
		Sensitivity		TCD: ≥ 800mV · mL/mg	U <sub>rel</sub> =5%		
2	*Verification Regulation of Gel Permeation Chromatographs	formula weight	Verification Regulation of Gel Permeation Chromatographs JJG 342	Inorganic phase : (10 <sup>4</sup> ~10 <sup>6</sup> )g/mol	U <sub>rel</sub> =14%		
				organic phase : (10 <sup>3</sup> ~10 <sup>6</sup> )g/mol	U <sub>rel</sub> =11%		
3	*Thin Layer Chromatography Scanners	Linear error	Calibration Specification for Thin Layer Chromatography Scanners JJF 1712	≤ 0.003mg/mL	U=0.0020mg/mL		
4	Verification Regulation of Wood Moisture Content Measuring Meters	Moisture content	Verification Regulation of Wood Moisture Content Measuring Meters JJG 986	(6~28) %	U=1.0%		
5	*Thermogravimetric moisture meters	Mass	Verification regulation of Thermogravimetric Moisture	1mg/division:(0~200)g	U=(0.8~4)mg		

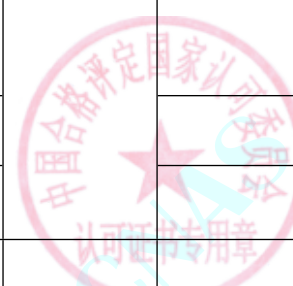


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			Meters JJG 658	0.01g/division:(0~200)g	U=(0.02~0.03)g		
		Moisture content		(0.01~99.99) %	U=0.10%		
6	*Melting-point Measurement Instrument	Melting-point	Verification Regulation of Melting-point Measurement Instruments JJG 701	(40~300)°C	U=0.24°C	Except for linear temperature rate error	
7	*Laboratory pH Meters	pH	Verification Regulation of Laboratory pH Meters JJG 119	Electrometer:0~14 Instrument:0~14	U=0.001 U=0.02	Except for pH of Instrument	
8	*Ultraviolet, Visible, Near-Infrared Spectrophotometers	Wavelength	Verification Regulation of Ultraviolet, Visible, Near-Infrared Spectrophotometers JJG 178	(190~900)nm	U=0.7nm		
				(900~2600)nm	U=1.5nm		
		Transmission Ratio		0.1~100%	U=0.6%		
9	*Liquid Chromatograph	Minimum Detection Concentration	Verification Regulation of Liquid Chromatographs JJG 705	Ultraviolet, Visible Detector: ≤5 × 10 <sup>-8</sup> g/mL	U <sub>rel</sub> =5.1%		
				Diode Array Detector: ≤5 × 10 <sup>-8</sup> g/mL	U <sub>rel</sub> =5.1%		
				Evaporative Light-scattering Detector: ≤5 × 10 <sup>-6</sup> g/mL	U <sub>rel</sub> =6.4%		
				Refractive Index Detector: ≤5 × 10 <sup>-6</sup> g/mL	U <sub>rel</sub> =6.2%		
				Fluorescence Detector: ≤5 × 10 <sup>-9</sup> g/mL	U <sub>rel</sub> =5.4%		
10	*Electrolytic Conductivity Meter	Conductivity	Verification Regulation of Electrolytic Conductivity Meters JJG 376	Electronic Unit:(0.05~1) μ S/cm	U <sub>rel</sub> =1.2%		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Electronic Unit:(1~2×10 <sup>5</sup> ) μ S/cm	U <sub>rel</sub> =0.3%		
				Instrument:(100~1500) μs/cm	U <sub>rel</sub> =0.4%		
11	*Quadrupole Inductively Coupled Plasma Mass Spectrometer	Detection Limit	Calibration Specification for Quadrupole Inductively Coupled Plasma Mass Spectrometers JJF 1159	Be: ≤30ng/L	U=0.3 ng/L		
				In: ≤10ng/L	U=0.1 ng/L		
				Bi: ≤10ng/L	U=0.3 ng/L		
12	*Liquid Chromatography-Mass Spectrometer	Signal-noise Ratio	Calibration Specification for Liquid Chromatography-Mass Spectrometers JJF 1317	≥10:1	U <sub>rel</sub> =11%		
13	*Gas Chromatography-Mass Spectrometries	Signal-noise Ratio	Calibration Specification for Gas Chromatography-Mass Spectrometries JJF 1164	≥10:1	U <sub>rel</sub> =6.4%		
				≥10:1	U <sub>rel</sub> =6.8%		
				≥10:1	U <sub>rel</sub> =7.2%		
14	*Ion Chromatograph	Minimum Detection Concentration	Verification Regulation of Ion Chromatographs JJG 823	Conductivity Detector(Cl <sup>-</sup> ): ≤0.02 μ g/mL	U <sub>rel</sub> =5.8%		
				Conductivity Detector(Li <sup>+</sup> ): ≤0.02 μ g/mL	U <sub>rel</sub> =5.8%		
				UV-vis detector : ≤0.02 μ g/mL	U <sub>rel</sub> =10%		
				Electrochemical detector: ≤0.02 μ g/mL	U <sub>rel</sub> =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		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Ni: $\leq 0.03\text{mg/L}$	$U=0.007\text{ mg/L}$		
				Mn、Ba: $\leq 0.005\text{mg/L}$	$U=0.001\text{ mg/L}$		
16	Air Sampler	Flow	V. R. of Air Samplers JJG 956	(0.1~1.0)L/min	$U_{\text{rel}}=1.2\%$		
				(>1.0~5.0)L/min	$U_{\text{rel}}=1.3\%$		
				(>5~20)L/min	$U_{\text{rel}}=1.5\%$		
		Time		(0~10)h	$U=0.06\text{s}$		
17	Dust Sampler	Flow	V. R. of Dust Sampler JJG 520	(0.1~1.0)L/min	$U_{\text{rel}}=1.2\%$		
				(>1.0~5.0)L/min	$U_{\text{rel}}=1.3\%$		
				(>5~20)L/min	$U_{\text{rel}}=1.5\%$		
		Time		(0~10)h	$U=0.06\text{s}$		
18	*Polarimeter and Polarimetric Saccharimeter	Optical Rotation	Verification Regulation of Polarimeter and Polarimetric Saccharimeters JJG 536	$(-45\sim 45)^{\circ}$	$U=0.003^{\circ}$		
		Sugar Degree		$(-20\sim 105)^{\circ} Z$	$U=0.04^{\circ} Z$		
19	*Chemical Oxygen Demand (COD) Meter	Concentration	Verification Regulation of Chemical Oxygen Demand (COD) Meters JJG 975	Type A: (50~1000)mg/L	$U_{\text{rel}}=4\%$		
		Temperature		(100~200) °C	$U=0.9^{\circ}\text{C}$		
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: $\leq 0.02\mu\text{g/mL}$	$U=0.004\mu\text{g/mL}$		
				Cd: $\leq 4\text{pg}$	$U=0.3\text{ pg}$		



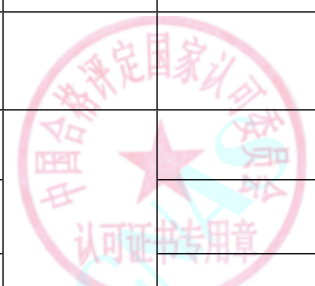
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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
22	*Automatic Potentiometric Titrator	Potential	Verification Regulation for Automatic Potentiometric Titrators JJG 814	(-2000~2000)mV	$U=0.3\text{mV}$		
23	*Total suspended particulates sampler	Flow	V. R. of Total Suspended Particulates Sampler JJG 943	(1~1200)L/min	$U_{\text{rel}}=1.7\%$		
24	*Samplers for Stack Dust	Flow	V. R. of Samplers for Stack Dust JJG 680	(0.1~60)L/min	$U_{\text{rel}}=1.5\%$		
25	Rotation Viscometer	Dynamic viscosity	Verification Regulation of Rotational Viscometers JJG 1002	(1~10 <sup>5</sup> )mPa·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 :(0.1~1000)mg/L	$U_{\text{rel}}=2.4\%$		
				Inorganic carbon :(0.1~1000)mg/L	$U_{\text{rel}}=2.2\%$		
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	Efflux time	Verification Regulation of Flow Cup Viscometers JJG 743	(20~100)s	$U_{\text{rel}}=2.4\%$		
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	$U_{\text{rel}}=4.0\%$		
				Total nitrogen: (0.1~2)mg/L	$U=0.04\text{mg/L}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Total nitrogen: (>2~100)mg/L	$U_{rel}=3.5\%$		
31	*Alarmer Detectors of Combustible Gas	Concentration	V. R. of Alarmer Detectors of Combustible Gas JIG 693	(0.1~100)%LEL	$U=1.5\%FS$		
32	*Carbon monoxide Infrared Gas Analyzer	Concentration	V. R. of Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer JIG 635	(0.1~2000) $\mu$ mol/mol	$U_{rel}=2\%$		
33	*Carbon Dioxide Infrared Gas Analyzer	Concentration	V. R. of Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer JIG 635	(0.1~0.5)%	$U_{rel}=3\%$		
34	*Paramagnetic Oxygen Analyzer	Concentration	V. R. of Paramagnetic Oxygen Analyzer JIG 662	(0.1~24)%	$U_{rel}=3\%$		
35	*Electrochemical Oxygen Meter	Concentration	V. R. of Electrochemical Oxygen Meter JIG 365	(0.1~24)%	$U_{rel}=3\%$		
36	*Micro Oxygen Analyzers	Concentration	V. R. of Micro Oxygen Analyzers JIG 945	(1~10) $\mu$ mol/mol	$U_{rel}=4\%$		
				(>10~1000) $\mu$ mol/mol	$U_{rel}=3\%$		
37	*Sulfur Hydrogen Gas Detectors	Concentration	V. R. of Sulfur Hydrogen Gas Detectors JIG 695	(0.1~100) $\mu$ mol/mol	$U_{rel}=3\%$		
38	*Sulfur Dioxide Gas Detectors	Concentration	V. R. of Sulfur Dioxide Gas Detectors JIG 551	(0.1~2000) $\mu$ mol/mol	$U_{rel}=3\%$		
39	*Carbon Monoxide Detectors	Concentration	V. R. of Carbon Monoxide Detectors JIG 915	(0.1~2000) $\mu$ mol/mol	$U_{rel}=3\%$		
40	*Ammonia Gas Detectors	Concentration	V. R. of Ammonia Gas Detectors JIG 1105	(10~100) $\mu$ mol/mol	$U_{rel}=3\%$		
41	*Air biological samplers	Flow	C. S. of Air biological samplers JJF (Su) 188	(1~100)L/min	$U_{rel}=1.5\%$		

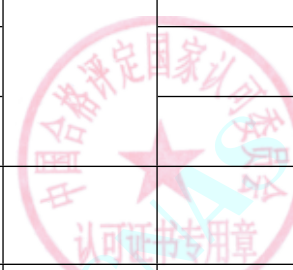


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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
42	*Alarmer Detectors of Benzene	Concentration	C.S. for Alarmer Detectors of Benzene JJF 1674	(0.1~100) μ mol/mol	$U_{rel}=5\%$		
43	*Chlorine Alarm Detectors	Concentration	C.S. for Chlorine Alarm Detectors JJF 1433	(0.1~100) μ mol/mol	$U_{rel}=4\%$		
44	*The Alarmer Detector of Sulfur Hexafluoride	Concentration	C.S. for the Alarmer Detector of Sulfur Hexafluoride JJF 1263	(1~1000) μ mol/mol	$U_{rel}=3\%$		
45	*Volatile Organic Compounds Photo Ionization Detectors	Concentration	C.S. for Volatile Organic Compounds Photo Ionization Detectors JJF 1172	(0.1~2000) μ mol/mol	$U_{rel}=3\%$		
46	*Flue Gas Analyzers	Concentration	V. R. of Flue Gas Analyzers JJG 968	SO <sub>2</sub> :(0.1~2000) μ mol/mol	$U_{rel}=3\%$		
				CO:(0.1~2000) μ mol/mol	$U_{rel}=3\%$		
				O <sub>2</sub> :(0.1~24)%	$U_{rel}=3\%$		
				NO:(0.1~2000) μ mol/mol	$U_{rel}=3\%$		
47	*Ammonia Nitrogen for Water Quality	Concentration	Verification Regulation of Ammonia-Nitrogen for Automatic Analyzers JJG 631	Tpye A: (0.05~2)mg/L	$U=0.05\text{mg/L}$		
				Tpye A: (>2~100)mg/L	$U_{rel}=4.0\%$		
				Tpye B: (0.05~100)mg/L	$U_{rel}=3.5\%$		
48	*Extrusion Plastometer	Meltflow velocity	Verification Regulation for Extrusion Plastometer JJG 878	(1~5)g/10min	$U_{rel}=4\%$		
49	*Flame Photometer	Detection limit	Verification Regulation of Flame Photometer JJG 630	K: ≤0.004mmol/L	$U=0.0015\text{mmol/L}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Na: ≤0.008mmol/L	U=0.0017mmol/L		
50	*Phosphate Analyzers	Concentration	Calibration Specification for Phosphate Analyzers JJF 1567	(1~100)μg/mL	U <sub>rel</sub> =1.8%		
51	Turbidimeters	Turbidity	Verification Regulation of Turbidimeters JJG 880	(0.1~400)NTU	U <sub>rel</sub> =3.3%		
52	*One-line Turbidimeters	Turbidity	Verification Regulation of On-Line Turbidimeters JJG (Zhe) 105	(0.1~400)NTU	U <sub>rel</sub> =3.3%		
53	*On-line pH Meters	pH	Calibration Specification for On-line pH Meters JJF 1547	Electrometer: 0~14	U=0.001		
				Instrument: 0~14	U=0.02		
54	*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 <sub>rel</sub> =3.4%		
55	*Residual Chlorine Meters	Concentration	Calibration Specification for Residual Chlorine Meters JJF 1609	(0.01~50)mg/L	U <sub>rel</sub> =3.2%		
56	Routine Capillary Viscometer	Motion viscosity	Verification Regulation of Routine Capillary Viscometer JJG 155	(1~105)mm <sup>2</sup> /s	U <sub>rel</sub> =0.7%		
57	*Laboratory Ion meters	pX	Verification Regulation of Laboratory Ion meters JJG 757	Electrometer: 0~14	U=0.005		
		Potential		(-2000~2000)mV	U=0.4mV		
58	Dissolved oxygen meter	Concentration	Verification Regulation of Dissolved Oxygen Meters JJG 291	(0.1~20)mg/L	U=0.2mg/L		

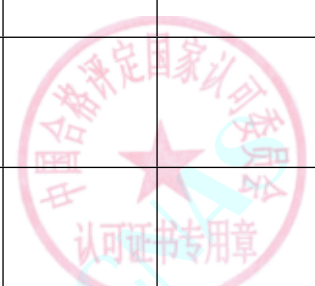


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
59	*Silicate Analyzers	Concentration	Calibration Specification for Silicate Analyzers JJF 1539	(0.1~100)mg/L	$U_{rel}=2.4\%$		
60	*Analyzers for Oil Content in Water	Concentration	Verification Regulation of Analyzers for Oil Content in Water JJG 950	(0.1~10)mg/L	$U_{rel}=0.4\text{mg/L}$		
				(>10~100)mg/L	$U_{rel}=3.6\%$		
61	*Particulate Analyzer	Particle count	C. S. for Particulate Analyzer JJF 1290	(10~100000)pieces/mL	$U_{rel}=5\%$		
62	*Static Light Scattering Particle Size Analyzers	Particle size	C. S. for Static Light Scattering Particle Size Analyzers JJF 1211	(1~20) μ m	$U_{rel}=5\%$		
				(>20~120) μ m	$U_{rel}=4\%$		
63	*Energy Dispersive X-Ray Fluorescence	Detection limit	Calibration Specification for Energy Dispersive X-Ray Fluorescence Spectrometers JJF (Min) 1047	≤40mg/kg	$U=8\text{mg/kg}$		
64	*Fourier Transform Infrared Spectrometers	Wave number	Calibration Specification for Fourier Transform Infrared Spectrometers JJF 1319	(400~4000)cm <sup>-1</sup>	$U=0.1\text{cm}^{-1}$		
65	*Mercury Analyzers	Detection limit	Verification Regulation of Mercury Analyzers JJG 548	Absorption type: ≤ 1.0ng/mL	$U=0.4\text{ng/mL}$		
				Fluorescence type: ≤ 0.1ng/m	$U=0.04\text{ng/mL}$		
66	*Water Quality On-line Analyzers of Heavy Metals	Concentration	Calibration Specification for Water Quality On-line Analyzers of Heavy Metals JJF 1565	(0.01~100)mg/L	$U_{rel}=4\%$		
67	*Karl Fischer Coulometry Titration	Moisture content	Verification Regulation of Instrument for KF Coulometry Titration JJG 1044	(10~5000) μ g	$U_{rel}=2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
68	*Karl Fischer Volumetric Titration for Water Content	Moisture content	Verification Regulation of Karl Fischer Volumetric Titration for Water Content JJG 1154	1mg~20mg	$U_{rel}=1.5\%$		
69	*Water Quality Synthetical Analyse Instrument	pH	Verification Regulation for Water-Quality Synthetical Analyse Instrument JJG 715	Electrometer:0~14	$U=0.001$		
		Dissolved oxygen		Instrument:0~14	$U=0.02$		
				(0.1~20)mg/L	$U=0.03\text{mg/L}$		
		Electrical conductivity		Electrometer:(0.05~10 <sup>5</sup> ) $\mu\text{ S/cm}$	$U=0.1\%\text{FS}$		
				Instrument:(0.05~10 <sup>5</sup> ) $\mu\text{ S/cm}$	$U=0.4\%\text{FS}$		
		Turbidity		(0.1~1000)NTU	$U_{rel}=3.6\%$		
Potential	(-1000~+1000)mV	$U=0.1\text{mV}$					
70	*Nitrogen Analyzer	Nitrogen content	Calibration Specification for Nitrogen Analyzer JJF (Ji) 109	(10~50)%	$U_{rel}=4.4\%$		
		Temperature		(125~400) $^{\circ}\text{C}$	$U=1.5^{\circ}\text{C}$		
71	Airborne Particle Counter	Concentration	C. S. for Airborne Particle Counter JJF 1190	(1000~100000)Pieces/28.3L	$U_{rel}=16\%$		
		Particle size distribution		(0.1~10) $\mu\text{ m}$	$U_{rel}=12\%$		
72	*The Differential Scanning Calorimeters	Heat value	Verification Regulation of the Differential Scanning Calorimeters JJG 936	(20~100)J/g	$U_{rel}=2.0\%$		
		Temperature		(120~450) $^{\circ}\text{C}$	$U=0.9^{\circ}\text{C}$		
73	*Thermogravimetric Analyzers	Temperature	Verification Regulation for Thermogravimetric Analyzers JJG 1135	Curie : (150~800) $^{\circ}\text{C}$	$U=2.1^{\circ}\text{C}$		
				Melting : (150~500) $^{\circ}\text{C}$	$U=(0.7\sim1.5)^{\circ}\text{C}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Mass		(1~20)mg	$U=(0.008\sim0.05)$ mg		
74	*Bomb Calorimeters	Calorific Value	Verification Regulation of Bomb Calorimeters JJG 672	(26430~26490)J/g	$U=45$ J/g		
75	*Water Colorimeter	Chroma	Calibration Specification for Water Colorimeters JJF 1689	Digital display: (1~70)PCU Visual: (1~70)PCU	(1~2)PCU (2~9)PCU		
76	*Polymerase Chain Reaction Analyzers	Temperature	Calibration Specification for Polymerase Chain Reaction Analyzers JJF 1527	(10~100)°C	$U=(0.4\sim1.0)$ °C	Except for sample indication error and sample linearity	
77	*Liquid Chromatograph-Atomic Fluorescence Spectrometers	Detection limit	Verification Regulation of Liquid Chromatograph-Atomic Fluorescence Spectrometers JJG 1151	Monomethylarsonic: < 0.7ng Dimethyl arsenic: < 0.7ng As <sup>5+</sup> : < 1.0ng	$U=0.08$ ng $U=0.06$ ng $U=0.10$ ng		
78	*Osmometers	Osmolarity	Verification Regulation of Osmometers JJG 1089	(1~400)mOsmol/kg (>400~700)mOsmol/kg	$U=1.8$ mOsmol/kg $U_{rel}=0.9\%$		
79	*Elemental Analyzers for C、H、N	Content	Calibration Specification for Elemental Analyzers JJF 1321	C:(68~80)% H:(1~50)% N:(0.8~2)%	$U=1.0\%$ $U=2.3\%$ $U=2.2\%$		
80	*Raman Spectrometers	Shift	Calibration Specification for Raman Spectrometers JJF 1544	(400~800)cm <sup>-1</sup>	$U=3.0$ cm <sup>-1</sup>		
81	*Fluorescence Spectrophotometer	Detection limit	Verification Regulation of Fluorescence	Class A: $\leq 5 \times 10^{-10}$ g/mL	$U=2.9 \times 10^{-10}$ g/mL		

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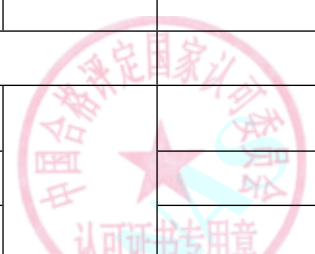
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
			Spectrophotometer JJG 537	Class B: $\leq 1 \times 10^{-8}$ g/mL	$U=6 \times 10^{-9}$ g/mL		
82	*Open/Closed Cup Flash Point Testers	Temperature of Flash Point	Calibration Specification for Open/Closed Cup Flash Point Testers JJF 1384	Closed Cup : (18~300) °C Open Cup : (18~300) °C	$U=(3.2 \sim 5.0)$ °C $U=(6.1 \sim 8.5)$ °C		
83	*Flow Analyzers with Spectrophotography	Detection limit	Calibration Specification for Flow Analyzers with Spectrophotography JJF 1568	Cyanide: $\leq 0.002$ mg/L Volatile phenol in water: $\leq 0.002$ mg/L Hexavalent chromium: $\leq 0.004$ mg/L Sulphide: $\leq 0.005$ mg/L Total phosphorus: $\leq 0.01$ mg/L Total nitrogen: $\leq 0.04$ mg/L Ammonia-nitrogen: $\leq 0.04$ mg/L Anionic surfactant: $\leq 0.05$ mg/L	$U_{rel}=25\%$ $U_{rel}=25\%$ $U_{rel}=25\%$ $U_{rel}=25\%$ $U_{rel}=25\%$ $U_{rel}=25\%$ $U_{rel}=25\%$ $U_{rel}=25\%$		
纺织、皮革专用测量仪器(含鞋类检测仪器)							
1	*Textile Dryer of the Rotary Tumble	Rotating velocity Temperature Length	Calibration Specification for Textile Dryer of the Rotary Tumble JJF (Textile)072	(0~60)r/min (0~100)°C (50~700)mm	$U=0.5r/min$ $U=2.0$ °C $U=0.2$ mm		
2	*Fabric Flat-Rubbing Tester	Rotating velocity	Calibration Specification for Fabric Flat-Rubbing Tester JJF (Textile)036	(1~60)r/min	$U_{rel}=0.2\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Mass		(0.5~4000)g	U=0.6g		
		Length		(0~10)mm	U=0.02mm		
3	*Scorch and Sublimation Tester	Length	Calibration Specification for Scorch and Sublimation Tester JJF (Textile)029	(0~200)mm	U=(0.1~0.3)mm		
		Temperature		(50~200)°C	U=0.8°C		
		Force		(1~20)N	U <sub>rel</sub> =0.2%		
4	*Fibre Strength Tester	Force	Calibration Specification for Fibre Strength Tester JJF (Textile) 016	(1~200)cN	U <sub>rel</sub> =0.4%		
5	*Pendulum Tear Instruments	Force	Calibration Specification for Pendulum Tear Instruments JJF 1553	(0.05~1000)N	U <sub>rel</sub> =0.5%		
		Length		(0~300)mm	U=0.06mm		
6	*Rotating Cylindrical Drum Abrasion Machine	Length	C.S for Rotating Cylindrical Drum Abrasion Machine JJF (Min) 1067	(50~400)mm	U=0.2mm		
		Rotating velocity		(20~60)r/min	U <sub>rel</sub> =0.5%		
		Mass		(1~20)N	U <sub>rel</sub> =0.4%		
		Time		(100~150)s	U=0.2s		
		Angle		(1~4)°	U=0.3°		
7	*Combustion Tester	Length	Calibration Specification for Vertical Combustion Tester JJF (Textile) 068	(0~1000)mm	U=0.5mm		
		Flame height		(0~100)mm	U=0.1mm		
		Time		0.1s~1h	U=0.2s		
		Mass		1g~1000g	U <sub>rel</sub> =0.3%		
		Angle		(0~320)°	U=0.2°		

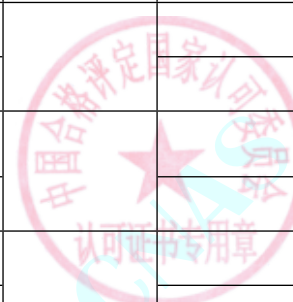


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
8	*Fabric Shrinkage Testers	Rotating velocity	Calibration Specification for Fabric Shrinkage Testers JJF (Textile)052	(10~600)r/min	$U_{rel}=0.2\%$		
		Temperature		(10~100)°C	$U=0.3^{\circ}\text{C}$		
		Time		(10~60)min	$U=0.05\text{min}$		
9	*Fabrics Bursting Tester	Length	Calibration Specification for Fabrics Bursting Tester JJF (Textile) 048	(10~300) mm	$U=(0.02\sim0.05)\text{mm}$		
		Pressure		(0.1~10)MPa	$U_{rel}=0.3\%$		
		Time		(55~65)s	$U=0.2\text{s}$		
10	*Corlour fastness to Friction Testers	Rotating velocity	Calibration Specification for Corlour fastness to Friction Testers JJF (Textile)027	(50~70)r/min	$U_{rel}=0.2\%$		
		Length		(0~200)mm	$U=0.03\text{mm}$		
		Force		(0~20)N	$U=0.02\text{N}$		
11	*Fuzzing and Pilling Tester	Rotating velocity	Calibration Specification for Fuzzing and Pilling Tester JJF (Textile) 053	(0~70)r/min	$U=0.3\text{r/min}$		
		Length		(0~300)mm	$U=0.05\text{mm}$		
		Mass		(40~60)g	$U=0.06\text{g}$		
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 tester	Rotating velocity	Calibration Specification for Yarn Abrasion Measuring Instrument JJF (Textile) 050	(10~60)r/min	$U_{rel}=0.2\%$		
		Length		(60~80)mm	$U=0.5\text{mm}$		
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		(0~5)m	$U=(2\sim5)\text{mm}$		




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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
15	*Light and Weather Fastness Testers	Rotating velocity	Calibration Specification for Light and Weather Fastness Testers JJF (Textile) 051	(0.1~60)r/min	$U_{rel}=0.5\%$		
		Time		(1~3600)s	$U=1s$		
		Temperature		(0~100)°C	$U=0.4^{\circ}C$		
16	*Fabrics Mace Snagging Resistance Tester	Mass	Calibration Specification for Fabrics Mace Snagging Resistance Tester JJF (Textile)076	(0~200)g	$U=0.1g$		
		Rotating velocity		(0~70)r/min	$U=0.3r/min$		
		Length		(0~130)mm	$U=(0.04\sim0.5)mm$		
17	*Abrasion Resistance Instruments	Length	C.S for Abrasion Resistance Instruments JJF (Zhe) 1070	(0~40)mm	$U=0.01mm$		
		Mass		(0~2000)g	$U=1g$		
		Rotating velocity		(100~300)r/min	$U=0.5r/min$		
		Time		(100~1200)s	$U=1s$		
18	*Peeling Strength Instruments	Length	Calibration Specification for Peeling Strength Instruments JJF (Zhe)1071	(0~300)mm	$U=0.03mm$		
		Force		(0.1~1000)N	$U_{rel}=0.4\%$		
		Speed		(0~30)mm/min	$U=0.2mm/min$		
19	*Capillary Effect Tester	Length	Calibration Specification for Capillary Effect Tester JJF (Textile) 056	(0~200) mm	$U=0.04mm$		
		Temperature		(10~30)°C	$U=0.3^{\circ}C$		
		Time		(0~30)min	$U=0.2s$		
		Mass		(0~10)g	$U=0.06g$		
20	*Impact Testing Machines For Footwear	Length	Calibration Specification for Impact Testing Machines For Footwear JJF (Min)1065	(0~200)mm	$U=0.05mm$		





№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ( $k=2$ )	Note	Effective Date
		Length		(0~1000)mm	$U=0.1\text{mm}$		
		Moment		(0~50)Nm	$U=0.05\text{Nm}$		
		Force		(0.1~100)N	$U_{\text{rel}}=0.4\%$		
21	*Tester for Down-proof Properties of Fabrics (Rubbing Test)	Length	Calibration Specification of Tester for Down-proof Properties of Fabrics (Rubbing Test) JJF (Textile)064	(0~300)mm	$U=0.06\text{mm}$		
		Rotating velocity		(0~500)r/min	$U=0.5\text{r/min}$		
22	*Textile Yarn Length Tester	Length	Calibration Specification for Textile Yarn Length Tester JJF (Textile) 021	(0~1000) mm	$U=0.08\text{mm}$		
		Force		(0.1~200)cN	$U_{\text{rel}}=1.4\%$		
23	*Fiber Diameter Analyzer	Length	Calibration Specification for Fiber Diameter Analyzer JJF (Textile) 065	(0~1000) $\mu\text{m}$	$U=0.8\ \mu\text{m}$		
24	*Zipper Closed Gently Slip Testers	Length	Calibration Specification for Zipper Closed Gently Slip Testers JJF (Zhe) 1114	(0~200) mm	$U=0.2\text{mm}$		
		Force		(0.1~50)N	$U_{\text{rel}}=0.3\%$		
		Speed		(1000~1500)mm/min	$U=10\text{mm/min}$		
25	*Electronic Fabric Strength Machines	Force	Calibration Specification for Electronic Fabric Strength Machines JJF (Textile) 062	(0.01~1000)N	$U_{\text{rel}}=0.4\%$		
		Speed		(0.1~500)mm/min	$U_{\text{rel}}=0.4\%$		
		Displacement		(0.1~1000)mm	$U_{\text{rel}}=0.2\%$		
26	*Eight-Basket Oven	Temperature	Calibration Specification for Eight-Basket Oven JJF (Textile)011	(0~300) $^{\circ}\text{C}$	$U=0.3^{\circ}\text{C}$		
		Time		(0~30)min	$U=0.05\text{min}$		
		Mass		(0~300)g	$U=0.6\text{g}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
27	*Fabrics Fuzzing and Pilling Tester	Length	Calibration Specification for Fabrics Fuzzing and Pilling Tester JJF (Textile)031	(0~200)mm	$U=(0.01\sim0.04)\text{mm}$		
		Rotating velocity		(0~100)r/min	$U=0.5\text{r/min}$		
		Force		(1~500)N	$U_{\text{rel}}=0.3\%$		
28	*Fabric Stiffness Tester	Length	Calibration Specification for Fabric Stiffness Tester JJF (Textile)054	(1~500)mm	$U=(0.02\sim0.04)\text{mm}$		
		Angle		(0.5~50)°	$U=0.2^\circ$		
29	*Color Fastness to Light Yellowing Tester	Temperature	Calibration Specification for Color Fastness to Light Yellowing Tester JJF (Textile)079	(0~150)°C	$U=0.4^\circ\text{C}$		
		Rotating velocity		(0.1~60)r/min	$U_{\text{rel}}=0.5\%$		
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 (Textile) 063	(0~50)°C	$U=0.6^\circ\text{C}$		
31	*Fabric's Water Impermeability Tester	Length	Calibration Specification for Fabric's Water Impermeability Tester JJF (Textile)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 (Textile) 026	(30~50)r/min	$U_{\text{rel}}=0.2\%$		
		Temperature		(10~100)°C	$U=0.3^\circ\text{C}$		
		Time		(10~60)min	$U=0.05\text{min}$		
33	*Wrap Reelers	Rotating velocity	Calibration Specification for Wrap Reelers JJF	(10~250)r/min	$U_{\text{rel}}=0.2\%$		

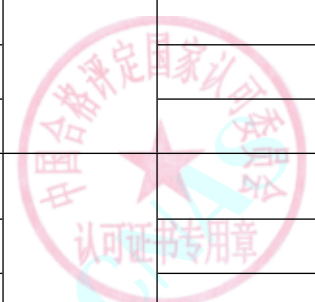


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Length	(Textile)019	(0~3)m	U=0.3mm		
		Force		0.01N~50N	U <sub>rel</sub> =0.4%		
		Time		(0~3600)s	U=0.2s		
34	*Fabric Thickness Instruments	Mass	Calibration Specification for Fabric Thickness Instruments JJF (Textile)020	(0.1~500)g	U=0.13g		
		Time		(0~180)s	U=0.3s		
		Force		(50~200)cN	U=0.2cN		
		Length		(0~10)mm	U=(2~30)μm		
35	*Circle Sample Cutters	Length	Calibration Specification for Circle Sample Cutters JJF(Textile)061	(0~120)mm	U=0.2mm		
36	*Traveling Counting Glasses	Length	Calibration Specification for Traveling Counting Glasses JJF(Textile)023	(0~50)mm	U=0.05mm		
37	*Textile Needle Detector	Length	Calibration Specification for Textile Needle Detector JJF (Textile)080	(0~2000)mm	U=2mm		
38	*Vertical Fabric Crease Recovery Tester	Angle	Calibration Specification for Vertical Fabric Crease Recovery Tester JJF (Textile) 032	(0~180)°	U=0.2°		
		Force		(5~20)N	U=0.015N		
		Time		(0.01~3600)s	U=0.2s		
39	*Yarn Twist Tester	Rotating velocity	Calibration Specification for Yarn Twist Tester JJF (Textile) 010	(1~1000)r/min	U <sub>rel</sub> =0.2 %		
		Length		(0~500)mm	U=0.1mm		
		Force		(0.1~500)cN	U <sub>rel</sub> =0.5%		

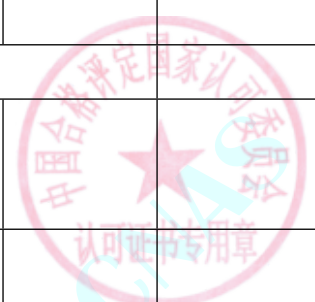


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
40	*Akron Abrasion Machine for Rubber	Force	Verification Regulation of Akron Abrasion Machine for Rubber JJG (Chemical Industry) 103	(1~100)N	$U_{rel}=0.4\%$		
		Rotating velocity		(1~300)r/min	$U_{rel}=0.2\%$		
		Angle		(5~35)°	$U=0.2^\circ$		
41	*Down Filling Power Tester	Length	Calibration Specification for Down Filling Power Tester JJF (Textile)074	(0~300)mm	$U=0.05\text{mm}$		
				(>300~600)mm	$U=0.3\text{mm}$		
42	*Perspiration Fastness Instruments	Length	Calibration Specification for Perspiration Fastness Instruments JJF (Textile)028	(0~300)mm	$U=(0.02\sim0.05)\text{mm}$		
		Force		(1~50)N	$U_{rel}=0.3\%$		
43	*Single Yarn Strength Machines	Force	Calibration Specification for Electronic Single Yarn Strength Machines JJF (Textile) 047	(1~2000)N	$U_{rel}=0.3\%$		
气象、海洋专用测量仪器							
1	Bucket Thermometers	Temperature	Verification Regulation of Bucket Thermometers JJG 289	(0~40)°C	$U=0.1^\circ\text{C}$		
造纸、纸张专用测量仪器							
1	*Alterable Compression Thickness Tester	Length	V.R of Alterable Compression Thickness Tester JJG (Light industry) 50.3	(0~3)mm	$U=1.3\ \mu\text{m}$		
2	*Thickness Tester for Corrugated Fibreboard	Length	V.R of Thickness Tester for Corrugated Fibreboard JJG (Light industry) 50.2	(0~20)mm	$U=0.01\text{mm}$		

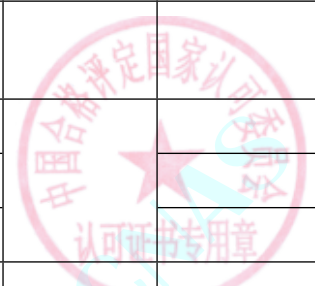


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
3	*Grammage Tester for Paper and Board	Mass	V.R of Grammage Tester for Paper and Board JJG (Light industry) 54.2	(1~50)g	U=0.004g		
4	*Tear Tester for Paper and Board	Length	V.R of Tear Tester for Paper and Board JJG (Light industry)63	(0~150)mm	U=0.05mm		
		Force		(1~100)N	U <sub>rel</sub> =0.5%		
5	*Absorption Tester for Paper and Board	Area	V.R of Absorption Tester for Paper and Board JJG (Light industry) 55	100cm <sup>2</sup>	U <sub>rel</sub> =0.08%		
		Length		200mm	U=0.05mm		
		Mass		10kg	U=0.05kg		
6	*Bursting Strength Tester for Paper and Board	Pressure	C.S for Bursting Strength Tester for Paper and Board JJF (Light industry) 116	(0~6)MPa	U=0.1%FS		
7	*Beating Degree Tester for Pulps	Time	V.R of Beating Degree Tester for Pulps JJG (Light industry) 53	(0~149)s	U=0.2s		
		Volume		(0~10)ml	U=0.2ml		
8	*Compression Strength Tester for Corrugated Box	Force	V.R of Compression Strength Tester for Corrugated Box JJG (Light industry) 115	(0.1~50)kN	U <sub>rel</sub> =0.4%		
		Speed		(0.1~60)mm/min	U <sub>rel</sub> =0.4%		
9	*Thickness Tester for Paper and Board	Length	V.R of Thickness Tester for Paper and Board JJG (Light industry) 50.1	(0~4)mm	U=1.3 μ m		
10	*MIT Type Folding Endurance Tester	Force	V.R of MIT Type Folding Endurance Tester JJG (Light industry) 59	(0.1~20)N	U <sub>rel</sub> =0.4%		
		Angle		(0~180)°	U=0.4°		
		frequency		(10~200)time/min	U <sub>rel</sub> =2%		
11	*Ink Absorbency Tester for Paper and Board	Speed	V.R of Ink Absorbency Tester for Paper and Board JJG (Light industry)68	(10~20) cm/min	U=0.3cm/min		
		Length		(0~200)mm	U=0.04mm		



No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Time		(0~60)min	U=0.5s		
医学专用测量仪器							
1	*Dry Block Digester	Temperature	V. R. of Dry Block Digester JJG (Yue) 029	(Indoor Temperature~ 200)°C	U=0.6°C		
		Time		(0~600)s	U=0.5s		
2	*Dissolution Testers	Temperature	C. S. for Dissolution Testers JJF (Zhe)1096	(0~50)°C	U=0.2°C		
		Rotating velocity		(1~300)r/min	U <sub>rel</sub> =1.6%		
3	*Electrolyte Analyzers	Concentration	V. R. for Electrolyte Analyzers JJG 1051	K <sup>+</sup> :(1.50~ 7.50)mmol/mol	U <sub>rel</sub> =2.4%		
				Na <sup>+</sup> :(100~ 180.0)mmol/mol	U <sub>rel</sub> =2.0%		
				CL <sup>-</sup> :(80.0~ 160.0)mol/mol	U <sub>rel</sub> =2.9%		
4	ELISA Analytical Instrument	Absorbance	V. R. of ELISA Analytical Instruments JJG 861	(0.0~2.0)A	U=0.01A		
		Wavelength		(400~630) nm	U=1.1 nm		
5	*Friability Surveymeter	Speed	V. R. for Friability Surveymeter JJF (Lu) 92	(20~200)r/min	U <sub>rel</sub> =1.6%		
		Length		(0~300)mm	U=0.3mm		
		Time		(10~300)s	U=0.7s		
6	*Antibiotics Potency Analyzers	Length	C. S. for Antibiotics Potency Analyzers JJF 1614	(0~22)mm	U=0.05mm	Only tube - disc instrument	
建筑、交通专用测量仪器							



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
1	*Coating Flexibility Testers	Length	Calibration Specification for Coating Flexibility Testers JJF (Petyifctin) 006	(0.5~25)mm	U=0.003mm		
2	*Drop Test Machine	Length	V.R of Drop Test Machine for Cement Sacks JJG (Meng) 013	(0~2000)mm	U=0.5mm		
3	*Mechanical Sieve Shaker	Frequency	Calibrating code for mechanical sieve shaker SL 411	(0~2000)time/min	U=1time/min		
		Length		(5~20)mm	U=0.1mm		
4	*Rapid Measuring Instrument for Chloride Ion of Concrete	Concentration	Verification Regulation of Rapid Measuring Instrument for Chloride Ion of Concrete JJG (Traffic) 134	(0.0001~0.100)mol/L	U <sub>rel</sub> =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°C		
		Length		(1~182)mm	U=0.06mm		
		Angle		(8~32)°	U=0.4°		
		Mass		(48~305)g	U=0.06g		
6	*Flow Time Tester for Fine Aggregate	Length	Verification Regulation of Flow Time Tester for Fine Aggregate JJG(Traffic) 109	(10~130)mm	U=0.03mm		
		Angle		(58~62)°	U=0.07°		
7	*Asphalt Mixture's Mixing Machine	Volume	Verification Regulation of Asphalt Mixture's Mixing Machine JJG(Traffic) 064	(10~20)L	U=0.05L		
		Rotating velocity		(48~85)r/min	U=0.9r/min		
		Temperature		(40~200)°C	U=0.5°C		
		Time		(1~999)s	U=0.3s		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
8	*Cement compression fixture	Length	Calibration Specification of Laboratory Instruments for Construction Engineering JJF(E) 10	(10~60)mm	U=0.05mm		
9	*Marshall Test Machine for Bituminous Mixtures	Length	Verification Regulation of Marshall Test Machine for Bituminous Mixtures JJG(Traffic) 066	(0.5~10)mm	U=0.01mm		
		Force		(5~50)kN	U <sub>rel</sub> =0.4%		
10	*Instrument for Steel Bar Gauge Length	Length	Verification Regulation of Instrument for Steel Bar Gauge Length JJG(Su) 67	(0~350)mm	U=0.05mm		
11	*Los Angeles Testing Machine	Rotating velocity	Verification Regulation of Los Angeles Testing Machine JJG(Traffic) 108	(30~33)r/min	U <sub>rel</sub> =0.2 %		
		Mass		(2450~5000)g	U=0.6g		
		Length		(90~720)mm	U=0.3mm		
12	*Benkelman Beam Pavement Deflectometer	Length	Verification Regulation of Benkelman Beam Pavement Deflectometer JJG(Traffic) 025	(8~202)mm	U=0.06mm		
13	Verticality Measuring Ruler	Perpendicularity	Calibration Specification for Construction Quality Tester Sets JJF 1110	(0~15)mm/2m	U=0.5mm/2m		
14	Inside and Outside Right Angle Detection Ruler	Perpendicularity	Calibration Specification for Construction Quality Tester Sets JJF 1110	(0~7)mm/150mm	U=0.5mm/150mm		
15	*Needle and Flake Gages	Length	Calibration Specification for Needle and Flake Gages JJF 1593	(4~90)mm	U=0.05mm		



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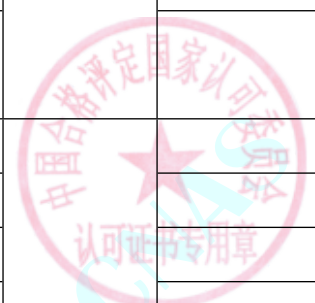
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
16	*Concrete Crack Width Instruments	Length	Calibration Specification for Concrete Crack Width and Depth Measuring Instruments JJF 1334	(0.01~10)mm	U=0.01mm		
17	*Concrete impermeable instrument	Length	Calibration Specification of Laboratory Instruments for Construction Engineering JJF(E) 10	(145~190)mm	U=0.05mm		
		Pressure		(0.1~4)MPa	U=0.02MPa		
18	*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		
19	*California Bearing Ratio Instrument	Force	Verification Regulation of California Bearing Ratio Instrument JJG(Traffic) 106	(0.1~50)kN	U <sub>rel</sub> =0.4%		
		Mass		(1245~1255)g	U=0.6g		
		Length		(45~55)mm	U=0.03mm		
		Speed		(1.00~1.25)mm/min	U=0.03mm/min		
20	*Sand-cone Density Apparatus	Length	Verification Regulation of Sand-cone Density Apparatus JJG(Traffic) 120	(1~460)mm	U=0.08mm		
21	Paint film Scriber	Length	Calibration Specification for Paint film Scriber JJF(Wan) 53	(0.5~3)mm	U=3 μ m		
22	*Compaction Instrument of Soil	Mass	Verification Regulation of Compaction Instrument of Soil JJG(Traffic) 058	(2490~4510)g	U=0.3g		
		Length		(295~455)mm	U=0.3mm		
				(45~55)mm	U=0.06mm		
		Length	Verification Regulation of	(35~500)mm	U=0.08mm		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Adhesion Performance of Retroreflective Sheeting	Mass	Measure for Adhesion Performance of Retroreflective Sheeting JIG(Traffic) 083	(795~805)g	U=0.6g		
24	*The Emulsified Bitumen Stability Test-tube	Length	Verification Regulation of The Emulsified Bitumen Stability Test-tube JIG(Traffic) 116	(1~181)mm (290~300)mm	U=0.05mm U=0.3mm		
25	*Apparatus for Determining Penetration of Bituminous Materials	Temperature	Calibration Specification for Apparatus for Determining Penetration of Bituminous Materials JJF 1208	(0~55)°C	U=0.2°C		
		Length		Displacement: (0~40)mm Standard needle: (0.1~1.1)mm	U=0.04mm U=0.01mm		
		Mass		(48~102)g	U=0.02g		
26	*Mortar delamination meter	Length	Calibration Specification of Laboratory Instruments for Construction Engineering JJF(E) 10	(95~205)mm	U=0.10mm		
27	*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 JIG(Traffic) 094	(6.8~7.2)L	U=2mL		
		Pressure		(0~0.25)MPa	U=0.7%FS		
28	*Asphalt Mixture Rut-depth Testing Instrument	Length	Calibration Specification for Asphalt Mixture Rut-depth Testing Instrument JJF(Zhe) 1094	Deformation: (0~30)mm	U=0.003mm		
		Length		(210~250)mm	U=0.2mm		
		Temperature		(58~62)°C	U=0.2°C		
		frequency		(40~44)t/min	U=0.2t/min		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Pressure		(0.6~0.8)MPa	U=0.01MPa		
29	*Mixer for Cement Test	Time	Verification Regulation of Cement Mortars Mixer JYG(Building materials) 102, Verification Regulation of Cement Mortar Mixer Complying with ISO 679 JYG(Building materials) 123, Verification Regulation of Mixer for Cement Paste JYG(Building materials) 104, Verification Regulation of Mixer For Cement Test JYG(Su) 42	(10~300)s	U=0.2s		
		Rotating velocity		(50~320)r/min	U <sub>rel</sub> =0.2%		
		Length		(1~300)mm	U=0.06mm		
30	*VeBe Consistometer	Amplitude	Verification Regulation of Consistency Testing Instrument for Concrete Mixing JYG(Su) 50	(0~1)mm	U=0.04mm		
		Frequency		(40~60)Hz	U <sub>rel</sub> =0.5%		
		Length		(1~300)mm	U=0.06mm		
31	*Boiling Testing Box for Soundness of the Portland Cement	Length	Verification Regulation for Boiling Testing Box for Soundness of the Portland Cement JYG(Building materials) 109	(8~420)mm	U=0.3mm		
		Power		(900~4400)W	U=2.4W		
		Time		(20~195)min	U=0.3min		
32	*Measurer for Resistance to Impact of Raised Pavement Markers	Length	Verification Regulation of Measurer for Resistance to Impact of Raised Pavement Markers JYG(Traffic) 080	(995~1005)mm	U=0.3mm		
		Mass		(995~1005)g	U=0.6g		



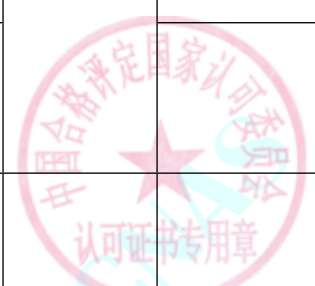
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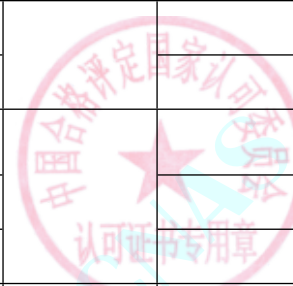
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
33	*Cutting tool	Length	Calibration Specification for Laboratory Instruments for Construction Engineering JJF(E) 10	(2~130)mm	U=0.05mm		
34	*Steel Bar Tarnish Measuring Instruments	Current	Calibration Specification for Steel Bar Tarnish Measuring Instruments JJF 1341	(-200~200)mA	U=0.2mA		
		Voltage		(-2000~2000)mV	U=1mV		
35	*Apparatus of Abrasion Resistance for Cement Mortar and Concrete	Force	V.R.of Apparatus of Abrasion Resistance for Cement Mortar and Concrete JJG (Traffic) 097	(50~500)N	U <sub>rel</sub> =0.3%		
		Rotating velocity		(10~650)r/min	U=0.8r/min		
		Revolution		(0~999)r	U=0.8r		
		Length		(1~70)mm	U=0.03mm		
36	*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=0.05mm		
		Mass		(445~455)g	U=0.6g		
37	*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 <sub>rel</sub> =0.1%		
		Voltage		(10~60)V	U <sub>rel</sub> =0.05%		
		Temperature		(4~96)°C	U=0.1°C		
38	*Annular Sword	Length	Calibration Specification for Laboratory Instruments for Construction Engineering JJF(E) 10	(18~85)mm	U=0.04mm		
	Instrument of	Length	Calibration Specification for Instrument of Testing Mortar-	(0~50)mm	U=0.05mm		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	strength by Penetration Resistance Method	Force	strength by Penetration Resistance Method JJF 1372	(780~820)N	$U_{rel}=0.4\%$		
40	*Testing Instrument for Sand Equivalent	Length	Verification Regulation of Test Instrument for Sand Equivalent JJG(Su) 44	(1~380)mm	$U=0.06\text{mm}$		
		Mass		(955~1005)g	$U=0.2\text{g}$		
		Frequency		(175~185)t/min	$U=0.2\text{t/min}$		
		Time		25s~35min	$U=0.2\text{s}$		
41	*Film hardness of pencil Scratch Test	Angle	Calibration Specification for Pencil Hardness Testers JJF(Petyifctin) 007	(40~50)°	$U=0.2^\circ$		
		Mass		(490~1050)g	$U=0.2\text{g}$		
42	Slope Ruler	Slope	Calibration Specification for Construction Quality Tester Sets JJF 1110	(0~30)mm/m	$U=0.2\text{mm/m}$		
43	*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	$U=0.06\text{mm}$		
44	*Pavement Structure Depth Detector	Length	Verification Regulation of Pavement Structure Depth Detector JJG(Su) 61	(1~500)mm	$U=0.05\text{mm}$		
		Capacity		(24.5~25.5)mL	$U=0.05\text{mL}$		
45	*Wet Track Abrasion Tester Asphalt Emulsion Slurry Mixture	Rotating velocity	Verification Regulation of Wet Track Abrasion Tester for Asphalt Emulsion Slurry Mixture JJG(Traffic) 090	(55~150)r/min	$U_{rel}=0.2\%$		
		Mass		(2200~2340)g	$U=0.3\text{g}$		
		Length		(1~185)mm	$U=0.06\text{mm}$		
46	*Cement Fineness Vacuum Sieving	Time	Calibration Specification for Cement Fineness Vacuum	(2~125)s	$U=0.3\text{s}$		



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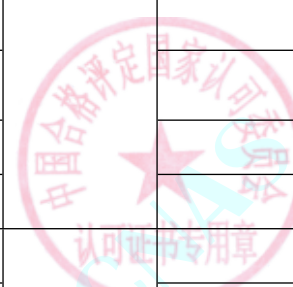
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Pressure	Sieving JJF(Min) 1055	(-80~-20)hPa	$U_{rel}=0.3\%$		
47	*Heat Distortion and Vicat Softening Temperature Apparatus	Temperature	Calibration Specification for Heat Distortion and Vicat Softening Temperature Apparatus JJF(Zhe) 1051	(40~300)°C	$U=0.4^{\circ}\text{C}$		
		Length		(0.5~1)mm	$U=0.01\text{mm}$		
		Mass		(1~5000)g	$U=0.3\text{g}$		
48	*Light Aggregate Cylinder	Length	Calibration Specification for Laboratory Instruments for Construction Engineering JJF(E) 10	(35~140)mm	$U=0.04\text{mm}$		
49	*Cement Mortar Specimen Jolting Tabler Complying	Length	Verification Regulation of Cement Mortar Specimen Jolting Tabler Complying JJG(Zhe) 115	(799~801)mm	$U=0.3\text{mm}$		
		Time		(55~65)s	$U=0.2\text{s}$		
		Mass		(13.5~14)kg	$U=0.02\text{kg}$		
50	*Consistency Tester for Asphalt Emulsion Slurry Mixture	Length	Verification Regulation of Consistency Tester for Asphalt Emulsion Slurry Mixture JJG(Traffic) 114	(1~235)mm	$U=0.05\text{mm}$		
51	*Apparatus of Fluidity of Cement Mortar	Time	Verification Regulation of Apparatus of Fluidity of Cement Mortar JJG(Building materials) 126,Verification Regulation of Flow Table for Determine Cement Mortar Fluidity JJG(Traffic) 096	(20~35)s	$U=0.2\text{s}$		
		Length		(1~300)mm	$U=0.06\text{mm}$		
		Mass		(3400~4600)g	$U=0.2\text{g}$		
52	*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	$U=0.5^{\circ}\text{C}$		
		Mass		(100~3000)g	$U=0.02\text{g}$		
		Length		(1~340)mm	$U=0.5\text{mm}$		



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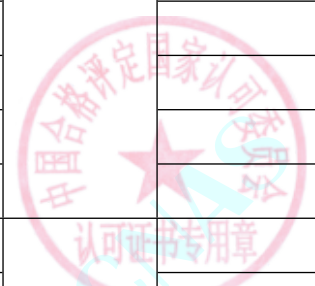
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Time		(1~25)min	U=0.2s		
53	The Standard testing Sieve of Cement Finess	Length	Calibration Specification for The Standard testing Sieve of Cement Finess JJF (Building materials) 106	(0.02~5)mm	U=2 μ m		
				(5~20)mm	U=0.03mm		
54	Diagonal measuring tape	Length	Calibration Specification for Construction Quality Tester Sets JJF 1110	(-5~+5)mm	U=0.2mm		
55	Wedge-Shape Filler Gauges	Length	Calibration Specification for Wedge-Shape Filler Gauges JJF 1548	(0~60) mm	U=11 μ m		
56	Grille screen	Length	Calibration Specification for Construction Quality Tester Sets JJF 1110	(0~240)mm	U=0.2mm		
57	Carbonization Testers	Length	Calibration Specification for Carbonization Testers JJF(Yu)162	(0~10)mm	U=0.10mm		
58	Lee Density Bottle	Capacity	Verification Regulation of Lee Density Bottles JJG (Traffic) 092	(1~24) mL	U <sub>rel</sub> =1.6%		
59	*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°C		
		Speed		(10~60)mm/min	U <sub>rel</sub> =0.2%		
60	*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		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
61	*Asphalt Centrifugal Extractor	Rotating velocity	Verification Regulation of Asphalt Centrifugal Extractor JIG(Traffic) 132	(2800~10000) r/min	$U_{rel}=0.2\%$		
		Length		(0~1)mm	$U=2 \mu m$		
62	*Slump Meter	Length	Verification Regulation of Consistency Testing Instrument for Concrete Mixing JIG(Su) 50	(1~300)mm	$U=0.06mm$		
63	*Asphalt Mixture's Marshall Compaction Test Apparatus	Length	Verification Regulation of Asphalt Mixture's Marshall Compaction Test Apparatus JIG(Traffic) 065	(48~154)mm	$U=0.06mm$		
		frequency		(50~60)t/min	$U=1t/min$		
		Mass		(0~30)kg	$U=1g$		
64	*Liquid & Plastic Limit Gauge	Angle	Verification Regulation of Liquid & Plastic Limit Gauge JIG (Traffic)069	(28~32)°	$U=4'$		
		Length		(0~50)mm	$U=0.03mm$		
		Mass		(74~102)g	$U=0.06g$		
		Time		(4~6)s	$U=0.2s$		
65	*Vibrator for Compacting Mortar Specimen	Amplitude	Verification Regulation of Vibrator for Compacting Mortar Specimen JIG 918	(0.8~0.9)mm	$U=0.03mm$		
		Mass		(2~6.5)kg	$U=0.03kg$		
		Frequency		(46.7~50)Hz	$U_{rel}=0.4\%$		
		Time		(3~125)s	$U=0.2s$		
		Length		(38~162)mm	$U=0.06mm$		
66	*Load Wheel Tester for Asphalt Emulsion Slurry	Length	Verification Regulation of Load Wheel Tester for Asphalt Emulsion Slurry	(0~160)mm	$U=0.06mm$		
				(375~385)mm	$U=0.2mm$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Mixture	Frequency	Mixture JJG(Traffic) 091	(40~50)t/min	$U=0.3t/min$		
		Mass		(50~60)kg	$U=0.1kg$		
67	*Testing Instrument for Sand Equivalent	Length	Verification Regulation of Testing Instrument for Crushing Value JJG(Su) 54	(10~155)mm	$U=0.05mm$		
68	*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	$U=0.06mm$		
		Length		(18~28)mm	$U=0.3mm$		
		Mass	(0.2~500)g	$U=0.02g$			
民航、航空专用测量仪器							
1	Ultrasonic Testing Blocks	Length	Calibration Specification for Blocks used in Ultrasonic Testing JJF 1487	(0~300)mm	$U=4 \mu m$		
		Angle		(0~180)°	$U=3'$		
电工电子电器专用测量仪器							
1	*A.C.Voltage Dip Test Generators	AC Voltage	Calibration Specification for Voltage Dips, Short Interruptions and Voltage Variations Test Generators JJF 1673	(0.1~240)V (50Hz, 60Hz)	$U_{rel}=0.6\%$		
		Duration Time		1ms~60s	$U_{rel}=3\%$		
		Interval Time		1ms~60s	$U_{rel}=3\%$		
		Phase Angle		(0~360)°	$U=2.5^\circ$		
2	*Voltage Probes of Oscilloscope	Voltage	Calibration Specification for Oscilloscope Voltage Probes JJF 1437	(0.01~1000)V	$U_{rel}=0.2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
3	*Power Frequency Cable and Wire Spark Tester	Voltage	Calibration Specification of Power Frequency Cable and Wire Spark Tester JJF (Min) 1083	(0.2~15)kV (50Hz)	$U=0.58\%V_x+1.2V$		
4	*D.C.Voltage Dip Test Generators	DC Voltage	Calibration Specification for Voltage Dips, Short Interruptions and Voltage Variations Test Generators JJF 1673	(0.1~360)V	$U_{rel}=0.3\%$		
		Duration Time		1ms~60s	$U_{rel}=3\%$		
		Interval Time		1s~60s	$U_{rel}=3\%$		
5	*Current Probes of Oscilloscope	DC Current	Calibration Specification of Oscilloscope Current Probes JJF (Electronics) 0036	(0.01~1000)A	$U_{rel}=0.4\%$		
		AC Current		(0.01~1000)A (10Hz~1kHz)	$U_{rel}=0.6\%$		
6	*Impulse Voltage Testers for Winding Interturn Insulation	Voltage	Calibration Specification for Impulse Voltage Testers for Winding Interturn Insulation JJF 1691	(0.5~15)kV (50Hz)	$U_{rel}=3.5\%$		
7	*Online Testers of Winding Temperature Rise	Resistance	Calibration Specification for Online Testers of Winding Temperature Rise JJF 1540	(0.1~1)Ω	$U_{rel}=1\%$		
				(1~100)Ω	$U_{rel}=0.5\%$		
				(0.1~10)kΩ	$U_{rel}=0.1\%$		
8	*Electrical Surge Generator	Voltage	Calibration Specifications of Electrical Surge Generator JJF (Electronics)30803	(0.5~15)kV (50Hz, 60Hz)	$U_{rel}=3.9\%$		
9	*Proof Tracking Index Testers	Voltage	Calibration Specification for Proof Tracking Index Testers JJF (Zhe)1087	(100~600)V (50Hz)	$U_{rel}=0.36\%$		
		Current		(0.01~1)A (50Hz)	$U_{rel}=0.35\%$		
		Time		(0~60)s	$U=0.4s$		
10	*DC Electronic Loads	DC voltage	Calibration Specification for DC Electronic Loads JJF	1V~1000V	$U_{rel}=0.08\%$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		DC Current	1462	0.2A~500A	$U_{rel}=0.10\%$		
		Power		0.2W~30kW	$U_{rel}=0.15\%$		
11	*Battery Internal Resistance Meters	Voltage	Calibration Specification for Battery Internal Resistance Testers JJF 1620	(0.1~800)V	$U_{rel}=(0.29\sim0.08)\%$		
		Resistance		(1~200)mΩ	$U_{rel}=0.04\%$		
12	*Charge & Discharge of Battery Tester	Voltage	Calibration Specification for Charge & Discharge of Battery Tester JJF (Military) 108	20mV~2V	$U_{rel}=0.08\%$		
				2V~1000V	$U_{rel}=0.05\%$		
		Current		1mA~1A	$U_{rel}=0.15\%$		
				1A~20A	$U_{rel}=0.10\%$		
				20A~1000A	$U_{rel}=0.08\%$		
				power	10mW~10kW	$U_{rel}=0.2\%$	



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