Date: May 2022

Five Year Proficiency (ILC) Scheme for Calibration Laboratories

2022	2023	2024	2025	2026
Dimensional	Dimensional	Dimensional	Dimensional	Dimensional
Electrical DCLF	Electrical DCLF	Electrical DCLF	Electrical DCLF	Electrical DCLF
Force, Torque & Hardness	Force, Torque & Hardness	Force, Torque & Hardness	Force, Torque & Hardness	Force, Torque & Hardness
Mass, Volume	Mass, Volume	Mass, Volume	Mass, Volume	Mass, Volume
Pressure	Pressure	Pressure	Pressure	Pressure
Radio Frequency	Radio Frequency	Radio Frequency	Radio Frequency	Radio Frequency
Time & Frequence	Time & Frequence	Time & Frequence	Time & Frequence	Time & Frequence
Temperature & Humidity	Temperature & Humidity	Temperature & Humidity	Temperature & Humidity	Temperature & Humidity

Length Metrology

Year	Month	Parameter	Instrument	Range
2022	April		Dial Test Indicator (Lever Type)	TBA
	April		Micrometer	TBA
2023	February		Screw Plug Gauge	TBA
	February		Screw Ring Gauge	TBA
	February		Tri-bore micrometer	TBA
2024	March		Gauge blocks (1 mm to 150 mm)	TBA
	March		Dial Test Indicator (Plunger Type)	TBA
2025	July		Optical Flat	TBA
	July		Optical Parallel	TBA
2026	June		Line Scale	TBA
	June		Surface Texture Standard	TBA
	June		Measuring Tapes	TBA

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Electrical DC/LF

Year	Month	Parameter	Instrument	Range
2022	May	Power & Energy	Energy Meter	PF=1 and PF=0,5 120 V @ 5 A 240 V @ 5 A
	August	Capacitance	Standard Capacitors	100 pF @ 1 kHz and 10 kHz 0,01 µF @ 1 kHz 0,05 µF @ 1 kHz 0,5 µF @ 1 kHz 1,0 µF @ 1 kHz
	October	Resistance	High Accuracy Resistors in Air	1 Ω, 10 Ω, 10 kΩ, 100 kΩ
2023	March	Current (ac & dc)	Fluke Current clamp meter (by means of Multi-turn Coils)	ac Current 5 A to 20 A @ 40 Hz to 5 kHz dc Current 0 A to 1000 A
	June	dc Voltage	dc Voltage Standard	10 V dc 1,018 V dc Thermister Resistance
	September	Current (ac & dc)	Fluke ac/dc Current Shunt	ac Current (60 Hz) 20 A to 750 A dc Current 5 A to 20 A

2024	April	Voltage (ac & dc) Current (ac & dc) Resistace Frequency	Angilent Digital Multimeter (6,5 digit)	dc Voltage 100 mV to 1000 V ac Voltage 100 mV to 750 V @ 40 Hz to 10 kHz dc Current 10 mA to 2A ac Current 1 A to 2 A @ 40 Hz to 5 kHz Resistance 1 Ω to 100 MΩ Frequency 10 Hz to 100 kHz
	July	Voltage (ac & dc)	Fluke HV Probe	dc V Ratio : 1 ac V Ratio : 1 @ 60 Hz

2025	May	Resistance	Low Resistance Meter	Resistance 100 µΩ, 1 mΩ, 10 mΩ, 100 mΩ, 1 Ω dc Voltage 1 V , 10 V, 100 V ac Voltage 1 V @ 0,4 kHz 10 V @ 4 kHz 10 V @ 50 kHz 100 V @ 0,4 kHz
	November	Voltage (ac & dc)	Multifunction Calibrator	

2026	February	High Resistance	Keithly High Resistance Standards	Nominal Resistance 10 MΩ, 1 GΩ, 10 GΩ, 100 GΩ

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Force, Torque & Hardness

Year	Month	Parameter	Instrument	Range
2022		Torque	Digital Torque Wrench	50 Nm, 100 Nm, 150 Nm, 200 Nm, 250 Nm, 290 Nm
		Torque	Digital Torque Wrench	10 Nm, 20 Nm, 30 Nm, 40 Nm, 48 Nm
2023		Force	Loadcell & Readout	Pre-load 0 kN, 500 kN Compression 0 kN to 500 kN
2024		Hardness	Standards (Rocwell & Vickers)	Rocwell 43 HRC - 54 HRC Vickers 566 HV10 - 575 HV10
2025		Torque	Torque transducer Torque Screwdriver	50 Nm - 300 Nm 2 Nm - 15 Nm
2026		Hardness	Standards (Rocwell & Brinell)	Rocwell 43 HRC - 54 HRC Brinell (To be annonced)

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Mass & Volume

Year	Month	Parameter	Instrument	Range
2022	March	Mass Pieces	High Accurate Mass pieces	Nominal Mass 100 mg to 500 g
	March	Mass Pieces	High Accurate Mass pieces	Nominal Mass 1 mg to 500 mg
	September	Balance	On-site calibration of 200 g Analytical Balance	As Found & As Left Repeatability/Precision Eccentric/Corner load Accuracy/Linearity
2023	April	Mass Pieces	High Accurate Mass pieces	Nominal Mass 100 mg to 500 g
	April	Mass Pieces	High Accurate Mass pieces	Nominal Mass 1 mg to 500 mg
	August	Volume	Fixed volume Micro Pipettes	Nominal Volume 10 µL, 100 µL, 1000 µL
2024	February	Mass Pieces	High Accurate Mass pieces	Nominal Mass 100 mg to 500 g
	February	Mass Pieces	High Accurate Mass pieces	Nominal Mass 1 mg to 500 mg
	November	Mass Pieces	High Accurate Mass pieces	Nominal Mass 5 mg to 200 mg
2025	February	Mass Pieces	High Accurate Mass pieces	Nominal Mass 100 mg to 500 g
	February	Mass Pieces	High Accurate Mass pieces	Nominal Mass 1 mg to 500 mg
	August	Mass Pieces	Mass Pieces	Nominal Mass 1 kg, 5 kg, 10 kg, 20 kg
2026	March	Mass Pieces	High Accurate Mass pieces	Nominal Mass 100 mg to 500 g

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	March	Mass Pieces	High Accurate Mass pieces	Nominal Mass 1 mg to 500 mg As Found Repeatability/Precision
	September	Balance	On-site calibration of a 75 kg Balance	As Left Repeatability/Precision Eccentric/Corner load Accuracy/Linearity

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Year	Month	Parameter	Pessure Instrument	Range
2022	June	Gas Pressure	Pressure Calibrator	-75 kPa, 10 kPa, 50 kPa, 100 kPa, 150 kPa, 200 kPa
2023	May	Gas Pressure	Pressure Calibrator	100 kPa, 250 kPa, 350 kPa, 475 kPa, 600 kPa
2024	August	Pressure	Digital Oil Pressure Gauge	Increasing Pressure 0 MPa to 70 MPa @ 10 MPa increments Reducing Pressure 70 MPa to 0 MPa @ 10 MPa increments
2025	April October	Barometer Manometer	Fluke RPM4	3 kPa or 5 kPa
2026	July	Pressure Calibrator	Fluke	-75 kPa to 200 kPa

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Radio Frequency (RF)

Year	Month	Parameter	Instrument	Range
2022	July	Attenuation	50 Ω 10 dB Fixed Attenuator	Attenuation & VRC (dc) 6 GHz, 10 GHz, 14 GHz
	July	Attenuation	50 Ω Combination Step Attenuator	Attenuation & VRC (dc) 6 GHz, 10 GHz, 14 GHz @ 0 dB, 20 dB, 60 dB, 100 Db
2023	July	Balanced RF	600 Ω Balanced Step Antennuator	Residual Attenuation (0 dB) &VRC 100 kHz, 620 kHz Incremental Attenuation (20 Db) &VRC 100 Khz, 620 kHz
	July	Attenuation	Step Attenuator	100 kHz, 600 kHz
2024	September	Frequency	Waveform Generator	Nominal Frequency @ 100 mVp-p 1,0001 Hz, 1 kHz, 1 MHz Nominal Frequency @ 1 mVp-p 1,0001 Hz, 1 kHz, 1 MHz
2025	March	Frequency	RF Power Sensor & Power Meter	Frequency 50 MHz, 12 GHz, 18 GHz, 26,5 GHz @ 1 mW
2026	May	Attenuation	Fixed Attenuator	50 Ω 10 dB

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Time & Frequency

Year	Month	Parameter	Instrument	Range
2022	November	Tachometer	Laser Photo/Contact Tachometer	Non Contact 5 RPM, 50 RPM, 200 RPM, 1000 RPM, 50000 RPM,99900 RPM Contact 15 RPM, 25 RPM, 150 RPM, 2000 RPM, 5000 RPM, 7000 RPM
2023	October	Time Interval	Time Interval Generator	Nominal Time Interval 20 ns to 6 s @ 10 MHz
2024	June	Frequency	Wafeform Generator	Nominal Frequency @ 100 mVp-p 1,0001 Hz, 1 kHz, 1 MHz Nominal Frequency @ 1 mVp-p 1,0001 Hz, 1 kHz, 1 MHz
2025	September	Frequency	Frequency Oscillator	Nominal Frequency 10 MHz
2026	August	Tachometer	Laser Photo/Contact Tachometer	Non Contact 5 RPM, 50 RPM, 200 RPM, 1000 RPM, 50000 RPM,99900 RPM Contact 15 RPM, 25 RPM, 150 RPM, 2000 RPM, 5000 RPM, 7000 RPM

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Temparature & Humidity

Year	Month	Parameter	Instrument	Range
2022	February	Temperature	Type R Noble Metal Thermocouple	0 °C, 249 °C, 599 °C, 999 °C, 1199 °C, 1500 °C
	July	Temperature & Humidity	Keytag Data Logger	Temperature 15 °C, 22 °C, 30 °C Humidity 30 %rh, 50 %rh, 70 %rh
2023	November	Temperature	PRT100 (385)	-30 °C, -20 °C, 0 °C,. 50 °C, 95 °C, 225 °C, 380 °C
	November	Humidity	Calibration of Humidity Salts	Nominal Humidity 33 % rh and 90 % rh
2024	May	Temperature	LIG Themometer	-10 °C, -5 °C, 0 °C 0 °C, 35 °C, 69 °C, 90 °C
	May	Temperature	Medical IR Thermometers	Nominal Temperatures 23 °C , 34 °C , 37 °C , 40 °C
2025	June	Temperature	On-site Drying Oven Calibration	Controller Setpoint Accuracy 50 °C, 100 °C, 150 °C, 200 °C Oven Stability 50 °C, 100 °C, 150 °C, 200 °C Spatial Inhomogeneity (9 positions)
	June	Temperature	On-site calibration of a Dry Block Calibrator	Setpoint Accuracy 150 °C, 300 °C Axial Uniformity 150 °C, 300 °C Radial Uniformity 150 °C, 300 °C

2026	April	Temperature	On-siteSteam Sterilizer Calibration	Pressure Gauge Temperature Measurement @ 5 positions Chamber Temperature Stability Setpoint Accuracy @ 121 °C Timer (15 minute cycle) Spatial Inhomogeneity
	April	Humidity	Calibration of a Hygrometer	

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