

ACCREDITATION CERTIFICATE

No. CL 001



Iraqi Accreditation System Certify that:

Modern Surveying Calibration & Testing Labs

Iraq - Kurdistan Region - Erbil - Main Gazna Road

Is accredited according to the requirements of the standard ISO/IEC17025:2017
(General Requirements for the Competence of Testing and Calibration Laboratories)

In the field of:

- Temperature Calibration
- Pressure Calibration
- Mass Calibration
- Volume Calibration
- Flow Calibration
- Acoustics Calibration
- Dimensional Calibration
- Electricity Calibration
- Time & Frequency Calibration
- Force Calibration
- Torque Calibration
- Mechanical Calibration

This accreditation is subject to with the above standard & IQAS requirements
The scope of accreditation is attached to the certificate & considered as part of it
The most recent issue of the accreditation scope is available on IQAS website

<https://iqas.mop.gov.iq>

Accreditation is valid From 2/7/2025 To 1/7/2027

Initial accreditation date

21/12/2015

Eng. Abdul Wahid M. Ibrahim
Director General of IQAS

Dr. Mohammed Ali Tamim
Deputy Prime Minister
Minister of Planning

شهادة اعتماد

رقم CL 001



يقر نظام الاعتماد العراقي بأن:

مختبرات الشركة الحديثة لخدمات فحص المنتجات وتقييم الجودة

العراق - اقليم كردستان - اربيل - شارع كازنا العام

تم اعتمادها وفقا لمتطلبات المواصفة ISO/ IEC 17025:2017
(المتطلبات العامة لاهلية مختبرات الفحص والمعايرة)

في مجال:

- معايرة درجة الحرارة
- معايرة الضغط
- معايرة الكتلة
- معايرة الحجم
- معايرة الجريان
- معايرة الصوتيات
- معايرة الابعاد
- معايرة الكهرباء
- معايرة الزمن والتردد
- معايرة القوة
- معايرة العزم
- المعايرة الميكانيكية

شرط التوافق مع متطلبات المواصفة اعلاه ومتطلبات IQAS الخاصة بالاعتماد
مجال الاعتماد المرفق بالشهادة يعتبر جزءا لا يتجزأ منها
يمكن الحصول على الاصدار الاحدث من مجال الاعتماد من خلال الموقع الالكتروني

<https://iqas.mop.gov.iq>

يكون الاعتماد نافذا من 2025/7/2 الى 2027/7/1

تاريخ منح الاعتماد لأول مرة

2015/12/21

لقد

أ.د. محمد علي تميم
نائب رئيس مجلس الوزراء
وزير التخطيط



المهندس
عبد الواحد محمد ابراهيم
مدير عام الهيئة/ وكالة

		استمارة مجال الاعتماد Scope of Accreditation form	نظام الاعتماد العراقي IQAS
Organization address: Iraq - Kurdistan Region - Erbil - Main Gazna Road	Organization name: Modern Surveying Calibration & Testing Labs	Accreditation no.: CL 001	
Signature:  Eng. Abdul Wahid M. Ibrahim Director General of IQAS	Accreditation is valid: From 2/7/2025 To 1/7/2027	Issue no.: 007	

Calibration Field	Type of Instrument or Material to be Calibrated or Measured	Measurand or reference material	Calibration Method	Measurement Range	Uncertainty (±)	Location
Pressure	Pressure Gauge, Differential Pressure, Indicators, Pressure Sensors, Pressure Transducer and Pressure Transmitter (Pneumatic & Hydraulic)	Automated Pressure Calibrator-Additel-ADT761-D Standard Pressure Gauge/ Modules Fluke & Additel	MSL/CP/P/04 & MSL/CP/P/02 Based on DKD-R-6-1	0 m Bar to 1000 m Bar	0.001 %	Modern Surveying Lab/ Customer Premises
		Automated Pressure Calibrator Additel-ADT761-HA Standard Pressure Gauge/Modules Fluke & Additel		1 Bar to 40 Bar	0.0025 %	
		Pressure Balance DH-Budenberg-CPB 5800 Standard Pressure Gauge/Modules Fluke & Additel		40 Bar to 200 Bar	0.0005 %	
				200 Bar to 1200 Bar	0.006 % Rdg	
Pressure	Vacuum Gauges, Vacuum Transducer, Vacuum Transmitters, Vacuum Sensors	Automated Pressure Calibrator-Additel ADT761-D Standard Pressure Gauge/Modules Fluke & Additel	MSL/CP/P/04 & MSL/CP/P/02 Based on DKD-R-6-1	-900 mBar to 0 mBar	0.001 %	Modern Surveying Lab/ Customer Premises
Other	Vertical Cylindrical Tank	Total station Measuring Tape Dipping Tape Ultrasonic Thickness Gauge	ISO7507-1 & ISO7507-2	100 m³ to 50000 m³	0.1 % of volume	Customer Premises
Mass	Weighing Balance Class 1 & Below	E2 Class Masses 1mg to 20 kg F1 Class Masses 1mg to 20kg M1 Class Masses 1kg to 20 kg	Euramet Calibration Guide # 18	Up to 210 g 210 g to 410 g 410 g to 3 kg 3 kg to 6 kg 6 kg to 15 kg 15 kg to 30 kg 30 kg to 60 kg 60 kg to 100 kg	0.00003 g 0.0003 g 0.001 g 0.003 g 0.006 g 0.010 g 0.028 g 0.7 g	Customer Premises

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				100 kg to 300 kg 300 kg to 500 kg	1.7 g 2.3 g	
Mass	Standard Weights F1 Class	Standard Weight E2 Class with Mass Comparator	OIML R111-1 OIML R111-2	50 kg 20 kg 10 kg 5 kg 2 kg 1 kg 200 g 100 g 50 g 20 g 10 g 5 g 2 g 1 g 500 mg to 1 mg	41 mg 31 mg 29 mg 3 mg 1.4 mg 0.95 mg 0.11 mg 0.05 mg 0.03 mg 0.03 mg 0.02 mg 0.02 mg 0.01 mg 0.01 mg 0.01 mg	Modern Surveying Lab.
Mass	Standard Weight F2, M1, M2, M3 Class	Standard Weight E2, F1 Class with Mass Comparator	OIML R111-1 OIML R111-2	50 kg 20 kg 10 kg 5 kg 2 kg 1 kg 500 g 200 g 100 g 50 g 20 g 10 g 5 g 2 g 1 g 500 mg to 1 mg	43 mg 31 mg 29 mg 3.1 mg 1.4 mg 0.93 mg 28 mg 0.13 mg 0.06 mg 0.04 mg 0.03 mg 0.02 mg 0.02 mg 0.02 mg 0.02 mg 0.01 mg	Modern Surveying Lab.
Force	Testing Machine/ Force Machine- Compression	Load Cell GTM-KTN Z/D PT Ltd- HCC 225t	ISO 7500-1	100 N to 1 kN 1 kN to 10 kN 10 kN to 100 kN 100 kN to 500 kN 500 kN to 1000 kN 1000 kN to 2000 kN	0.1 % of the Indicated Value 0.2% of the Indicated Value	Customer Premises

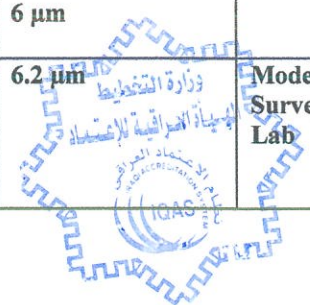
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Force	Testing Machine/Force Machine-Tensile	Load Cell-GTM-KTN Z/D Loadcell-LCM System	ISO 7500-1	100 N to 1 kN 1 kN to 10 kN 10 kN to 100 kN 100 kN to 500 kN 500 kN to 750 kN	0.1% of the Indicated Value 0.2% of the Indicated Value	Customer Premises
Force	Load Cells (Compression & Tensile)	Load Cell GTM-KTN Z/D Universal Calibrating Machine-Morehouse	MSL/CP/F/03 Based on ISO 376	100 N to 1 kN 1 kN to 10 kN 10 kN to 100 kN 100 kN to 500 kN 500 kN to 889 kN	0.3% of the Indicated Value	Modern Surveying Lab
Torque	Hand Torque Tools (All Types)	Torque Transducer-AKO TSD 2011-TSD011/020 Torque Transducer-CDI 6004-F-MT- CDI 15005-F-MT Torque Calibrator Norbar-Protest 60-Protest 400-Protest 1500-True Checkplus-3 Nm-True check Plus-2000 Nm	ISO 6789-1 ISO 6789-2	0.1 Nm to 3 Nm 3 Nm to 60 Nm 60 Nm to 400 Nm 400 Nm to 1500 Nm 1500 Nm to 2000 Nm	2 % 0.5 % 0.3 % 0.3 % 0.3 %	Modern Surveying Lab/ Customer Premises
Torque	Hydraulic Torque Wrenches	Static Torque Transducer-Norbar Torque Transducer-AKO	MSL/CP/F/02	150 ft·lbf to 500 ft·lbf 500 ft·lbf to 5000 ft·lbf 2000 ft·lbf to 20000 ft·lbf 4000 ft·lbf to 40 000 ft·lbf	0.3 % 0.3 % 0.5 % 0.5 %	Modern Surveying Lab/ Customer Premises
Dimensional	Outside Micrometer	Grade 0 Gauge Block Set - Mitutoyo Grade 0- Gauge Block Set -Tesa Grade 1- Gauge Block Set -Tesa	BS:870	up to 25 mm	(0.79 + 0.16 L) μm	Modern Surveying Lab/ Customer Premises



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Dimensional	Inside Micrometer	Grade 0- Gauge Block Set -Tesa Grade 0 Gauge Block Set - Mitutoyo Grade 1- Gauge Block Set -Tesa	BS:959	Up to 25 mm	(5.77 + 0.08 L) μ m	Modern Surveying Lab/ Customer Premises
Dimensional	Depth Micrometer	Grade 0- Gauge Block Set -Tesa Grade 1- Gauge Block Set -Tesa	BS:6468	Up to 25 mm	(5.8+0.01 L) μ m	Modern Surveying Lab/ Customer Premises
Dimensional	Measuring Tapes	Measuring Scale & Tape Calibration System Octagon MSTC-1000	OIML:R 35-1 OIML:R 35-2	Up to 100 m	(580 + 0.12 L) μ m	Modern Surveying Lab
Dimensional	Steel Ruler	Measuring Scale & Tape Calibration System Octagon MSTC-1000	OIML:R 35-1 OIML: R 35-2	up to 1000 mm	580 μ m	Modern Surveying Lab
Dimensional	Calipers (Vernier, Dial & Digital)	Caliper Checker Mitutoyo 515-556-2 Gauge Block Set-Grade 0-Tesa Gauge Block Set-Grade 1-Tesa	BS:887	Up to 600 mm	(6.1 + 0.3 L) μ m	Modern Surveying Lab/ Customer premises
Dimensional	Depth Caliper	Caliper checker Mitutoyo- 515-556-2	BS: 6365	UP to 300 mm UP to 600 mm	(10.39 + 0.004 L) μ m (29.95 + 0.004 L) μ m	Modern Surveying Lab
Dimensional	Indicator (Dial/Digital)	Dial Indicator Tester Mitutoyo 170-102-12	MSL/CP/D/07 based on BS:463	Up to 25 mm	0.7 μ m	Modern Surveying Lab
		Grade 0- Gauge Block Set -T esa		Up to 100 mm	6 μ m	
Dimensional	Lever Type - Dial Indicator	Dial Calibrator Tester Mitutoyo 170-102-12 Grade 0- Gauge Block Set -Tesa	BS EN ISO 9493	Up to 1.5mm	6.2 μ m	Modern Surveying Lab



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Dimensional	Feeler Gauge	Digimatic Thickness Gauge Mitutoyo-C112XBS	Dubai Municipality Standard: DMS 2024:2010-Standard Operating Procedure for Calibration of Feeler Gauges	Up to 1 mm	(1.19 + 28.6 L) μ m	Modern Surveying Lab/ Customer Premises
Dimensional	Thickness Gauge	Grade 0- Gauge Block Set -Tesa Grade 1- Gauge Block Set -Tesa	Dubai Municipality Standard: SOP-MS-C D18 Standard Operating Procedure for Calibration of Digimatic Thickness Gauge	up to 12.7 mm	(1 + 0.1 L) μ m	Modern Surveying Lab/ Customer premises
Dimensional	Height Gauge	Caliper Checker Mitutoyo 515-556-2	Dubai Municipality Standard: SOP-MS-C D10 Standard Operating Procedure for Calibration of Height Gauge	up to 600 mm	(10.79+0.48 L) μ m	Modern Surveying Lab
Dimensional	Test Sieve	Profile Projector Mitutoyo PJ-A3000	MSL-CP-D-08	200 μ m to 900 μ m 1 mm to 5mm	4.2 μ m 8.3 μ m	Modern Surveying Lab
		Digital Caliper CD-12 PSX		5.6 mm to 125 mm	0.02 mm	Modern Surveying Lab

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Dimensional	Measuring Tape & Scale Calibration System	Glass Scale- Mitutoyo HL-3-1000	MSL-CP-D-09	up to 1000 mm	(3.5 +14 L) μm	Modern Surveying Lab
Dimensional	Ultrasonic Thickness Gauge	Five Step Block	ASTM-E317	2.5 mm to 20.01 mm	10 μm	Modern Surveying Lab
Dimension	Profile Projector	Working Standard Scale Steel Angle Gauge Set	MSL/CP/D/10 Based on JIS-B-7184	(Length -Linearity) X-Axis Up to 200mm Y-Axis Up to 100mm Angle Measurement of Rotation Screen Up to 360° Angular Mesasurement device up to 90°	(3.05 +15.3 L) μm 51'' 4.3''	Modern Surveying Lab
Other	Nuclear Density Gauge	Density verification standard for nuclear gauge model/ 919.875.8371	Validator user guide/instro tek	Density: 1762 kg/m ³ to 2627 kg/m ³ Moisture: 564.9 kg/m ³ to 656 kg/m ³	0.7 % 3.9 %	Modern Surveying Lab
Electricity	Equipment to Measure DC Voltage	Multi-Product Calibrator Fluke 5522A	MSL/CP/E/01	Up to 330 mV 0.33 V to 3.3 V 3.3 V to 30 V 30 V to 330 V 330 V to 1000 V	25 $\mu\text{V/V} + 1 \mu\text{V}$ 14 $\mu\text{V/V} + 2 \mu\text{V}$ 9 $\mu\text{V/V} + 20 \mu\text{V}$ 12 $\mu\text{V/V} + 150 \mu\text{V}$ 12 $\mu\text{V/V} + 1.5 \text{ mV}$	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Measure AC Voltage	Multi-Product Calibrator Fluke 5522A	MSL/CP/E/01	Up to 33 mV @ 45 Hz to 1kHz	600 $\mu\text{V/V} + 6 \mu\text{V}$	Modern Surveying Lab/ Customer Premises
				33 mV to 330 mV @ 45 Hz to 1kHz	120 $\mu\text{V/V} + 8 \mu\text{V}$	
				0.33 V to 3.3 V @ 45 Hz to 1kHz	82 $\mu\text{V/V} + 160 \mu\text{V}$	
				3.3 V to 33 V @ 45 Hz to 1kHz	55 $\mu\text{V/V} + 600 \mu\text{V}$	
				33 V to 330 V @ 45 Hz to 1kHz	65 $\mu\text{V/V} + 2000 \mu\text{V}$	
				330 V to 1000 V @ 45 Hz to 1kHz	90 $\mu\text{V/V} + 10 \text{ mV}$	

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Electricity	Equipment to Measure DC Current	Multi-Product Calibrator Fluke 5522A	MSL/CP/E/01	100 µA to 330 µA 0.33 mA to 3.3 mA 3.3 mA to 33 mA 33 mA to 330 mA 0.33 A to 1.1 A 1.1 A to 3 A 3 A to 11 A 11 A to 20 A	4 µA/A + 0.02 µA 25 µA/A + 0.05µA 25 µA/A + 0.25µA 25 µA/A + 2.5 µA 41 µA/A + 40 µA 50 µA/A + 40 µA 470 µA/A + 750 µA 800 µA/A + 1500 µA	Modern Surveying Lab/ Customer Premises
Electricity	Clamp - On Meters to Measure DC Current	Multi-Product Calibrator Fluke 5522A Fluke 5500A (Coil)	MSL/CP/E/01	10 A to 16.5 A 16.5 A to 150 A 150 A to 1000 A	0.19 % + 1.6 mA 0.19 % + 12 mA 0.19 % + 39 mA	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Measure AC Current	Multi-Product Calibrator Fluke 5522A	MSL/CP/E/01	29 µA to 330 µA @ 45 Hz to 1 kHz	0.12 % + 0.1 µA	Modern Surveying Lab/ Customer Premises
				0.33 mA to 3.3 mA @ 45Hz to 1 kHz	0.11 % + 0.15 µA	
				3.3 mA to 33 mA @ 45 Hz to 1 kHz	0.048 % + 2 µA	
				33 mA to 330 mA @ 45 Hz to 1 kHz	0.05 % + 20 µA	
				0.33 A to 1.1 A @ 45 Hz to 1 kHz	0.06 % + 0.1 mA	
				1.1 A to 3 A @ 45 Hz to 1 kHz	0.08 %+ 0.1 mA	
				3 A to 11 A @ 45 Hz to 1 kHz	0.09 % + 2 mA	
				11 A to 20 A @ 45 Hz to 1 kHz	0.2 % + 5 mA	
Electricity	Clamp - On Meters to Measure AC Current	Multi-Product Calibrator Fluke 5522A Fluke 5500A (Coil)	MSL/CP/E/01	10 A to 16.5 A @ 45 Hz to 1 kHz	0.22 % + 2.33 mA	Modern Surveying Lab/ Customer Premises
				16.5 A to 150 A @ 45 Hz to 1 kHz	0.22 % + 19.38 mA	
				150 A to 1000 A @ 45Hz to 1 kHz	0.22 % + 69.77 mA	
Electricity	Equipment to Measure Resistance (Fixed Points)	Burster- 1240 Calibration Resistor	MSL/CP/E/01	1 mΩ	0.0001 mΩ	Modern Surveying Lab/ Customer Premises
				10 mΩ	0.001 mΩ	
				100 mΩ	0.01 mΩ	
		Fluke 742 A Resistance Standards	MSL/CP/E/01	1 Ω	0.00058 Ω	
				10 Ω	0.00058Ω	

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				100 Ω	0.0058 Ω	
				1 KΩ	0.000058 KΩ	
				10 KΩ	0.0008 KΩ	
				1 MΩ	0.008 KΩ	
				10 MΩ	0.002 MΩ	
Electricity	Equipment to Measure Resistance	Multi-Product Calibrator Fluke 5522A	MSL/CP/E/ 01	0.1 Ω to 11 Ω	0.006 % + 0.5 mΩ	Modern Surveying Lab/ Customer Premises
				11 Ω to 33 Ω	0.001 % + 1 mΩ	
				33 Ω to 110 Ω	0.001 % + 4 mΩ	
				110 Ω to 330 Ω	0.001 % + 4 mΩ	
				0.33 KΩ to 1.1 KΩ	0.001 % + 4 mΩ	
				1.1 KΩ to 3.3 KΩ	0.001 % + 4 mΩ	
				3.3 KΩ to 11 KΩ	0.001 % + 1 Ω	
				11 KΩ to 33 KΩ	0.08 % + 4 Ω	
				33 KΩ to 110 KΩ	0.001 % + 4 Ω	
				110 KΩ to 330 KΩ	0.001 % + 11 Ω	
				0.33 MΩ to 1.1 MΩ	0.001 % + 36 Ω	
				1.1 MΩ to 3.3 MΩ	0.006 % + 0.2 kΩ	
				3.3 MΩ to 11 MΩ	0.036 % + 1.5 kΩ	
				11 MΩ to 33 MΩ	0.1 % + 8.3 kΩ	
				33 MΩ to 110 MΩ	0.01 % + 55 kΩ	
				110 MΩ to 330 MΩ	0.01 % + 0.1 MΩ	
				330 MΩ to 1100 MΩ	0.74 % + 0.1 MΩ	
Electricity	Equipment to Measure Earth Resistance	Multifunction Electrical Tester Calibrator Fluke 5320 A 5320A LOAD	MSL/CP/E/ 01 & User Manual - Fluke 5320 A	100 mΩ to 5 Ω	0.3 % + 0.01 Ω	Modern Surveying Lab
				5 Ω to 30 Ω	0.2 % + 0.01 Ω	
				30 Ω to 200 Ω	0.2 % + 0.01 Ω	
				200 Ω to 500 Ω	0.2 % + 0.01 Ω	
				500 Ω to 2 kΩ	0.2 %	
				2 kΩ to 5 kΩ	0.2 %	
				5 kΩ to 10 kΩ	0.2 %	
		Decade Resistance Box Time electronics-1040	Multifunction Electrical Tester Calibrator	10 kΩ to 90 kΩ	0.019 kΩ	
				90 kΩ to 900 kΩ	0.06 KΩ	
				0.9 MΩ to 9 MΩ	0.06 MΩ	
Electricity	Equipment to Measure Insulation Resistance	Multifunction Electrical Tester Calibrator Fluke 5320 A 5320A LOAD TIME ELECTRONIC 5065	MSL/CP/E/ 01 & User Manual - Fluke 5320 A Multifunction	10 kΩ to 40 kΩ	0.2 %	Modern Surveying Lab
				40 kΩ to 100 kΩ	0.2 %	
				100 kΩ to 200 kΩ	0.2 %	
				200 kΩ to 1000 kΩ	0.2 %	
				1 MΩ to 10 MΩ	0.1 %	
				10 MΩ to 1000 MΩ	0.1 %	
				1 GΩ to 10 GΩ	0.1 %	
				10 GΩ to 100 GΩ	1 %	

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		Multifunction Electrical Tester Calibrator Fluke 5320 A Source with R Multiplier	on Electrical Tester Calibrator	0.35 GΩ to 100 GΩ 100 GΩ to 1000 GΩ 1 TΩ to 10 TΩ	2.6 kΩ + 2 % 6.3 kΩ + 2.9 % 4.9 %	
Electricity	Equipment to Measure Ground Bond Resistance (Decade Source, Fixed Points)	Multifunction Electrical Tester Calibrator Fluke 5320 A 5320A LOAD	MSL/CP/E/ 01 & User Manual - Fluke 5320 A Multifuncti on Electrical Tester Calibrator	25 mΩ 50 mΩ 100 mΩ 330 mΩ 500 mΩ 1 Ω 1.8 Ω 5.0 Ω 10.0 Ω 18.0 Ω 50.0 Ω 100 Ω 180 Ω 500 Ω 1 kΩ 1.8 kΩ	5 mΩ 5 mΩ 5 mΩ 7 mΩ 8 mΩ 10 mΩ 18 mΩ 30 mΩ 60 mΩ 100 mΩ 300 mΩ 500 mΩ 1 Ω 2.5 Ω 5 Ω 10 Ω	Modern Surveying Lab
Electricity	RCD (Trip Current)	Multifunction Electrical Tester Calibrator Fluke 5320 A	MSL/CP/E/ 01	3 mA to 3000 mA (0.5 X I & 1 X I Mode) (3 mA to 1500 mA) (1.4 X I & 2 X I Mode) 3mA to 600 mA (5 X I Mode)	1 % 2 % 5.8 %	Modern Surveying Lab.
Time & Frequency	RCD (Trip Time)	Multifunction Electrical Tester Calibrator Fluke 5320 A	User Manual - Fluke 5320 A Multifuncti on Electrical Tester Calibrator	10 ms to 50 ms 50 ms to 100 ms 100 ms to 500 ms 500 ms to 2500 ms 2500 ms to 5000 ms	0.45 % + 0.25 ms 0.27 % + 0.25 ms 0.06 % + 0.25 ms 0.0029 % + 0.25 ms 0.0072 % + 0.25 ms	Modern Surveying Lab
Electricity	Equipment to Measure Capacitance	Multi-Product Calibrator Fluke 5522A	MSL/CP/E/	0.19 nF to 0.3999 nF 0.4 nF to 1.0999 nF 1.1 nF to 3.2999 nF	0.61 % + 0.01 nF 0.58 % + 0.01 nF 0.58 % + 0.01 nF	Modern Surveying Lab/

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		Multi-Function Calibrator Time Electronics 5025C	01	3.3 nF to 10.9999 nF 11 nF to 32.9999 nF 33 nF to 109.999 nF 110 nF to 329.999 nF 0.33 µF to 1.09999 µF 1.1 µF to 3.29999 µF 3.3 µF to 10.9999 µF 11 µF to 32.9999 µF 33 µF to 109.999 µF 110 µF to 329.999 µF 0.33 mF to 1.09999 mF 1.1 mF to 3.29999 mF 3.3 mF to 10.9999 mF 11 mF to 32.9999 mF 33 mF to 110 mF	0.30 % + 0.01 nF 0.30 % + 0.1 nF 0.30 % + 0.1 nF 0.30 % + 0.3 nF 0.30 % + 1 nF 0.30 % + 3 nF 0.30 % + 10 nF 0.47 % + 30 nF 0.54 % + 100 nF 0.52 % + 300 nF 0.52 % + 1 µF 0.52 % + 3 µF 0.52 % + 10 µF 0.87 % + 30 µF 1.3 % + 100 µF	Customer Premises
Electricity	Equipment to Measure Inductance @ 1kHz	Programmable Inductance Substituter IET Labs PLS-1492 Inductance Decade Box Time Electronics-1053	MSL/CP/E/01	10 µH to 10 mH 10 mH to 100 mH 100 mH to 1 H 1 H to 10 H	1 % + 1.5 µH 1 % + 1.5 µH 2 % + 1.5 µH 2 % + 1.5 µH	Modern Surveying Lab/ Customer Premises
Electricity	Three Phase Energy Meter (AC)	Power & Energy Calibrator- Inmel - 8033	MSL/CP/E/03	1 kWh to 30 kWh (@ 50Hz, 60Hz)	0.1 kWh	Modern Surveying Lab
Electricity	AC Power Meter	Power & Energy Calibrator- Inmel - 8033 Multi-Product Calibrator Fluke 5522A	MSL/CP/E/03	1000 W to 2000 W 2 kW to 4 kW 4 kW to 20 kW 20 kW to 40 kW 40 kW to 60 kW (@ 50Hz, 60Hz)	6 W 0.01 kW 0.02 kW 0.03 kW 0.1 kW	Modern Surveying Lab
Electricity	Equipment to Output DC Voltage	Reference Multimeter Fluke -8508A	MSL/CP/E/01	1 mV to 200 mV 0.2 V to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V	10 µV/V + 0.07 µV 5 µV/V + 1.4 µV 5 µV/V + 40 µV 8 µV/V + 36 µV 10 µV/V + 0.49 mV	Modern Surveying Lab/ Customer Premises

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Electricity	Equipment to Output AC Voltage	Reference Multimeter Fluke-8508A	MSL/CP/E/01	1 mV to 200 mV 0.2 V to 2 V 2 V to 20 V 20 V to 200 V 200 V to 1000 V (45 Hz to 1 kHz)	0.011 % + 0.002 mV 0.0086 % + 20 μ V 0.0086 % + 0.2 mV 0.009 % + 2 mV 0.011 % + 2 mV	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Output AC Current	Reference Multimeter Fluke -8508A	MSL/CP/E/01	1 μ A to 200 μ A 0.2 mA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 0.2 A to 2 A 2 A to 20 A (45 Hz to 1 kHz)	0.054 % + 20 nA 0.032 % + 0.2 μ A 0.033 % + 2 μ A 0.031 % + 20 μ A 0.063 % + 0.2 mA 0.84 % + 2 mA	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Output AC Current	Reference Clamp meter Fluke 376	MSL/CP/E/01	10 A to 150 A 150 A to 1000 A	2% 0.3%	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Output DC Current	Reference Multimeter Fluke -8508A	MSL/CP/E/01	1 μ A to 200 μ A 0.2 mA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 0.2 A to 2 A 2 A to 20 A	42 μ A/A + 0.023 μ A 26 μ A/A + 0.003 μ A 28 μ A/A + 0.03 μ A 28 μ A/A + 0.03 μ A 220 μ A/A + 0.02 μ A 0.48 mA/A + 0.04 mA	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Output DC Current	Reference Clamp meter Fluke 376	MSL/CP/E/01	10 A to 150 A 150 A to 1000 A	2% 0.3 %	Modern Surveying Lab/ Customer Premises
Electricity	Equipment to Output Resistance	Reference Multimeter Fluke -8508A	MSL/CP/E/01	1 m Ω to 2 Ω 2 Ω to 20 Ω 20 Ω to 200 Ω 0.2 K Ω to 2 K Ω 2 K Ω to 20 K Ω 20 K Ω to 200 K Ω 0.2 M Ω to 2 M Ω 2 M Ω to 20 M Ω 20 M Ω to 200 M Ω	0.002 % Rdg 0.002 % Rdg 0.0009 % Rdg 0.001 % Rdg 0.001 % Rdg 0.001 % Rdg 0.001 % Rdg 0.003 % Rdg 0.009 % Rdg	Modern Surveying Lab/ Customer Premises

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Electricity	Equipment to Output Capacitance @ 1 kHz	Precision RLC Digi bridge -IET 1693-9700	MSL/CP/E/01	0.2 GΩ to 2 GΩ	0.1 % Rdg	Modern Surveying Lab
				1 pF to 10 pF	0.37 % + 0.002 pF	
				10 pF to 100 pF	0.014 % + 0.003 pF	
				100 pF to 1000 pF	0.007 % + 0.010 pF	
				1 nF to 10 nF	0.010 % + 0.08 pF	
				10 nF to 100 nF	0.016 %	
				100 nF to 1000 nF	0.01 %	
				1 μF to 10 μF	0.01 %	
				10 μF to 100 μF	0.008 %	
				100 μF to 1000 μF	0.02 %	
Electricity	Equipment to Output Inductance @ 1 kHz	Precision RLC Digi bridge- IET- 1693-9700	MSL/CP/E/01	100 μH to 1 mH	0.12 %	Modern Surveying Lab
				1 mH to 1 H	0.035 %	
				1 H to 5 H	0.014 %	
				5 H to 10 H	0.25 %	
Electricity	Equipment to Output High Voltage (DC)	Precision High Voltage Meter Vitrek 4700 High Voltage Probe HVL-35, HVL-70, HVL-100	MSL/CP/E/05	1 kV to 10 kV	0.02 % + 0.05 V	Modern Surveying Lab
				10 kV to 100 kV	0.06 % + 0.2 V	
Electricity	Equipment to Output High Voltage AC	Precision High Voltage Meter Vitrek 4700 High Voltage Probe HVL-35, HVL-70, HVL-100	MSL/CP/E/05	1 kV to 10 kV	0.05 % + 0.3 V	Modern Surveying Lab
				10 kV to 100 kV	0.06 % + 0.2 V	
Electricity	Calibration of Temperature Indicators and Simulators by Electrical Simulation and Measurement (Type J)	Multi-Product Calibrator Fluke 5522A	Euramet cg-11	- 210 °C to -100 °C	0.21 °C	Modern Surveying Lab/ Customer Premises
				- 100 °C to -30 °C	0.12 °C	
				- 30 °C to 150 °C	0.08 °C	
				150 °C to 760 °C	0.12 °C	
				760 °C to 1200 °C	0.18 °C	
Electricity	Calibration of	Multi-Product Calibrator Fluke	Euramet cg-11	- 200 °C to -100 °C	0.25 °C	Modern Surveying
				- 100 °C to -25 °C	0.12 °C	

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	Temperature Indicators and Simulators by Electrical Simulation and Measurement (Type K)	5522A		- 25 °C to 120 °C	0.09 °C	Lab/ Customer Premises
				120 °C to 1000 °C	0.19 °C	
				1000 °C to 1372 °C	0.57 °C	
Electricity	Calibration of Temperature Indicators and Simulation by Electrical Simulation and Measurement (Type R)	Multi-Product Calibrator Fluke 5522A	Euramet cg-11	0 °C to 250 °C	0.21 °C	Modern Surveying Lab/ Customer Premises
				250 °C to 400 °C	0.27 °C	
				400 °C to 1000 °C	0.35 °C	
				1000 °C to 1767 °C	0.47 °C	
Electricity	Calibration of Temperature Indicators and Simulation by Electrical Simulation and Measurement (Type S)	Multi-Product Calibrator Fluke 5522A	Euramet cg-11	0 °C to 250 °C	0.38 °C	Modern Surveying Lab/ Customer Premises
				250 °C to 1000 °C	0.29 °C	
				1000 °C to 1400 °C	0.41 °C	
				1400 °C to 1767 °C	0.49 °C	
Electricity	Calibration of Temperature Indicators and Simulation by Electrical Simulation and Measurement (RTD Pt 385, 100 Ω)	Multi-Product Calibrator Fluke 5522A	Euramet cg-11	- 200°C to 0°C	0.07 °C	Modern Surveying Lab/ Customer Premises
				0°C to 100°C	0.092 °C	
				100°C to 300°C	0.11 °C	
				300°C to 400°C	0.13 °C	
				400°C to 630°C	0.15 °C	
				630°C to 800°C	0.28 °C	

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Time & Frequency	Equipment to Output Frequency	Timer/Counter/Analyzer: 300MHz, Tektronix, FCA3100	MSL/CP/E/04	10 Hz to 1000 Hz 1000 Hz to 50000 Hz 50 kHz to 300 M Hz	0.01 % Rdg 0.001 % Rdg 0.03 % Rdg	Modern Surveying Lab
Time & Frequency	Equipment to Measure Frequency	Arbitrary Function Generator 100MHz, Tektronix-AFG3101 Multi-Product Calibrator Fluke 5522A Multi-Function Calibrator Time Electronics 5025C RF Signal Generator/ RF Reference Source Fluke 9640A-LPNX	MSL/CP/E/04	1 Hz to 1000 Hz 1000 Hz to 50000 Hz 50 kHz to 1MHz 1 MHz to 100 MHz 0.1 GHz to 1 GHz	0.001 % 0.001 % 0.002 % 0.01 % 0.1 %	Modern Surveying Lab
Time & Frequency	Tachometer	Arbitrary Function Generator 100MHz, Tektronix, AFG3101 Multi-Product Calibrator Fluke 5522A Multi-Function Calibrator- Time Electronics 5025C	MSL/CP/E/02	60 RPM to 500 RPM 500 RPM to 5000 RPM 5000 RPM to 60000 RPM	0.01 RPM 0.06 RPM 0.58 RPM	Modern Surveying Lab
Time & Frequency	RPM Measurement	Tachometer- Extech 461893	MSL/CP/E/02	60 RPM to 500 RPM 500 RPM to 30000 RPM	0.1 RPM 1 RPM	Modern Surveying Lab/ Customer Premises

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Time & Frequency	Timer / Stop Watch	Timer/Counter/Analyzer: 300MHz- Tektronix-FCA3100 Arbitrary Function Generator 100MHz, Tektronix- AFG3101	NIST 960-12	10 Sec to 36000 Sec	0.04 Sec	Modern Surveying Lab
Time & Frequency	Timer / Stop Watch	Stop Watch	NIST 960-12	60 Sec to 3600 Sec	0.1 Sec	Customer Premises
Acoustic	Sound Level Measuring Equipment	Sound Level Calibrator Extech 407766	MSL/CP/E/08	94 dB (@1 kHz) 114 dB (@1 kHz)	0.2 dB 0.2 dB	Modern Surveying Lab/ Customer Premises
Time & Frequency	Equipment to Measure Vibration	Portable Vibration Calibrator 9110D	Product Manual Portable Vibration Calibrator-9110D	0.4 g pk to 1.01 g pk @ 7 Hz to 10 Hz 10 Hz to 30 Hz 30 Hz to 2 kHz 2 kHz to 10 kHz	4.2 % Rdg 3.2 % Rdg 1.9 % Rdg 4.2 % Rdg	Modern Surveying Lab/ Customer Premises
Flow	Liquid Flow Meters (Liquid Volume)	Master Flow Meter	MSL/CP/FL/02 Based on API MPMS chapter 4.5, 4.8	Up to 10000 l	0.1 l	Modern Surveying / Customer Premises
Flow	Liquid Flow Meters (Liquid Volume)	Standard Proving Tank	MSL/CP/FL/02 Based on API MPMS chapter 4.5, 4.8	1000 l	4.9 l	Modern Surveying / Customer Premises
Flow	Liquid Flow Meters (Volumetric Flow Rate)	Master Flow Meter	MSL/CP/FL/02 Based on API MPMS chapter 4.5,	33 l/min to 3 392 l/min 150 l/min to 7 190 l/min	0.34 % 0.17 %	Modern Surveying / Customer Premises

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			4.8			
Flow	Liquid Flow Meters (Volumetric Flow Rate)	Small Volume Prover Turbine Master Flow Meter	MSL/CP/FL /04 Based on API MPMS chapter 4.5, 4.8	Up to 2 000 m3/h	0.068 %	Modern Surveying / Customer Premises
Flow	Liquid Flow Meters (Liquid Volume)	Small Volume Prover	MSL/CP/FL /04 Based on API MPMS chapter 4.5, 4.8	Up to 15000 l	0.06 %	Modern Surveying / Customer Premises
Flow	Liquid Flowmeter (Liquid Mass)	Master Flow Meter	MSL/CP/FL /02 Based on API MPMS chapter 4.5, 4.8	20 kg to 3948 kg	0.1 % Rdg	Modern Surveying / Customer Premises
Flow	Liquid Flow Meters (Mass Flow Rate)	Master Flow Meter	MSL/CP/FL /02 Based on API MPMS chapter 4.5, 4.8	Up to 3 295 Kg/min 3 295 Kg/min to 7 177 Kg/min	0.34 % Rdg 0.1 % Rdg	Modern Surveying / Customer Premises
Flow	Prover Base Volume (Pipe Prover, Compact prover, Tank Prover) To Contain	Water Draw System	Water Draw System and API MPMS 4.9.2, API MPMS 12.4.1 API MPMS 12.2.4, API MPMS 4.3.7	5 USG 10 USG 20 USG 50 USG 75 USG 100 USG 200 USG	0.029 %	Modern Surveying / Customer Premises
Temperature	Digital Thermometer With RTD and or Thermocoupl	PRT Fluke 5626 &5628 Type S Thermocouple Standard -Fluke 5650, Precision Baths:	MSL/CP/T/ 05	-60°C to -40°C -40°C to 0°C 0 °C to 50°C 50 °C to 100 °C 100 °C to 175°C	0.039 °C 0.046 °C 0.046 °C 0.046 °C 0.074 °C	Modern Surveying Lab / Customer Premises

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	e	Fluke 6331& 7381 Metrology Wells: Fluke 9170, 9173 Wika- CTM9100 Thermocouple Calibration Furnace: Fluke 9112B Readout: Fluke Black Stack 1560,2565, 2560		175°C to 250 °C 250 °C to 400 °C 400 °C to 600 °C 600 °C to 1000 °C	0.12 °C 0.17 °C 0.2 °C 1°C	Modern Surveying Lab
Temperature	Temperature Transmitter (RTD& Thermocoupl e)	PRT Fluke 5626 &5628 Type S Thermocouple Standard -Fluke 5650, Precision Baths: Fluke 6331& 7381 Metrology Wells: Fluke 9170, 9173 Wika- CTM9100 Thermocouple Calibration Furnace: Fluke 9112B Readout: Fluke Black Stack 1560,2565, 2560 PRT Fluke 5626 &5628 Metrology Wells: Fluke 9170, 9173 Wika- CTM9100	MSL/CP/T/ 04	-40°C to 0 °C 0°C to 100 °C 100 °C to 210 °C 210 °C to 400 °C 400 °C to 600 °C 600 °C to 1000 °C	0.046°C 0.041 °C 0.057°C 0.16 °C 0.2 °C 1 °C	Modern Surveying Lab / Customer Premises Modern Surveying Lab
Temperature	Dial Thermometer	PRT Fluke 5626 &5628 Type S Thermocouple Standard -Fluke 5650, Precision Baths: Fluke 6331& 7381 Metrology Wells: Fluke 9170, 9173 Wika- CTM9100 Readout: Fluke Black Stack 1560,2565, 2560 PRT Fluke 5626 &5628	MSL/CP/T/ 01	-50 °C to 120°C 120 °C to 450°C 450 °C to 600°C	0.58 °C 2.9 °C 5.8 °C	Modern Surveying Lab / Customer Premises
Temperature	Liquid in Glass	PRT Fluke 5626 &5628	ASTM E1 ASTM E77	-46 °C to 0 °C 0 °C to 51 °C	0.05 °C 0.062 °C	Modern Surveying

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	Thermometer	Type S Thermocouple Standard -Fluke 5650, Precision Baths: Fluke 6331& 7381 Wika- CTM9100 Readout: Fluke Black Stack 1560,2565, 2560 PRT Fluke 5626 &5628		51 °C to 100 °C 100 °C to 200 °C 200 °C to 300 °C	0.13 °C 0.61 °C 2 °C	Lab
Temperature	Thermocouple Type J	PRT Fluke 5626 &5628 Type S Thermocouple Standard -Fluke 5650, Precision Baths: Fluke 6331& 7381	MSL/CP/T/ 07	-40°C to 50°C 50°C to 100°C 100°C to 300 °C 300°C to 500 °C 500°C to 700 °C	0.06 °C 0.06 °C 0.18 °C 0.2 °C 1.1 °C	Modern Surveying Lab
	Thermocouple Type K	Metrology Wells: Fluke 9170, 9173 Wika- CTM9100		-40°C to 100°C 100°C to 200 °C 200°C to 450 °C 450 °C to 500° °C 500 °C to 1000° °C	0.066 °C 0.18 °C 0.13 °C 0.22°C 1.1 °C	
	Thermocouple Type R	Thermocouple Calibration Furnace: Fluke 9112B		0 °C to 100°C 100 °C to 500 °C 500 °C to 1000° °C	0.32 °C 0.23 °C 1.1 °C	
	Thermocouple Type S	Readout: Fluke Black Stack 1560,2565, 2560		0°C to 200°C 200°C to 400 °C 400 °C to 600°C 600 °C to 900 °C 900 °C to 1000 °C	0.12 °C 0.16 °C 0.2 °C 0.71 °C 1.1 °C	
	Thermocouple Type E			-40°C to 50°C 50°C to 100°C 100°C to 300°C 300°C to 600 °C 600 °C to 800° °C	0.058 °C 0.063 °C 0.18 °C 0.24 °C 1.1 °C	
	RTD Pt 100 (385) 2, 3, 4 Wire		MSL/CP/T/ 03	-50°C to 80 °C 80 °C to 100 °C 100 °C to 200 °C 200 °C to 300 °C 300 °C to 400 °C 400 °C to 600 °C	0.045 °C 0.072 °C 0.12 °C 0.18 °C 0.21 °C 0.26 °C	

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Temperature	Dry Block Calibrators	PRT Fluke 5626 & 5628 Type S Thermocouple Standard -Fluke 5650, Readout: Fluke Black Stack 1560,2565, 2560	EURAMET Calibration Guide No.13	-40 °C to 140 °C 140 °C to 300 °C 300 °C to 400 °C 400 °C to 650 °C 650 °C to 750 °C 750 °C to 900 °C 900 °C to 1200 °C	0.06 °C 0.12 °C 0.14 °C 0.16 °C 0.2 °C 0.26 °C 0.57 °C	Modern Surveying Lab
Temperature	Thermo-Hygrometer	Humidity Chamber with Fluke 1620A Thermo-Hygrometer	MSL/CP/T/08	15 °C to 44 °C 20 %RH to 80% RH	0.076 °C 0.53 %RH	Modern Surveying Lab
Temperature	Furnace	Type S Thermocouple Standard -Fluke 5650 Fluke Black Stack 1560,2565, 2560	DMS 2010:2010 Standard Operating Procedure for Calibration of Furnaces	200 °C to 300 °C 300 °C to 600 °C 600 °C to 1000 °C 1000 °C to 1200 °C	0.1 °C 0.16 °C 0.21 °C 1.4 °C	Modern Surveying Lab/ Customer premises
Temperature	Infrared Thermometers	Portable Infrared Calibrator- Fluke 9133	ASTM E2847	-30.0 °C -25.0 °C -20.0 °C -10.0 °C -5.0 °C 0.0 °C 23.0 °C 50.0 °C 75.0 °C 100.0 °C 125.0 °C 150.0 °C	2 °C 1.8 °C 1.6 °C 1.1 °C 0.94 °C 0.72 °C 0.31 °C 0.67 °C 1.1 °C 1.5 °C 1.9 °C 2.3 °C	Modern Surveying Lab
Temperature	Temperature Chamber System Accuracy Test	Hydra Logger Fluke 2638A with PRT Probes Data Loggers Midgetech HiTemp 140, Data loggers Rotronic HL-20D	BS EN 60068-3-5	-60°C to -40°C -40 °C to -18 °C -18 °C to 0 °C 0 °C to 8 °C 8 °C to 45 °C 45 °C to 100 °C 100 °C to 250 °C	0.3 °C 0.58 °C 0.58 °C 0.58 °C 0.1 °C 0.1 °C 0.13 °C	Modern Surveying Lab/ Customer premises
Temperature	Temperature Chamber System Uniformity Test	Hydra Logger Fluke 2638A with PRT Probes Data Loggers Midgetech HiTemp	BS EN 60068-3-5	-60°C to -40°C -40 °C to -18 °C -18 °C to 0 °C 0 °C to 8 °C 8 °C to 45 °C	3.3 °C 0.96 °C 2.1 °C 2.1 °C 0.14 °C	Modern Surveying Lab/ Customer premises

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		140, Data loggers Rotronic HL-20D		45 °C to 100 °C 100 °C to 250 °C	0.21 °C 0.32 °C	
Temperature	Calibration Bath	PRT Fluke 5626 & 5628 Type S Thermocouple Standard -Fluke 5650, Readout: Fluke Black Stack 1560, 2565, 2560	ASTM E 2488	-60 °C to -40 °C -40 °C to 10 °C 10 °C to 80 °C 80 °C to 175 °C 175 °C to 200 °C	0.018 0.018 °C 0.029 °C 0.036 °C 0.046 °C	Modern Surveying Lab/ Customer premises
Temperature	Liquid Bath/(Water Bath/ Oil Bath etc.)	Hydra Logger Fluke 2638A PRT Probes Thermometer Testo	DMS 2009:2012	-58 °C to 0 °C 0 °C to 100 °C 100 °C to 250 °C	0.1 °C 0.058 °C 0.6 °C	Modern Surveying Lab/ Customer premises
Volume	Measuring Cylinder/ Beaker	Precision Balance (XP404S) 410g-Metler Toledo Precision Balance 3200 g- Sartorius	ASTM E 542	Up to 5 ml 5 ml - 25 ml 25 ml - 50 ml 50 ml - 100 ml 100 ml - 250 ml 250 ml - 500 ml 500 ml - 1000 ml 1000 ml - 2000 ml	0.058 ml 0.003 ml 0.058 ml 0.58 ml 0.72 ml 1.2 ml 2 ml 12 ml	Modern Surveying Lab
Volume	Pipette (Multi Mark)	Precision Balance (XP404S) 410g-Metler Toledo Precision Balance 3200 g- Sartorius	ASTM E 542	Up to 0.5 ml 0.5 to 1 ml 1 ml to 2 ml 2 ml - 5 ml 5 ml to 10 ml 10 ml to 25 ml	0.00059 ml 0.0058 ml 0.01 ml 0.03 ml 0.04 ml 0.06ml	Modern Surveying Lab
Volume	Volumetric Pipette (Single Mark)	Precision Balance (XP404S) 410g-Metler Toledo Precision Balance 3200 g- Sartorius	ASTM E 542	2 ml 5 ml 11 ml	0.028 ml 0.0031 ml 0.0069 ml	Modern Surveying Lab
Volume	Burette	Precision Balance (XP404S) 410g-Metler Toledo Precision Balance 3200 g- Sartorius	ASTM E 542	10 ml 25 ml 50 ml 100 ml 125 ml 360 ml	0.035 ml 0.03 ml 0.013 ml 0.12 ml 0.08 ml 0.3 ml	Modern Surveying Lab
Volume	Piston-operated Burette	Precision Balance (XP404S) 410g-Metler Toledo Precision Balance	ISO 8655-6	0.1 ml -20 ml	0.0058 ml	Modern Surveying Lab

	استمارة مجال الاعتماد Scope of Accreditation form	نظام الاعتماد العراقي IQAS
Organization address: Iraq - Kurdistan Region - Erbil - Main Gazna Road	Organization name: Modern Surveying Calibration & Testing Labs	Accreditation no.: CL 001
Signature: Eng. Abdul Wahid M. Ibrahim Director General of IQAS	Accreditation is valid: From 2/7/2025 To 1/7/2027	Issue no.: 007

		3200 g- Sartorius				
Volume	Piston-operated Dispenser	Precision Balance (XP404S) 410g- Metler Toledo Precision Balance 3200 g- Sartorius	ISO 8655-6	1.0 ml – 5 ml 5 ml – 10 ml	0.058 ml 0.12 ml	Modern Surveying Lab
Volume	Volumetric Flask	Precision Balance (XP404S) 410g- Metler Toledo Precision Balance 3200 g- Sartorius	ASTM E 542	5 ml 10 ml 25 ml 50 ml 100 ml 250 ml 500 ml 1000 ml	0.1 ml 0.1 ml 0.043 ml 0.061 ml 0.031 ml 0.079 ml 0.046 ml 0.038 ml	Modern Surveying Lab
Chemical	Conductivity Meter	Conductivity Standard Solution	MSL-CP-A-03	1.3 µS/cm to 2000 µS/cm 2 mS/cm to 12.64 mS/cm 12.64 mS/cm to 12.88 mS/cm	0.00058 µS/cm 0.0059 mS/cm 0.16 mS/cm	Modern Surveying Lab / Customer Premises
Chemical	Density Meter	Density Standard Solution	MSL-CP-A-02	0.65 g/cm ³ to 1.8 g/cm ³	0.000062 g/cm ³	Modern Surveying Lab / Customer Premises
Chemical	pH Meter	Certified pH Buffer Solution	MSL-CP-A-01	4.01 pH 7.00 pH 10.01 pH	0.006 pH 0.006 pH 0.006 pH	Modern Surveying Lab / Customer Premises
Chemical	Gas Detector	Calibration Gases	MSL/CP/N/01	Hydrogen Sulphide (H ₂ S) 25 ppm Carbon Monoxide (CO) 100 ppm Methane (LEL) 50% Oxygen (O ₂) 18%	2 ppm 6 ppm 6 % 5.8 %	Modern Surveying Lab