Accreditation No: LAB 175

Awarded to

QARSHI RESEARCH INTERNATIONAL Pvt. Ltd.
Hattar Industrial Estate, Haripur, KPK, Pakistan.

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **30-05-2019** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017**

The accreditation requires regular surveillance, and is valid until **29-05-2025.**

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

PAKISTAN NATIONAL ACCREDITATION COUNCIL

14-03-2024
Date

SD
Director General

Calibration Laboratory.

Accreditation Scope of Accreditation Scope of QARSHI RESEARCH INTERNATIONAL Pvt. Ltd. Hattar Industrial Estate, Haripur, KPK, Pakistan.

Permanent laboratory premises X

Field of measurement: In house

Measured quantity	Range	*Expanded Uncertainty (±)	Technique, Reference Standard, Equipment
Mass (1 mg-20 Kg) F_1 and below class weights	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 01 g 02 g 05 g 10 g 20 g 50 g 100 g 200 g 500 g to 5000 g 10 Kg 20 Kg	0.0020 mg 0.0020 mg 0.0020 mg 0.0020 mg 0.0020 mg 0.0020 mg 0.0040 mg 0.0040 mg 0.0060 mg 0.0000080 g 0.000016 g 0.000012 g 0.000014 g 0.000020 g 0.000030 g 0.00010 g 0.00020 g 0.0020 g 0.0000040 Kg 0.000010 Kg	**(ABBA Method)** **TEC-CAL-SCM -02** i) E_2 & F_1 Class Standard Weight ii) Microbalance iii) Analytical Balance, iv) Mass Comparator v) Top loading Balance, vi) Platform balance.
Micropipette (10 µL-5000 µL)	10 µL to 50µL 51 µL to 99µL 100 µL to 200µL 201 µL to 499µL 500 µL to 999µL 1000 µL to 2999µL 3000 µL to 5000µL	0.010 µL to 0.051 µL 0.051 µL to 0.088 µL 0.088 µL to 0.18 µL 0.18 µL to 0.40 µL 0.40 µL to 0.80 µL 0.80 µL to 2.3 µL 2.3 µL to 3.8 µL	**(Gravimetric Method)** **TEC-CAL-SCM-01** i) E_2 & F_1 Class Standard Weight ii) Microbalance iii) Analytical Balance, iv) Top loading Balance, v) Platform balance.
Glass wares (Cylinders, Beakers, Flasks, Pycnometers, Mccartney Bottles, Pipettes, Burettes) **(1 mL-5000 mL)**	1 mL-5 L	0.0042 mL-0.29 L	

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Sd
Director

Metallic (20 mL-20 L)	20 mL-20 L	0.29 mL-0.29 L	
Plastic (1 mL-20 L)	1 mL-20 L	0.29 mL-0.58 L	
Temperature i) Liquid in Glass ii) Probes (PRT) iii) Probes (Thermocouples) iv) IR Thermometers	i) - 40 °C to 125 °C ii) - 40 °C to 420 °C iii) - 30 °C to 1300°C iv) 30 °C to 550 °C	i) 0.37 °C to 0.62 °C ii) 0.25 °C to 1.4 °C iii) 0.23 °C to 0.57 °C iv) 0.40 °C to 0.50 °C	**Comparison Method TEC-CAL-SCM-04** **Equipment used** i. Heating bath (ISOTECH LIBRA 785 M) ii. DUAL Blocks (Fluke 9011& 9009) iii. SATURN FURNACE (ISOTECH 877) iv. IR Calibrator (ISOTECH GEMNI (R 550/700) v. PRT with Readout (FLUKE) vi. S& R Type Thermocouple (FLUKE) vii. Type K J Thermometer (Dwyer TC20)
Pneumatic Pressure (Gauges) (-10-300) Psi	-10 psi to 300 psi	0.11 psi to 0.58 psi	**Comparison Method TEC-CAL-SCM -06 (DKD-R61)** i. Pneumatic Test pump with reference gauge
Hydraulic Pressure (Gauges) (0-10,000) Psi	0 psi to 10000 psi	0.10 psi to 6.3 psi	**Comparison Method TEC-CAL-SCM -06 (DKD-R61)** i. Hydraulic Test pump with reference gauge
Temperature and Humidity meters	(10-50) ^{0}C (10-90) %	0.90 ^{0}C 3.4 % to 4.4 %	**Comparison Method TEC-CAL-SCM-11** Michell Temperature and Humidity Calibrator

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Field of measurement: On-Site			
Measured quantity	**Range**	***Expanded Uncertainty (±)**	**Technique, Reference Standard, Equipment**
Weighing (Balances) (2 mg-120 Kg)	2 mg to 100 mg 101 mg to 500 mg 501 mg to 50 g 51 g to 200 g 201 g to 5000 g 5001g to 120 Kg	0.0060 mg 0.0060 mg to 0.010 mg 0.010 mg to 0.000032 g 0.000032 g to 0.00020 g 0.00020 g to 0.010 g 0.010 g to 0.010 Kg	**(ABBA Method) TEC-CAL-SCM -05** i. F_1 Class Standard Weight ii. E_2 Class Standard Weight
Temperature i) Probes (PRT) ii) **Probes** (Thermocouples) iii) **IR Thermometers** iv)**Cooling & Heat Generating Sources**	i) – 30 °C to 420 °C ii) - 30°C to 670 °C iii) 30 °C to 550 °C iv)-80 °C to 1100 °C -196 ^{0}C to 1450 ^{0}C (Simulated value)	i) 0.26 °C to 1.4 °C ii) 0.32 °C to 0.94 °C iii) 0.40 °C to 0.50 °C iv) 0.69 °C to 0.95 °C	**Comparison Method TEC-CAL-SCM-04 TEC-CAL-SCM-05** Equipment used i. DUAL Blocks (Fluke 9011& 9009) ii. IR Calibrator (ISOTECH GEMNI R 550/700 iii. PRT with Readout (FLUKE) iv. S& R Type Thermocouple (FLUKE) v. Type K .J Thermometer (Dwyer TC20) vi. Temperature Recorder (Fluke 2638A) vii. Digital Thermometer with probe (Testo 735) viii. High Temperature & pressure data logger (MADGETECH PRT Temp140)
Volume Onsite i)Micropipette ii)Glassware iii)Metallic iv)Plastic	i)10 µL to 5000 µL ii)1 mL to 5 L iii)20 mL to 20 L iv)1 mL to 20 L	i) 0.20 µL to 9.2 µL ii)0.10 mL to 0.29 L iii)0.29 mL to 0.29 L iv)0.29 mL to 0.58 L	**Gravimetric Method TEC-CAL-SCM-07** Using customer balance, calibrated by Standard masses of E_2 & F_1 class weights

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pH Meter	(4, 7 & 10) pH	0.020 pH to 0.031 pH	**TEC-CAL-SCM-09** NIST Traceable pH buffers sachets. APHA, AWWA, WEF (4-95)
Conductivity Meter	84 µs/cm 1413 µs/cm	0.87 µs/cm 6.4 µs/cm	**TEC-CAL-SCM-08** NIST Traceable Conductivity standard solution sachets. APHA, AWWA, WEF (2-56)

* **Expanded Uncertainty:**

Expanded Uncertainty is the measurement uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of k = 2. This measurement uncertainty is a value for which the laboratory has been accredited using the procedure that was the subject of assessment. In certificates issued under its accreditation scope an accredited laboratory is not permitted to quote an uncertainty that is smaller than the published uncertainty for respective ranges as given above.

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Sd
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