



ACCREDITATION DOCUMENT

F-06/02
Issue Date: 18/08/2020
Rev. No: 09
LAB 019

Accreditation No: LAB 019

Awarded to

**Chemical Testing Laboratory (Water, Herbal, Pharmacology, Physical and Botany, Honey, Vegetable Oil), Microbiology Testing Laboratory & Calibration Laboratory
of
PCSIR Laboratories Complex, Peshawar-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 **27-11-2014** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2005**.

The accreditation requires regular surveillance, and is valid until **25-11-2020**.

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

11.09.2020
Date

Director General

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Testing Laboratory:-

Accreditation Scope of *Chemical Testing Laboratory* of PCSIR Laboratories Complex,
Peshawar - Pakistan

Permanent Laboratory Premises

Materials/ Products Tested	Testing field (e.g. Environmental Testing or Mechanical Testing) Testing Field	Types of test/ Properties Measured	Reference to Standardized Method (e.g. ISO 14577-1:2003)/ Internal Method Reference
Water	Chemical Testing Laboratory	1. pH	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 4500- H ⁺ . B
		2. Sodium (Na)	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 3500 – Na.
		3. Potassium (K)	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 3500-K.
		4. Total Hardness as CaCO ₃	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 2340.C.
		5. Calcium Hardness as CaCO ₃	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 3500-Ca.B
		6. Total Alkalinity as CaCO ₃	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 2320. B
		7. Chloride (Cl)	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 4500 Cl. B.
		8. Total Dissolved Solids	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 2540. C.
		9. Electrical Conductivity	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012, Method No. 2510. B.
		10. Sulphate as SO ₄	Standard Methods for the Examination of Water and Waste water APHA/AWWA 22 nd Ed. 2012,
		11. Magnesium as CaCO ₃	Standard Methods for the Examination of Water and Waste water APHA/AWWA 22 nd Ed. 2012
		12. Carbonates	Standard Methods for the Examination of Water and Waste water APHA/AWWA 22 nd Ed. 2012,
		13. Bicarbonates	Standard Methods for the Examination of Water and Waste water APHA/AWWA 22 nd Ed. 2012,

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Waste Water	Chemical Testing Laboratory	i). COD	Standard Methods for the Examination of Water and Waste water APHA/AWWA 22nd Ed. 2012.
Edible/ Vegetable oil	Chemical Testing Laboratory	i). Moisture & Volatile Matters	AOAC -2000
		ii). Refractive Index	AOAC-2000 Official Method 921.08
		iii). Peroxide Value	AOAC-2000 Official Method 965.33
		iv). Saponification Value	AOAC-2000 Official Method 920.160
		v). Free Fatty Acid	Method of Sampling and test for oil and fats ISO-660:1996
Honey	Chemical Testing Laboratory	i). Moisture	AOAC 969.38 B
		ii). Ash	AOAC 923.04
		iii). Total Sugars	AOAC 2000
		iv). Reducing Sugars	AOAC 2000
		v). Non Reducing Sugars	AOAC 2000
		vi). Acidity	AOAC 2000
		vii). HMF	AOAC 980.23
		viii). Diastase Activity	AOAC 958.09
		ix). Water Insoluble Solid Contents	AOAC 2000
Herbal Raw Materials	Chemical Testing Laboratory Physical Testing	i). Moisture/Water Content	AOAC 19 th Edition, 2012
		ii). Total Ash	AOAC 19 th Edition, 2012
		iii). Ash Acid Insoluble	AOAC 19 th Edition, 2012
Tobacco and Tobacco product	Chemical Testing Laboratory	i). Ash Content ii). Moisture Content iii). Acid Insoluble Ash iv). Nicotine Content	AOAC, 19 th Edition, 2012
Herbal raw materials and finished products	Chemical Testing Laboratory	i). Volatile Oil Content	AOAC, 19 th Edition, 2012/B.P 2016
Herbal raw materials	Chemical Testing Laboratory	i). Organoleptic Evaluation ii). Macroscopic Studies iii). Microscopic Studies	Quality control methods for medicinal plant material.1998. British Pharmaceutical Codex 1968. British pharmacopoeia 2016
Plant materials (Powder and liquid form)	Chemical Testing Laboratory	i). Melting Point ii). Density of Liquid iii). Water Soluble Extraction iv). Alcohol Soluble Extraction	British Pharmacopeias 2012, Appendix XIM WHO Monograph on selected Medicinal Plants Volume, 1999
Plant extracts/products	Chemical Testing Laboratory	Acute Toxicity	British Pharmacopeias 2016

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Testing Laboratory:-

Accreditation Scope of *Microbiology Testing Laboratory* of PCSIR Laboratories Complex,
Peshawar - Pakistan

Permanent Laboratory Premises

Materials/ Products Tested	Testing field (e.g. Environmental Testing or Mechanical Testing) Testing Field	Types of test/ Properties measured	Reference to Standardized Method (e.g. ISO 14577-1:2003)/ Internal Method Reference
Water	Microbiology Testing Laboratory	1. Total Plate Count (TPC)	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012 Method No. 9215 A-B
		2. Total Coliform and Fecal Coliform	Standard Methods for the Examination of water and wastewater, APHA/AWWA/WEF 22 nd Edition, 2012 Method No.9221 A-E
Water	Microbiology Testing Laboratory	3. Detection of E. Coli 4. Enumeration of E. Coli	Standard methods for the Examination of water and waste water, APHA/AWWA/WEF 22 nd Edition, 2012, Method No.9221 A-F
Juice	Microbiology Testing Laboratory	1. Total Plate Count (TPC) 2. Total Coliform and Fecal Coliform 3. Detection of E. Coli 4. Enumeration of E. Coli	Compendium of method for Microbiological examination of food 4th edition, 2001 Edited by Frances Pouch Downes Keith ITO American Public Health Association Washington DC USA.
Milk	Microbiology Testing Laboratory	1. Total Plate Count (TPC) 2. Total Coliform and Fecal Coliform 3. Detection of E. Coli 4. Enumeration of E. Coli	Compendium of method for Microbiological examination of food 4th edition, 2001 Edited by Frances Pouch Downes Keith ITO American Public Health Association Washington DC USA.
Milk Powder (Food)	Microbiology Testing Laboratory	1. Total plate count (TPC) 2. Total Coliform 3. Fecal Coliform 4. Detection of E. Coli 5. Enumeration of E. Coli	Compendium of method for Microbiological examination of food 4 th edition, 2001, Edited by Frances Pouch Downes Keith ITO American Public Health Association Washington DC USA
		6. Detection of Yeast 7. Enumeration of Yeast 8. Detection of Mould 9. Enumeration of Yeast	Manual of Food and Agriculture Organization of the United Nation 1992.

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Calibration Laboratory.

Accreditation Scope of *Calibration Laboratory* of PCSIR Laboratories Complex,
Peshawar - Pakistan

Permanent Laboratory Premises

Calibration Area	Range	*Expanded Uncertainty (±)	Technique, Reference Standard, Equipment
Mass:			
Mass/Weights	Class F2 and Lower classes (10 mg to 5 kg)	0.02 mg to 0.040 g	OIMLRIII-I Analytical Balance, Sartorius Mass Comparator Hygrometer Digital, Model HTC-2
Weighing Scales Class II and Below Accuracy Classes	(10 mg to 6 kg)	0.09 mg to 80 mg	OIMLR76-I ASTM Class I Weights Hygrometer Digital, Model HTC-2
Temperature:			
Temperature (Liquid In Glass Thermometers)	-20 °C to 200 °C	0.12 °C to 2 °C	ASTM ,E77-07 Water Bath (Julabo) Oil Bath
Volume:			
Micropipette	i). 0.5 µL to 10 µL ii). 10 µL to 100 µL iii). 100 µL to 1000 µL	0.13 µL to 0.14 µL 0.20 µL to 1.67 µL 0.76 µL to 3.66 µL	BS EN ISO 8655-6 Analytical Balance, Sartorius Hygrometer Digital, Model HTC-2
Pipettes	i). 1 mL, ii). 2 mL, iii). 5 mL, iv). 10 mL, v). 20 mL, vi). 25 mL	0.00077 mL 0.00088 mL 0.00092 mL 0.0013 mL 0.13 mL 0.12 mL	ASTM ,E542-01 Analytical Balance, Sartorius Top Loading Balance, Adam Hygrometer Digital, Model HTC-2
Graduated Cylinder	i). 10 mL ii). 25 mL iii). 50 mL iv). 100 mL v). 250 mL vi). 500 mL vii). 1000 mL	0.17 mL 0.31 mL 0.59 mL 0.59 mL 0.59 mL 1.5 mL 2.9 mL	ASTM ,E542-01 Top Loading Balance, Adam Hygrometer Digital, Model HTC-2
Volumetric Flasks	i) 25 mL ii) 50 mL iii) 100 mL iv. 250 mL v) 500 mL vi) 1000 mL vii) 2000 mL	0.12 mL 0.12 mL 0.12 mL 0.12 mL 0.12 mL 0.12 mL 0.12 mL	ASTM ,E542-01 Top Loading Balance, Adam Hygrometer Digital, Model HTC-2
Burettes	i) 25 mL	0.13 mL	ASTM ,E542-01

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	ii) 50 mL iii) 100 mL	0.14 mL 0.17 mL	Top Loading Balance, Adam Hygrometer Digital, Model HTC-2
Beakers	i) 50 mL ii) 100 mL iii) 250 mL iv) 500 mL v) 1000 mL	0.58 mL 1.16 mL 1.53 mL 2.94 mL 5.86 mL	ASTM ,E542-01 Top Loading Balance, Adam Hygrometer Digital, Model HTC-2
Pressure:			
Pressure Gauge	0.0 psi to 10000 psi	1 psi	Direct measurement Dead Weight Tester
Electrical:			
AC Voltage @ 50 Hz (measurement)	200 mV to 1000 V	0.010 mV to 0.06 V	Direct measurement Inmel 7000 Inmel 33 5500
DC Voltage (measurement)	200 mV to 1000 V	0.006 mV to 0.06 V	Direct measurement Inmel 7000 5500
AC Current @ 50 Hz (measurement)	1 mA to 20 A	0.005 mA to 0.010 A	Direct measurement Inmel 7000 Inmel 33 5500
DC Current (Measurement)	1 mA to 20 A	0.0006 mA to 0.010 A	Direct measurement Inmel 7000 5500
Electrical (Resistance)	1 Ω to 1 MΩ	0.070 Ω to 0.0011 MΩ	Decade resistance block
Dimension:			
Vernier Caliper / Digital Caliper	1 mm to 200 mm	0.01 mm	Gauge block set (Grade 1)

*** 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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