



Pakistan National Accreditation Council

Ministry of Science & Technology
Government of Pakistan
Islamabad



Certificate of Accreditation

is awarded to

**Water Environment Laboratories &
Consultancy Services (WELCOS)
Lahore, Pakistan**

in accordance with the requirements of **ISO/IEC 17025:2017**

The accreditation is subject to regular surveillance and compliance
to the requirements of PNAC.

For scope of accreditation, see appendix.

Accreditation Certificate Number: LAB 227



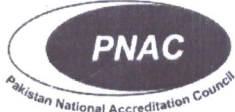
Date of Issue:

02-09-2024

Director General

Valid until

13-06-2027

	ACCREDITATION DOCUMENT	F-06/02 Issue Date: 18/08/2020 Rev. No: 09 LAB 227
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Accreditation No: LAB 227

Awarded to

**Water Environment Laboratories & Consultancy Services,
WELCOS,
Lahore, 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 **14-06-2021** 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 **13-06-2027**.

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.

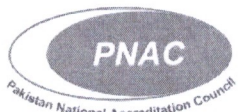
PAKISTAN NATIONAL ACCREDITATION COUNCIL

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Testing Laboratory.

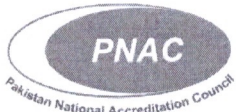
Accreditation Scope of Water Environment Laboratories & Consultancy Services (WELCOS) Lahore, Pakistan

Permanent laboratory premises. 29-D Punjab University Town-II, Khayaban-e -Jinnah, Lahore, Pakistan

Materials/ Products tested	Testing field (e.g. environmental testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577- 1:2003)/ Internal method reference
Portable Surface Ground Process & Waste Water	Environmental Testing	Alkalinity	APHA Standard Method 2320-B (Titration method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Bicarbonate	APHA Standard Method 2320-B (Titration method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Chemical Oxygen Demand (COD)	APHA Standard Method 5220-B & D (Open Reflux & Closed Reflux colorimetric method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Electrical Conductivity	APHA Standard Method 2510-B (Conductance Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Calcium	APHA Standard Method 3500 Ca ²⁺ -B (EDTA Titration Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Magnesium	APHA Standard Method 3500 Mg ²⁺ -B (EDTA Titration Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Fluoride	APHA Standard Method 4500 F ⁻ -D (SPADNS Method) APHA, AWWA, WEF 24 th Edition 2023

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Portable Surface Ground Process & Waste Water	Environmental Testing	Nitrate as Nitrogen	APHA Standard Method 4500 NO ₃ ⁻ B (Ultraviolet Spectrophotometric Screening Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Oil & Grease	APHA Standard Method 5520-B (Liquid-Liquid Partition Gravimetric Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Sulphate (SO ₄ ²⁻)	APHA Standard Method 4500 SO ₄ ²⁻ E (Turbidimetric Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Total Dissolved Solids (TDS)	APHA Standard Method 2540-C (Total Dissolved Solids at 180°C Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Total Hardness as CaCO ₃	APHA Standard Method 2340-C (EDTA Titration Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Arsenic (As)	APHA Standard Method 3113-B & 3114-B (Electro thermal & Hydride Generation AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Chromium (Cr)	APHA Standard Method 3113-B & 3111-B (Electro thermal & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Copper (Cu)	APHA Standard Method 3113-B & 3111-B (Electro thermal & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Cadmium (Cd)	APHA Standard Method 3113-B & 3111-B (Electro thermal & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023

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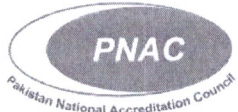

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Portable Surface Ground Process & Waste Water	Environmental Testing	Chloride	APHA Standard Method 4500 Cl ⁻ B (Argentometric Titration Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Iron (Fe)	APHA Standard Method 3500 Fe-B & 3111-B (Phenanthroline Spectrophotometric & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Lead (Pb)	APHA Standard Method 3113-B & 3111-B (Electro thermal & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Manganese (Mn)	APHA Standard Method 3113-B & 3111-B (Electro thermal & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Potassium	APHA Standard Method 3500-K B (Flame Photometric Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Sodium	APHA Standard Method 3500-Na B (Flame Photometric Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	Zinc (Zn)	APHA Standard Method 3113-B & 3111-B (Electro thermal & Air Acetylene Flame AAS Method) APHA, AWWA, WEF 24 th Edition 2023
	Environmental Testing	pH	APHA Standard Method 4500 H ⁺ -B (Electrometric Method) APHA, AWWA, WEF 24 th Edition 2023
Portable Surface Ground	Environmental Testing	Total Suspended Solids (TSS)	APHA Standard Method 2540 D (Total Suspended Solids dried at 103°C to 105°C Method) APHA, AWWA, WEF 24 th Edition 2023

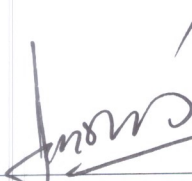
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Process & Waste Water	Environmental Testing	Total Coliform	APHA Standard Method 9222-B (Total Coliform Membrane Filter Method) APHA, AWWA, WEF 24th Edition 2023
	Environmental Testing	Fecal Coliform (E. Coli)	APHA Standard Method 9222-D (Thermotolerant Fecal Coliform Membrane Filter Method) APHA, AWWA, WEF 24th Edition 2023

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