

	ACCREDITATION DOCUMENT	F-06/02 Issue Date: 18/08/2020 Rev. No: 09 LAB 146
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Accreditation No: LAB 146

Awarded to

SOIL AND WATER TESTING LABORATORY, GULBURG ROAD, MODAL TOWN-A, BAHAWALPUR, 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 **29-06-2018** 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 **28-06-2021**.

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

20-10-2020

Date

Sd

Director General

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Testing Laboratory.

Accreditation Scope of Soil and Water Testing Laboratory for Research
Bahawalpur, Pakistan.

Permanent laboratory premises

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
Phosphate Fertilizer (solid, Liquid)	Chemical Testing	Citrate soluble phosphorus estimation	SWTBWL/SOP/L3/02 (based on Modified Official Method of Analysis of AOAC International 18 th Edition 2005 Method No. 993.31, Chapter 2, p 11) (Titrimetric Method)
Potassium Fertilizer (solid, Liquid)		Water soluble Potassium estimation	SWTBWL/SOP/L3/03 (based on Modified Official Method of Analysis of AOAC International 18 th Edition 2005 Method No. 983.02, Chapter2, p 21). (Flame Photometer)
Nitrogen Fertilizer (solid, Liquid)		Ammoniacal Nitrogen	SWTBWL/SOP/L3/01 (based on Modified Official Method of Analysis of AOAC International 18 th Edition 2005 Method No. 920.03-04, Chapter 2, p 15) (Kjeldhal,s distillation apparatus)
Nitrogen Fertilizer (solid, Liquid)		Uric Nitrogen	SWTBWL/SOP/L3/01 (based on Modified Official Method of Analysis of AOAC International 18 th Edition 2005 Method No. 955.04). (Kjeldhal,s distillation apparatus)
Nitrogen Fertilizer (solid, Liquid)		Nitrate Nitrogen	SWTBWL/SOP/L3/01 (based on Modified Official Method of Analysis of AOAC International 18 th Edition 2005 Method No. 892.01, Chapter 2, p 15). (Kjeldhal,s distillation apparatus)

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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
Fertilizer Zn, Boron (solid, Liquid)		Water soluble Zinc	SWTBWL/SOP/L3/05 (based on Official Method of Analysis of AOAC International 18th Edition 2005 Method No. 965.09, Chapter 2, p 25). (Atomic Absorption Spectrophotometry)
		Water soluble Boron	SWTBWL/SOP/L3/04 (based on Official Method of Analysis of AOAC International 18th Edition 2005 Method No. 982.01 Chapter2, p 32). (Spectrophotometer)
Fertilizer Solid/Liquid (Cu, Fe, Mn Zn, Chelated- Zn)		Acid soluble Zinc estimation	SWTBWL/SOP/L3/06 & 10 (based on Official Method of Analysis of AOAC International 20 th Edition 2016, Current through revision, 4, 2011. Method No. 2.6.01. (AOAC Official Method No. 965.09) Fertilizers Chapter 2, Subchapter 6, p 29-30). (Atomic Absorption Spectrophotometry)
		Acid soluble Cu estimation	
		Acid soluble Fe estimation	
		Acid soluble Mn estimation	
		Chelated estimation by precipitation technique of Sodium Carbonate	
Potassium Humate (Solid/Liquid)	Gravimetric Testing	Humic Acid	SWTBWL/SOP/L3/08 (based on ISO 19822:2018) https://www.iso.org/standard/66271.html (Oven)
Organic Matter in Waste Compost/BOP	Ignition method	Organic matter	SWTBWL/SOP/L3/09 (based on Official Methods of Analysis of AOAC International, 20 th Edition, 2016, Current through Revision, 4, 2011. Method No. 2.7.06 & 2.7.09 (AOAC Official Method 967.04 & 967.05), Fertilizers Chapter 2, Page 54). (Oven & Furnace)

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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
CEC in Waste Compost	Titrimetric Method	Cation Exchange Capacity	<p style="text-align: center;">SWTBWL/SOP/L3/07</p> (based on Official Methods of Analysis of AOAC International, 20th Edition, 2016, Current Through Revision, 4, 2011. Method No. 2.7. 13 (AOAC Official Method 973.09), Fertilizers Chapter 2 Page 56). (Titration)

20-10-2020
 Date

Sd
 Director