Accreditation No: LAB 194

Awarded to

Solex Chemicals Quality Control Laboratory
7/C-II, Industrial Estate Multan, 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 **26-02-2020** 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 **25-02-2023.**

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

02-02-2021
Date

-:Sd:-
Director General

Testing Laboratory.

Accreditation Scope of **Solex Chemicals Quality Control Laboratory 7/C-II, Industrial Estate Multan, Pakistan.**

Permanent laboratory premises X

Materials/Products tested	Testing field (e.g. Chemical Testing or mechanical testing)	Types of test/ Properties measured	Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference
Deltamethrin Carbofuran Triazophos Buprofezin Emamectin Pendimethalin Chlorfenapyr Diafenthiuron Acetamiprid Metalochlor Bromoxynil + MCPA Paraquate Phosphorus Fertilizer Liquid Total Nitrogen Fertilizer Liquid Humic Acid Fertilizer Liquid Sulphur Fertilizer Liquid Boron Fertilizer Liquid **Fertilizer Liquid** Zinc (Zn) Ferrous (Fe) Copper (Cu) Manganese (Mn)	Physical Testing	Density (Finished / Formulated Products)	CIPAC Vol. F Method No.3.3.1 Page No 18-19 (Hydrometer/S.G Bottle) **(SOLEX/QCL/STM/SG)**
Deltamethrin Triazophos Emamectin Pendimethalin Metalochlor Bromoxynil + MCPA		Emulsion (Finished / Formulated Products)	CIPAC Vol. F,MT 36 Page No.108-110 (Measuring Cylinder, Water Bath) **(SOLEX/QCL/STM/EM)**

02-02-2021
Date

_____-:Sd:-_____
Director

Deltamethrin (Formulation/Finished & Technical)	Chemical Testing	Quantitative determination of Deltamethrin (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/DM)** (HPLC Method) Based on reference: 333/TC/M2/Volume-L, CIPAC 2006. HPLC.
Carbofuran (Formulation/Finished & Technical)		Quantitative determination of Carbofuran (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/CARB)** (HPLC Method) Based on reference: 276/TC/M/Volume -D, CIPAC 1988. HPLC.
Triazophos (Formulation/Finished & Technical)		Quantitative determination of Triazophos (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/TRI)** (HPLC Method) Based on reference: 353/TK/M/Volume -H, CIPAC 1998. HPLC.
Buprofezin (Formulation/Finished & Technical)		Quantitative determination of Buprofezin (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/BZN)** (HPLC Method) Based on reference: Current Science, Vol. 115, No. 5, 10 September 2018.
Emamectin (Formulation/Finished & Technical)		Quantitative determination of Emamectin (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/EMA)** (HPLC Method) Based on reference: African Journal of Pure and Applied Chemistry Vol. 5(13), pp. 457-462, 10 November, 2011.

_02-02-2021_ _____-:Sd:-_____

Date Director

Pendimethalin (Formulation/Finished & Technical)	Chemical Testing	Quantitative determination of Pendimethalin (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/PMN)** (HPLC Method) Based on reference: 357/TC/M/Volume – M, CIPAC 2009. HPLC.
Chlorfenapyr (Formulation/Finished & Technical)		Quantitative determination of Chlorfenapyr (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/CFNR)** (HPLC Method) Based on reference: 570/TC/M/Volume - O, CIPAC 2009. HPLC.
Diafenthiuron (Formulation/Finished & Technical)		Quantitative determination of Diafenthiuron (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/DFN)** (HPLC Method) Based on reference: Research Journal of Recent Sciences Vol. 1(10), 55-58, October (2012).
Acetamiprid (Formulation/Finished & Technical)		Quantitative determination of Acetamiprid (Active Ingredient)	In-house Developed & Validated Method (HPLC Method) **(SOLEX/QCL/STM/ACM)** Based on reference: 649/TC/M/ CIPAC Volume -L, 2006. HPLC
Metalochlor (Formulation/Finished & Technical)		Quantitative determination of Metalochlor (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/MCR)** (HPLC Method) Based on reference: National Laboratory Association South Africa.
Bromoxynil + MCPA (Formulation/Finished & Technical)		Quantitative determination of Bromoxynil + MCPA (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/B+MCPA)** (HPLC Method) Based on reference: 2/TC/M3 Volume – 1C,

	Chemical Testing		CIPAC.
Paraquate (Formulation/Finished & Technical)		Quantitative determination of Paraquate (Active Ingredient)	In-house Developed & Validated Method (HPLC Method) **(SOLEX/QCL/STM/PQ)** Based on reference: 56/SL/M/ CIPAC Volume -E, 1993.
Phosphorus (Fertilizer Solid & Liquid) (Formulation/Finished & Technical)		Quantitative determination of Phosphorus (Active Ingredient)	Modified Official Method of Analysis of AOAC International 18th Edition 2005 Method No. 993.31 Chapter 2, Page No 11 **(SOLEX/QCL/STM/P)** (Spectrophotometer Method)
Total Nitrogen (Fertilizer Solid & Liquid) (Formulation/Finished & Technical)		Quantitative determination of Total Nitrogen (Active Ingredient)	Modified Official Method of Analysis of AOAC International 18th Edition 2005 Method No. 892.01 Chapter 2, Page No: 13 and 15. **(SOLEX/QCL/STM/N)** (Kjeldahl Apparatus)
Humic Acid (Fertilizer Solid & Liquid) (Formulation/Finished & Technical)		Quantitative determination of Humic Acid (Active Ingredient)	http://www.humates.com/methodlolgy.html **(SOLEX/QCL/STM/HA)** (Spectrophotometer Method)
Sulphur (Fertilizer Solid & Liquid) (Formulation/Finished & Technical)		Quantitative determination of Sulphur (Active Ingredient)	In-house Developed & Validated Method **(SOLEX/QCL/STM/S)** (HPLC Method) Based on reference: ALS Environmental Hawarden Method Number: TM 136 Updated: 13/02/2020 Method Issue Number: 16.

Boron (Fertilizer Solid & Liquid) (Formulation/Finished & Technical)	Chemical Testing	Quantitative determination of Boron (Active Ingredient)	Gaines, T.P. and G.A. Mitchell. 1979. Common. Soil Sci. Plan Anal. 10:1099-1108. **(SOLEX/QCL/STM/B)** (Spectrophotometer Method)
Fertilizers Zinc (Zn) Ferrous (Fe) Copper (Cu) Manganese (Mn) (Solid & Liquid) (Formulation/Finished & Technical)		Quantitative determination of active ingredient (Water Soluble Zinc, Copper, Ferrous & Manganese)	Official Method of Analysis of AOAC International 18th Edition 2005, Current through revision, 4, 2011. Method No. 2.6.01 (AOAC Official Method No. 965.09) Fertilizers Chapter 2, Subchapter 6, Page No: 29-30 With Hach Kit Method From USEPA Approved for water and waste water analysis (Method 8007, 8008, 8009 & 8026). **(SOLEX/QCL/STM/Zn, Fe, Cu, Mn)** (Spectrophotometer Method)
Fertilizers Zinc (Zn) Ferrous (Fe) Copper (Cu) Manganese (Mn) (Solid & Liquid) (Formulation/Finished & Technical)		Quantitative determination of active ingredient (Acid Soluble Zinc, Copper, Ferrous & Manganese)	Official Method of Analysis of AOAC International 18th Edition 2005, Current through revision, 4, 2011. Method No. 2.6.01 (AOAC Official Method No. 965.09) Fertilizers Chapter 2, Subchapter 6, Page No: 29-30 With Hach Kit Method From USEPA Approved for water and waste water analysis (Method 8007, 8008, 8009 & 8026). **(SOLEX/QCL/STM/Zn, Fe, Cu, Mn)** (Spectrophotometer Method)

02-02-2021
Date

-:Sd:-
Director