Accreditation No: LAB 190
Awarded to
Hexon, Quality Assurance Laboratory, Plot No. 10
industrial Estate, Phase-II, 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 **24-01-2020** by Pakistan National Accreditation Council.

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

The accreditation requires regular surveillance, and is valid until **21-01-2026.**

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

07-04-2023
Date

SD
Director General

Testing Laboratory.

Accreditation Scope of Hexon, Quality Assurance Laboratory, Plot No. 10, Industrial Estate, Phase II, Multan-Pakistan.

Permanent laboratory premises X

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
Pesticide *(Finished/Formulated Products)* Imidacloprid, Acetamiprid, Chlorpyrifos, Pyriproxyfen, Fipronil, Clodinofop propargyl, Lufenuron, Chlorfenapyr, Pendimethalin, Metolachlor, Bifenthrin, Diafenthiuron, Lambda Cyhalothrin, Buprofezin, Clothianidian, Azoxystrobin, Indoxacarb, Difenoconazole,Mesotrione, Cymoxynil,Triazophos.Atrazine, deltamethrin, Emamectin Benzoate **Fertilizer** *(Finished/Formulated Products)* Potash(K_2O), Phosphorous (P_2O_5),Sulfer, Nitrogen, Humic Acid, Iron (Fe), Zinc (Zn), Manganese (Mn), Boron, Chloride (Cl)	Physical Testing	Qualitative determination of **p H**	**(HEXON/QAL/TM/014)** Verified Method based on CIPAC Hand Book, Volume F, and Method No. MT75, Pg. 205 (pH Meter
Pesticide *(Liquid Finished/Formulated Products)* Imidacloprid, Acetamiprid, Chlorpyrifos, Pyriproxyfen, Fipronil, Clodinofop propargyl, Lufenuron, Chlorfenapyr, Pendimethalin, Metolachlor, Bifenthrin, Diafenthiuron, Lambda Cyhalothrin, Buprofezin, Clothianidian, Azoxystrobin, Indoxacarb, Difenoconazole,Mesotrione, Cymoxynil,Triazophos.Atrazine, deltamethrin, Emamectin Benzoate **Fertilizer (***Liquid Finished/Formulated Products)* Potash(K_2O), Phosphorous (P_2O_5),Sulfer, Nitrogen, Humic Acid,	Physical Testing	Qualitative determination of **Density**	**(HEXON/QAL/TM/0012)** Verified Method based on CIPAC Hand Book, Volume F, and Method No. MT3.3, Pg. 13 (Pyknometer method)

Iron (Fe), Zinc (Zn), Manganese (Mn), Boron, Chloride (Cl)			
Pesticides *(Finished &Formulated WP, SP, WDG/WG and SC Products)* Imidacloprid, Acetamiprid, Chlorpyrifos, Pyriproxyfen, Fipronil, Clodinofop propargyl, Lufenuron, Chlorfenapyr, Pendimethalin, Metolachlor, Bifenthrin, Diafenthiuron, Lambda Cyhalothrin, Buprofezin, Clothianidian, Azoxystrobin, Indoxacarb, Difenoconazole,Mesotrione, Cymoxynil,Triazophos.Atrazine, deltamethrin, Emamectin Benzoate	Physical Testing	Quantitative determination of **Suspensibility**	**(HEXON/QAL/TM/0016)** Verified Method based on CIPAC Hand Book, Volume k, and Method No. MT 184, Pg. 142-145 (Gravimetric Method)
*(***Pesticides** *(Finished &Formulated EC, SL, EW & OD Products)* Imidacloprid, Acetamiprid, Chlorpyrifos, Pyriproxyfen, Fipronil, Clodinofop propargyl, Lufenuron, Chlorfenapyr, Pendimethalin, Metolachlor, Bifenthrin, Diafenthiuron, Lambda Cyhalothrin, Buprofezin, Clothianidian, Azoxystrobin, Indoxacarb, Difenoconazole,Mesotrione, Cymoxynil,Triazophos.Atrazine, deltamethrin, Emamectin Benzoate	Physical Testing	Qualitative determination of **Emulsion**	**(HEXON/QAL/TM/013)** Verified Method based on CIPAC Hand Book, Volume F, and Method No. MT 36, Pg. 108-114
Pesticides *(Finished &Formulated WP, SP, WDG/)* Imidacloprid, Acetamiprid , Chlorpyrifos, Pyriproxyfen, Fipronil, Clodinofop propargyl, Lufenuron, Chlorfenapyr, Pendimethalin, Metolachlor, Bifenthrin, Diafenthiuron, Lambda Cyhalothrin, Buprofezin, Clothianidian, Azoxystrobin, Indoxacarb, Difenoconazole,Mesotrione, Cymoxynil,Triazophos.Atrazine, deltamethrin, Emamectin Benzoate	Physical Testing	Qualitative determination of **Wettability**	**(HEXON/QAL/TM/0018)** Verified Method based on CIPAC Hand Book, Volume F, and Method No. MT 53.3, Pg. 164 Physical test)

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Pesticide Imidacloprid, Acetamiprid, Chlorpyrifos, Pyriproxyfen Fipronil, Clodinafop-Propargyl, Lufenuron, Chlorfenpyr, Pendimethalin, Metolachlor, Bifenthrin Diafenthiuron, Lambda Cyhalothrin Buprofezin, Clothianidian, Azoxystrobin Indoxacarb, Difenoconazole, Mesotrione, Cymoxynil, Triazophos. Atrazine, deltamethrin, Emamectin Benzoate **(Solid & Liquid)** **Formulation /Finished product & Technical**	Chemical Testing of Pesticide	Quantitative determination of Imidacloprid (Active Ingredient)	**(HEXON/QAL/TM/006)** In-House Modified & validated Method Based on CIPAC Volume K , Page No. 70-72 (HPLC Technique)
		Quantitative determination of Acetamiprid (Active Ingredient)	**(HEXON/QAL/TM/001)** In-House Modified & Validated Method based on CIPAC Vol L page # 4-7 (HPLC Technique)
		Quantitative determination of Chlorpyrifos (Active Ingredient)	**(HEXON/QAL/TM/003)** In-House Modified & validated Method based on CIPAC Vol 1C page # 2028, (HPLC Technique)
		Quantitative determination of Pyriproxyfen (Active Ingredient)	**(HEXON/QAL/TM/009)** In-House Modified & validated Method based on CIPAC Vol M page # 180-183(HPLC Technique)
		Quantitative determination of Fipronil (Active Ingredient)	**(HEXON/QAL/TM/005)** In-House Modified & validated Method based on CIPAC Vol J page # 61 (HPLC Technique)
		Quantitative determination of Clodinofop propargyl (Active Ingredient)	**(HEXON/QAL/TM/004)** In-House Modified & Validated Method based on CIPAC Vol M page # 26-29 (HPLC Technique)
		Quantitative determination of Lufenuron (Active Ingredient)	**(HEXON/QAL/TM/007)** In-house Modified &Validated Method based on CIPAC Vol M page # 106 - 109 (HPLC Technique)
		Quantitative determination of Chlorfenapyr (Active Ingredient)	**(HEXON/QAL/TM/002)** In-house Modified & Validated Method based on CIPAC Vol O page # 22-26 (HPLC Technique)
		Quantitative determination of Pendimethalin (Active Ingredient)	**(HEXON/QAL/TM/008)** In- House Modified & Validated Method based on CIPAC Vol M page # 149 (HPLC Technique)
		Quantitative determination of Metolachlor (Active Ingredient)	**(HEXON/QAL/TM/025)** In-houseModified & validated method based on NLA South Africa (HPLC Technique)
		Quantitative determination of Bifenthrin (Active Ingredient)	**(HEXON/QAL/TM/020)** In-House developed and validated method based on International Journal of Advance Research (Volume 5, Issue 6) (HPLC Technique)
		Quantitative determination of Diafenthiuron (Active Ingredient)	**(HEXON/QAL/TM/023)** In-House developed and validated Method based on Ciba-Geigy (HPLC Technique)

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		Quantitative determination of Lambda Cyhalothrin (Active Ingredient)	**(HEXON/QAL/TM/024)** In-House developed and validated Method based on University of China qingdgo, (HPLC Technique)
		Quantitative determination of Buprofezin (Active Ingredient)	In-House developed and validated Method (HEXON/QAL/TM/022) based on Korean Journal of Environmental Agriculture, (HPLC Technique)
		Quantitative determination of Clothianidin (Active Ingredient)	**(HEXON/QAL/TM/0021)** In-House Modified & Validated Method based on CIPAC Handbook Volume N page 14 (HPLC Technique)
		Quantitative determination of Azoxystrobin (Active Ingredient)	**(HEXON/QAL/TM/019)** In-House developed and validated Method based on J. Braz. Chem. Soc., Vol. 19, No. 1, 60-63, 2008 (HPLC Technique)
		Quantitative determination of Indoxacarb (Active Ingredient)	**(HEXON/QAL/TM/0032)** In-House Modified & Validated Method based on National Laboratory of South Africa (HPLC Technique)
		Quantitative determination of Difenoconazole(Active Ingredient)	**(HEXON/QAL/TM/0033)** In-House Modified & Validated Method based on National Laboratory of South Africa (HPLC Technique)
		Quantitative determination of Mesotrione (Active Ingredient)	**(HEXON/QAL/TM/0034)** In-House Modified & Validated Method based on National Laboratory of South Africa (HPLC Technique)
		Quantitative determination of Cymoxynil (Active Ingredient)	**(HEXON/QAL/TM/0035)** In-House Modified & validated Method based on CIPAC Vol J page # 22-28 (HPLC Technique)
		Quantitative determination of Triazophos (Active Ingredient)	**(HEXON/QAL/TM/0036)** In-House Modified & validated Method based on International Journal of Advance Research in Chemistry and Environment Vol.5 Pag. 65-69 (HPLC Technique)
		Quantitative determination of Atrazine (Active Ingredient)	**(HEXON/QAL/TM/0037)** In-House Modified & validated Method based on Indian Journal of environmental sciences Vol.8 Pag. 263-268 (HPLC Technique)
		Quantitative determination of Deltamethrin (Active Ingredient)	**(HEXON/QAL/TM/0038)** In-House Modified & validated Method based on African Journal of agriculture research Vol.1 Pag. 182-185 (HPLC Technique)
		Quantitative determination of	**(HEXON/QAL/TM/0039)** In-House Modified & validated

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		Emamectin Benzoate (Active Ingredient)	Method 5 (HPLC Technique)
Fertilizer Potash (K_2O), Phosphorous (P_2O_5), Sulfur, Nitrogen ((Ammonical, Uric, and Total nitrogen) Humic Acid, Iron (Fe) Zinc (Zn), Manganeze (Mn) Boron Chloride (Cl) **(Solid & Liquid)** **(Formulation/Finished & Technical)**	Chemical Testing of Fertilizer	Quantitative determination of K_2O (Active Ingredient)	**(HEXON/QAL/TM/010)** Verified Method for fertilizers Food And Agricultural Materials Inspection Center (FAMIC), Japan, 2013 Flame Photometer Technique)
		Quantitative determination of P_2O_5 (Active Ingredient)	**(HEXON/QAL/TM/011)** Verified Method Pakistan standard for Single Super Phosphate (2nd edition) PS: 67-1996. PSQCA. Karachi (Titration Method)
		Quantitative determination of Sulfur (Active Ingredient)	**(HEXON/QAL/TM/026)** Verified Method of AOAC 15th edition page 34 method No. 980.02 (Gravimetric Titration)
		Quantitative determination of Nitrogen (Ammonical, Uric, and Total nitrogen) (Active Ingredient)	**(HEXON/QAL/TM/027)** Verified Method of AOAC 18th edition (Kjeldahl method)
		Quantitative determination of Humic Acid (Active Ingredient)	**(HEXON/QAL/TM/028)** Verified Method ttp://www.humates.com/ methodlolgy.html MVH Humic Acid Methodology (Spectrophotometer Method)
		Quantitative determination of Acid Soluble Iron (Fe) (Active Ingredient)	**(HEXON/QAL/TM/030)** HACH Kit Method USEPA 8008 (Ferrover Method) (Spectrophotometer Method)
		Quantitative determination of Water Soluble Zinc (Zn) (Active Ingredient)	**(HEXON/QAL/TM/029)** Verified HACH Kit Method USEPA 8009 (Spectrophotometer Method)
		Quantitative determination of Acid Soluble Manganese (Mn) (Active Ingredient)	**(HEXON/QAL/TM/031)** Spectrophotometric Method/AOAC Method
		Quantitative determination of Boron (Active Ingredient)	**(HEXON/QAL/TM/040)** Gains T.P & G.A. Mitchell 1979Commun.SoilSci.Plan Anal 10: 1099-1108 (Spectrophotometer Method)
		Quantitative determination of Chloride (Cl) (Active Ingredient)	**(HEXON/QAL/TM/041)** AOAC Method(Titration Method)

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