

Laboratory Pesticide Residue Analysis Laboratory, Department of Entomology,
Punjab Agricultural University, Ludhiana, Punjab

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7774 (in lieu of T-1821)

Page 1 of 9

Validity 25.08.2018 to 24.08.2020

Last Amended on 30.08.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I.	RESIDUES IN WATER			
A.	Pesticide residues			
1.	Surface Water and Ground Water	<u>Organochlorines</u> Aldrin α -HCH β -HCH γ -HCH (Lindane) δ -HCH Dicofol Endosulfan- α Endosulfan- β Heptachlor o,p'-DDT p,p'-DDT o,p'-DDE p,p'-DDE o,p'-DDD p,p'-DDD	SOP No. PRAL/SOP-002 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS	0.1 μ g/L to 1000 μ g/L
		<u>Organophosphates</u> Anilophos Acephate Chlorofenvinphos Chlorpyrifos Chlorpyrifos- methyl Diazinon Dichlorovos Dimethoate Edifenphos Ethion Fenitrothion Malathion	SOP No. PRAL/SOP-002 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS	0.1 μ g/L to 1000 μ g/L

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Page 2 of 9

Validity **25.08.2018 to 24.08.2020**

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		Methyl-parathion Monocrotophos Phorate Phosalone Profenofos Quinalphos Triazophos		
		Synthetic pyrethroids Cyfluthrin-β Bifenthrin Cyhalothrin-λ Cypermethrin Deltamethrin Fenpropathrin Fenvalerate Fluvalinate Cypermethrin-α	SOP No. PRAL/SOP-002 (Issue No. 01 & Issue Date 01-05-2009) by GC- ECD/GC-MS	0.1 µg/L to 1000 µg/L
		Herbicides and others Alachlor Atrazine Butachlor Fipronil Fluchloralin Pendimethalin	SOP No. PRAL/SOP-002 (Issue No. 01 & Issue Date 01-05-2009) by GC- ECD/GC-MS	0.1 µg/L to 1000 µg/L
II.	SOIL AND ROCK			
A.	Pesticide Residues			
1.	Soil	Organochlorines Aldrin α-HCH β-HCH γ-HCH (Lindane) δ-HCH Dicofol	SOP No. PRAL/SOP-004 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS	0.01 mg/kg to 10 mg/kg

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Page 3 of 9

Validity 25.08.2018 to 24.08.2020

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		Endosulfan- α Endosulfan- β Heptachlor o,p'-DDT p,p'-DDT o,p'-DDE p,p'-DDE o,p'-DDD p,p'-DDD		
		Organophosphates Anilophos Acephate Chlorofenvinphos Chlorpyrifos Chlorpyrifos- methyl Diazinon Dichlorovos Dimethoate Edifenphos Ethion Fenitrothion Malathion Methyl-parathion Monocrotophos Phorate Phosalone Profenofos Quinalphos Triazophos	SOP No. PRAL/SOP-004 (Issue No. 01 & Issue Date 01-05-2009) by GC- ECD/GC-MS	0.01 mg/kg to 10 mg/kg
		Synthetic pyrethroids Cyfluthrin- β Bifenthrin Cyhalothrin- λ Cypermethrin Deltamethrin	SOP No. PRAL/SOP-004 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS	0.01 mg/kg to 10mg/kg

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Certificate Number **TC-7774 (in lieu of T-1821)**

Page 4 of 9

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		Fenprothrin Fenvalerate Fluvalinate Cypermethrin- α		
		Herbicides and others Alachlor Atrazine Butachlor Fipronil Fluchloralin Pendimethalin	SOP No. PRAL/SOP-004 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS	0.01 mg/kg to 10 mg/kg
II.	RESIDUES IN FOOD PRODUCTS			
A.	Pesticide Residues			
1.	Food Commodities (Vegetables includes tomato, brinjal, cabbage, cauliflower, okra, chilli, capsicum, peas, bitter gourd, cucumber and bottle gourd) (Fruits includes apple and guava)	Organochlorines Aldrin α -HCH β -HCH γ -HCH (Lindane) δ -HCH Dicofol Endosulfan- α Endosulfan- β Heptachlor o,p'-DDT p,p'-DDT o,p'-DDE p,p'-DDE o,p'-DDD p,p'-DDD	SOP No. PRAL/SOP-001 (Issue No. 01 & Issue Date 01-05-2009) by GC- ECD/GC-MS	0.01 mg/kg to 10 mg/kg

Laboratory Pesticide Residue Analysis Laboratory, Department of Entomology,
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Certificate Number TC-7774 (in lieu of T-1821)

Page 5 of 9

Validity 25.08.2018 to 24.08.2020

Last Amended on 30.08.2018

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		Organophosphates Anilophos Acephate Chlorofenvinphos Chlorpyrifos Chlorpyrifos-Methyl Diazinon Dichlorovos Dimethoate Edifenphos Ethion Fenitrothion Malathion Methyl-parathion Monocrotophos Phorate Phosalone Profenofos Quinalphos Triazophos Phorotoxon Phorate sulfone Phorate sulfoxide Methamidophos Phosphamidon Omethoate Malaxon	SOP No. PRAL/SOP-001 (Issue No. 01 & Issue Date 01-05-2009) by GC-FPD/FTD/GC-MS	0.05 mg/kg to 10 mg/kg
		Synthetic pyrethroids Cyfluthrin- β Bifenthrin Cyhalothrin- λ Cypermethrin Deltamethrin Fenpropathrin Fenvalerate	SOP No. PRAL/SOP-001 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/LC-MS/MS	0.05 mg/kg to 10 mg/kg

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Certificate Number TC-7774 (in lieu of T-1821)

Page 6 of 9

Validity 25.08.2018 to 24.08.2020

Last Amended on 30.08.2018

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		Fluvalinate Cypermethrin- α		
		Carbamates Carbaryl Methomyl Thiodicarb Carbosulfan Carbofuran 3-hydroxy carbofuran Herbicides Alachlor Atrazine Butachlor Fipronil Fluchloralin Pendimethalin Dimethachlor Hexaconazole Quizalofop ethyl	SOP No. PRAL/SOP-001 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/LC-MS/MS SOP No. PRAL/SOP-001 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/LC-MS/MS	0.05 mg/kg to 10 mg/kg 0.01 mg/kg to 10 mg/kg
		Others Thiamethoxam Indoxacarb Spiromesifen Trifloxystrobin Tebuconazole Flusilazole Fluopicolide Imidacloprid Thiacloprid Acetamiprid Chlorantraniliprole Flubendiamide Emamectin benzoate Propargite Propamocarb	SOP No. PRAL/SOP-001 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/LC-MS/MS	0.05 mg/kg to 10 mg/kg

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Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7774 (in lieu of T-1821)**

Page 7 of 9

Validity **25.08.2018 to 24.08.2020**

Last Amended on **30.08.2018**

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2.	Food commodities Cereals (rice and wheat), Pulses (green gram, chickpea)	<u>Organochlorines</u> Aldrin α-HCH β-HCH γ-HCH (Lindane) δ-HCH Dicofol Endosulfan- α Endosulfan- β Heptachlor o,p'-DDT p,p'-DDT o,p'-DDE p,p'-DDE o,p'-DDD p,p'-DDD	SOP No. PRAL/SOP-003 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS	0.01 mg/kg to 10 mg/kg
		<u>Organophosphates</u> Anilophos Acephate Chlorofenvinphos Chlorpyrifos Chlorpyrifos- methyl Diazinon Dichlorovos Dimethoate Edifenphos Ethion Fenitrothion Malathion Methyl-parathion Monocrotophos Phorate Phosalone Profenofos Quinalphos	SOP No. PRAL/SOP-004 (Issue No. 01 & Issue Date 01-05-2009) by GC-FPD/FTD/GC-MS	0.05 mg/kg to 10 mg/kg

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Page 8 of 9

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		Triazophos Phorotoxon Phorate sulfone Phorate sulfoxide Methamidophos Phosphamidon Omethoate Malaxon		
		<u>Synthetic pyrethroids</u> Cyfluthrin-β Bifenthrin Cyhalothrin-λ Cypermethrin Deltamethrin Fenpropathrin Fenvalerate Fluvalinate Cypermethrin-α <u>Carbamates</u> Carbaryl Methomyl Thiodicarb Carbosulfan Carbofuran 3-hydroxy carbofuran	SOP No. PRAL/SOP-003 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/LC-MS/MS SOP No. PRAL/SOP-003 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/LC-MS/MS	0.05 mg/kg to 10 mg/kg 0.05 mg/kg to 10 mg/kg
		<u>Herbicides</u> Alachlor Atrazine Butachlor Fipronil Fluchloralin Pendimethalin Dimethachlor Hexaconazole Quizalofop ethyl	SOP No. PRAL/SOP-003 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/ LC-MS/MS	0.01 mg/kg to 10 mg/kg

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Page 9 of 9

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		Others Thiamethoxam Indoxacarb Spiromesifen Trifloxystrobin Tebuconazole Flusilazole Fluopicolide Imidacloprid Thiacloprid Acetamiprid Chlorantraniliprole Flubendiamide Emamectin benzoate Propargite Propamocarb	SOP No. PRAL/SOP-003 (Issue No. 01 & Issue Date 01-05-2009) by GC-ECD/GC-MS, HPLC/ LC-MS/MS	0.05 mg/kg to 10 mg/kg