

**PACIFIC AGRICULTURAL LABORATORY**

A MATRIX SCIENCES COMPANY

21830 S.W. Alexander Ln. • Sherwood, OR 97140 • Ph 503.626.7943 • pacaglab.com

Northwest Onion Company

11235 Portland Road NE

Brooks, OR 97305

Client Sample ID: Red Onion**PAL Sample ID:** P193089-01**Sample Type:** Onion**Report Number:** P193089**Report Date:** October 16, 2019**Client Project ID:****Sample Date:** 10/04/2019**Received Date:** 10/04/2019**Extraction Date:** 10/08/2019**Notes and Definitions**

<u>Notes</u>	<u>Definition</u>
LOQ	Limit of Quantitation
MRL	Maximum Residue Level
ND	Not Detected
*	Not included under current scope of accreditation

The results contained in this report relate only to the items tested.

The results reflect the condition of the samples as received by PAL.

Samples will be stored for a minimum of 60 days after the final report is issued, as described in our Quality Manual.

Reports should not be reproduced, except in full, without written approval from PAL.

PAL is accredited to ISO/IEC 17025:2017 Standard, by PJLA, Accreditation #64422, Testing.

Rick Jordan, Laboratory Manager

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(Continued)

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
AOAC 2007.01 (GC-MS/MS) (Continued)									
10/11/2019	Endrin	ND	0.010		10/11/2019	Endrin aldehyde	ND	0.010	
10/11/2019	Endrin ketone	ND	0.010		10/11/2019	EPN	ND	0.010	
10/11/2019	EPTC	ND	0.020		10/11/2019	Esfenvalerate	ND	0.010	
10/11/2019	Ethalfuralin	ND	0.010		10/11/2019	Ethofumesate	ND	0.010	
10/11/2019	Ethoprop	ND	0.010		10/11/2019	Ethoxyquin	ND	0.010	
10/11/2019	Etoazole	ND	0.010		10/11/2019	Etridiazole	ND	0.010	
10/11/2019	Fenarimol	ND	0.010		10/11/2019	Fenitrothion	ND	0.010	
10/11/2019	Fenoxaprop-ethyl	ND	0.010		10/11/2019	Fenthion	ND	0.010	
10/11/2019	Fenvalerate	ND	0.010		10/11/2019	Fipronil	ND	0.010	
10/11/2019	Fluazifop-p-butyl	ND	0.010		10/11/2019	Fludioxonil	ND	0.010	
10/11/2019	Fluroxypyr-methyl	ND	0.010		10/11/2019	Flutolanil	ND	0.010	
10/11/2019	g-BHC	ND	0.010		10/11/2019	Heptachlor	ND	0.010	
10/11/2019	Heptachlor epoxide	ND	0.010		10/11/2019	Hexachlorobenzene	ND	0.010	
10/11/2019	Kresoxim-methyl	ND	0.010		10/11/2019	lambda-Cyhalothrin	ND	0.020	
10/11/2019	Leptophos	ND	0.010		10/11/2019	Malathion	ND	0.010	
10/11/2019	Mefenoxam	ND	0.010		10/11/2019	Methoxychlor	ND	0.010	
10/11/2019	Mctolachlor	ND	0.010		10/11/2019	MGK-264	ND	0.010	
10/11/2019	Myclobutanil	ND	0.010		10/11/2019	Napropamide	ND	0.010	
10/11/2019	o-Phenylphenol	ND	0.010		10/11/2019	Ovex	ND	0.010	
10/11/2019	Oxadiazon	ND	0.010		10/11/2019	Oxyfluorfen	ND	0.010	
10/11/2019	p,p'-DDD	ND	0.010		10/11/2019	p,p'-DDE	ND	0.010	
10/11/2019	p,p'-DDT	ND	0.010		10/11/2019	Parathion-methyl	ND	0.010	
10/11/2019	PCA	ND	0.010		10/11/2019	PCB	ND	0.010	
10/11/2019	PCNB	ND	0.010		10/11/2019	Pendimethalin	ND	0.010	
10/11/2019	Pentachlorophenyl methyl sulfide	ND	0.010		10/11/2019	Permethrin	ND	0.050	
10/11/2019	Phorate	ND	0.010		10/11/2019	Procymidone	ND	0.010	
10/11/2019	Prodiamine	ND	0.010		10/11/2019	Pronamide	ND	0.010	
10/11/2019	Propachlor	ND	0.010		10/11/2019	Pyriproxyfen	ND	0.010	
10/11/2019	Quinoxifen	ND	0.010		10/11/2019	Ronnel	ND	0.010	
10/11/2019	Spirodiclofen	ND	0.010		10/11/2019	Sulfotep	ND	0.010	
10/11/2019	Tefluthrin	ND	0.010		10/11/2019	Terbufos	ND	0.010	
10/11/2019	Tetraconazole	ND	0.010		10/11/2019	Tetradifon	ND	0.010	
10/11/2019	Thionazin	ND	0.010		10/11/2019	Tokuthion	ND	0.010	
10/11/2019	trans-Nonachlor	ND	0.010		10/11/2019	Trichloronate	ND	0.010	
10/11/2019	Trifluralin	ND	0.010		10/11/2019	Vinclozalin	ND	0.010	

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(Continued)**

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
AOAC 2007.01 (LC-MS/MS) (Continued)									
10/10/2019	Spinetoram	ND	0.010		10/10/2019	Spinosad	ND	0.010	
10/10/2019	Spiromesifen	ND	0.020		10/10/2019	Spirotetramat	ND	0.010	
10/10/2019	Spiroxamine	ND	0.010		10/10/2019	Sulfentrazone	ND	0.010	
10/10/2019	Sulfometuron-methyl	ND	0.010		10/10/2019	Sulfoxaflor	ND	0.010	
10/10/2019	Tebuconazole	ND	0.010		10/10/2019	Tebufenozide	ND	0.010	
10/10/2019	Tebuthiuron	ND	0.010		10/10/2019	Terbacil	ND	0.010	
10/10/2019	Terbutylazine	ND	0.010		10/10/2019	Terbutryn	ND	0.010	
10/10/2019	Thiabendazole	ND	0.010		10/10/2019	Thiacloprid	ND	0.010	
10/10/2019	Thiamethoxam	ND	0.010		10/10/2019	Thiencazone-methyl	ND	0.020	
10/10/2019	Thifensulfuron-methyl	ND	0.010		10/10/2019	Thiobencarb	ND	0.010	
10/10/2019	Thiodicarb	ND	0.010		10/10/2019	Thiophanate methyl	ND	0.010	
10/10/2019	Tolfenpyrad	ND	0.010		10/10/2019	Triadimefon	ND	0.010	
10/10/2019	Triadimenol	ND	0.020		10/10/2019	Triallate	ND	0.020	
10/10/2019	Trifloxystrobin	ND	0.010		10/10/2019	Trifloxysulfuron-sodium	ND	0.010	
10/10/2019	Triflumizole	ND	0.010		10/10/2019	Trinexapac-ethyl	ND	0.010	
10/10/2019	Triticonazole	ND	0.010						
AOAC 2007.01 (GC-MS/MS)									
10/11/2019	2,6-Dichlorobenzamide	ND	0.010		10/11/2019	a-BHC	ND	0.010	
10/11/2019	Acetochlor	ND	0.010		10/11/2019	Alachlor	ND	0.010	
10/11/2019	Aldrin	ND	0.010		10/11/2019	Ametryn	ND	0.010	
10/11/2019	Aspon	ND	0.010		10/11/2019	b-BHC	ND	0.010	
10/11/2019	Benfluralin	ND	0.010		10/11/2019	Bifenthrin	ND	0.010	
10/11/2019	Bromopropylate	ND	0.010		10/11/2019	Buprofezin	ND	0.010	
10/11/2019	Captan	ND	0.20		10/11/2019	Chlordane	ND	0.010	
10/11/2019	Chlorfenvinphos	ND	0.010		10/11/2019	Chlorobenzilate	ND	0.010	
10/11/2019	Chloroncb	ND	0.010		10/11/2019	Chlorothalonil	ND	0.010	
10/11/2019	Chlorpropham	ND	0.010		10/11/2019	Chlorpyrifos	ND	0.010	
10/11/2019	Chlorpyrifos-methyl	ND	0.010		10/11/2019	cis-Nonachlor	ND	0.010	
10/11/2019	Cyfluthrin	ND	0.050		10/11/2019	Cypermethrin	ND	0.050	
10/11/2019	Dacthal	ND	0.010		10/11/2019	d-BHC	ND	0.010	
10/11/2019	Deltamethrin	ND	0.050		10/11/2019	Demeton	ND	0.010	
10/11/2019	Diazinon	ND	0.010		10/11/2019	Dichlobenil	ND	0.010	
10/11/2019	Dichlorofenthion	ND	0.010		10/11/2019	Dichlorvos	ND	0.010	
10/11/2019	Diclofop-methyl	ND	0.010		10/11/2019	Dicloran	ND	0.050	
10/11/2019	Dicofol	ND	0.010		10/11/2019	Dieldrin	ND	0.010	
10/11/2019	Dimethenamid	ND	0.010		10/11/2019	Diphenamid	ND	0.010	
10/11/2019	Diphenylamine	ND	0.010		10/11/2019	Disulfoton	ND	0.010	
10/11/2019	Dithiopyr	ND	0.010		10/11/2019	Endosulfan I	ND	0.020	
10/11/2019	Endosulfan II	ND	0.020		10/11/2019	Endosulfan sulfate	ND	0.020	

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(Continued)**

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
AOAC 2007.01 (LC-MS/MS) (Continued)									
10/10/2019	Fluopicolide	ND	0.010		10/10/2019	Fluopyram	ND	0.010	
10/10/2019	Fluoxastrobin	ND	0.010		10/10/2019	Flupyradifurone	ND	0.010	
10/10/2019	Fluridone	ND	0.010		10/10/2019	Flutriafol	ND	0.010	
10/10/2019	Fluvalinate	ND	0.010		10/10/2019	Fluxapyroxad	ND	0.010	
10/10/2019	Fomesafen	ND	0.010		10/10/2019	Fenofos	ND	0.020	
10/10/2019	Formetanate HCl	ND	0.010		10/10/2019	Hexaconazole	ND	0.010	
10/10/2019	Hexazinone	ND	0.010		10/10/2019	Hexythiazox	ND	0.010	
10/10/2019	Imazalil	ND	0.010		10/10/2019	Imidacloprid	ND	0.010	
10/10/2019	Indaziflam	ND	0.010		10/10/2019	Indoxacarb	ND	0.010	
10/10/2019	Iodosulfuron-methyl	ND	0.010		10/10/2019	Ipconazole	ND	0.010	
10/10/2019	Iprodione	ND	0.050		10/10/2019	Isoxaben	ND	0.010	
10/10/2019	Isoxadifen-ethyl	ND	0.010		10/10/2019	Lactofen	ND	0.010	
10/10/2019	Linuron	ND	0.010		10/10/2019	Malaoxon	ND	0.010	
10/10/2019	Mandipropamid	ND	0.010		10/10/2019	Metconazole	ND	0.010	
10/10/2019	Methamidophos	ND	0.020		10/10/2019	Methidathion	ND	0.010	
10/10/2019	Methiocarb	ND	0.010		10/10/2019	Methomyl	ND	0.010	
10/10/2019	Methoxyfenozide	ND	0.010		10/10/2019	Metrafenone	ND	0.010	
10/10/2019	Metribuzin	ND	0.010		10/10/2019	Metsulfuron methyl	ND	0.010	
10/10/2019	Mevinphos	ND	0.010		10/10/2019	Neburon	ND	0.010	
10/10/2019	Nicosulfuron	ND	0.010		10/10/2019	Norflurazon	ND	0.010	
10/10/2019	Novaluron	ND	0.010		10/10/2019	Omethoate	ND	0.010	
10/10/2019	Oryzalin	ND	0.010		10/10/2019	Oxadixyl	ND	0.010	
10/10/2019	Oxamyl	ND	0.010		10/10/2019	Oxydemeton-Methyl	ND	0.010	
10/10/2019	Penoxsulam	ND	0.010		10/10/2019	Penthiopyrad	ND	0.010	
10/10/2019	Phorate Sulfone	ND	0.010		10/10/2019	Phorate Sulfoxide	ND	0.010	
10/10/2019	Phosalone	ND	0.010		10/10/2019	Phosmet	ND	0.010	
10/10/2019	Phosphamidon	ND	0.010		10/10/2019	Picoxystrobin	ND	0.010	
10/10/2019	Piperonyl Butoxide	ND	0.010		10/10/2019	Pirimicarb	ND	0.010	
10/10/2019	Pirimiphos-methyl	ND	0.010		10/10/2019	Prallethrin	ND	0.010	
10/10/2019	Prometon	ND	0.010		10/10/2019	Prometryn	ND	0.010	
10/10/2019	Propanil	ND	0.020		10/10/2019	Propargite	ND	0.010	
10/10/2019	Propazine	ND	0.010		10/10/2019	Propiconazole	ND	0.020	
10/10/2019	Prothioconazole	ND	0.020		10/10/2019	Pymetrozine	ND	0.010	
10/10/2019	Pyraclostrobin	ND	0.010		10/10/2019	Pyraflufen-ethyl	ND	0.010	
10/10/2019	Pyrasulfotole	ND	0.010		10/10/2019	Pyrethrin	ND	0.050	
10/10/2019	Pyridaben	ND	0.010		10/10/2019	Pyrimethanil	ND	0.010	
10/10/2019	Pyroxasulfone	ND	0.010		10/10/2019	Quizalofop-p-ethyl	ND	0.010	
10/10/2019	Rotenone	ND	0.010		10/10/2019	Saflufenacil	ND	0.010	
10/10/2019	Sethoxydim	ND	0.020		10/10/2019	Siduron	ND	0.010	
10/10/2019	Simazine	ND	0.010		10/10/2019	Simetryn	ND	0.010	

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Client Sample ID: Red Onion
PAL Sample ID: P193089-01
Sample Type: Onion

Report Number: P193089
Report Date: October 16, 2019
Client Project ID:
Sample Date: 10/04/2019
Received Date: 10/04/2019
Extraction Date: 10/08/2019

Certificate of Analysis

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
AOAC 2007.01 (LC-MS/MS)									
10/10/2019	3-Hydroxycarbofuran	ND	0.010		10/10/2019	Abamectin	ND	0.010	
10/10/2019	Acephate	ND	0.010		10/10/2019	Acetamiprid	ND	0.010	
10/10/2019	Acibenzolar-S-methyl	ND	0.020		10/10/2019	Aldicarb	ND	0.010	
10/10/2019	Aldicarb Sulfone	ND	0.010		10/10/2019	Aldicarb Sulfoxide	ND	0.010	
10/10/2019	Allethrin	ND	0.010		10/10/2019	Ametoctradin	ND	0.010	
10/10/2019	Atrazine	ND	0.010		10/10/2019	Azinphos-ethyl	ND	0.010	
10/10/2019	Azinphos-methyl	ND	0.020		10/10/2019	Azoxystrobin	ND	0.010	
10/10/2019	Bendiocarb	ND	0.010		10/10/2019	Bensulfuron methyl	ND	0.010	
10/10/2019	Bensulide	ND	0.010		10/10/2019	Bicyclopoyrone	ND	0.010	
10/10/2019	Bifenazate	ND	0.010		10/10/2019	Bispyribac-sodium	ND	0.010	
10/10/2019	Bitertanol	ND	0.010		10/10/2019	Boscalid	ND	0.010	
10/10/2019	Bromacil	ND	0.010		10/10/2019	Carbaryl	ND	0.010	
10/10/2019	Carbendazim	ND	0.010		10/10/2019	Carbofuran	ND	0.010	
10/10/2019	Carboxin	ND	0.010		10/10/2019	Carfentrazone-ethyl	ND	0.010	
10/10/2019	Chlorantraniliprole	ND	0.010		10/10/2019	Chlorimuron-ethyl	ND	0.010	
10/10/2019	Clethodim	ND	0.020		10/10/2019	Clofentezine	ND	0.010	
10/10/2019	Clomazone	ND	0.010		10/10/2019	Cloransulam-methyl	ND	0.010	
10/10/2019	Clothianidin	ND	0.010		10/10/2019	Cyanazine	ND	0.010	
10/10/2019	Cyantraniliprole	ND	0.010		10/10/2019	Cyazofamid	ND	0.010	
10/10/2019	Cycloate	ND	0.020		10/10/2019	Cyflufenamid	ND	0.010	
10/10/2019	Cyflumetofen	ND	0.010		10/10/2019	Cyhalofop-butyl	ND	0.050	
10/10/2019	Cymoxanil	ND	0.010		10/10/2019	Cyprodinil	ND	0.010	
10/10/2019	Cyprosulfamide	ND	0.010		10/10/2019	Cyromazine	ND	0.010	
10/10/2019	DCPMU	ND	0.010		10/10/2019	Diazoxon	ND	0.010	
10/10/2019	Difenoconazole	ND	0.010		10/10/2019	Disulfoton sulfone	ND	0.010	
10/10/2019	Disulfoton sulfone	ND	0.010		10/10/2019	Dimethoate	ND	0.010	
10/10/2019	Diuron	ND	0.010		10/10/2019	Dinotefuran	ND	0.010	
10/10/2019	d-Phenothrin	ND	0.010		10/10/2019	Disulfoton sulfone	ND	0.010	
10/10/2019	Ethion	ND	0.010		10/10/2019	Dodine	ND	0.010	
10/10/2019	Famphur	ND	0.010		10/10/2019	Emamectin Benzoate	ND	0.010	
10/10/2019	Fenamiphos sulfone	ND	0.010		10/10/2019	Famoxadone	ND	0.010	
10/10/2019	Fenazaquin	ND	0.010		10/10/2019	Fenamidone	ND	0.010	
10/10/2019	Fenbutatin oxide	ND	0.010		10/10/2019	Fenamiphos sulfoxide	ND	0.010	
10/10/2019	Fenobucarb	ND	0.010		10/10/2019	Fenbuconazole	ND	0.010	
10/10/2019	Fenpyroximate	ND	0.010		10/10/2019	Fenhexamid	ND	0.010	
10/10/2019	Flonicamid	ND	0.010		10/10/2019	Fenpropathrin	ND	0.010	
10/10/2019	Flubendiamide	ND	0.020		10/10/2019	Fenuron	ND	0.010	
10/10/2019	Flumioxazin	ND	0.010		10/10/2019	Fluazinam	ND	0.010	
					10/10/2019	Flufenacet	ND	0.010	
					10/10/2019	Fluometuron	ND	0.010	

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PAL Sample ID: P193089-01
Sample Type: Onion

Report Number: P193089
Report Date: October 16, 2019
Client Project ID:

Sample Date: 10/04/2019
Received Date: 10/04/2019
Extraction Date: 10/08/2019

Maximum Residue Level (MRL) Summary

Values displayed in red indicate sample results that exceed the MRL for this market.

No residues present above the stated LOQ.

All MRL data is provided by Bryant Christie, Inc., www.globalmrl.com. MRLs frequently change, and the user accepts that the MRL information herein is only intended to be an initial reference. PAL, LLC is not liable for any damages, in whole or in part, caused by or arising in any way from its usage. It is important that the MRL data obtained from this report be verified with knowledgeable parties in the market of interest prior to sale or shipment of product or commodity.

Rick Jordan, Laboratory Manager