



American College Of Healthcare Sciences

5940 SW Hood Ave
Portland, OR 97239

Client Sample ID: Peppermint essential oil Lot #34103R

PAL Sample ID: P183612-01

Sample Type:

Report Number: P183612

Report Date: January 03, 2019

Client Project ID:

Sample Date: 12/19/2018

Received Date: 12/20/2018

Extraction Date: 12/28/2018

Certificate of Analysis

Table with 9 columns: Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes, Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes. Includes a section for Modified EPA 8270D (GC-MS/MS) with multiple rows of pesticide data.

Handwritten signature of Rick Jordan



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Report Date: January 03, 2019
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Sample Type:

Sample Date: 12/19/2018

Received Date: 12/20/2018

Extraction Date: 12/28/2018

Certificate of Analysis
(Continued)

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
Modified EPA 8270D (GC-MS/MS) (Continued)									
01/01/2019	PCNB	ND	0.50		01/01/2019	Pendimethalin	ND	0.50	
01/01/2019	Pentachlorophenyl methyl sulfide	ND	0.50		01/01/2019	Permethrin	ND	2.5	
01/01/2019	Procymidone	ND	0.50		01/01/2019	Prodiamine	ND	0.50	
01/01/2019	Pronamide	ND	0.50		01/01/2019	Propachlor	ND	0.50	
01/01/2019	Pyriproxyfen	ND	0.50		01/01/2019	Quinoxifen	ND	0.50	
01/01/2019	Spirodiclofen	ND	0.50		01/01/2019	Tetraconazole	ND	0.50	
01/01/2019	Tetradifon	ND	0.50		01/01/2019	trans-Nonachlor	ND	0.50	
01/01/2019	Trifluralin	ND	0.50		01/01/2019	Vinclozalin	ND	0.50	
Modified EPA 8321B (HPLC MS-MS)									
12/31/2018	3-Hydroxycarbofuran	ND	0.47		12/31/2018	Abamectin	ND	0.47	
12/31/2018	Acephate	ND	0.47		12/31/2018	Acetamiprid	ND	0.47	
12/31/2018	Acibenzolar-S-methyl	ND	0.94		12/31/2018	Aldicarb	ND	0.47	
12/31/2018	Aldicarb Sulfone	ND	0.47		12/31/2018	Aldicarb Sulfoxide	ND	0.47	
12/31/2018	Allethrin	ND	0.47		12/31/2018	Ametoctradin	ND	0.47	
12/31/2018	Atrazine	ND	0.47		12/31/2018	Azinphos-ethyl	ND	0.47	
12/31/2018	Azinphos-methyl	ND	0.94		12/31/2018	Azoxystrobin	ND	0.47	
12/31/2018	Bendiocarb	ND	0.47		12/31/2018	Bensulide	ND	0.47	
12/31/2018	Bifenazate	ND	0.47		12/31/2018	Bitertanol	ND	0.47	
12/31/2018	Boscalid	ND	0.47		12/31/2018	Bromacil	ND	0.47	
12/31/2018	Carbaryl	ND	0.47		12/31/2018	Carbendazim	ND	0.47	
12/31/2018	Carbofuran	ND	0.47		12/31/2018	Carfentrazone-ethyl	ND	0.47	
12/31/2018	Chlorantraniliprole	ND	0.47		12/31/2018	Clethodim	ND	0.94	
12/31/2018	Clofentezine	ND	0.47		12/31/2018	Clothianidin	ND	0.47	
12/31/2018	Cyanazine	ND	0.47		12/31/2018	Cyantraniliprole	ND	0.47	
12/31/2018	Cyazofamid	ND	0.47		12/31/2018	Cycloate	ND	0.94	
12/31/2018	Cyflufenamid	ND	0.47		12/31/2018	Cyflumetofen	ND	0.47	
12/31/2018	Cymoxanil	ND	0.47		12/31/2018	Cyprodinil	ND	0.47	
12/31/2018	Cyromazine	ND	0.47		12/31/2018	DCPMU	ND	0.47	
12/31/2018	Diazoxon	ND	0.47		12/31/2018	Difenoconazole	ND	0.47	
12/31/2018	Diiflubenzuron	ND	0.47		12/31/2018	Dimethoate	ND	0.47	
12/31/2018	Dimethomorph	ND	0.47		12/31/2018	Dinotefuran	ND	0.47	
12/31/2018	Disulfoton sulfone	ND	0.47		12/31/2018	Diuron	ND	0.47	
01/01/2019	Dodine	ND	0.47		12/31/2018	d-Phenothrin	ND	0.47	
12/31/2018	Emamectin Benzoate	ND	0.47		12/31/2018	Ethion	ND	0.47	
12/31/2018	Famoxadone	ND	0.47		12/31/2018	Famphur	ND	0.47	
12/31/2018	Fenamidone	ND	0.47		12/31/2018	Fenamiphos sulfone	ND	0.47	
12/31/2018	Fenamiphos sulfoxide	ND	0.47		12/31/2018	Fenazaquin	ND	0.47	
12/31/2018	Fenbuconazole	ND	0.47		12/31/2018	Fenbutatin oxide	ND	0.47	



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Certificate of Analysis
(Continued)

Table with 10 columns: Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes, Analysis Date, Analyte, Amount Detected, LOQ (mg/kg), Notes. Contains data for Modified EPA 8321B (HPLC MS-MS) with various analytes and their respective amounts and LOQs.

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Certificate of Analysis
(Continued)

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
Modified EPA 8321B (HPLC MS-MS) (Continued)									
12/31/2018	Sulfentrazone	ND	0.47		12/31/2018	Sulfoxaflor	ND	0.47	
12/31/2018	Tebuconazole	ND	0.47		12/31/2018	Tebufenozide	ND	0.47	
12/31/2018	Tebuthiuron	ND	0.47		12/31/2018	Terbacil	ND	0.47	
12/31/2018	Terbutylazine	ND	0.47		12/31/2018	Terbutryn	ND	0.47	
12/31/2018	Thiabendazole	ND	0.47		12/31/2018	Thiacloprid	ND	0.47	
12/31/2018	Thiamethoxam	ND	0.47		12/31/2018	Thiobencarb	ND	0.47	
12/31/2018	Thiodicarb	ND	0.47		12/31/2018	Thiophanate methyl	ND	0.47	
12/31/2018	Tolfenpyrad	ND	0.47		12/31/2018	Triadimefon	ND	0.47	
12/31/2018	Triadimenol	ND	0.94		12/31/2018	Trifloxystrobin	ND	0.47	
12/31/2018	Triflumizole	ND	0.47						

Notes and Definitions

Notes	Definition
LOQ	Limit of Quantitation
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.
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