

Pine Walker CBDV

Lab ID: 2110250-01

Whole Circle Farms
AG-R10408871HG

Harvest / Process Lot: WCF-2021-Pine-002Comp

METRC Batch ID: WCF-2021-Pine-002Comp

Date Sampled: 10/27/21

Date Printed: 11/4/21

Potency Analysis

Analytical Method: De Backer, Journal of Chromatography b.2009. 11.004 -
SOP 102 - Cannabinoids via High Performance Liquid Chromatography

Cannabinoids (% weight)		Moisture Adjusted	LOQ
THCA	0.207	0.237	0.114
delta 9-THC	< LOQ	< LOQ	0.102
delta 8-THC	< LOQ	< LOQ	0.122
CBDA	6.36	7.29	0.0876
CBDVA	5.27	6.04	0.122
CBGA	0.522	0.598	0.0920
CBD	0.112	0.128	0.111
CBDV	< LOQ	< LOQ	0.122
CBG	< LOQ	< LOQ	0.122
CBN	< LOQ	< LOQ	0.111
Total CBG	0.458	0.525	0.0920
Total Cannabinoids	11.0	12.6	0.0876

Total THC
0.208 %

Total CBD
6.52 %

<LOQ - Results below the Limit of Quantitation

Acid form of THC/CBD are decarboxylated by heat, lose 12% of original mass as CO₂. Result = *bioactive*

Total Cannabinoid accounts for decarboxylation and moisture content. Total THC = [(THCA×0.877) + Δ9THC] / (100%-MC)

Moisture

Analysis Method/SOP: SOP 7

Moisture: 12.8 %

Water Activity

Analysis Method/SOP: SOP 8

Results above 0.65 fail state testing requirements and will be highlighted Red.

Water Activity: 0.608

PASS



Erik Werstler
Lab Director

Pine Walker CBDV

Whole Circle Farms

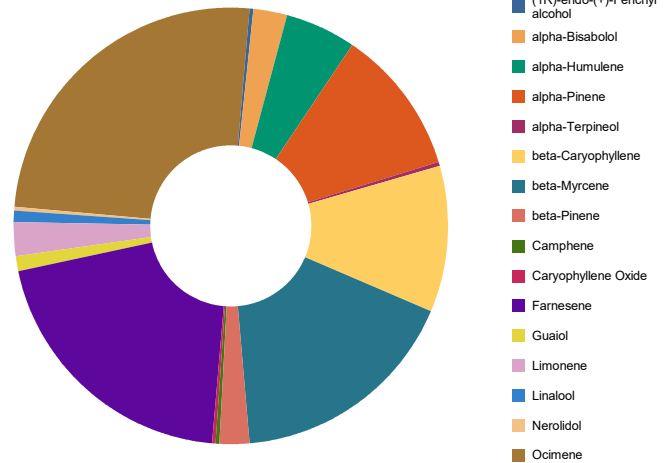
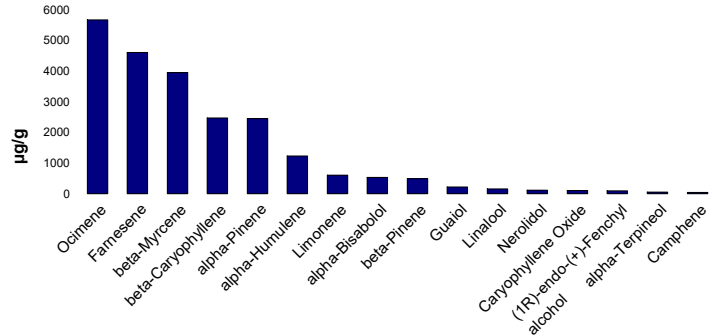
AG-R10408871HG

Laboratory ID: 2110250-01

Terpene Test Report

Analysis Method/SOP: Terp

Analyte	Result µg/g	Result %
alpha-Bisabolol	524.8	0.05248
Camphene	39.17	0.003917
Camphor	< LOQ	< LOQ
delta-3-Carene	< LOQ	< LOQ
beta-Caryophyllene	2474	0.2474
Caryophyllene Oxide	105.1	0.01051
alpha-Cedrene	< LOQ	< LOQ
Cedrol	< LOQ	< LOQ
p-Cymene	< LOQ	< LOQ
(1R)-endo-(+)-Fenchyl alcohol	89.92	0.008992
Eucalyptol	< LOQ	< LOQ
Geraniol	< LOQ	< LOQ
Geranyl acetate	< LOQ	< LOQ
Guaiol	212.2	0.02122
alpha-Humulene	1232	0.1232
Isoborneol	< LOQ	< LOQ
Isopulegol	< LOQ	< LOQ
Limonene	599.7	0.05997
Linalool	155.6	0.01556
beta-Myrcene	3951	0.3951
Nerolidol	115.5	0.01155
Ocimene	5670	0.5670
alpha-Pinene	2445	0.2445
beta-Pinene	484.1	0.04841
Pulegone	< LOQ	< LOQ
Sabinene	< LOQ	< LOQ
Sabinene hydrate	< LOQ	< LOQ
gamma-Terpinene	< LOQ	< LOQ
alpha-Terpinene	< LOQ	< LOQ
Farnesene	4612	0.4612
Terpinolene	< LOQ	< LOQ
Valencene	< LOQ	< LOQ
Nerol	< LOQ	< LOQ




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Analysis Method/SOP: Terp

Analyte	Result µg/g	Result %
(+/-)-Borneol	< LOQ	< LOQ
(+/-)-Fenchone	< LOQ	< LOQ
alpha-Phellandrene	< LOQ	< LOQ
Menthol	< LOQ	< LOQ
alpha-Terpeneol	54.48	0.005448
gamma-Terpeneol	< LOQ	< LOQ
Total Terpenes	22760	2.276



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Whole Circle Farms

Sample ID: 2110250-01

Matrix: Hemp

M #:

Date Sampled: 10/27/21 12:42

Date Accepted: 10/27/21

Results Valid Until: 10/27/22

Pesticide Analysis in PPM

Date/Time Extracted: 10/29/21 07:14

Date/Time Analyzed: 10/29/21 19:55

Analysis Method/SOP: SOP 33

Instrument: Selene

Batch Identification: B21J155

Analyte	Result	Action Level	LOQ	Type
Abamectin	< LOQ	0.5	0.2500	Avermectin insecticide
Acephate	< LOQ	0.4	0.2000	Organophosphate Insecticide
Acequinocyl	< LOQ	2	1.000	Quinoline insecticide
Acetamiprid	< LOQ	0.2	0.1000	Neonicotinoid insecticide
Aldicarb	< LOQ	0.4	0.2000	Carbamate insecticide
Azoxystrobin	< LOQ	0.2	0.1000	Strobin fungicide
Bifenazate	< LOQ	0.2	0.1000	Carbazate miticide
Bifenthrin	< LOQ	0.2	0.1000	Pyrethroid insecticide
Boscalid	< LOQ	0.4	0.2000	Carboxamide fungicide
Carbaryl	< LOQ	0.2	0.1000	Carbamate insecticide
Carbofuran	< LOQ	0.2	0.1000	Carbamate insecticide
Chlorantraniliprole	< LOQ	0.2	0.1000	Anthranilic diamide insecticide
Chlorfenapyr	< LOQ	1	0.5000	Pyrrole insecticide
Chlorpyrifos	< LOQ	0.2	0.1000	Organophosphate Insecticide
Clofentezine	< LOQ	0.2	0.1000	Tetrazine miticide
Cyfluthrin	< LOQ	1	0.5000	Pyrethroid insecticide
Cypermethrin	< LOQ	1	0.5000	Pyrethroid insecticide
Daminozide	< LOQ	1	0.5000	Plant growth regulator
DDVP (Dichlorvos)	< LOQ	1	0.5000	Organophosphate insecticide
Diazinon	< LOQ	0.2	0.1000	Organophosphate Insecticide
Dimethoate	< LOQ	0.2	0.1000	Organophosphate insecticide
Ethoprophos	< LOQ	0.2	0.1000	Organophosphate insecticide
Etofenprox	< LOQ	0.4	0.2000	Pyrethroid insecticide
Etoxazole	< LOQ	0.2	0.1000	Oxazoline insecticide
Fenoxycarb	< LOQ	0.2	0.1000	Carbamate insecticide
Fenpyroximate	< LOQ	0.4	0.2000	Pyrazolium miticide
Fipronil	< LOQ	0.4	0.2000	Pyrazole insecticide
Fonicamid	< LOQ	1	0.5000	Pyridinecarboxamide insecticide



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Date/Time Analyzed: 10/29/21 19:55

Analysis Method/SOP: SOP 33

Instrument: Selene

Batch Identification: B21J155

Analyte	Result	Action Level	LOQ	Type
Fludioxonil	< LOQ	0.4	0.2000	Benzodioxole fungicide
Hexythiazox	< LOQ	1	0.5000	Heterocyclic miticide
Imazalil	< LOQ	0.2	0.1000	Imidazole fungicide
Imidacloprid	< LOQ	0.4	0.2000	Neonicotinoid insecticide
Kresoxim-methyl	< LOQ	0.4	0.2000	Strobilurin fungicide
Malathion	< LOQ	0.2	0.1000	Organophosphate insecticide
Metalaxyl	< LOQ	0.2	0.1000	Benzenoid fungicide
Methiocarb	< LOQ	0.2	0.1000	Carbamate insecticide
Methomyl	< LOQ	0.4	0.2000	Carbamate insecticide
Methyl parathion	< LOQ	0.2	0.1000	Organophosphate insecticide
MGK-264	< LOQ	0.2	0.1000	Pesticide synergist
Myclobutanil	< LOQ	0.2	0.1000	Triazole fungicide
Naled	< LOQ	0.5	0.2500	Organophosphate insecticide
Oxamyl	< LOQ	1	0.5000	Carbamate insecticide
Paclbutrazol	< LOQ	0.4	0.2000	Triazole fungicide
Permethrins	< LOQ	0.2	0.1000	Pyrethroid insecticide
Phosmet	< LOQ	0.2	0.1000	Organophosphate insecticide
Piperonyl butoxide	< LOQ	2	1.000	Pesticide synergist
Prallethrin	< LOQ	0.2	0.1000	Pyrethroid insecticide
Propiconazole	< LOQ	0.4	0.2000	Triazole fungicide
Propoxur	< LOQ	0.2	0.1000	Carbamate insecticide
Pyrethrins	< LOQ	1	0.5000	Pyrethroid insecticide
Pyridaben	< LOQ	0.2	0.1000	Pyridazinone insecticide
Spinosad	< LOQ	0.2	0.1000	Spinosyn insecticide
Spiromesifen	< LOQ	0.2	0.1000	Keto-enol insecticide
Spirotetramat	< LOQ	0.2	0.1000	Keto-enol insecticide
Spiroxamine	< LOQ	0.4	0.2000	Spiroketalamine fungicide
Tebuconazole	< LOQ	0.4	0.2000	Triazole fungicide



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Date/Time Extracted: 10/29/21 07:14

Date/Time Analyzed: 10/29/21 19:55

Analysis Method/SOP: SOP 33

Instrument: Selene

Batch Identification: B21J155

Analyte	Result	Action Level	LOQ	Type
Thiacloprid	< LOQ	0.2	0.1000	Neonicotinoid insecticide
Thiamethoxam	< LOQ	0.2	0.1000	Neonicotinoid insecticide
Trifloxystrobin	< LOQ	0.2	0.1000	Strobin fungicide

<LOQ - Results below the Limit of Quantitation - Compound not detected
Results above the Action Level fail state testing requirements and will be highlighted Red.



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Quality Control Potency

Batch: B21K017 - Potency

Blank(B21K017-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	< LOQ	0.103	%		11/03/21 16:19	11/03/21 21:42	
delta 9-THC	< LOQ	0.0921	%		11/03/21 16:19	11/03/21 21:42	
CBGA	< LOQ	0.0832	%		11/03/21 16:19	11/03/21 21:42	
CBDA	< LOQ	0.0792	%		11/03/21 16:19	11/03/21 21:42	
CBD	< LOQ	0.100	%		11/03/21 16:19	11/03/21 21:42	
CBN	< LOQ	0.100	%		11/03/21 16:19	11/03/21 21:42	
CBG	< LOQ	0.110	%		11/03/21 16:19	11/03/21 21:42	
delta 8-THC	< LOQ	0.110	%		11/03/21 16:19	11/03/21 21:42	
CBDVA	< LOQ	0.110	%		11/03/21 16:19	11/03/21 21:42	
CBDV	< LOQ	0.110	%		11/03/21 16:19	11/03/21 21:42	

LCS(B21K017-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	98.1	0.106	%	85-115	11/03/21 16:19	11/03/21 21:52	
delta 9-THC	98.4	0.0948	%	85-115	11/03/21 16:19	11/03/21 21:52	
CBDA	101	0.0815	%	85-115	11/03/21 16:19	11/03/21 21:52	
CBD	105	0.103	%	85-115	11/03/21 16:19	11/03/21 21:52	



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Quality Control Pesticide Analysis

Batch: B21J155 - Pest/Myco

Blank(B21J155-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Abamectin	< LOQ	0.2500	ppm		10/29/21 07:14	10/29/21 17:32	
Acephate	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Acequinocyl	< LOQ	1.000	ppm		10/29/21 07:14	10/29/21 17:32	
Acetamiprid	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Aldicarb	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Azoxystrobin	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Bifenazate	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Bifenthrin	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Boscalid	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Carbaryl	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Carbofuran	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Chlorantraniliprole	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Chlorfenapyr	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Chlorpyrifos	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Clofentezine	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Cyfluthrin	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Cypermethrin	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Daminozide	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
DDVP (Dichlorvos)	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Diazinon	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Dimethoate	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Ethoprophos	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Etofenprox	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Etoxazole	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Fenoxycarb	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Fenpyroximate	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Fipronil	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Fonicamid	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Fludioxonil	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Hexythiazox	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Imazalil	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Imidacloprid	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Kresoxim-methyl	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Malathion	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	



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Quality Control Pesticide Analysis (Continued)

Batch: B21J155 - Pest/Myco (Continued)

Blank(B21J155-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Metalaxyl	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Methiocarb	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Methomyl	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Methyl parathion	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
MGK-264	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Myclobutanil	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Naled	< LOQ	0.2500	ppm		10/29/21 07:14	10/29/21 17:32	
Oxamyl	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Paclobutrazol	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Permethrins	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Phosmet	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Piperonyl butoxide	< LOQ	1.000	ppm		10/29/21 07:14	10/29/21 17:32	
Prallethrin	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Propiconazole	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Propoxur	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Pyrethrins	< LOQ	0.5000	ppm		10/29/21 07:14	10/29/21 17:32	
Pyridaben	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Spinosad	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Spiromesifen	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Spirotetramat	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Spiroxamine	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Tebuconazole	< LOQ	0.2000	ppm		10/29/21 07:14	10/29/21 17:32	
Thiacloprid	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Thiamethoxam	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	
Trifloxystrobin	< LOQ	0.1000	ppm		10/29/21 07:14	10/29/21 17:32	

LCS(B21J155-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Abamectin	95.0	0.2500	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Acephate	83.2	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Acequinocyl	112	1.000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Acetamiprid	86.4	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Aldicarb	84.9	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Azoxystrobin	90.1	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Bifenazate	93.8	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	



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Quality Control

Pesticide Analysis (Continued)

Batch: B21J155 - Pest/Myco (Continued)

LCS(B21J155-BS1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Bifenthrin	80.7	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Boscalid	83.6	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Carbaryl	87.3	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Carbofuran	84.9	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Chlorantraniliprole	89.2	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Chlorfenapyr	84.3	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Chlorpyrifos	90.0	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Clofentezine	79.5	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Cyfluthrin	109	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Cypermethrin	101	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Daminozide	77.9	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
DDVP (Dichlorvos)	83.3	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Diazinon	83.7	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Dimethoate	85.2	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Ethoprophos	80.6	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Etofenprox	80.9	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Etoxazole	93.4	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Fenoxycarb	84.3	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Fenpyroximate	98.1	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Fipronil	88.8	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Flonicamid	86.1	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Fludioxonil	87.2	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Hexythiazox	92.6	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Imazalil	72.9	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Imidacloprid	84.4	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Kresoxim-methyl	82.4	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Malathion	88.9	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Metalaxyl	85.6	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Methiocarb	85.8	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Methomyl	83.3	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Methyl parathion	74.2	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
MGK-264	80.1	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Myclobutanil	87.9	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Naled	88.1	0.2500	ppm	50-150	10/29/21 07:14	10/29/21 17:16	



Erik Werstler
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Pine Walker CBDV

Whole Circle Farms

AG-R10408871HG

Laboratory ID: 2110250-01

Quality Control Pesticide Analysis (Continued)

Batch: B21J155 - Pest/Myco (Continued)

LCS(B21J155-BS1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Oxamyl	86.6	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Paclobutrazol	82.1	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Permethrins	84.4	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Phosmet	84.2	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Piperonyl butoxide	95.1	1.000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Prallethrin	83.1	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Propiconazole	84.7	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Propoxur	85.0	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Pyrethrins	97.0	0.5000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Pyridaben	83.5	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Spinosad	87.9	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Spiromesifen	87.4	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Spirotetramat	89.6	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Spiroxamine	83.7	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Tebuconazole	84.1	0.2000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Thiacloprid	86.2	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Thiamethoxam	86.3	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	
Trifloxystrobin	84.6	0.1000	ppm	50-150	10/29/21 07:14	10/29/21 17:16	



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Whole Circle Farms

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Laboratory ID: 2110250-01

Quality Control Terpene Analysis

Batch: B21J146 - Terp

Blank(B21J146-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Camphene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Camphor	< LOQ	0.01200	%		10/27/21 21:11	10/28/21 01:47	
delta-3-Carene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
beta-Caryophyllene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Caryophyllene Oxide	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
alpha-Cedrene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Cedrol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
p-Cymene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
(1R)-endo-(+)-Fenchyl alcol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Eucalyptol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Geraniol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Geranyl acetate	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Guaiol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
alpha-Humulene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Isoborneol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Isopulegol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Limonene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Linalool	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
beta-Myrcene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Nerolidol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Ocimene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
alpha-Pinene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
beta-Pinene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Pulegone	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Sabinene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Sabinene hydrate	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
gamma-Terpinene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
alpha-Terpinene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Farnesene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Terpinolene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Valencene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Nerol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
(+/-)-Borneol	< LOQ	0.008000	%		10/27/21 21:11	10/28/21 01:47	



Erik Werstler
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Pine Walker CBDV

Whole Circle Farms

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Quality Control

Terpene Analysis (Continued)

Batch: B21J146 - Terp (Continued)

Blank(B21J146-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
(+/-)-Fenchone	< LOQ	0.008000	%		10/27/21 21:11	10/28/21 01:47	
alpha-Phellandrene	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
Menthol	< LOQ	0.004000	%		10/27/21 21:11	10/28/21 01:47	
alpha-Terpineol	< LOQ	0.003200	%		10/27/21 21:11	10/28/21 01:47	
gamma-Terpineol	< LOQ	8.000E-4	%		10/27/21 21:11	10/28/21 01:47	

LCS(B21J146-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	71.9	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Camphene	124	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Camphor		0.01260	%	0-200	10/27/21 21:11	10/28/21 02:19	
delta-3-Carene	145	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
beta-Caryophyllene	80.2	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Caryophyllene Oxide	77.4	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
alpha-Cedrene		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Cedrol		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
p-Cymene		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
(1R)-endo-(+)-Fenchyl alcohol	95.1	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Eucalyptol	88.9	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Geraniol		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Geranyl acetate		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Guaiol	83.2	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
alpha-Humulene	106	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Isoborneol		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Isopulegol		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Limonene	91.9	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Linalool	86.4	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
beta-Myrcene	88.6	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Nerolidol	62.1	0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Ocimene	112	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
alpha-Pinene	128	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
beta-Pinene	126	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Pulegone		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Sabinene		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
Sabinene hydrate		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	



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Pine Walker CBDV

Whole Circle Farms

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Quality Control Terpene Analysis (Continued)

Batch: B21J146 - Terp (Continued)

LCS(B21J146-BS1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
gamma-Terpinene	118	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
alpha-Terpinene	234	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	Q1
Farnesene	80.9	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Terpinolene	113	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Valencene	148	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Nerol		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
(+/-)-Borneol	113	0.008400	%	50-150	10/27/21 21:11	10/28/21 02:19	
(+/-)-Fenchone	99.6	0.008400	%	50-150	10/27/21 21:11	10/28/21 02:19	
alpha-Phellandrene	126	0.004200	%	50-150	10/27/21 21:11	10/28/21 02:19	
Menthol		0.004200	%	0-200	10/27/21 21:11	10/28/21 02:19	
alpha-Terpineol	81.5	0.003360	%	50-150	10/27/21 21:11	10/28/21 02:19	
gamma-Terpineol		8.400E-4	%	0-200	10/27/21 21:11	10/28/21 02:19	

Batch: B21K002 - Moisture Content

Blank(B21K002-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.0800	0.00	%		11/01/21 17:01	11/01/21 17:01	

LCS(B21K002-BS1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	91.0	0.00	%	80-120	11/01/21 17:01	11/01/21 17:01	

Batch: B21K003 - WA

Blank(B21K003-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Water Activity	0.300	0.150	AW		11/01/21 16:59	11/01/21 16:59	



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Whole Circle Farms

AG-R10408871HG

Laboratory ID: 2110250-01

Notes and Definitions

- B Analyte detected in method blank, but not associated samples.
 - B2 Analyte detected in sample and associate method blank.
 - C Interference due to co-elution.
 - D Initial result exceeded calibration range, reported data are based on analysis of a dilution.
 - H Non-homogenous sample matrix affecting RPD and/or QC.
 - I Manual Integration was performed.
 - L Duplicate sample relative percent difference (RPD) exceeds QC limits.
 - M Anomalous results due to matrix interference
 - P Peaks manually split.
 - Q1 QC out of limits but still ok
 - Q2 Quality Control outside QC limits. Data considered estimate.
 - Q3 CCV was above the acceptance criteria. Non-detect samples are considered acceptable.
 - Q4 CCV was below the acceptance criteria, however the sample still exceeds the regulatory limit.
 - R Marginal Exceedence.
 - U Reported result is an estimate. The analyte was detected above the calibration range.
 - X Problems with initial analysis, reported data are from reinjection of prepared sample.
- <LOQ - Results below the Limit of Quantitation - Compound not detected



Erik Werstler
Lab Director