

CERTIFICATE OF ANALYSIS



JuniperAnalytics
INTEGRITY AND ACCURACY IN EVERY STEP

Juniper Analytics, LLC

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ORELAP: 4101-001 / OLCC: 10035537931

Client Name:

Contact Info:

Sample Type: Concentrate

External Batch ID: 8036

Harvest/Prod. Date: 3/29/2019

Sample ID: Isolate

METRC ID: Industrial Hemp

Juniper Batch #: 19JA0759.01_A-B Composite

Intake Date: 2019-04-01



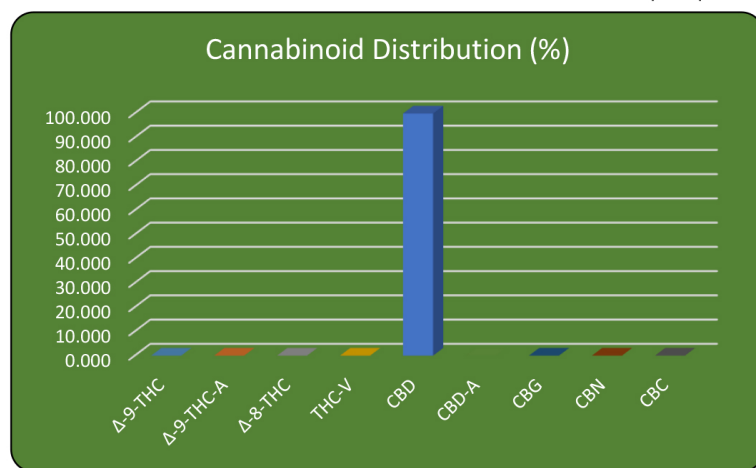
Potency Analysis (Oregon Compliance Standard OAR 333-007-0430)

ANALYSIS DATE: 2019-04-02

Instrument: HPLC/DAD

Method: JA-Potency-Proprietary

Compound	Weight (%)	Concentration (mg/g)	LOQ (mg/g)
Δ-9-THC	<LOQ	<LOQ	1.00
Δ-9-THC-A	<LOQ	<LOQ	1.00
Δ-8-THC	<LOQ	<LOQ	1.00
THC-V	<LOQ	<LOQ	1.00
CBD	99.888	998.88	1.00
CBD-A	<LOQ	<LOQ	1.00
CBG	<LOQ	<LOQ	1.00
CBN	<LOQ	<LOQ	1.00
CBC	<LOQ	<LOQ	1.00



TOTAL THC/CBD	Weight (%)	Conc (mg/g)	RPD
% THC Total =	<LOQ	<LOQ	N/A
%THC _{Total} = (THC-A * 0.877) + Δ9THC			
			N/A
% CBD Total =	99.888	998.88	
%CBD _{Total} = (CBD-A * 0.877) + CBD			

Residual Solvent Analysis (Oregon Compliance Standard OAR 333-007-0410)

Solvent	Result (ppm)	Action Level / LOQ (ppm)
1,4-Dioxane	<LOQ	380 / 100
2-Butanol	<LOQ	5000 / 500
2-Ethoxyethanol	<LOQ	160 / 100
2-Propanol (IPA)	<LOQ	5000 / 500
Acetone	<LOQ	5000 / 500
Acetonitrile	<LOQ	410 / 100
Benzene	<LOQ	2 / 1
Cumene	<LOQ	70 / 50
Cyclohexane	<LOQ	3880 / 500
Dichloromethane	<LOQ	600 / 100
Ethyl acetate	<LOQ	5000 / 500
Ethyl ether	<LOQ	5000 / 500
Ethylene glycol	<LOQ	620 / 300
Ethylene oxide	<LOQ	50 / 10
Heptane	<LOQ	5000 / 500
Isopropyl acetate	<LOQ	5000 / 500
Methanol	<LOQ	3000 / 500
Propane	<LOQ	5000 / 500
Tetrahydrofuran	<LOQ	720 / 100
Toluene	<LOQ	890 / 100

Solvent	Result (ppm)	Action Level / LOQ (ppm)
Pentanes;		
-n-pentane	<LOQ	5000 / 500
-iso-pentane	<LOQ	**
-neo-pentane	<LOQ	**
Butanes;		
-n-butane	<LOQ	5000 / 500
-iso-butane	<LOQ	**
Hexanes;		
-n-hexane	<LOQ	290 / 50
-2-methylpentane	<LOQ	**
-3-methylpentane	<LOQ	**
-2,2-dimethylbutane	<LOQ	**
-2,3-dimethylbutane	<LOQ	**
Xylenes;		
-1,2-dimethylbenzene	<LOQ	2170 / 300
-1,3-dimethylbenzene	<LOQ	**
-1,4-dimethylbenzene	<LOQ	**
-Ethyl benzene	<LOQ	**
**RPD calculated for combined results		

Residual Solvents PASS

Tentatively Identified Compounds: Peak 1: Hit 1: 2-Propanol, 2-Methyl

<LOQ - Less than the Limit of Quantification

***Largest hit reported to appropriate governing body; RPD only calculated on samples where the average result is above 50% of the action level.

Approval

[Signature]

Report Date:

2019-04-03

QA Review



Juniper Batch #: 19JA0759.01_A-B Composite
Intake Date: 2019-04-01

Pesticide Analysis (Oregon Compliance Standard OAR 333-008-1190)

ANALYSIS DATE: 2019-04-03			Instrument: LC/MS/MS		Method: AOAC 2007.1 ^{modified}	
Pesticide	Result (ppm)	Action Level / LOQ (ppm)		Pesticide	Result (ppm)	Action Level / LOQ (ppm)
Abamectin	<LOQ	0.5 / 0.25		Imazalil	<LOQ	0.2 / 0.10
Acephate	<LOQ	0.4 / 0.20		Imidacloprid	<LOQ	0.4 / 0.20
Acequinocyl	<LOQ	2.0 / 1.00		Kresoxim-methyl	<LOQ	0.4 / 0.20
Acetamiprid	<LOQ	0.2 / 0.10		Malathion	<LOQ	0.2 / 0.10
Aldicarb	<LOQ	0.4 / 0.20		Metalaxyl	<LOQ	0.2 / 0.10
Azoxystrobin	<LOQ	0.2 / 0.10		Methiocarb	<LOQ	0.2 / 0.10
Bifenazate	<LOQ	0.2 / 0.10		Methomyl	<LOQ	0.4 / 0.20
Bifenthrin	<LOQ	0.2 / 0.10		Methyl Parathion	<LOQ	0.2 / 0.10
Boscalid	<LOQ	0.4 / 0.20		MGK-264	<LOQ	0.2 / 0.10
Carbaryl	<LOQ	0.2 / 0.10		Myclobutanil	<LOQ	0.2 / 0.10
Carbofuran	<LOQ	0.2 / 0.10		Naled	<LOQ	0.5 / 0.25
Chlorantraniliprole	<LOQ	0.2 / 0.10		Oxamyl	<LOQ	1.0 / 0.50
Chlorfenapyr	<LOQ	1.0 / 0.50		Paclobutrazol	<LOQ	0.4 / 0.20
Chlorpyrifos	<LOQ	0.2 / 0.10		Permethrins	<LOQ	0.2 / 0.10
Clofentezine	<LOQ	0.2 / 0.10		Phosmet	<LOQ	0.2 / 0.10
Cyfluthrin	<LOQ	1.0 / 0.50		Piperonyl butoxide	<LOQ	2.0 / 1.00
Cypermethrin	<LOQ	1.0 / 0.50		Prallethrin	<LOQ	0.2 / 0.10
Daminozide	<LOQ	1.0 / 0.50		Propiconazole	<LOQ	0.4 / 0.20
DDVP (Dichlorvos)	<LOQ	1.0 / 0.50		Propoxur	<LOQ	0.2 / 0.10
Diazinon	<LOQ	0.2 / 0.10		Pyrethrins	<LOQ	1.0 / 0.50
Dimethoate	<LOQ	0.2 / 0.10		Pyridaben	<LOQ	0.2 / 0.10
Ethoprophos	<LOQ	0.2 / 0.10		Spinosad	<LOQ	0.2 / 0.10
Etofenprox	<LOQ	0.4 / 0.20		Spiromesifen	<LOQ	0.2 / 0.10
Etiozole	<LOQ	0.2 / 0.10		Spirotetramat	<LOQ	0.2 / 0.10
Fenoxycarb	<LOQ	0.2 / 0.10		Spiroxamine	<LOQ	0.4 / 0.20
Fenpyroximate	<LOQ	0.4 / 0.20		Tebuconazole	<LOQ	0.4 / 0.20
Fipronil	<LOQ	0.4 / 0.20		Thiacloprid	<LOQ	0.2 / 0.10
Flonicamid	<LOQ	1.0 / 0.50		Thiamethoxam	<LOQ	0.2 / 0.10
Fludioxonil	<LOQ	0.4 / 0.20		Trifloxystrobin	<LOQ	0.2 / 0.10
Hexythiazox	<LOQ	1.0 / 0.50				
Pesticide Screen	PASS					
LOQ= Limit of Quantification						

Microbiological Contaminants (Oregon Compliance Standard OAR 333-007-0390)

ANALYSIS DATE: Not Tested

Microbiological screening	Colony count	CFU/g	Results:
Total coliforms	Not tested	Not tested	N/A
Escherichia coli (E. coli)	Not tested	Not tested	N/A

Terpene Profile

ANALYSIS DATE: Not Tested

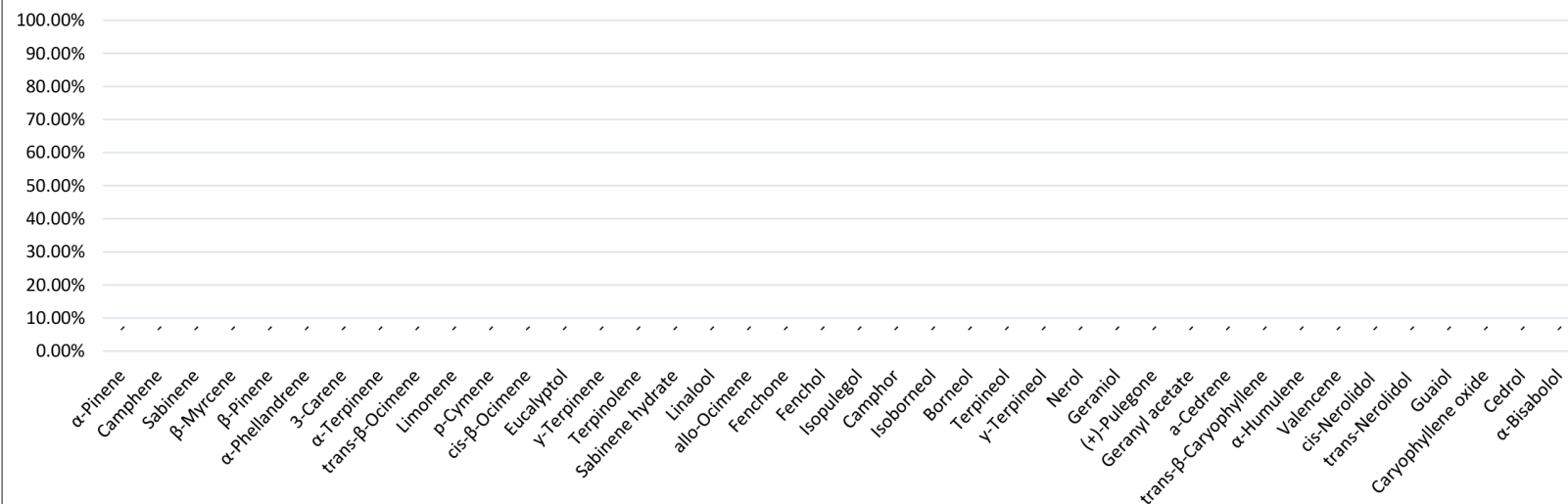
Instrument: GC/MS

Method: JA-Terpene-Proprietary

Compound	µg/g	%
α-Pinene		
Camphene		
Sabinene		
β-Myrcene		
β-Pinene		
α-Phellandrene		
3-Carene		
α-Terpinene		
trans-β-Ocimene		
Limonene		
p-Cymene		
cis-β-Ocimene		
Eucalyptol		
γ-Terpinene		
Terpinolene		
Sabinene hydrate		
Linalool		
allo-Ocimene		
Fenchone		
Fenchol		

Compound	µg/g	%
Isopulegol		
Camphor		
Isoborneol		
Borneol		
Terpineol		
γ-Terpineol		
Nerol		
Geraniol		
(+)-Pulegone		
Geranyl acetate		
α-Cedrene		
trans-β-Caryophyllene		
α-Humulene		
Valencene		
cis-Nerolidol		
trans-Nerolidol		
Guaiol		
Caryophyllene oxide		
Cedrol		
α-Bisabolol		
TOTAL		

Terpene Profile*



* Profile expressed as a percent of total terpenes

Batch QC WorkGroup ID:

Potency PO-2019-04-01-02

Pesticides PE-2019-04-01-01

Residual Solvents RS-2019-04-02-01

Disclaimer

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