

CERTIFICATE OF ANALYSIS



Juniper Analytics, LLC
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 ORELAP: 4101-001 / OLCC: 10035537931

Sample Type: Extract
 External Batch ID: 2265
 Harvest/Prod. Date: 5/16/2019 Expiration Date: 11/16/2019
 Sample ID: T-Free Distillate
 METRC ID: Industrial Hemp
 Juniper Batch #: 19JA1189.01_A-B Composite
 Intake Date: 5/21/2019

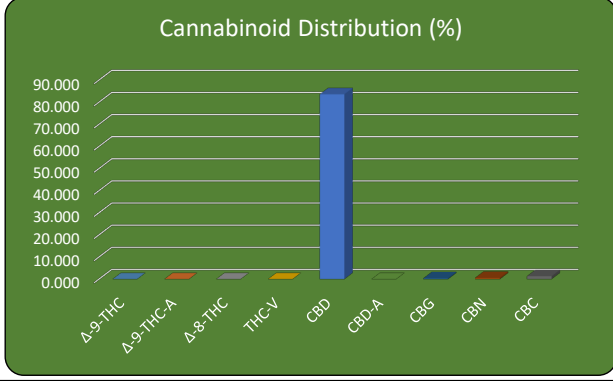


Potency Analysis (Oregon Compliance Standard OAR 333-007-0430)

ANALYSIS DATE: 5/21/2019 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	83.613	836.13	1.00
CBD-A	<LOQ	<LOQ	1.00
CBG	0.404	4.04	1.00
CBN	0.613	6.13	1.00
CBC	1.347	13.47	1.00

TOTAL THC/CBD	Weight (%)	Conc (mg/g)	RPD
% THC Total =	<LOQ	<LOQ	N/A
%THC _{Total} = (THC-A * 0.877) + Δ9THC			
% CBD Total =	83.613	836.13	
%CBD _{Total} = (CBD-A * 0.877) + CBD			



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

ANALYSIS DATE: Not Tested Instrument: GC/MS Method: USP 467 - Modified

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

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

**RPD calculated for combined results

Residual Solvents N/A
 Tentatively Identified Compounds:

<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: 5/21/2019

QA Review



Juniper Batch #: 19JA1189.01_A-B Composite
 Intake Date: 5/21/2019

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

ANALYSIS DATE: Not Tested			Instrument: LC/MS/MS		Method: AOAC 2007.1 ^{-modified}	
Pesticide	Result (ppm)	Action Level / LOQ (ppm)	Pesticide	Result (ppm)	Action Level / LOQ (ppm)	
Abamectin		0.5 / 0.25	Imazalil		0.2 / 0.10	
Acephate		0.4 / 0.20	Imidacloprid		0.4 / 0.20	
Acequinocyl		2.0 / 1.00	Kresoxim-methyl		0.4 / 0.20	
Acetamiprid		0.2 / 0.10	Malathion		0.2 / 0.10	
Aldicarb		0.4 / 0.20	Metaxyl		0.2 / 0.10	
Azoxystrobin		0.2 / 0.10	Methiocarb		0.2 / 0.10	
Bifenazate		0.2 / 0.10	Methomyl		0.4 / 0.20	
Bifenthrin		0.2 / 0.10	Methyl Parathion		0.2 / 0.10	
Boscalid		0.4 / 0.20	MGK-264		0.2 / 0.10	
Carbaryl		0.2 / 0.10	Myclobutanil		0.2 / 0.10	
Carbofuran		0.2 / 0.10	Naled		0.5 / 0.25	
Chlorantraniliprole		0.2 / 0.10	Oxamyl		1.0 / 0.50	
Chlorfenapyr		1.0 / 0.50	Paclobutrazol		0.4 / 0.20	
Chlorpyrifos		0.2 / 0.10	Permethrins		0.2 / 0.10	
Clofentezine		0.2 / 0.10	Phosmet		0.2 / 0.10	
Cyfluthrin		1.0 / 0.50	Piperonyl butoxide		2.0 / 1.00	
Cypermethrin		1.0 / 0.50	Prallethrin		0.2 / 0.10	
Daminozide		1.0 / 0.50	Propiconazole		0.4 / 0.20	
DDVP (Dichlorvos)		1.0 / 0.50	Propoxur		0.2 / 0.10	
Diazinon		0.2 / 0.10	Pyrethrins		1.0 / 0.50	
Dimethoate		0.2 / 0.10	Pyridaben		0.2 / 0.10	
Ethoprophos		0.2 / 0.10	Spinosad		0.2 / 0.10	
Etofenprox		0.4 / 0.20	Spiromesifen		0.2 / 0.10	
Etoxazole		0.2 / 0.10	Spirotetramat		0.2 / 0.10	
Fenoxycarb		0.2 / 0.10	Spiroxamine		0.4 / 0.20	
Fenpyroximate		0.4 / 0.20	Tebuconazole		0.4 / 0.20	
Fipronil		0.4 / 0.20	Thiacloprid		0.2 / 0.10	
Flonicamid		1.0 / 0.50	Thiamethoxam		0.2 / 0.10	
Fludioxonil		0.4 / 0.20	Trifloxystrobin		0.2 / 0.10	
Hexythiazox		1.0 / 0.50				
Pesticide Screen	NA					

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
<i>Escherichia coli (E. coli)</i>	Not tested	Not tested	N/A

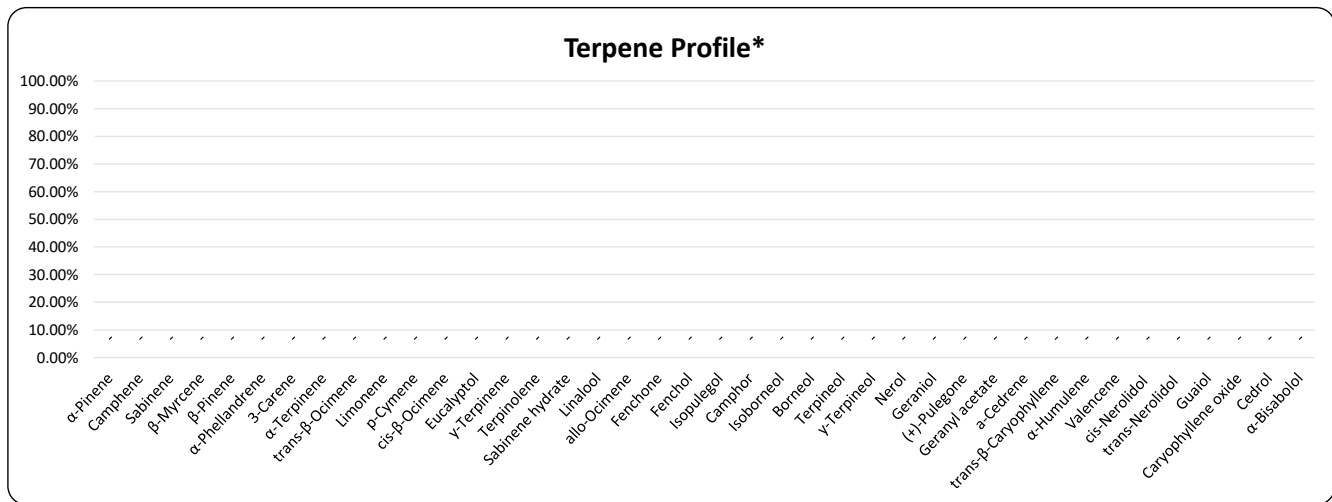


Juniper Batch #:	19JA1189.01_A-B Composite
Intake Date:	5/21/2019

Terpene Profile

ANALYSIS DATE: Not Tested			Instrument: GC/MS		Method: JA-Terpene-Proprietary	
Compound	µg/g	%	Compound	µg/g	%	

α-Pinene			Isopulegol		
Camphene			Camphor		
Sabinene			Isoborneol		
β-Myrcene			Borneol		
β-Pinene			Terpineol		
α-Phellandrene			γ-Terpineol		
3-Carene			Nerol		
α-Terpinene			Geraniol		
trans-β-Ocimene			(+)-Pulegone		
Limonene			Geranyl acetate		
p-Cymene			a-Cedrene		
cis-β-Ocimene			trans-β-Caryophyllene		
Eucalyptol			α-Humulene		
γ-Terpinene			Valencene		
Terpinolene			cis-Nerolidol		
Sabinene hydrate			trans-Nerolidol		
Linalool			Guaiol		
allo-Ocimene			Caryophyllene oxide		
Fenchone			Cedrol		
Fenchol			α-Bisabolol		
			TOTAL		



* Profile expressed as a percent of total terpenes

Batch QC WorkGroup ID:

Potency PO-2019-05-21-01

Pesticides

Residual Solvents

Disclaimer

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