

CERTIFICATE OF ANALYSIS



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

Client Name: Arise Bioscience
 Contact Info: Brandon
 Sample Type: Cannabinoid
 External Batch ID: TNM-959
 Harvest/Prod. Date: NA
 Sample ID: Thin Mint 350mg
 METRC ID: Personal
 Juniper Batch #: **19JA0521.05**
 Intake Date: **2019-03-04**

NOT FOR COMPLIANCE



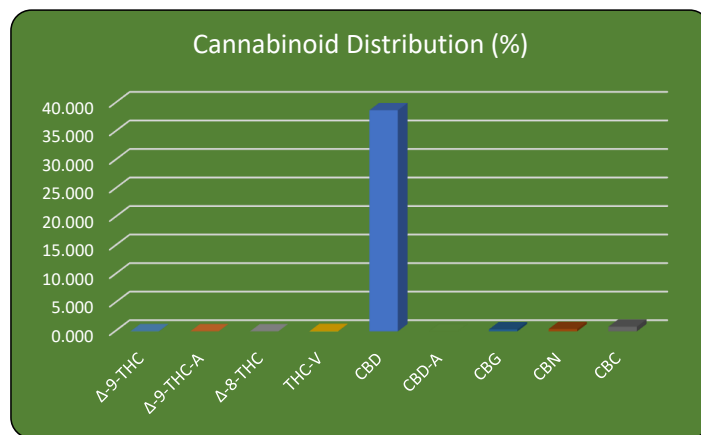
Potency Analysis (Oregon Compliance Standard OAR 333-007-0430)

ANALYSIS DATE: 2019-03-06

Instrument: HPLC/DAD

Method: JA-Potency-Proprietary

Compound	Weight (%)	Concentration (mg/g)	LOQ * (mg/g)
Δ-9-THC	0.023	0.23	0.16
Δ-9-THC-A	< LOQ	< LOQ	0.16
Δ-8-THC	< LOQ	< LOQ	0.16
THC-V	0.049	0.49	0.16
CBD	38.746	387.46	0.16
CBD-A	< LOQ	< LOQ	0.16
CBG	0.342	3.42	0.16
CBN	0.401	4.01	0.16
CBC	0.811	8.11	0.16



TOTAL THC/CBD	Weight (%)	Conc (mg/g)
THC Total =	0.023	0.23

THC_{Total} = (THC-A * 0.877) + Δ9THC

CBD Total =	38.746	387.46
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CBD_{Total} = (CBD-A * 0.877) + CBD

* < LOQ - Less than the Limit of Quantification

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

ANALYSIS DATE: 2019-03-12

Instrument: GC/MS

Method: USP 467 - Modified

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;	<LOQ	5000 / 500
-n-pentane	<LOQ	**
-iso-pentane	<LOQ	**
-neo-pentane	<LOQ	**
Butanes;	<LOQ	5000 / 500
-n-butane	<LOQ	**
-iso-butane	<LOQ	**
Hexanes;	<LOQ	290 / 50
-n-hexane	<LOQ	**
-2-methylpentane	<LOQ	**
-3-methylpentane	<LOQ	**
-2,2-dimethylbutane	<LOQ	**
-2,3-dimethylbutane	<LOQ	**
Xylenes;	<LOQ	2170 / 300
-1,2-dimethylbenzene	<LOQ	**
-1,3-dimethylbenzene	<LOQ	**
-1,4-dimethylbenzene	<LOQ	**
-Ethyl benzene	<LOQ	**

**Limit based on combined results

Residual Solvents **PASS**

Tentatively Identified Compounds: None Detected

<LOQ - Less than the Limit of Quantification

APPROVAL

Report Date: 2019-03-12

QA Review



Juniper Batch #:	19JA0521.05
Intake Date:	2019-03-04

Pesticide Analysis (Oregon Compliance Standard OAR 333-007-0400)

ANALYSIS DATE: 2019-03-08			Instrument: LC/MS/MS			Method: AOAC 2007.1-Mod		
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		
Etoxazole	<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
<i>Escherichia coli (E. coli)</i>	Not tested	Not tested	N/A

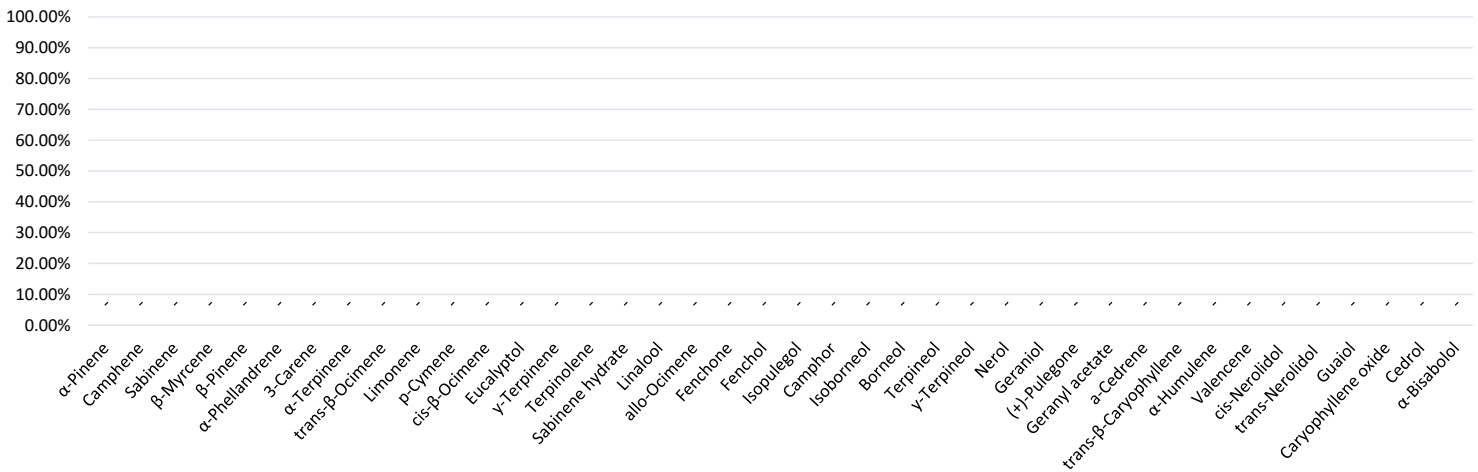


Juniper Batch #:	19JA0521.05
Intake Date:	2019-03-04

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			α-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	N/A	N/A

Terpene Profile*



* Profile expressed as a percent of total terpenes

Batch QC WorkGroup ID:

Potency PO-2019-03-05-01

Residual Solvents RS-2019-03-08-01

Pesticide Pest-2019-03-05-01

Disclaimer

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