

Medicine Creek Analytics Certificate of Analysis

3700 Pacific HWY E, Ste 400, Fife, WA 98424
 WA State I502 Certification 0018 | ISO 17025 91428 | Accreditation #91428



Sample **Liquefy**

#COC/INVOICE: 1256-19

Laboratory ID 190815-032	Matrix Terpenes
Tested for Atlas Technology LLC	
Sampled -	Received Aug 15, 2019
	Reported Aug 22, 2019
Analyses executed CAN, TER, MIB, MYC, RES, PES, MET	

CAN - Cannabinoid Profile Analysis

Analyzed Aug 19, 2019 | Instrument LC2040

Analyte	LOD %	LOQ %	Result %	Result mg/g
Cannabidiol (CBD)	0.003	0.01	ND	ND
Tetrahydrocannabinol (THC)	0.003	0.01	ND	ND
Cannabidiol (CBD)	0.003	0.01	ND	ND
Cannabigerol (CBG)	0.003	0.01	ND	ND
Cannabidiolic Acid (CBDA)	0.003	0.01	ND	ND
Cannabigerol Acid (CBGA)	0.003	0.01	ND	ND
Cannabinol (CBN)	0.003	0.01	ND	ND
delta-9-Tetrahydrocannabinol (THC)	0.003	0.01	ND	ND
delta-8-Tetrahydrocannabinol (Δ8-THC)	0.003	0.01	ND	ND
Cannabichromene (CBC)	0.003	0.01	ND	ND
Tetrahydrocannabinolic Acid (THCA)	0.003	0.01	ND	ND
Total THC (THCa * 0.877 + THC)			0.00	0.00
Total CBD (CBDA * 0.877 + CBD)			0.00	0.00

MIB - Microbial Testing Analysis

Analyzed Aug 20, 2019 | Instrument Plated

Analyte	LOD CFU/g	LOQ CFU/g	Result CFU/g	WRL	Analyte	LOD CFU/g	LOQ CFU/g	Result CFU/g	WRL
Aerobic	100.0		NT	no limit	Yeast and Mold	100.0		NT	no limit
Coliform	100.0		NT	no limit	Bile Tolerant gram neg	100.0		ND	10000
E.Coli			ND	ND per 1 gram	Salmonella	100.0		ND	ND per 1 gram

NR Not Reported
 ND Not Detected
 <LOD Below Lod
 NT Not Tested
 LOD Limit of Detection
 LOQ Limit of Quantification
 DET Detected below quantitation limit
 CFU/g Colony Forming Units per 1 gram
 TNTC Too Numerous to Count
 mg/g Milligrams per gram
 ppm Parts per million
 WRL Washington Regulatory Limit



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MYC - Mycotoxin Testing Analysis

Analyzed Aug 19, 2019 | Instrument ELISA

Analyte	LOD ppb	Result PPB	WRL PPB	Analyte	LOD ppb	Result PPB	WRL PPB
Aflatoxin (B1 B2 G1 G2)	3.0	ND	20	Ochratoxin A	1.9	ND	20

RES - Residual Solvents Testing Analysis

Analyzed Aug 19, 2019 | Instrument HS-GC-FID

Analyte	Result PPM	WRL PPM	Analyte	Result PPM	WRL PPM
Propane (Prop)	<LOD	5000	Isobutane (iso-But)	<LOD	5000
n-Butane (n-But)	<LOD	5000	Methanol (Metha)	<LOD	3000
n-Pentane (n-Pen)	<LOD	5000	Ethanol (Eth)	<LOD	
Ethyl Ether (EthEt)	<LOD	5000	Acetone (Acet)	<LOD	5000
2-Propanol (2-Prop)	<LOD	5000	Acetonitrile (Acetonit)	<LOD	50
Dichloromethane (Dichme)	<LOD	600	n-Hexane (nHexa)	<LOD	290
Ethyl Acetate (EthAc)	<LOD	5000	Chloroform (Chlfrm)	<LOD	2
Cyclohexane (Cycex)	<LOD	3880	Benzene (Benz)	<LOD	2
n-Heptane (nHept)	<LOD	5000	Toluene (Tol)	<LOD	890
Xylene (Xyl)	<LOD	2170			

*The limit of 2170 ug/g for Xylene is to be intended as the combined concentration of Ethyl Benzene, m-Xylene, o-Xylene, p-Xylene.

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PES - Pesticides Screening Analysis

Analyzed Aug 21, 2019 | Instrument LCMS 8050

Analyte	LOD ppm	LOQ ppm	Result PPM	WRL PPM	Analyte	LOD ppm	LOQ ppm	Result PPM	WRL PPM
3-Hydroxycarbofuran	0.075	0.25	<LOD	0.2	Abamectin B1a	0.15	0.45	<LOD	0.5
Acephate	0.1	0.3	<LOD	0.4	Acetamiprid	0.033	0.1	<LOD	0.2
Aldicarb Sulfone	0.05	0.2	<LOD	0.4	Aldicarb	0.075	0.25	<LOD	0.4
Aminocarb	0.033	0.1	<LOD	0.1	Azoxystrobin	0.05	0.2	<LOD	0.2
Benalaxyl	0.05	0.15	<LOD	0.1	Bifenthrin	0.05	0.2	<LOD	0.2
Bifenazate	0.05	0.2	<LOD	0.2	Boscalid			<LOD	0.4
Butafenacil	0.05	0.15	<LOD	0.1	Carbaryl	0.05	0.2	<LOD	0.2
Carbetamide	0.05	0.15	<LOD	0.1	Carbofuran	0.05	0.15	<LOD	0.2
Carboxin	0.05	0.15	<LOD	0.1	Carfentrazone-ethyl	0.05	0.2	<LOD	0.1
Chlorantraniliprole	0.075	0.25	<LOD	0.2	Chlorotoluron	0.05	0.2	<LOD	0.1
Chloroxuron	0.05	0.15	<LOD	0.1	Chlorpyrifos	0.075	0.25	<LOD	0.2
Clofentezine			<LOD	0.2	Clothianidin	0.05	0.15	<LOD	0.1
Cyazofamid	0.05	0.15	<LOD	0.1	Cycluron	0.05	0.15	<LOD	0.1
Diazinon	0.05	0.2	<LOD	0.2	Diclotophos	0.05	0.15	<LOD	0.1
Diethofencarb	0.05	0.15	<LOD	0.1	Dimethoate	0.05	0.2	<LOD	0.2
Dimethomorph	0.05	0.2	<LOD	0.1	Dimoxystrobin	0.05	0.15	<LOD	0.1
Diuron	0.1	0.3	<LOD	0.1	Epoxiconazole	0.075	0.25	<LOD	0.1
Ethiofencarb	0.075	0.25	<LOD	0.1	Ethoprophos	0.1	0.4	<LOD	0.2
Etofenprox	0.04	0.125	<LOD	0.4	Etoxazole	0.05	0.2	<LOD	0.2
Fenamidon	0.05	0.15	<LOD	0.1	Fenazaquin	0.05	0.2	<LOD	0.1
Fenoxycarb	0.05	0.2	<LOD	0.2	Fenpyroximate	0.04	0.125	<LOD	0.4
Fenuron	0.033	0.1	<LOD	0.1	Fipronil	0.1	0.3	<LOD	0.4
Flonicamid			<LOD	1	Fluazinam	0.075	0.25	<LOD	0.1
Fludioxonil			<LOD	0.4	Flufenacet	0.05	0.2	<LOD	0.1
Fluometuron	0.05	0.2	<LOD	0.1	Flutolanil	0.05	0.2	<LOD	0.1
Fuberidazole	0.033	0.1	<LOD	0.1	Furalaxyl	0.05	0.15	<LOD	0.1
Furathiocarb	0.05	0.2	<LOD	0.1	Hexythiazox	0.05	0.2	<LOD	1
Imazalil	0.1	0.4	<LOD	0.2	Imidacloprid	0.05	0.2	<LOD	0.4
Indoxacarb	0.05	0.2	<LOD	0.1	Iprovalicarb	0.05	0.2	<LOD	0.1
Isoprocarb	0.05	0.2	<LOD	0.1	Isoproturon	0.05	0.15	<LOD	0.1
Kresoxym-methyl	0.05	0.15	<LOD	0.4	Malathion	0.05	0.2	<LOD	0.2
Mandipropamid	0.05	0.2	<LOD	0.1	Mefenacet	0.05	0.15	<LOD	0.1
Metalaxyl	0.05	0.15	<LOD	0.2	Methabenzthiazuron	0.05	0.15	<LOD	0.1
Methamidophos	0.033	0.1	<LOD	0.1	Methiocarb			<LOD	0.2
Methomyl	0.05	0.2	<LOD	0.4	Methoprotryne	0.05	0.2	<LOD	0.1
Methoxyfenozide	0.05	0.15	<LOD	0.1	Mexacarbate	0.033	0.1	<LOD	0.1
Monocrotophos			<LOD	0.1	Myclobutanil	0.075	0.25	<LOD	0.2
Nitenpyram	0.05	0.2	<LOD	0.1	Omethoate	0.05	0.2	<LOD	0.1
Oxadixyl	0.05	0.2	<LOD	0.1	Oxamyl	0.033	0.1	<LOD	1
Paclobotrazol	0.05	0.2	<LOD	0.4	Permethrin	0.05	0.2	<LOD	0.2
Phosmet	0.05	0.2	<LOD	0.2	Picoxystrobin	0.05	0.2	<LOD	0.1
Piperonyl Butoxide	0.05	0.15	<LOD	2	Pirimicarb	0.05	0.15	<LOD	0.1
Prometon	0.05	0.15	<LOD	0.1	Propamocarb	0.04	0.125	<LOD	0.1
Propargite	0.04	0.125	<LOD	0.1	Propoxur	0.04	0.125	<LOD	0.2
Pymetrozine	0.05	0.2	<LOD	0.1	Pyracarbolid	0.04	0.125	<LOD	0.1
Pyraclostrobin	0.05	0.15	<LOD	0.1	Pyrethrin I			<LOD	1
Pyrethrin II			<LOD	1	Pyridaben	0.05	0.2	<LOD	0.2
Pyriproxyfen	0.05	0.15	<LOD	0.1	Quinoxifen	0.033	0.1	<LOD	0.1
Rotenone	0.05	0.2	<LOD	0.1	Spinosad A	0.05	0.2	<LOD	0.2
Spinosad D	0.05	0.2	<LOD	0.2	Spiromesifen	0.04	0.125	<LOD	0.2
Spirotetramat	0.05	0.2	<LOD	0.2	Spiroxamine	0.05	0.15	<LOD	0.4

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Tebuconazole	0.05	0.2	<LOD	0.4	Tebufenozide	0.05	0.15	<LOD	0.1
Tebuthiuron	0.04	0.125	<LOD	0.1	Thiacloprid	0.05	0.15	<LOD	0.2
Thiamethoxam	0.05	0.2	<LOD	0.2	Thiobencarb	0.05	0.2	<LOD	0.1
Thiophanate-Methyl	0.05	0.15	<LOD	0.1	Tricyclazole	0.05	0.15	<LOD	0.1
Trifloxystrobin	0.04	0.125	<LOD	0.2	Triflumizole	0.05	0.15	<LOD	0.1
Uniconazole	0.075	0.25	<LOD	0.5	Vamidothion	0.033	0.1	<LOD	0.1
Zoxamide	0.05	0.2	<LOD	0.1					

MET - Heavy Metals Detection Analysis

Analyzed Aug 20, 2019 | Instrument ICP-MS

Analyte	LOD ug/5g	LOQ ug/5g	Result ug/5g	WRL ug/5g	Analyte	LOD ug/5g	LOQ ug/5g	Result ug/5g	WRL ug/5g
Arsenic (As)	0.02	0.06	ND	10	Cadmium (Cd)	0.01	0.04	ND	4.1
Lead (Pb)	0.01	0.02	ND	6	Mercury (Hg)	0.02	0.07	ND	2

TER - Terpenes Testing Analysis

Analyzed Aug 22, 2019 | Instrument GC-FID

Analyte	LOD mg/g	LOQ mg/g	(%)	(mg/g)	Analyte	LOD mg/g	LOQ mg/g	(%)	(mg/g)
α-Pinene (α-Pin)	0.05	0.12	ND	ND	Camphene (Cam)	0.05	0.12	ND	ND
β-Myrcene (Myr)	0.05	0.12	0.47	4.67	β-Pinene (β-Pin)	0.05	0.12	ND	ND
Δ ³ -Carene (β-Car)	0.05	0.12	ND	ND	α-Terpinene (α-Ter)	0.05	0.12	ND	ND
Limonene (Lim)	0.05	0.12	ND	ND	p-Cymene (p-Cym)	0.05	0.12	ND	ND
Ocimene 1 (Oci1)	0.05	0.12	ND	ND	Eucalyptol (Euca)	0.05	0.12	ND	ND
g-Terpinene (g-Ter)	0.05	0.12	ND	ND	Terpinolene (Terp)	0.05	0.12	ND	ND
Linalool (Lin)	0.05	0.12	ND	ND	Geraniol (Gera)	0.05	0.12	ND	ND
Isopulegol (Isop)	0.05	0.12	ND	ND	b-Caryophyllene (b-Cary)	0.05	0.12	ND	ND
α-Humulene (Hum)	0.05	0.12	ND	ND	cis-Nerolidol (ci-Ner)	0.05	0.12	ND	ND
trans-Nerolidol (tr-Ner)	0.05	0.12	ND	ND	Guaiol (Gua)	0.05	0.12	ND	ND
Caryophyllene Oxide (ca-Oxi)	0.05	0.12	ND	ND	α-bisabolol (α-Bbis)	0.05	0.12	ND	ND
Total Terpene Concentration								0.47 %	4.67 mg/g

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