PharmLabs San Diego Certificate of Analysis

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Sample Mauna Kea MK51221

Sample ID SD211224	1-007 (45459)	Matrix Topical (Other Cannabis Good)	
Tested for Maui Sur	perherbs		
Sampled -	Received Dec 23, 2021	Reported Jan 06, 2022	
Analyses executed	CAN+, RES, MIBNIG, MTO, PES, HME, FVI	Unit Volume (mL) 30.0 Density (g/mL) 1.0	

CAN+ - Cannabinoids Analysis

Analyzed Dec 29, 2021 | Instrument HPLC-VWD | Method SOP-001 Measurement Uncertainty at 95% confidence 10.6%

Analyte	LOD mg/g	LOQ mg/g	Result %	Result mg/mL	Result mg/Package
Cannabidivarin (CBDV)	0.002	0.161	0.01	0.14	4.11
Cannabidiolic Acid (CBDA)	0.001	0.16	ND	ND	ND
Cannabigerol Acid (CBGA)	0.001	0.16	ND	ND	ND
Cannabigerol (CBG)	0.001	0.16	ND	ND	ND
Cannabidiol (CBD)	0.001	0.16	1.58	15.82	474.54
Tetrahydrocannabivarin (THCV)	0.001	0.16	ND	ND	ND
Cannabinol (CBN)	0.001	0.16	ND	ND	ND
Tetrahydrocannabinol (Δ9-THC)	0.003	0.16	0.04	0.44	13.05
Δ8-tetrahydrocannabinol (Δ8-THC)	0.004	0.16	ND	ND	ND
Cannabicyclol (CBL)	0.002	0.161	ND	ND	ND
Cannabichromene (CBC)	0.002	0.16	0.04	0.42	12.69
Tetrahydrocannabinolic Acid (THCA)	0.001	0.16	ND	ND	ND
Total THC (THCa * 0.877 + THC)			0.04	0.44	13.05
Total CBD (CBDa * 0.877 + CBD)			1.58	15.82	474.54
Total CBG (CBGa * 0.877 + CBG)			ND	ND	ND
TOTAL CANNABINOIDS			1.68	16.82	504.39

HME - Heavy Metals Detection Analysis

Analyzed Jan 06, 2022 | Instrument ICP/MSMS | Method SOP-005

Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g	Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g
Arsenic (As)	0.0002	0.05	ND	1.5	Cadmium (Cd)	3.0e-05	0.05	<loq< td=""><td>0.5</td></loq<>	0.5
Mercury (Hg)	1.0e-05	0.01	<loq< td=""><td>3</td><td>Lead (Pb)</td><td>1.0e-05</td><td>0.125</td><td>ND</td><td>0.5</td></loq<>	3	Lead (Pb)	1.0e-05	0.125	ND	0.5

MIBNIG - Microbial Testing Analysis

Analyzed Dec 30, 2021 | Instrument Plating | Method SOP-007

Analyte	Result CFU/g	Limit	Analyte	Result CFU/g	Limit
Shiga toxin-producing Escherichia Coli	ND	ND per 1 gram	n Salmonella spp.	ND	ND per 1 gram

ND Not Detected
N/A Not Applicable
NT Not Reported
LOD Limit of Detection
LOQ Limit of Quantification
<LOQ Detected
>ULOL Above upper limit of linearity
CFU/g Colony Forming Units per 1
gram
TNTC Too Numerous to Count









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Dr. Aaron Stancik, Laboratory Director Thu, 06 Jan 2022 18:13:20 -0800



MTO - Mycotoxin Testing Analysis

Analyzed Jan 06, 2022 | Instrument LC/MSMS | Method SOP-004

Analyte	LOD ug/kg	LOQ ug/kg	Result ug/kg (ppb)	Limit ug/kg	Analyte	LOD ug/kg	LOQ ug/kg	Result ug/kg (ppb)	Limit ug/kg
Ochratoxin A	5.0	20.0	ND	20	Aflatoxin B1	2.5	5.0	ND	
Aflatoxin B2	2.5	5.0	ND		Aflatoxin G1	2.5	5.0	ND	
Aflatoxin G2	2.5	5.0	ND		Total Aflatoxins	10.0	20.0	ND	20



COLLECTIVE

ND Not Detected
N/A Not Applicable
NT Not Reported
LOD Limit of Detection
LOQ Limit of Quantification
<LOQ Detected
>ULOL Above upper limit of linearity
CFU/g Colony Forming Units per 1
gram
TNTC Too Numerous to Count









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Dr. Aaron Stancik, Laboratory Director Thu, 06 Jan 2022 18:13:20 -0800

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PES - Pesticides Screening Analysis

Analyzed Jan 06, 2022 | Instrument LC/MSMS GC/MSMS | Method SOP-003

Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g	Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g
Aldicarb	0.0078	0.02	ND	0.0078	Carbofuran	0.01	0.02	ND	0.01
Dimethoate	0.01	0.02	ND	0.01	Etofenprox	0.02	0.1	ND	0.02
Fenoxycarb	0.01	0.02	ND	0.01	Thiachloprid	0.01	0.02	ND	0.01
Daminozide	0.01	0.03	ND	0.01	Dichlorvos	0.02	0.07	ND	0.02
Imazalil	0.02	0.07	ND	0.02	Methiocarb	0.01	0.02	ND	0.01
Spiroxamine	0.01	0.02	ND	0.01	Coumaphos	0.01	0.02	ND	0.01
Fipronil	0.01	0.1	ND	0.01	Paclobutrazol	0.01	0.03	ND	0.01
Chlorpyrifos	0.01	0.04	ND	0.01	Ethoprophos (Prophos)	0.01	0.02	ND	0.01
Baygon (Propoxur)	0.01	0.02	ND	0.01	Chlordane	0.04	0.1	ND	0.04
Chlorfenapyr	0.03	0.1	ND	0.03	Methyl Parathion	0.02	0.1	ND	0.02
Mevinphos	0.03	0.08	ND	0.03	Abamectin	0.03	0.08	ND	0.3
Acephate	0.02	0.05	ND	5	Acetamiprid	0.01	0.05	ND	5
Azoxystrobin	0.01	0.02	ND	40	Bifenazate	0.01	0.05	ND	5
Bifenthrin	0.02	0.35	ND	0.5	Boscalid	0.01	0.03	ND	10
Carbaryl	0.01	0.02	ND	0.5	Chlorantraniliprole	0.01	0.04	ND	40
Clofentezine	0.01	0.03	ND	0.5	Diazinon	0.01	0.02	ND	0.2
Dimethomorph	0.02	0.06	ND	20	Etoxazole	0.01	0.05	ND	1.5
Fenpyroximate	0.02	0.1	ND	2	Flonicamid	0.01	0.02	ND	2
Fludioxonil	0.01	0.05	ND	30	Hexythiazox	0.01	0.03	ND	2
Imidacloprid	0.01	0.05	ND	3	Kresoxim-methyl	0.01	0.03	ND	1
Malathion	0.01	0.05	ND	5	Metalaxyl	0.01	0.02	ND	15
Methomyl	0.02	0.05	ND	0.1	Myclobutanil	0.02	0.07	ND	9
Naled	0.01	0.02	ND	0.5	Oxamyl	0.01	0.02	ND	0.2
Permethrin	0.01	0.02	ND	20	Phosmet	0.01	0.02	ND	0.2
Piperonyl Butoxide	0.02	0.06	ND	8	Propiconazole	0.03	0.08	ND	20
Prallethrin	0.02	0.05	ND	0.4	Pyrethrin	0.05	0.41	ND	1
Pyridaben	0.02	0.07	ND	3	Spinosad A	0.01	0.05	ND	3
Spinosad D	0.01	0.05	ND	3	Spiromesifen	0.02	0.06	ND	12
Spirotetramat	0.01	0.02	ND	13	Tebuconazole	0.01	0.02	ND	2
Thiamethoxam	0.01	0.02	ND	4.5	Trifloxystrobin	0.01	0.02	ND	30
Acequinocyl	0.02	0.09	ND	4	Captan	0.01	0.02	ND	5
Cypermethrin	0.02	0.1	ND	1	Cufluthrin	0.04	0.1	ND	1
Fenhexamid	0.02	0.07	ND	10	Spinetoram J,L	0.02	0.07	ND	3
Pentachloronitrobenzene	0.01	0.1	ND	0.2	.,			=	-

COLLECTIVE

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N/A Not Applicable
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RES - Residual Solvents Testing Analysis

Analyzed Dec 30, 2021 | Instrument GC/FID with Headspace Analyzer | Method SOP-006

Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g	Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g
Propane (Prop)	0.4	40.0	<loq< td=""><td>5000</td><td>Butane (But)</td><td>0.4</td><td>40.0</td><td><loq< td=""><td>5000</td></loq<></td></loq<>	5000	Butane (But)	0.4	40.0	<loq< td=""><td>5000</td></loq<>	5000
Methanol (Metha)	0.4	40.0	<loq< td=""><td>3000</td><td>Ethylene Oxide (EthOx)</td><td>0.4</td><td>8.0</td><td>ND</td><td>1</td></loq<>	3000	Ethylene Oxide (EthOx)	0.4	8.0	ND	1
Pentane (Pen)	0.4	40.0	ND	5000	Ethanol (Ethan)	0.4	40.0	ND	5000
Ethyl Ether (EthEt)	0.4	40.0	ND	5000	Acetone (Acet)	0.4	40.0	<loq< td=""><td>5000</td></loq<>	5000
Isopropanol (2-Pro)	0.4	40.0	ND	5000	Acetonitrile (Acetonit)	0.4	40.0	ND	410
Methylene Chloride (MetCh)	0.4	0.8	ND	1	Hexane (Hex)	0.4	40.0	ND	290
Ethyl Acetate (EthAc)	0.4	40.0	<loq< td=""><td>5000</td><td>Chloroform (Clo)</td><td>0.4</td><td>0.8</td><td>ND</td><td>1</td></loq<>	5000	Chloroform (Clo)	0.4	0.8	ND	1
Benzene (Ben)	0.4	0.8	ND	1	1-2-Dichloroethane (12-Dich)	0.4	0.8	ND	1
Heptane (Hep)	0.4	40.0	ND	5000	Trichloroethylene (TriClEth)	0.4	0.8	ND	1
Toluene (Toluene)	0.4	40.0	ND	890	Xylenes (Xyl)	0.4	40.0	ND	2170

FVI - Filth & Foreign Material Inspection Analysis

Analyzed Dec 28, 2021 | Instrument Microscope | Method SOP-010

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Analyte / Limit	Result	Analyte / Limit	Result
> 1/4 of the total sample area covered by sand, soil, cinders, or dirt	ND	> 1/4 of the total sample area covered by mold	ND
> 1 insect fragment, 1 hair, or 1 count mammalian excreta per 3g	ND	> 1/4 of the total sample area covered by an imbedded foreign material	ND

COLLECTIVE

ND Not Detected
N/A Not Applicable
NT Not Reported
LOD Limit of Detection
LOQ Limit of Quantification
<LOQ Detected
>ULOL Above upper limit of linearity
CFU/g Colony Forming Units per 1
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