

## PharmLabs San Diego Certificate of Analysis

3421 Hancock St, Second Floor, San Diego, CA 92110 | License: C8-0000098-LIC  
ISO/IEC 17025:2017 Certification L17-427-1 | Accreditation #85368

Sample **Modern Trees Grape Ape disposable vape cart 1:1**

Sample ID	SD220518-047 (48420)	Matrix	Concentrate (Inhalable Cannabis Good)
Tested for	Pacific Manufacturing and Design		
Sampled	-	Received	May 18, 2022
		Reported	May 23, 2022
Analyses executed	CAN20, RES, MIBIG, MTO, PES, HME, FVI	Unit Mass (g)	1.0

**Laboratory note :** The estimated concentration of the unknown peak in the sample is 5.0% | Currently PharmLabs laboratory can not confirm an unidentified peak in your chromatogram due to interference (only with highly concentrated D8 products) from which we believe to be either (+)d8-THC or d9-THC. At this time there are no reference standards available for (+)d8-THC. (+)d8-THC is a different compound from the main (-)d8-THC cannabinoid and, therefore, these two compounds may have different efficacies. Using the most advanced instruments and techniques available, the separation of (+)d8-THC and d9-THC is problematic for the scientific community as a whole. PharmLabs believes the unidentified peak to be a combination of (+)d8-THC and d9-THC with the majority, if not all, of the concentration being (+)d8-THC.

## CAN20 - Cannabinoids Analysis

Analyzed May 23, 2022 | Instrument HPLC

Measurement Uncertainty at 95% confidence 7.806%

Analyte	LOD mg/g	LOQ mg/g	Result %	Result mg/g	Result mg/Package
Cannabidiol (CBDV)	0.039	0.16	ND	ND	ND
Cannabidiol 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	ND	ND	ND
Tetrahydrocannabivarin (THCV)	0.001	0.16	ND	ND	ND
Cannabinol (CBN)	0.001	0.16	ND	ND	ND
exo-THC (exo-THC)	0.016	0.8	ND	ND	ND
Tetrahydrocannabinol (Δ9-THC)	0.003	0.16	UI	UI	UI
Δ8-tetrahydrocannabinol (Δ8-THC)	0.004	0.16	44.38	443.78	443.78
(6aR,9S)-Δ10-Tetrahydrocannabinol ((6aR,9S)-Δ10)	0.015	0.16	ND	ND	ND
Hexahydrocannabinol (S Isomer) (9s-HHC)	0.017	0.16	ND	ND	ND
(6aR,9R)-Δ10-Tetrahydrocannabinol ((6aR,9R)-Δ10)	0.007	0.16	ND	ND	ND
Hexahydrocannabinol (R Isomer) (9r-HHC)	0.016	0.16	ND	ND	ND
Cannabichromene (CBC)	0.002	0.16	ND	ND	ND
Tetrahydrocannabinolic Acid (THCA)	0.001	0.16	ND	ND	ND
Δ9-Tetrahydrocannabiphorol (Δ9-THCP)	0.017	0.16	ND	ND	ND
Δ8-Tetrahydrocannabiphorol (Δ8-THCP)	0.041	0.16	ND	ND	ND
Δ8-THC-O-acetate (Δ8-THC-O)	0.076	0.16	36.93	369.28	369.28
Δ9-THC-O-acetate (Δ9-THC-O)	0.066	0.16	ND	ND	ND
Total THC (THCa * 0.877 + THC)			ND	ND	ND
Total CBD (CBDa * 0.877 + CBD)			ND	ND	ND
Total CBG (CBGa * 0.877 + CBG)			ND	ND	ND
Total HHC (9r-HHC + 9s-HHC)			ND	ND	ND
TOTAL CANNABINOIDS			81.31	813.06	813.06

## Sample photography



UI Not Identified  
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



RP0611043



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Authorized Signature

*Brandon Starr*

Brandon Starr, Lab Manager  
Mon, 23 May 2022 17:45:22 -0700

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## HME - Heavy Metals Detection Analysis

Analyzed May 21, 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	<LOQ	0.2	Cadmium (Cd)	3.0e-05	0.05	<LOQ	0.2
Mercury (Hg)	1.0e-05	0.01	ND	0.1	Lead (Pb)	1.0e-05	0.125	ND	0.5

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## MIBIG - Microbial Testing Analysis

Analyzed May 21, 2022 | Instrument qPCR and/or Plating | Method SOP-007

Analyte	Result CFU/g	Limit	Analyte	Result CFU/g	Limit
Shiga toxin-producing Escherichia Coli	ND	ND per 1 gram	Salmonella spp.	ND	ND per 1 gram
Aspergillus fumigatus	ND	ND per 1 gram	Aspergillus flavus	ND	ND per 1 gram
Aspergillus niger	ND	ND per 1 gram	Aspergillus terreus	ND	ND per 1 gram

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## MTO - Mycotoxin Testing Analysis

Analyzed May 20, 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

UI Not Identified  
 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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## PES - Pesticides Screening Analysis

Analyzed May 20, 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	0.1
Acephate	0.02	0.05	ND	0.1	Acetamiprid	0.01	0.05	ND	0.1
Azoxystrobin	0.01	0.02	ND	0.1	Bifenazate	0.01	0.05	ND	0.1
Bifenthrin	0.02	0.35	ND	3	Boscalid	0.01	0.03	ND	0.1
Carbaryl	0.01	0.02	ND	0.5	Chlorantraniliprole	0.01	0.04	ND	10
Clofentezine	0.01	0.03	ND	0.1	Diazinon	0.01	0.02	ND	0.1
Dimethomorph	0.02	0.06	ND	2	Etoxazole	0.01	0.05	ND	0.1
Fenpyroximate	0.02	0.1	ND	0.1	Flonicamid	0.01	0.02	ND	0.1
Fludioxonil	0.01	0.05	ND	0.1	Hexythiazox	0.01	0.03	ND	0.1
Imidacloprid	0.01	0.05	ND	5	Kresoxim-methyl	0.01	0.03	ND	0.1
Malathion	0.01	0.05	ND	0.5	Metalaxyl	0.01	0.02	ND	2
Methomyl	0.02	0.05	ND	1	Myclobutanil	0.02	0.07	ND	0.1
Naled	0.01	0.02	ND	0.1	Oxamyl	0.01	0.02	ND	0.5
Permethrin	0.01	0.02	ND	0.5	Phosmet	0.01	0.02	ND	0.1
Piperonyl Butoxide	0.02	0.06	ND	3	Propiconazole	0.03	0.08	ND	0.1
Prallethrin	0.02	0.05	ND	0.1	Pyrethrin	0.05	0.41	ND	0.5
Pyridaben	0.02	0.07	ND	0.1	Spinosad A	0.01	0.05	ND	0.1
Spinosad D	0.01	0.05	ND	0.1	Spiromesifen	0.02	0.06	ND	0.1
Spirotetramat	0.01	0.02	ND	0.1	Tebuconazole	0.01	0.02	ND	0.1
Thiamethoxam	0.01	0.02	ND	5	Trifloxystrobin	0.01	0.02	ND	0.1
Acequinocyl	0.02	0.09	ND	0.1	Captan	0.01	0.02	ND	0.7
Cypermethrin	0.02	0.1	ND	1	Cyfluthrin	0.04	0.1	ND	2
Fenhexamid	0.02	0.07	ND	0.1	Spinetoram J,L	0.02	0.07	ND	0.1
Pentachloronitrobenzene	0.01	0.1	ND	0.1					

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## RES - Residual Solvents Testing Analysis

Analyzed May 20, 2022 | 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	ND	5000	Butane (But)	0.4	40.0	ND	5000
Methanol (Metha)	0.4	40.0	ND	3000	Ethylene Oxide (EthOx)	0.4	0.8	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	100.4	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	ND	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

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## FVI - Filth & Foreign Material Inspection Analysis

Analyzed May 20, 2022 | Instrument Microscope | Method SOP-010

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

UI Not Identified  
 ND Not Detected  
 N/A Not Applicable  
 NT Not Reported  
 LOD Limit of Detection  
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