

PharmLabs San Diego Certificate of Analysis

Sample **Sour Zkittles Sour'd Sumo 2ct**

Delta9 THC	0.12%	THCa	ND	Total THC (THCa * 0.877 + THC)	0.12%	Delta8 THC	4.13%
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Sample ID	SD250729-012 (119659)	Matrix	Edible
Tested for	Fresh Farms E-Liquid LLC		
Sampled	-	Received	Jul 28, 2025
Analyses executed	CANX, RES, MIBIG, MICX, MTO, PES, HME, FVI, MWA, D9C	Reported	Aug 08, 2025
		Unit Mass (g)	8.92
		Num. of Servings	2
		Serving Size (g)	4.46

Summary D9C: The total Δ9-THC content in this sample is 0.12%. For the most accurate Δ9-THC concentration, refer to the GC MS/MS section of this COA. This sample was tested using HPLC and GC MS/MS. HPLC analysis can yield inconsistent results for Δ8-THC and Δ9-THC due to isomer interference: GC MS/MS was employed to avoid this issue. Please note, if THCa is present, the Δ9-THC level measured by GC MS/MS might be higher due to decarboxylation.

D9C - D9 Confirmation

Analyzed Jul 26, 2025 | Instrument GC MS/MS | Method SOP-041 D9C
The expanded Uncertainty of the D9 Confirmation analysis is approximately ±7.806% at the 95% Confidence Level

Analyte	LOD ppb	LOQ ppb	Result %	Result mg/g	Result mg/Serving	Result mg/Unit
Δ9-Tetrahydrocannabinol (Δ9-THC)	1.462	4.432	0.12	1.25	5.58	11.15
Total Cannabinoids Analyzed	-	-	0.12	1.25	5.58	11.15

CANx - Cannabinoids

Analyzed Jul 24, 2025 | Instrument HPLC-VWD | Method SOP-001
The expanded Uncertainty of the Cannabinoids analysis is approximately ±7.81% at the 95% Confidence Level

Analyte	LOD mg/g	LOQ mg/g	Result %	Result mg/g	Result mg/Serving	Result mg/Unit	Limit
11-Hydroxy-Δ8-Tetrahydrocannabivarin (11-Hyd-Δ8-THCV)	0.013	0.041	ND	ND	ND	ND	
Cannabidiol (CBDO)	0.006	0.02	ND	ND	ND	ND	
Abnormal Cannabidiol (a-CBDO)	0.013	0.038	ND	ND	ND	ND	
(+/-)-9B-hydroxy-Hexahydrocannabinol (9b-HHC)	0.015	0.045	ND	ND	ND	ND	
11-Hydroxy-Δ8-Tetrahydrocannabinol (11-Hyd-Δ8-THC)	0.015	0.045	ND	ND	ND	ND	
Cannabidiolic Acid (CBDA)	0.033	0.16	ND	ND	ND	ND	
Cannabigerol Acid (CBGA)	0.033	0.16	ND	ND	ND	ND	
Cannabigerol (CBG)	0.048	0.16	0.02	0.17	0.76	1.52	
Cannabidiol (CBD)	0.069	0.229	3.05	30.50	136.03	272.06	
1(S)-Tetrahydrocannabidiol (1(S)-H4-CBD)	0.008	0.026	ND	ND	ND	ND	
1(R)-Tetrahydrocannabidiol (1(R)-H4-CBD)	0.016	0.049	ND	ND	ND	ND	
Tetrahydrocannabivarin (THCV)	0.049	0.162	0.01	0.05	0.22	0.45	
Δ8-tetrahydrocannabivarin (Δ8-THCV)	0.012	0.036	0.02	0.19	0.85	1.69	
Cannabidiol (CBDH)	0.014	0.042	ND	ND	ND	ND	
Tetrahydrocannabinol (Δ9-THCB)	0.01	0.029	ND	ND	ND	ND	
Cannabinol (CBN)	0.047	0.16	0.01	0.11	0.49	0.98	
Cannabidiophorol (CBDP)	0.016	0.049	ND	ND	ND	ND	
exo-THC (exo-THC)	0.016	0.8	ND	ND	ND	ND	
Tetrahydrocannabinol (Δ9-THC)	0.092	0.307	D9C	D9C	D9C	D9C	
Δ8-tetrahydrocannabinol (Δ8-THC)	0.044	0.16	4.13	41.32	184.29	368.57	
(6aR,9S)-Δ10-Tetrahydrocannabinol ((6aR,9S)-Δ10)	0.015	0.8	ND	ND	ND	ND	
Hexahydrocannabinol (S Isomer) (9s-HHC)	0.017	0.8	ND	ND	ND	ND	
(6aR,9R)-Δ10-Tetrahydrocannabinol ((6aR,9R)-Δ10)	0.007	0.8	ND	ND	ND	ND	
Hexahydrocannabinol (R Isomer) (9r-HHC)	0.016	0.8	ND	ND	ND	ND	
Tetrahydrocannabinolic Acid (THCA)	0.117	0.389	ND	ND	ND	ND	
Δ9-Tetrahydrocannabihexol (Δ9-THCH)	0.02	0.061	ND	ND	ND	ND	
Cannabinol Acetate (CBNO)	0.009	0.027	ND	ND	ND	ND	
9(S)-Hexahydrocannabinolic Acid (9(S)-HHCa)	0.063	0.065	ND	ND	ND	ND	
9(R)-Hexahydrocannabinolic Acid (9(R)-HHCa)	0.191	0.196	ND	ND	ND	ND	
Δ9-Tetrahydrocannabiphorol (Δ9-THCP)	0.017	0.8	0.18	1.81	8.07	16.15	
Δ8-Tetrahydrocannabiphorol (Δ8-THCP)	0.041	0.8	0.01	0.12	0.54	1.07	
Cannabicitran (CBT)	0.005	0.16	0.02	0.20	0.89	1.78	
Δ8-THC-O-acetate (Δ8-THCO)	0.076	0.8	ND	ND	ND	ND	
9(S)-HHCP (s-HHCP)	0.013	0.041	ND	ND	ND	ND	
Δ9-THC-O-acetate (Δ9-THCO)	0.066	0.8	ND	ND	ND	ND	
9(R)-HHCP (r-HHCP)	0.015	0.045	ND	ND	ND	ND	
9(S)-HHC-O-acetate (s-HHCO)	0.037	0.112	ND	ND	ND	ND	
9(R)-HHC-O-acetate (r-HHCO)	0.031	0.093	ND	ND	ND	ND	
3-octyl-Δ8-Tetrahydrocannabinol (Δ8-THC-C8)	0.021	0.062	ND	ND	ND	ND	
Total THC (THCa * 0.877 + Δ9THC)			D9C	D9C	D9C	D9C	
Total THC + Δ8THC + Δ10THC (THCa * 0.877 + Δ9THC + Δ8THC + Δ10THC)			4.13	41.32	184.29	368.57	
Total CBD (CBDA * 0.877 + CBD)			3.05	30.50	136.03	272.06	
Total CBG (CBGA * 0.877 + CBG)			0.02	0.17	0.76	1.52	
Total HHC (9r-HHC + 9s-HHC)			ND	ND	ND	ND	
Total Cannabinoids Analyzed			7.45	74.47	332.14	664.27	

UI Unidentified
ND Not Detected
N/A Not Applicable
NT Not Reported
LOD Limit of Detection
<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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DEA license: RP0611043
ISO/IEC 17025:2017 Acc. 85368



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Authorized Signature

Brandon Starr

Brandon Starr, Quality Assurance Manager
Fri, 08 Aug 2025 17:22:00 -0700

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HME - Heavy Metals

Analyzed Aug 08, 2025 | Instrument ICP/MSMS | Method SOP-005

Analyte	LOD ug/g	LOQ ug/g	Result ug/g	Limit ug/g
Arsenic (As)	0.0009	0.0027	0.00	0.2
Cadmium (Cd)	0.0005	0.0015	<LOQ	0.2
Mercury (Hg)	0.0058	0.0174	ND	0.2
Lead (Pb)	0.0006	0.0018	<LOQ	0.2

MIBIG - Microbial

Analyzed Aug 05, 2025 | Instrument qPCR and/or Plating | Method SOP-007

Analyte	LOD CFU/g	LOQ CFU/g	Result CFU/g	Limit CFU/g
Shiga toxin-producing Escherichia Coli	1.0	1.0	ND	1
Salmonella spp.	1.0	1.0	ND	N/A
Aspergillus fumigatus	1.0	1.0	Negative	1
Aspergillus flavus	1.0	1.0	Negative	1
Aspergillus niger	1.0	1.0	Negative	1
Aspergillus terreus	1.0	1.0	Negative	1

MTO - Mycotoxin

Analyzed Aug 06, 2025 | Instrument LC/MSMS | Method SOP-004

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

UI Unidentified
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

Analyzed Aug 06, 2025 | 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	0.01	0.02	ND	0.02	Carbofuran	0.01	0.02	ND	0.02
Dimethoate	0.01	0.02	ND	0.02	Etofenprox	0.02	0.1	ND	0.1
Fenoxycarb	0.01	0.02	ND	0.02	Thiachloprid	0.01	0.02	ND	0.02
Daminozide	0.01	0.03	ND	0.03	Dichlorvos	0.02	0.07	ND	0.07
Imazalil	0.02	0.07	ND	0.07	Methiocarb	0.01	0.02	ND	0.02
Spiroxamine	0.01	0.02	ND	0.02	Coumaphos	0.01	0.02	ND	0.02
Fipronil	0.01	0.1	ND	0.1	Paclobutrazol	0.01	0.03	ND	0.03
Chlorpyrifas	0.01	0.04	ND	0.04	Ethoprophos (Prophos)	0.01	0.02	ND	0.02
Baygon (Propoxur)	0.01	0.02	ND	0.02	Chlordane	0.04	0.1	ND	0.1
Chlorfenapyr	0.03	0.1	ND	0.1	Methyl Parathion	0.02	0.1	ND	0.1
Mevinphos	0.03	0.08	ND	0.08	Abamectin	0.03	0.08	ND	0.08
Acephate	0.02	0.05	ND	0.05	Acetamiprid	0.01	0.05	ND	0.05
Azoxystrobin	0.01	0.02	ND	0.02	Bifenazote	0.01	0.05	ND	0.05
Bifenthrin	0.02	0.35	ND	0.1	Boscalid	0.01	0.03	ND	0.03
Carbaryl	0.01	0.02	ND	0.02	Chlorantranilprole	0.01	0.04	ND	0.04
Clofentezine	0.01	0.03	ND	0.03	Diazinon	0.01	0.02	ND	0.02
Dimethomorph	0.02	0.06	ND	0.06	Etoxazole	0.01	0.05	ND	0.05
Fenpyroximate	0.02	0.1	ND	0.1	Flonicamid	0.01	0.02	ND	0.02
Fludioxonil	0.01	0.05	ND	0.05	Hexythiazox	0.01	0.03	ND	0.03
Imidacloprid	0.01	0.05	ND	0.05	Kresoxim-methyl	0.01	0.03	ND	0.03
Malathion	0.01	0.05	ND	0.05	Metaxalyl	0.01	0.02	ND	0.02
Methomyl	0.02	0.05	ND	0.05	Myclobutanil	0.02	0.07	ND	0.07
Naled	0.01	0.02	ND	0.02	Oxamyl	0.01	0.02	ND	0.02
Permethrin	0.01	0.02	ND	0.02	Phosmet	0.01	0.02	ND	0.02
Piperonyl Butoxide	0.02	0.06	ND	0.06	Propiconazole	0.03	0.08	ND	0.08
Prallethrin	0.02	0.05	ND	0.05	Pyrethrin	0.05	0.41	ND	0.1
Pyridaben	0.02	0.07	ND	0.07	Spinosad A	0.01	0.05	ND	0.05
Spinosad D	0.01	0.05	ND	0.05	Spiromesifen	0.02	0.06	ND	0.06
Spir tetramat	0.01	0.02	ND	0.02	Tebuconazole	0.01	0.02	ND	0.02
Thiamethoxam	0.01	0.02	ND	0.02	Trifloxystrobin	0.01	0.02	ND	0.02
Acequinocyl	0.02	0.09	ND	0.09	Captan	0.01	0.02	ND	0.02
Cypermethrin	0.02	0.1	ND	0.1	Cyfluthrin	0.04	0.1	ND	0.1
Fenhexamid	0.02	0.07	ND	0.07	Spinetoram J,L	0.02	0.07	ND	0.07
Pentachloronitrobenzene	0.01	0.1	ND	0.1					

RES - Residual Solvents

Analyzed Aug 08, 2025 | 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)	0.044	0.4	ND	N/A	Butane (But)	0.02	0.4	ND	800
Methanol (Metha)	1.176	3.92	74.8	N/A	Ethylene Oxide (EthOx)	0.08	0.4	ND	N/A
Pentane (Pen)	0.024	0.4	ND	N/A	Ethanol (Ethan)	0.048	0.4	ND	5000
Ethyl Ether (EthEt)	0.036	0.4	ND	N/A	Acetone (Acet)	0.044	0.4	<LOQ	N/A
Isopropanol (2-Pro)	1.16	3.868	<LOQ	N/A	Acetonitrile (Acetonit)	0.888	2.952	ND	N/A
Methylene Chloride (MetCh)	0.04	0.4	ND	N/A	Hexane (Hex)	0.012	0.4	51.1	100
Ethyl Acetate (EthAc)	0.032	0.4	ND	N/A	Chloroform (Clo)	0.028	0.4	ND	N/A
Benzene (Ben)	0.012	0.4	ND	N/A	1-2-Dichloroethane (12-Dich)	0.024	0.4	ND	N/A
Heptane (Hep)	0.012	0.4	ND	500	Trichloroethylene (TriClEth)	0.072	0.4	ND	N/A
Toluene	0.036	0.4	ND	N/A	Xylenes (Xyl)	0.012	0.4	ND	N/A

FVI - Filth & Foreign Material Inspection

Analyzed Aug 01, 2025 | 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

MWA - Moisture Content & Water Activity

Analyzed Aug 08, 2025 | Instrument Chilled-mirror Dewpoint and Capacitance | Method SOP-008

Analyte	LOD %	LOQ %	Result	Limit	Analyte	LOD %	LOQ %	Result	Limit
Moisture (Moi)	0.0	0.0	11.6 % Mw	% Mw	Water Activity (WA)	0.03	0.03	0.71 a _w	a _w

MICx - Microbial X

Analyzed Aug 05, 2025 | Instrument Plating | Method SOP-007

Analyte	LOD CFU/G	LOQ CFU/G	Result CFU/G	Limit CFU/G
Total Yeast & Molds (TYM)	1.0	1.0	ND	10000
Listeria (LIS)	1.0	1.0	ND	N/A
Gram Negative Bacteria (BTGN)	1.0	1.0	ND	1000
Total Viable Aerobic Bacteria (TVAB)	1.0	1.0	ND	100000

UI Unidentified
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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