

PharmLabs San Diego Certificate of Analysis

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



Sample **GMO HHC Caviar**

Sample ID <b>SD230719-001 (81392)</b>	Matrix <b>Flower (Inhalable Cannabis Good)</b>
Tested for <b>Top Shelf Hemp Co</b>	
Sampled <b>-</b>	Received <b>Jul 18, 2023</b>
Analyses executed <b>CANX, MWA</b>	Reported <b>Jul 24, 2023</b>

**Laboratory note:** The estimated concentration of the unknown peak in the sample is 0.38% | 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 (+)-8-THC or d9-THC. At this time there are no reference standards available for (+)-8-THC. (+)-8-THC is a different compound from the main (-)-8-THC cannabinoid and, therefore, these two compounds may have different efficacies. Using the most advanced instruments and techniques available, the separation of (+)-8-THC and d9-THC is problematic for the scientific community as a whole. PharmLabs believes the unidentified peak to be a combination of (+)-8-THC and d9-THC with the majority, if not all, of the concentration being (+)-8-THC. Total (+/-) D8 Concentration is estimated to be: 2.05%

**CANX - Cannabinoids Analysis**

Analyzed Jul 24, 2023 | Instrument HPLC-VWD | Method SOP-001  
 The expanded Uncertainty of the Cannabinoid analysis is approximately **±7.81%** at the 95% Confidence Level

Analyte	LOD mg/g	LOQ mg/g	Result %	Result mg/g
11-Hydroxy-Δ8-Tetrahydrocannabivarin (11-Hyd-Δ8-THCV)	0.013	0.041	ND	ND
Cannabidiol (CBDO)	0.002	0.007	ND	ND
Abnormal Cannabidiol (a-CBDO)	0.01	0.031	ND	ND
(+/-)-9B-Hydroxy-Hexahydrocannabinol (9b-HHC)	0.012	0.036	ND	ND
11-Hydroxy-Δ8-Tetrahydrocannabinol (11-Hyd-Δ8-THC)	0.007	0.021	ND	ND
Cannabidiolic Acid (CBDA)	0.001	0.16	5.02	50.20
Cannabigerol Acid (CBGA)	0.001	0.16	2.53	25.30
Cannabigerol (CBG)	0.001	0.16	0.14	1.44
Cannabidiol (CBD)	0.001	0.16	1.09	10.87
1(S)-THD (s-THD)	0.013	0.041	ND	ND
1(R)-THD (r-THD)	0.025	0.075	ND	ND
Tetrahydrocannabivarin (THCV)	0.001	0.16	ND	ND
Δ8-tetrahydrocannabivarin (Δ8-THCV)	0.021	0.064	ND	ND
Cannabidihexol (CBDH)	0.005	0.16	ND	ND
Tetrahydrocannabutol (Δ9-THCB)	0.013	0.038	ND	ND
Cannabinol (CBN)	0.001	0.16	ND	ND
Cannabidiphoral (CBDP)	0.015	0.047	ND	ND
exo-THC (exo-THC)	0.005	0.16	ND	ND
Tetrahydrocannabinol (Δ9-THC)	0.003	0.16	UI	UI
Δ8-tetrahydrocannabinol (Δ8-THC)	0.004	0.16	2.05	20.50
(6aR,9S)-Δ10-Tetrahydrocannabinol ((6aR,9S)-Δ10)	0.015	0.16	ND	ND
Hexahydrocannabinol (S Isomer) (9s-HHC)	0.017	0.16	1.07	10.73
(6aR,9R)-Δ10-Tetrahydrocannabinol ((6aR,9R)-Δ10)	0.007	0.16	ND	ND
Hexahydrocannabinol (R Isomer) (9r-HHC)	0.016	0.16	3.07	30.71
Tetrahydrocannabinolic Acid (THCA)	0.001	0.16	0.30	3.00
Δ9-Tetrahydrocannabihexol (Δ9-THCH)	0.024	0.071	ND	ND
Cannabinol Acetate (CBNO)	0.014	0.043	ND	ND
Δ9-Tetrahydrocannabiphoral (Δ9-THCP)	0.017	0.16	ND	ND
Δ8-Tetrahydrocannabiphoral (Δ8-THCP)	0.041	0.16	ND	ND
Cannabicitran (CBT)	0.005	0.16	ND	ND
Δ8-THC-O-acetate (Δ8-THCO)	0.076	0.16	ND	ND
9(S)-HHCP (s-HHCP)	0.031	0.094	ND	ND
Δ9-THC-O-acetate (Δ9-THCO)	0.066	0.16	ND	ND
9(R)-HHCP (r-HHCP)	0.026	0.079	ND	ND
9(S)-HHC-O-acetate (s-HHCO)	0.005	0.16	ND	ND
9(R)-HHC-O-acetate (r-HHCO)	0.008	0.025	ND	ND
3-octyl-Δ8-Tetrahydrocannabinol (Δ8-THC-C8)	0.067	0.204	ND	ND
Δ9-THC methyl ether (Δ9-MeO-THC)			NT	NT
<b>Total THC ( THCa * 0.877 + Δ9THC )</b>			<b>0.26</b>	<b>2.63</b>
<b>Total THC + Δ8THC + Δ10THC ( THCa * 0.877 + Δ9THC + Δ8THC + Δ10THC )</b>			<b>2.31</b>	<b>23.13</b>
<b>Total CBD ( CBDO * 0.877 + CBD )</b>			<b>5.49</b>	<b>54.89</b>
<b>Total CBG ( CBGa * 0.877 + CBG )</b>			<b>2.36</b>	<b>23.63</b>
<b>Total HHC ( 9r-HHC + 9s-HHC )</b>			<b>4.14</b>	<b>41.44</b>
<b>Total Cannabinoids</b>			<b>14.31</b>	<b>143.10</b>

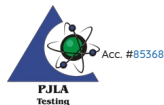
\*Dry Weight %

**MWA - Moisture Content & Water Activity Analysis**

Analyzed Jul 24, 2023 | 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	7.2 % Mw	13 % Mw	Water Activity (WA)	0.03	0.03	0.51 a <sub>w</sub>	0.85 a <sub>w</sub>

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



Scan the QR code to verify authenticity.

Authorized Signature

*Brandon Starr*

Brandon Starr, Lab Manager  
 Mon, 24 Jul 2023 12:55:56 -0700

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