Certificate of Analysis

ANALYZED BY:
Anresco Laboratories
1375 Van Dyke Avenue,
San Francisco, CA 94124
DEA# PA0202945

CUSTOMER:
Surly Brewing Company
4811 Dusharme Dr
Brooklyn Center, MN 55429

MANUFACTURER:
Surly Brewing Company
4811 Dusharme Dr
Brooklyn Center 55429
FDA: 13566238728
LPMFR-A25-000046

SAMPLE INFORMATION

Sample No.: 1438735
Product Name: Willie's THC Infused Original Soda
Matrix: Edible (Carbonated Beverage)
Lot #: NWSTH009

Production Date: 08/25/2026
Date Collected: 08/26/2026
Date Received: 08/26/2026
Date Reported: 09/01/2026
Expiration Date: 08/25/2027
Best By Date: 08/25/2027

TEST SUMMARY

Cannabinoid Profile:	Tested	**Terpenoid Profile:**	Tested
Microbiological Screen:	Pass	**Pesticide Residue Screen:**	Pass
Residual Solvent Screen:	Pass	**Heavy Metal Screen:**	Pass
Foreign Material:	Pass	**Mycotoxin Screen:**	Pass

Cannabinoid Profile Tested

08/28/2026

Method: MF-CHEM-15
Instrument: Liquid Chromatography Diode Array Detector (LC-DAD)
Limit of Detection 0.0008 mg/g
Limit of Quantitation 0.0025 mg/g
Measurement of Uncertainty Average: ±6.3%

Cannabinoid	mg/g	mg/ml	%	mg/serving	mg/package	Labeled mg/serving	% Difference
Δ8-THC	ND	ND	ND	ND	ND	-	-
Δ9-THC	0.0287	0.0289	0.00287	10.25	10.25	10	2.50
Δ9-THCA	ND	ND	ND	ND	ND	-	-
THCV	ND	ND	ND	ND	ND	-	-
THCVA	ND	ND	ND	ND	ND	-	-
CBD	0.0134	0.0135	0.00134	4.79	4.79	5	4.29
CBDA	ND	ND	ND	ND	ND	-	-
CBC	ND	ND	ND	ND	ND	-	-
CBCA	ND	ND	ND	ND	ND	-	-
CBDV	ND	ND	ND	ND	ND	-	-
CBG	0.0142	0.0143	0.00142	5.07	5.07	5	1.43
CBGA	ND	ND	ND	ND	ND	-	-
CBN	ND	ND	ND	ND	ND	-	-
Exo-THC	ND	ND	ND	ND	ND	-	-
(6aR,9R)-Δ10-THC	ND	ND	ND	ND	ND	-	-
(6aR,9S)-Δ10-THC	ND	ND	ND	ND	ND	-	-
9(R)-Hexahydrocannabinol	ND	ND	ND	ND	ND	-	-
9(S)-Hexahydrocannabinol	ND	ND	ND	ND	ND	-	-
Δ8-THC-O-Acetate	ND	ND	ND	ND	ND	-	-
Δ9-THC-O-Acetate	ND	ND	ND	ND	ND	-	-
THC-O-Phosphate	NT	NT	NT	NT	NT	-	-
Δ8-THCP	ND	ND	ND	ND	ND	-	-
Δ9-THCP	ND	ND	ND	ND	ND	-	-
Total Δ9-THC	0.0287	0.0289	0.00287	10.25	10.25	-	-
Total THC	0.0287	0.0289	0.00287	10.25	10.25	-	-
Total CBD	0.0134	0.0135	0.00134	4.79	4.79	-	-
Total Cannabinoids	0.0563	0.0566	0.00563	20.11	20.11	-	-
Sum of Cannabinoids	0.0563	0.0566	0.00563	20.11	20.11	-	-
Serving Weight (g)	357.13						
Package Weight (g)	357.13						

This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential or protected from disclosure under applicable law. Sampling was not performed by the laboratory. Results apply only to the sample(s) as received. Anresco Laboratories is ISO/IEC 17025:2017 Accredited by ANAB - Certificate Number AT-1551.

Cannabinoid	mg/g	mg/ml	%	mg/serving	mg/package	Labeled mg/serving	% Difference
g/ml Conversion Factor	1.006						

Total Δ9-THC = Δ9-THC + (0.877 * THCA)
Total THC = Δ8-THC + Δ9-THC + (0.877 * THCA)
Total CBD = CBD + (0.877 * CBDA)
Total Cannabinoids = Σ (neutral cannabinoids) + [0.877 * Σ (acidic cannabinoids)]

Terpenoid Profile

09/01/2026

Method: MF-CHEM-17

Instrument: Gas Chromatography Mass Spectrometry (GC/MS)

Terpene	LOD/LOQ (mg/g)	mg/g	%
α-Pinene	0.009/0.025	ND	ND
Camphene	0.009/0.025	ND	ND
ß-Myrcene	0.009/0.025	ND	ND
β-Pinene	0.009/0.025	ND	ND
δ -3-Carene	0.009/0.025	ND	ND
Limonene	0.009/0.025	ND	ND
α-Terpinene	0.009/0.025	ND	ND
trans-beta-Ocimene	0.006/0.01725	ND	ND
cis-beta-Ocimene	0.003/0.00775	ND	ND
p-Cymene	0.009/0.25	ND	ND
Eucalyptol	0.009/0.025	ND	ND
γ-Terpinene	0.009/0.025	ND	ND
Terpinolene	0.009/0.025	ND	ND
Linalool	0.009/0.025	ND	ND
Isopulegol	0.009/0.025	ND	ND
Menthol	0.009/0.025	ND	ND
(-)-Borneol	0.009/0.025	ND	ND
Terpineol	0.009/0.025	<LOQ	<LOQ
Citronellol	0.009/0.025	ND	ND
Geraniol	0.009/0.025	ND	ND
ß-Caryophyllene	0.009/0.025	ND	ND
α-Humulene	0.009/0.025	ND	ND
cis-Nerolidol	0.004/0.01025	ND	ND
trans-Nerolidol	0.005/0.01475	ND	ND
Guaiol	0.009/0.25	ND	ND
Caryophyllene Oxide	0.009/0.025	ND	ND
α-Bisabolol	0.009/0.025	ND	ND
Total Terpenes	-	ND	ND

Microbiological Screen ✔ Pass

08/31/2026

Measurement of Uncertainty Average: APC ±35.6%, Y&M ±31.3%

Analyte	Findings	Units	Method	Limit	Status
Salmonella	ND	/25g	AOAC 2016.01	ND	Pass
STEC	ND	/25g	MF-MICRO-18	ND	Pass
Aspergillus flavus	ND	/25g	MF-MICRO-14	ND	Pass
Aspergillus fumigatus	ND	/25g	MF-MICRO-14	ND	Pass
Aspergillus niger	ND	/25g	MF-MICRO-14	ND	Pass
Aspergillus terreus	ND	/25g	MF-MICRO-14	ND	Pass
Listeria Species	ND	/25g	AOAC 2016.07	ND	Pass
Total Aerobic Plate Count	0/10	cfu/g	FDA BAM	100000	Pass
Total Coliforms	0/10	cfu/g	FDA BAM - ECC Agar	100	Pass
E. Coli	ND	/1g	FDA BAM Modified	ND	Pass
Total Enterobacteriaceae	<1	cfu/g	CMMEF - VRBG Agar	ND	Pass
Staphylococcus aureus	<1	cfu/g	AOAC 2003.07	ND	Pass
Bile-Tolerant Gram-Negative Bacteria	<1	cfu/g	CMMEF - VRBG Agar	ND	Pass
Total Yeast and Mold	0/10	cfu/g	FDA BAM	10000	Pass

This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential or protected from disclosure under applicable law. Sampling was not performed by the laboratory. Results apply only to the sample(s) as received. Anresco Laboratories is ISO/IEC 17025:2017 Accredited by ANAB - Certificate Number AT-1551.

Pesticide Residue Screen ✔ Pass

09/01/2026

Method: MF-CHEM-13

Instrument: Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) & Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS)

Measurement of Uncertainty Average: ±21.40%

Analyte	LOD/LOQ (ppm)	Findings (ppm)	Limit (ppm)	Status
Abamectin	0.015/0.05	ND	0.05	Pass
Acephate	0.003/0.01	ND	0.01	Pass
Acequinocyl	0.003/0.01	ND	0.01	Pass
Acetamiprid	0.003/0.01	ND	0.01	Pass
Aldicarb	0.003/0.01	ND	0.01	Pass
Azoxystrobin	0.003/0.01	ND	0.01	Pass
Bifenazate	0.003/0.01	ND	0.01	Pass
Bifenthrin	0.003/0.01	ND	0.01	Pass
Boscalid	0.003/0.01	ND	0.01	Pass
Captan	0.250/0.7	ND	0.7	Pass
Carbaryl	0.003/0.01	ND	0.01	Pass
Carbofuran	0.003/0.01	ND	0.01	Pass
Chlorantraniliprole	0.003/0.01	ND	0.01	Pass
Chlordane	0.020/0.06	ND	0.06	Pass
Chlorfenapyr	0.015/0.05	ND	0.05	Pass
Chlorpyrifos	0.003/0.01	ND	0.01	Pass
Clofentezine	0.003/0.01	ND	0.01	Pass
Coumaphos	0.003/0.01	ND	0.01	Pass
Cyfluthrin	0.015/0.05	ND	0.05	Pass
Cypermethrin	0.015/0.05	ND	0.05	Pass
Daminozide	0.003/0.01	ND	0.01	Pass
DDVP (Dichlorvos)	0.003/0.01	ND	0.01	Pass
Diazinon	0.003/0.01	ND	0.01	Pass
Dimethoate	0.003/0.01	ND	0.01	Pass
Dimethomorph	0.003/0.01	ND	0.01	Pass
Ethoprop(hos)	0.003/0.01	ND	0.01	Pass
Etofenprox	0.003/0.01	ND	0.01	Pass
Etoxazole	0.003/0.01	ND	0.01	Pass
Fenhexamid	0.007/0.02	ND	0.02	Pass
Fenoxycarb	0.003/0.01	ND	0.01	Pass
Fenpyroximate	0.007/0.02	ND	0.02	Pass
Fipronil	0.003/0.01	ND	0.01	Pass
Flonicamid	0.003/0.01	ND	0.01	Pass
Fludioxonil	0.003/0.01	ND	0.01	Pass
Hexythiazox	0.003/0.01	ND	0.01	Pass
Imazalil	0.003/0.01	ND	0.01	Pass
Imidacloprid	0.003/0.01	ND	0.01	Pass
Kresoxim Methyl	0.003/0.01	ND	0.01	Pass
Malathion	0.003/0.01	ND	0.01	Pass
Metalaxyl	0.003/0.01	ND	0.01	Pass
Methiocarb	0.003/0.01	ND	0.01	Pass
Methomyl	0.003/0.01	ND	0.01	Pass
Methyl parathion	0.003/0.01	ND	0.01	Pass
Mevinphos	0.007/0.02	ND	0.02	Pass
Myclobutanil	0.003/0.01	ND	0.01	Pass
Naled	0.003/0.01	ND	0.01	Pass
Oxamyl	0.003/0.01	ND	0.01	Pass
Paclobutrazol	0.003/0.01	ND	0.01	Pass
Pentachloronitrobenzene	0.003/0.01	ND	0.01	Pass
Permethrins	0.015/0.05	ND	0.05	Pass
Phosmet	0.003/0.01	ND	0.01	Pass
Piperonyl Butoxide	0.003/0.01	ND	0.01	Pass
Prallethrin	0.015/0.05	ND	0.05	Pass
Propiconazole	0.003/0.01	ND	0.01	Pass
Propoxur	0.003/0.01	ND	0.01	Pass
Pyrethrins	0.015/0.05	ND	0.05	Pass
Pyridaben	0.003/0.01	ND	0.01	Pass
Spinetoram	0.003/0.01	ND	0.01	Pass
Spinosad	0.003/0.01	ND	0.01	Pass
Spiromesifen	0.003/0.01	ND	0.01	Pass
Spirotetramat	0.003/0.01	ND	0.01	Pass
Spiroxamine	0.003/0.01	ND	0.01	Pass

This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential or protected from disclosure under applicable law. Sampling was not performed by the laboratory. Results apply only to the sample(s) as received. Anresco Laboratories is ISO/IEC 17025:2017 Accredited by ANAB - Certificate Number AT-1551.

Analyte	LOD/LOQ (ppm)	Findings (ppm)	Limit (ppm)	Status
Tebuconazole	0.003/0.01	ND	0.01	Pass
Thiacloprid	0.003/0.01	ND	0.01	Pass
Thiamethoxam	0.003/0.01	ND	0.01	Pass
Trifloxystrobin	0.003/0.01	ND	0.01	Pass
Azadirachtin	0.100/0.30	ND	0.3	Pass
Chlormequat Chloride	0.03/0.10	ND	0.1	Pass
MGK 264	0.03/0.10	ND	0.1	Pass

Residual Solvent Screen ✔ Pass

09/01/2026

Method: MF-CHEM-32

Measurement of Uncertainty Average: ±1.43%

Analyte	LOD/LOQ (µg/g)	Findings (µg/g)	Limit (µg/g)	Status
Propane	67/200	ND	210	Pass
(+/-)-2-Butanol	13.3/40	ND	5000	Pass
1,1-Dichloroethene	2/4	ND	8	Pass
1,2-Dichloroethane	0.2/0.5	ND	5	Pass
1,4-Dioxane	13.3/40	ND	30	Pass
2-Ethoxyethanol	13.3/40	ND	160	Pass
Acetone	67/200	ND	500	Pass
Acetonitrile	67/200	ND	410	Pass
Benzene	0.2/0.5	ND	1	Pass
Chloroform	0.2/0.5	ND	2	Pass
Cumene	13.3/40	ND	70	Pass
Cyclohexane	13.3/40	ND	3880	Pass
Ethanol	67/200	1630.00	5000	Pass
Ethyl acetate	67/200	ND	1000	Pass
Ethyl ether	67/200	ND	5000	Pass
Ethylene Glycol	13.3/40	ND	620	Pass
Ethylene oxide	0.2/0.5	ND	5	Pass
n-Heptane	67/200	ND	500	Pass
Isopropyl Acetate	13.3/40	ND	5000	Pass
Isopropyl alcohol	67/200	ND	500	Pass
Methanol	67/200	ND	500	Pass
Methylene chloride	0.2/0.5	ND	600	Pass
Toluene	67/200	ND	53	Pass
Tetrahydrofuran	13.3/40	ND	720	Pass
Trichloroethene	13.3/40	ND	80	Pass
Isobutane	6.7/20	ND	-	See Total Butanes
n-Butane	67/200	ND	-	See Total Butanes
Total Butanes	6.7/40	ND	500	Pass
2,2-Dimethylbutane	2.7/8	ND	-	See Total Hexanes
2,3-Dimethylbutane	2.7/8	ND	-	See Total Hexanes
2-Methylpentane	2.7/8	ND	-	Pass
3-Methylpentane	2.7/8	ND	-	Pass
n-Hexane	67/200	ND	-	See Total Hexanes
Total Hexanes	2.7/8	ND	18	Pass
2 Methylbutane	4.4/13.34	ND	-	See Total Pentanes
Neopentane	4.4/13.34	ND	-	See Total Pentanes
n-Pentane	67/200	ND	-	See Total Pentanes
Total Pentanes	4.4/13.34	ND	500	Pass
Ethylbenzene	3.3/10	ND	-	See Total Xylenes
m+p-Xylene	6.7/20	ND	-	See Total Xylenes
o-Xylene	3.3/10	ND	-	See Total Xylenes
Total Xylenes	67/200	ND	217	Pass

Heavy Metal Screen ✔ Pass

09/01/2026

Method: MF-CHEM-16

Instrument: Inductively Coupled Plasma Mass Spectrometry (ICP-MS)

Measurement of Uncertainty Average: ±4.4%

Analyte	LOD / LOQ (µg/g)	Findings (µg/g)	Limit	Status
Arsenic	0.033/0.101	ND	0.2	Pass
Cadmium	0.047/0.141	ND	0.2	Pass
Mercury	0.014/0.05	ND	0.1	Pass
Lead	0.107/0.324	ND	0.5	Pass

This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential or protected from disclosure under applicable law. Sampling was not performed by the laboratory. Results apply only to the sample(s) as received. Anresco Laboratories is ISO/IEC 17025:2017 Accredited by ANAB - Certificate Number AT-1551.

Foreign Material ✔ Pass

09/01/2026

Method: MF-CHEM-7

Analyte	Findings	Limit	Status
Sand, Soils, Cinders, and Dirt	ND	25%	Pass
Mold	ND	25%	Pass
Imbedded Foreign Material	ND	25%	Pass
Insect Fragment	ND	1 per 3g	Pass
Hair	ND	1 per 3g	Pass
Mammalian Excreta	ND	1 per 3g	Pass

Mycotoxin Screen ✔ Pass

09/01/2026

Method: MF-CHEM-13

Instrument: Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) & Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS)

Measurement of Uncertainty (MU): ±20.21%

Analyte	LOD/LOQ (ppb)	Findings (ppb)	Limit (ppb)	Status
Aflatoxin B1	2/5	ND	20	Pass
Aflatoxin B2	2/5	ND	20	Pass
Aflatoxin G1	2/5	ND	20	Pass
Aflatoxin G2	2/5	ND	20	Pass
Total Aflatoxins	8/20	ND	20	Pass
Ochratoxin A	2/5	ND	20	Pass

Product Ingredients: Water, Cane Sugar, Natural Flavors, Citric Acid, THC Emulsion, L-Theanine, CBD Emulsion, CBG Emulsion, Monk Fruit Juice Concentrate

AL ABC Rule 20-X-32 Attestation: The laboratory maintains documentation from the submitter affirming the cannabinoids in this sample are naturally extracted and were not created via chemical synthesis, modification, or chemical conversion from another cannabinoid utilizing non-cannabis materials.

ND = None Detected
LOD = Limit of Detection
LOQ = Limit of Quantitation

Reported by

Vu Lam
Lab Co Director

Scan to verify

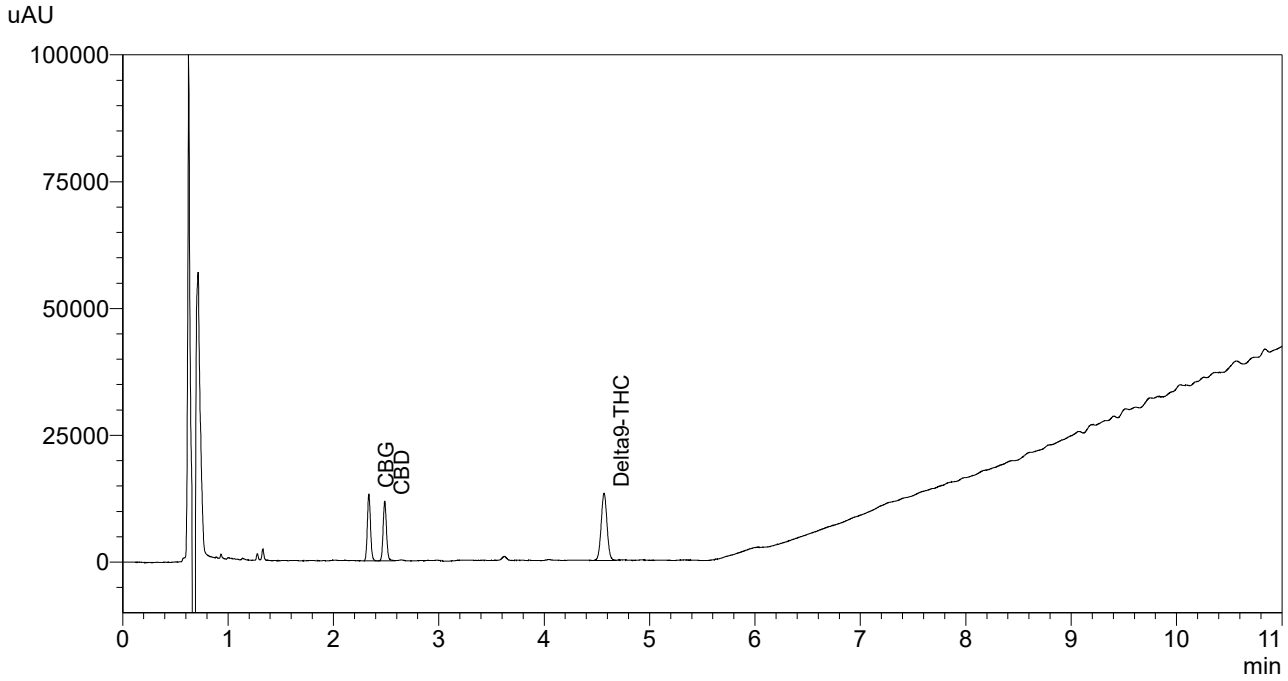
This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential or protected from disclosure under applicable law. Sampling was not performed by the laboratory. Results apply only to the sample(s) as received. Anresco Laboratories is ISO/IEC 17025:2017 Accredited by ANAB - Certificate Number AT-1551.

Cannabis Potency Report

<Sample Information>

Sample Name	: 1438735A 2.5x		
Sample ID	: run046		
Data Filename	: 1438735A 2.5x_run046_023.lcd		
Method Filename	: CanEX1_260505_CP5-26,-27.lcm		
Batch Filename	: 08-27-2026 processed.lcb		
Vial #	: 1-13	Sample Type	: Unknown
Injection Volume	: 5 uL		
Date Acquired	: 8/27/2026 8:40:17 PM	Acquired by	: System Administrator
Date Processed	: 8/28/2026 1:00:10 PM	Processed by	: System Administrator
Sample Amount	: 4.0362 grams		
Dilution Factor	: 10		

<Cannabinoid Chromatogram>



<Peak Table>

PDA Ch1 228nm

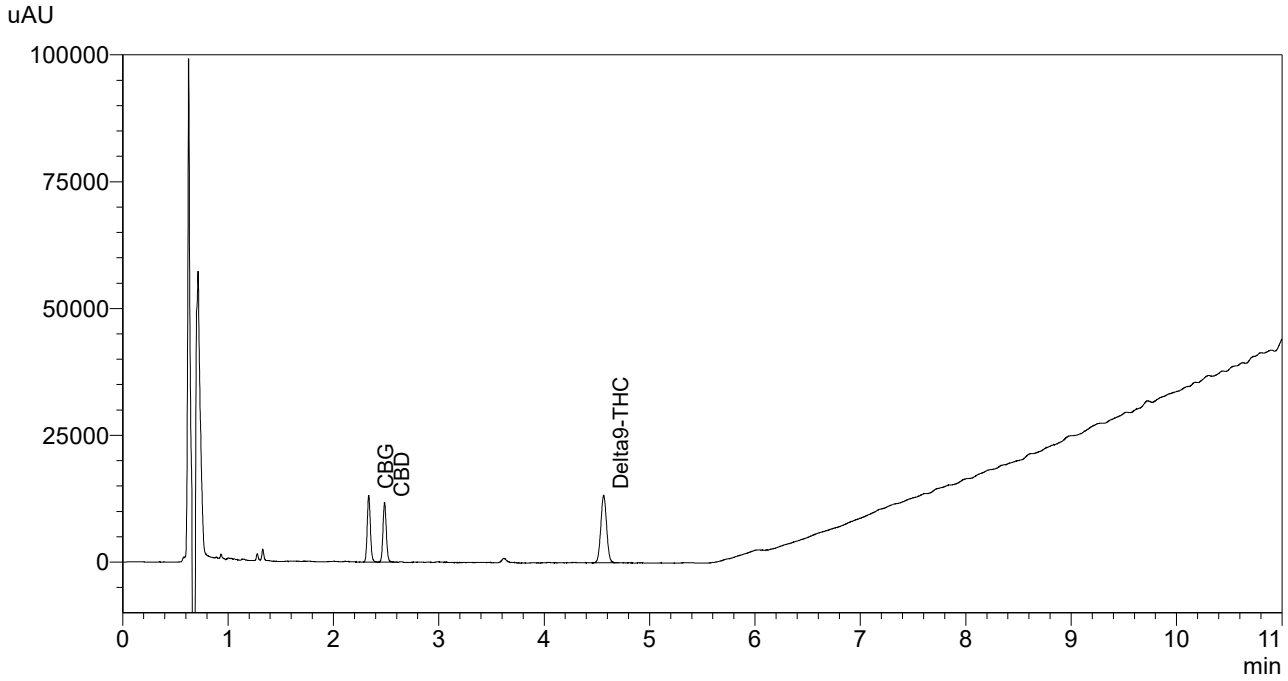
Peak#	Ret. Time	Name	Area	Height	Conc.	Unit
1	2.336	CBG	27333	12487	0.0142	mg/g
2	2.487	CBD	26382	11508	0.0135	mg/g
3	4.568	Delta9-THC	50808	13096	0.0287	mg/g

Cannabis Potency Report

<Sample Information>

Sample Name	: 1438735B 2.5x		
Sample ID	: run047		
Data Filename	: 1438735B 2.5x_run047_024.lcd		
Method Filename	: CanEX1_260505_CP5-26,-27.lcm		
Batch Filename	: 08-27-2026 processed.lcb		
Vial #	: 1-14	Sample Type	: Unknown
Injection Volume	: 5 uL		
Date Acquired	: 8/27/2026 8:53:38 PM	Acquired by	: System Administrator
Date Processed	: 8/28/2026 1:00:20 PM	Processed by	: System Administrator
Sample Amount	: 4.0281 grams		
Dilution Factor	: 10		

<Cannabinoid Chromatogram>



<Peak Table>

PDA Ch1 228nm

Peak#	Ret. Time	Name	Area	Height	Conc.	Unit
1	2.335	CBG	27539	12770	0.0143	mg/g
2	2.485	CBD	25902	11599	0.0133	mg/g
3	4.564	Delta9-THC	50755	13257	0.0287	mg/g