Smithers AMS LLC
790 Main St
Wareham, MA 02571
License #: IL281355
Phone: 508-295-2550

Certificate of Analysis



Customer: Berkshire Roots

Address:
501 Dalton Ave
Pittsfield MA 01201

Phone: 413-329-5067

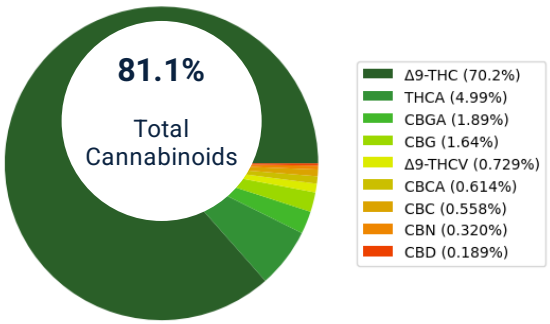
License #: MP281427

Sample ID: 46771
Sample Name: Orange Chemeleon Bulk LIVE Concentrate
Sample Strain: Orange Chemeleon
Sample Type: Concentrate
Received Date: 05/15/2026
Report Date: 05/20/2026
METRC ID: 1A40A0300000642000111675
METRC Source ID: 1A40A0300000642000111313
Client Batch ID: 260401ORCH-FF-BP
Sanitization Method: None
Client Sample Size: 5.5 grams

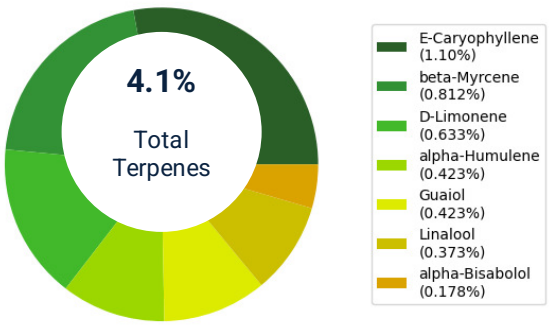
Results Summary

Cannabinoids	TESTED	
05/18/2026		
Terpenes	TESTED	
05/18/2026		
Heavy Metals	☑ PASS	
05/20/2026		
Microbial Impurities	☑ PASS	
05/18/2026		
Residual Solvents	☑ PASS	
05/18/2026		
Mycotoxins	☑ PASS	
05/20/2026		

Cannabinoid Distribution (%)



Terpene Distribution (%)



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Certificate of Analysis

Cannabinoids

Date Started: 05/15/2026
Instrument: UPLC-PDA

Date Completed: 05/18/2026
Method: TP-09.001.06 & TP-09.012.07

Analyst: Lana Rivera (B144852)
Deviation: N/A

Cannabinoid	Result (%)	Result (mg/g)	LOD (%)	LOQ (%)
Δ9-THC	70.2	702	0.247	1.34
THCA	4.99	49.9	0.0214	0.134
CBGA	1.89	18.9	0.00524	0.0668
CBG	1.64	16.4	0.00580	0.0668
Δ9-THCV	0.729	7.29	0.00720	0.0534
CBCA	0.614	6.14	0.0172	0.0534
CBC	0.558	5.58	0.00632	0.0534
CBN	0.320	3.20	0.00915	0.0668
CBD	0.189	1.89	0.0103	0.134
CBDVA	ND	ND	0.00899	0.0534
CBDV	ND	ND	0.0255	0.0534
CBDA	ND	ND	0.00842	0.134
Δ8-THCV	ND	ND	0.0130	0.0534
THCVA	ND	ND	0.00567	0.0534
CBNA	ND	ND	0.00705	0.0534
Exo-THC	ND	ND	0.0107	0.0534
Δ8-THC	ND	ND	0.0234	0.0668
CBL	ND	ND	0.0158	0.0534
Total THC	**74.6**	**746**		
Total CBD	**0.189**	**1.89**		
Total Cannabinoids	**81.1**	**811**		

Total THC = Δ9-THC + (THCA x 0.877)
Total CBD = CBD + (CBDA x 0.877)
Total Cannabinoids = Sum of all cannabinoids without THC/CBD corrections.
LOD = Limit of Detection; **LOQ** = Limit of Quantitation; **ND** = Not Detected.

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SMITHERS

Smithers AMS LLC
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Certificate of Analysis

Terpenes

Date Started: 05/15/2026
Instrument: GC-MS

Date Completed: 05/18/2026
Method: TP-09.004.06

Analyst: Lana Rivera (B144852)
Deviation: N/A

Terpene	Result (%)	Result (mg/g)	LOD (%)	LOQ (%)
E-Caryophyllene	1.10	11.0	0.00583	0.0133
beta-Myrcene	0.812	8.12	0.00223	0.0133
D-Limonene	0.633	6.33	0.00281	0.0133
alpha-Humulene	0.423	4.23	0.00287	0.0133
Guaiol	0.423	4.23	0.00289	0.0133
Linalool	0.373	3.73	0.00405	0.0133
alpha-Bisabolol	0.178	1.78	0.00492	0.0133
beta-Pinene	0.0501	0.501	0.00275	0.0133
alpha-Pinene	0.0410	0.410	0.00112	0.0133
Carophyllene Oxide	0.0386	0.386	0.00301	0.0133
Geraniol	<LOQ	<LOQ	0.00413	0.0133
Camphene	<LOQ	<LOQ	0.00147	0.0133
Terpinolene	<LOQ	<LOQ	0.00166	0.0133
E-beta-Ocimene	ND	ND	0.00549	0.0133
Isopulegol	ND	ND	0.00644	0.0133
Z-Nerolidol	ND	ND	0.00360	0.0133
E-Nerolidol	ND	ND	0.00303	0.0133
Eucalyptol	ND	ND	0.00403	0.0133
delta-3-Carene	ND	ND	0.00434	0.0133
alpha-Terpinene	ND	ND	0.00407	0.0133
Z-beta-Ocimene	ND	ND	0.00538	0.0133
gamma-Terpinene	ND	ND	0.00301	0.0133
Total Terpenes	**4.10**	**41.0**		

Heavy Metals

PASS

Date Started: 05/19/2026
Instrument: ICP-MS

Date Completed: 05/20/2026
Method: TP-09.007.04

Analyst: Meagan Mattos (B154555)
Deviation: N/A

Heavy Metals	Result (ppb)	LOD (ppb)	LOQ (ppb)	Limit (ppb)	Status
Arsenic	ND	12.4	83.8	200	Pass
Cadmium	ND	7.44	83.8	200	Pass
Lead	<LOQ	6.84	83.8	500	Pass
Mercury	ND	5.97	41.9	100	Pass

Microbial Impurities

PASS

Date Started: 05/15/2026
Instrument: TEMPO & Gene-Up

Date Completed: 05/18/2026
Method: TP-09.010.02 & TP-09.011.03

Analyst: Sydney Murphy (B168056)
Deviation: N/A

Microbials	Result (CFU/g)	Limit (CFU/g)	Status
Coliforms	ND	100	Pass
Bile-Tolerant Gram-Negative Bacteria	ND	100	Pass
Yeast & Mold	ND	1000	Pass
Aerobic Bacteria	ND	10000	Pass
E.coli	ND		Pass
Salmonella	ND		Pass

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Certificate of Analysis

Residual Solvents

PASS

Date Started: 05/15/2026
Instrument: HS-GC-MS

Date Completed: 05/18/2026
Method: TP-09.005.04

Analyst: Lana Rivera (B144852)
Deviation: N/A

Residual Solvent	Result (ppm)	LOD (ppm)	LOQ (ppm)	Limit (ppm)	Status
n-Propane	ND	0.393	1.55	12.0	Pass
Iso-butane	ND	0.259	1.55	12.0	Pass
n-Butane	ND	0.169	1.55	12.0	Pass
Methanol	ND	36.8	93.0	3000	Pass
Ethylene Oxide	ND	0.619	1.24		Pass
n-Pentane	ND	25.0	93.0	5000	Pass
Ethanol	ND	17.2	93.0	5000	Pass
Ethyl Ether	ND	23.5	93.0	5000	Pass
Acetone	ND	16.8	93.0	5000	Pass
Isopropyl Alcohol	ND	21.0	93.0	5000	Pass
Acetonitrile	ND	13.1	93.0	410	Pass
Methylene Chloride	ND	0.619	1.24	600	Pass
n-Hexane	ND	25.3	93.0	290	Pass
Ethyl Acetate	ND	14.6	93.0	5000	Pass
Chloroform	ND	0.619	1.24	60.0	Pass
1,2-Dichloroethane	ND	0.619	1.24	1870	Pass
Benzene	ND	0.619	1.24		Pass
n-Heptane	ND	27.1	93.0	5000	Pass
Trichloroethylene	ND	0.619	1.24	80.0	Pass
Toluene	ND	10.7	93.0	890	Pass
Total Xylenes	**ND**	**18.3**	**46.5**	**2170**	**Pass**

Mycotoxins

PASS

Date Started: 05/18/2026
Instrument: LC-MS/MS

Date Completed: 05/20/2026
Method: TP-09.009.05

Analyst: Meagan Mattos (B154555)
Deviation: N/A

Mycotoxins	Result (ppb)	LOD (ppb)	LOQ (ppb)	Limit (ppb)	Status
Aflatoxin B1	ND	0.867	2.86		
Aflatoxin B2	ND	0.867	2.86		
Aflatoxin G1	ND	0.867	2.86		
Aflatoxin G2	ND	0.867	2.86		
Ochratoxin A	ND	0.867	2.86		
Total Mycotoxins	**ND**	**0.867**	**2.86**	**20.0**	**Pass**

Yuemin Wang Kovaleff, Lab Manager
05/20/2026

END OF REPORT

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