

SAMPLE NAME: Grape Gas

Concentrate, Product Inhalable

CULTIVATOR / MANUFACTURER

Business Name: ArcataX
License Number: CDPH-10002992
Address: 4651 West End RD. SUITE B
ARCATA, CA 95521

DISTRIBUTOR

Business Name: LIGHTWORK
DISTRIBUTORS LLC
License Number: C11-000051-LIC
Address: 4651 West End RD, SUITE F,
Arcata, CA 95521



SAMPLE DETAIL

Batch Number: AF-VP-102
Sample ID: 231116Q008
Source Metrc UID:
1A40603000042D4000013199

Date Collected: 11/16/2023
Date Received: 11/17/2023
Batch Size: 695.0 units
Sample Size: 12.0 units
Unit Mass: 1 grams per Unit
Serving Size:



Scan QR code to verify authenticity of results.

Sampling Method: QSP 1265 - Sampling of Cannabis and Product Batches

CANNABINOID ANALYSIS - SUMMARY ✔ PASS

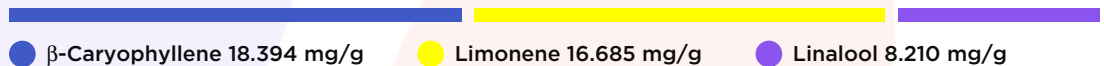
Sum of Cannabinoids: 85.84%
Total Cannabinoids: 80.56%
Total THC: 70.976%
Total CBD: 0.211%

Sum of Cannabinoids = Δ^9 -THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ^8 -THC + CBL + CBN
Total Cannabinoids = $(\Delta^9$ -THC + 0.877*THCa + Δ^8 -THC) + (CBD + 0.877*CBDa) + (CBG + 0.877*CBGa) + (THCV + 0.877*THCVa) + (CBC + 0.877*CBCa) + (CBDV + 0.877*CBDVa) + CBL + CBN
Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step:
Total THC = Δ^9 -THC + (THCa (0.877)) + Δ^8 -THC
Total CBD = CBD + (CBDa (0.877))

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 7.2387%



SAFETY ANALYSIS - SUMMARY

Δ⁹-THC per Unit: ✔ PASS	Pesticides: ✔ PASS	Mycotoxins: ✔ PASS
Residual Solvents: ✔ PASS	Heavy Metals: ✔ PASS	Microbiology: ✔ PASS
Foreign Material: ✔ PASS		

These results relate only to the sample included on this report.

This report shall not be reproduced, except in full, without written approval of the laboratory.

Sample Certification: California Code of Regulations Title 4 Division 19. Department of Cannabis Control Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT)



All LQC samples were performed and met the prescribed acceptance criteria in 4 CCR section 15730, as attested by:
Maria Garcia
Job Title: Senior Laboratory Analyst
Date: 11/19/2023



Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 11/19/2023



CANNABINOID TEST RESULTS - 11/18/2023 ✔ PASS

Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD). **Method:** QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

TOTAL CANNABINOIDS: 80.56%

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + CBL + CBN

TOTAL THC: 70.976%

Total THC (Δ^9 -THC+0.877*THCa+ Δ^8 -THC)

TOTAL CBD: 0.211%

Total CBD (CBD+0.877*CBDA)

TOTAL CBG: 5.1%

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: 0.45%

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 3.82%

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: ND

Total CBDV (CBDV+0.877*CBDA)

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Δ^9 -THC	0.06 / 0.26	±11.091	413.86	41.386
THCa	0.05 / 0.14	±6.748	337.40	33.740
CBGa	0.1 / 0.2	±1.91	47.1	4.71
CBCa	0.07 / 0.28	±1.510	39.62	3.962
CBG	0.06 / 0.19	±0.297	9.67	0.967
CBC	0.2 / 0.5	±0.08	3.5	0.35
THCVa	0.07 / 0.20	±0.098	2.63	0.263
CBDA	0.02 / 0.19	±0.055	2.41	0.241
THCV	0.1 / 0.2	±0.09	2.2	0.22
Δ^8 -THC	0.1 / 0.4	N/A	ND	ND
CBD	0.07 / 0.29	N/A	ND	ND
CBDV	0.04 / 0.15	N/A	ND	ND
CBDVa	0.03 / 0.53	N/A	ND	ND
CBL	0.06 / 0.24	N/A	ND	ND
CBN	0.1 / 0.3	N/A	ND	ND
SUM OF CANNABINOIDS			858.4 mg/g	85.84%

UNIT MASS: 1 grams per Unit

Δ^9 -THC per Unit	1100 per-package limit	413.86 mg/unit	PASS
Total THC per Unit		709.76 mg/unit	
CBD per Unit		ND	
Total CBD per Unit		2.11 mg/unit	
Sum of Cannabinoids per Unit		858.4 mg/unit	
Total Cannabinoids per Unit		805.6 mg/unit	

TERPENOID TEST RESULTS - 11/19/2023

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID). **Method:** QSP 1192 - Analysis of Terpenoids by GC-FID

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β -Caryophyllene	0.004 / 0.012	±0.5095	18.394	1.8394
Limonene	0.005 / 0.016	±0.1852	16.685	1.6685
Linalool	0.009 / 0.032	±0.2430	8.210	0.8210
Myrcene	0.008 / 0.025	±0.0700	7.003	0.7003
α -Humulene	0.009 / 0.029	±0.1568	6.271	0.6271
trans- β -Farnesene	0.008 / 0.025	±0.0700	2.536	0.2536
α -Bisabolol	0.008 / 0.026	±0.0995	2.397	0.2397
β -Pinene	0.004 / 0.014	±0.0173	1.945	0.1945
Nerolidol	0.006 / 0.019	±0.0841	1.717	0.1717
Terpineol	0.009 / 0.031	±0.0719	1.505	0.1505
Fenchol	0.010 / 0.034	±0.0405	1.345	0.1345
α -Pinene	0.005 / 0.017	±0.0077	1.152	0.1152
Caryophyllene Oxide	0.010 / 0.033	±0.0383	1.071	0.1071
Valencene	0.009 / 0.030	±0.0264	0.492	0.0492
Camphene	0.005 / 0.015	±0.0032	0.351	0.0351
Borneol	0.005 / 0.016	±0.0104	0.319	0.0319
Terpinolene	0.008 / 0.026	±0.0038	0.237	0.0237
Geraniol	0.002 / 0.007	±0.0068	0.199	0.0199
β -Ocimene	0.006 / 0.020	±0.0039	0.154	0.0154
Sabinene Hydrate	0.006 / 0.022	±0.0021	0.070	0.0070
Eucalyptol	0.006 / 0.018	±0.0014	0.069	0.0069
Guaiaol	0.009 / 0.030	±0.0019	0.051	0.0051
Citronellol	0.003 / 0.010	±0.0019	0.050	0.0050
Fenchone	0.009 / 0.028	±0.0010	0.045	0.0045
α -Terpinene	0.005 / 0.017	±0.0004	0.033	0.0033
γ -Terpinene	0.006 / 0.018	±0.0004	0.031	0.0031
Nerol	0.003 / 0.011	±0.0010	0.028	0.0028
p-Cymene	0.005 / 0.016	±0.0006	0.027	0.0027
α -Phellandrene	0.006 / 0.020	N/A	<LOQ	<LOQ
Isoborneol	0.004 / 0.012	N/A	<LOQ	<LOQ
Sabinene	0.004 / 0.014	N/A	ND	ND
Δ^3 -Carene	0.005 / 0.018	N/A	ND	ND
Isopulegol	0.005 / 0.016	N/A	ND	ND
Camphor	0.006 / 0.019	N/A	ND	ND
Menthol	0.008 / 0.025	N/A	ND	ND
Pulegone	0.003 / 0.011	N/A	ND	ND
Geranyl Acetate	0.004 / 0.014	N/A	ND	ND
α -Cedrene	0.005 / 0.016	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
TOTAL TERPENOIDS			72.387 mg/g	7.2387%



CATEGORY 1 PESTICIDE TEST RESULTS - 11/19/2023 ✔ PASS

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). *GC-MS utilized where indicated. **Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS or QSP 1213 - Analysis of Pesticides by GC-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Aldicarb	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Carbofuran	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Chlordane*	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Chlorfenapyr*	0.03 / 0.10	≥ LOD	N/A	ND	PASS
Chlorpyrifos	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Coumaphos	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Daminozide	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Dichlorvos (DDVP)	0.03 / 0.09	≥ LOD	N/A	ND	PASS
Dimethoate	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Ethoprophos	0.03 / 0.10	≥ LOD	N/A	ND	PASS
Etofenprox	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Fenoxycarb	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Fipronil	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Imazalil	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Methiocarb	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Parathion-methyl	0.03 / 0.10	≥ LOD	N/A	ND	PASS
Mevinphos	0.03 / 0.09	≥ LOD	N/A	ND	PASS
Pacllobutrazol	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Propoxur	0.03 / 0.09	≥ LOD	N/A	ND	PASS
Spiroxamine	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Thiacloprid	0.03 / 0.10	≥ LOD	N/A	ND	PASS

CATEGORY 2 PESTICIDE TEST RESULTS - 11/19/2023 *continued*

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Cyfluthrin	0.12 / 0.38	2	N/A	ND	PASS
Cypermethrin	0.11 / 0.32	1	N/A	ND	PASS
Diazinon	0.02 / 0.05	0.1	N/A	ND	PASS
Dimethomorph	0.03 / 0.09	2	N/A	ND	PASS
Etoazole	0.02 / 0.06	0.1	N/A	ND	PASS
Fenhexamid	0.03 / 0.09	0.1	N/A	ND	PASS
Fenpyroximate	0.02 / 0.06	0.1	N/A	ND	PASS
Flonicamid	0.03 / 0.10	0.1	N/A	ND	PASS
Fludioxonil	0.03 / 0.10	0.1	N/A	ND	PASS
Hexythiazox	0.02 / 0.07	0.1	N/A	ND	PASS
Imidacloprid	0.04 / 0.11	5	N/A	ND	PASS
Kresoxim-methyl	0.02 / 0.07	0.1	N/A	ND	PASS
Malathion	0.03 / 0.09	0.5	N/A	ND	PASS
Metalaxyl	0.02 / 0.07	2	N/A	ND	PASS
Methomyl	0.03 / 0.10	1	N/A	ND	PASS
Myclobutanil	0.03 / 0.09	0.1	N/A	ND	PASS
Naled	0.02 / 0.07	0.1	N/A	ND	PASS
Oxamyl	0.04 / 0.11	0.5	N/A	ND	PASS
Pentachloronitrobenzene*	0.03 / 0.09	0.1	N/A	ND	PASS
Permethrin	0.04 / 0.12	0.5	N/A	ND	PASS
Phosmet	0.03 / 0.10	0.1	N/A	ND	PASS
Piperonyl Butoxide	0.02 / 0.07	3	N/A	ND	PASS
Prallethrin	0.03 / 0.08	0.1	N/A	ND	PASS
Propiconazole	0.02 / 0.07	0.1	N/A	ND	PASS
Pyrethrins	0.04 / 0.12	0.5	N/A	ND	PASS
Pyridaben	0.02 / 0.07	0.1	N/A	ND	PASS
Spinetoram	0.02 / 0.07	0.1	N/A	ND	PASS
Spinosad	0.02 / 0.07	0.1	N/A	ND	PASS
Spiromesifen	0.02 / 0.05	0.1	N/A	ND	PASS
Spirotetramat	0.02 / 0.06	0.1	N/A	ND	PASS
Tebuconazole	0.02 / 0.07	0.1	N/A	ND	PASS
Thiamethoxam	0.03 / 0.10	5	N/A	ND	PASS
Trifloxystrobin	0.03 / 0.08	0.1	N/A	ND	PASS

CATEGORY 2 PESTICIDE TEST RESULTS - 11/19/2023 ✔ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Abamectin	0.03 / 0.10	0.1	N/A	ND	PASS
Acephate	0.02 / 0.07	0.1	N/A	ND	PASS
Acequinocyl	0.02 / 0.07	0.1	N/A	ND	PASS
Acetamiprid	0.02 / 0.05	0.1	N/A	ND	PASS
Azoxystrobin	0.02 / 0.07	0.1	N/A	ND	PASS
Bifenazate	0.01 / 0.04	0.1	N/A	ND	PASS
Bifenthrin	0.02 / 0.05	3	N/A	ND	PASS
Boscalid	0.03 / 0.09	0.1	N/A	ND	PASS
Captan	0.19 / 0.57	0.7	N/A	ND	PASS
Carbaryl	0.02 / 0.06	0.5	N/A	ND	PASS
Chlorantraniliprole	0.04 / 0.12	10	N/A	ND	PASS
Clofentezine	0.03 / 0.09	0.1	N/A	ND	PASS



MYCOTOXIN TEST RESULTS - 11/19/2023 ✔ PASS

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS). **Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)	RESULT
Aflatoxin B1	2.0 / 6.0		N/A	ND	
Aflatoxin B2	1.8 / 5.6		N/A	ND	
Aflatoxin G1	1.0 / 3.1		N/A	ND	
Aflatoxin G2	1.2 / 3.5		N/A	ND	
Total Aflatoxin		20		ND	PASS
Ochratoxin A	6.3 / 19.2	20	N/A	ND	PASS

HEAVY METALS TEST RESULTS - 11/18/2023 ✔ PASS

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS). **Method:** QSP 1160 - Analysis of Heavy Metals by ICP-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / 0.1	0.2	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.2	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	0.1	N/A	ND	PASS

CATEGORY 1 RESIDUAL SOLVENTS TEST RESULTS - 11/18/2023 ✔ PASS

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS). **Method:** QSP 1204 - Analysis of Residual Solvents by GC-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Ethylene Oxide	0.3 / 0.8	1	N/A	ND	PASS
Dichloromethane (Methylene Chloride)	0.3 / 0.9	1	N/A	ND	PASS
Trichloroethylene	0.1 / 0.3	1	N/A	ND	PASS

MICROBIOLOGY TEST RESULTS - 11/19/2023 ✔ PASS

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants. **Method:** QSP 1221 - Analysis of Microbiological Contaminants

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing <i>Escherichia coli</i>	Not Detected in 1g	ND	PASS
<i>Salmonella</i> spp.	Not Detected in 1g	ND	PASS
<i>Aspergillus fumigatus</i>	Not Detected in 1g	ND	PASS
<i>Aspergillus flavus</i>	Not Detected in 1g	ND	PASS
<i>Aspergillus niger</i>	Not Detected in 1g	ND	PASS
<i>Aspergillus terreus</i>	Not Detected in 1g	ND	PASS

CATEGORY 2 RESIDUAL SOLVENTS TEST RESULTS - 11/18/2023 ✔ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Acetone	20 / 50	5000	±2.0	60	PASS
Acetonitrile	2 / 7	410	N/A	ND	PASS
n-Butane	10 / 50	5000	±5.5	115	PASS
Ethanol	20 / 50	5000	N/A	ND	PASS
Ethyl Acetate	20 / 60	5000	N/A	ND	PASS
Ethyl Ether	20 / 50	5000	N/A	ND	PASS
n-Heptane	20 / 60	5000	N/A	ND	PASS
n-Hexane	2 / 5	290	N/A	<LOQ	PASS
2-Propanol (Isopropyl Alcohol)	10 / 40	5000	N/A	ND	PASS
Methanol	50 / 200	3000	N/A	ND	PASS
n-Pentane	20 / 50	5000	N/A	ND	PASS
Propane	10 / 20	5000	N/A	ND	PASS
Toluene	7 / 21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	N/A	ND	PASS

FOREIGN MATERIAL TEST RESULTS - 11/17/2023 ✔ PASS

Visual analysis includes, but is not limited to, sand, soil, cinders, dirt, mold, hair, insect fragments, and mammalian excreta. **Method:** QSP 1226 - Analysis of Foreign Material in Cannabis and Cannabis Products

COMPOUND	ACTION LIMIT	RESULT
Total Sample Area Covered by Sand, Soil, Cinders, or Dirt	>25%	PASS
Total Sample Area Covered by Mold	>25%	PASS
Total Sample Area Covered by an Imbedded Foreign Material	>25%	PASS
Insect Fragment Count	> 1 per 3 grams	PASS
Hair Count	> 1 per 3 grams	PASS
Mammalian Excreta Count	> 1 per 3 grams	PASS