



Hawaiian Haze Indoor Hemp Flower

Sample ID: G0G0463-03

Matrix: Industrial Hemp

Test ID: 5002513

Source ID:

Date Sampled: 07/23/20

Date Accepted: 07/23/20

Arete Hemp LLC

Results at a Glance

Total THC : 0.7344 %

Total CBD : 17.48 %

Total CBG : 0.1306 % dry PASS

Percent Moisture : 6.34 % PASS

Total Terpenes : 0.6828 % PASS



Russell Kuhfeld

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Quality Officer - 7/27/2020

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Potency Analysis

Date/Time Extracted: 07/25/20 13:01

Analysis Method/SOP: 215

Batch Identification: 2030060

	LOQ (%)	% by Wt.	mg/g	Cannabinoids Profile
Total THC	0.0097	0.7344	7.344	
Total CBD	0.0089	17.48	174.8	
Total CBG	0.0008	0.1306	1.306	
THCA	0.0031	0.7054	7.054	
delta 9-THC	0.0097	0.1158	1.158	
THCV	0.0054	< LOQ	< LOQ	
THCVA	0.0020	< LOQ	< LOQ	
CBD	0.0066	1.023	10.23	
CBDA	0.0089	18.76	187.6	
CBDV	0.0053	< LOQ	< LOQ	
CBDVA	0.0018	0.0987	0.987	
CBN	0.0032	< LOQ	< LOQ	
CBG	0.0008	0.1306	1.306	
CBGA	0.0008	< LOQ	< LOQ	
CBC	0.0096	0.1376	1.376	

Cannabinoid	Value
THCA	0.7
delta 9-THC	0.1
CBDA	18.8
CBD	1.0
CBG	0.1
CBC	0.1
CBDVA	0.1
Total	21.0

Moisture

Date/Time Extracted: 07/27/20 15:29

Analysis Method/SOP: 103

Moisture: 6.34 %

Action Level: 15%

Potency results are reported on a dry weight basis.

Total THC = delta 9-THC + (THCA * 0.877)

Total CBD = CBD + (CBDA * 0.877)

LOQ=Limit of Quantification, the lowest measurable concentration of an analyte.



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ACCREDITED
LABORATORY

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Terpene Analysis

Date/Time Extracted: 07/25/20 13:01

Analysis Method/SOP: 204

Monoterpenes	%	mg/g	Monoterpenes	%	mg/g
Camphene	< LOQ	< LOQ	Camphor	< LOQ	< LOQ
3-Carene	< LOQ	< LOQ	alpha-Cedrene	< LOQ	< LOQ
Cedrol	< LOQ	< LOQ	Endo-fenchyl alcohol	0.01690	0.169
Eucalyptol	< LOQ	< LOQ	Fenchone	< LOQ	< LOQ
Geraniol	< LOQ	< LOQ	Geranyl acetate	< LOQ	< LOQ
Hexahydrothymol	< LOQ	< LOQ	Isoborneol	< LOQ	< LOQ
Isopulegol	< LOQ	< LOQ	Limonene	0.03844	0.3844
Linalool	0.04971	0.4971	p-Mentha-1,5-diene	< LOQ	< LOQ
beta-Myrcene	0.3364	3.364	alpha-Pinene	0.06343	0.6343
beta-Pinene	0.02159	0.2159	Pulegone	< LOQ	< LOQ
Sabinene	< LOQ	< LOQ	Sabinene hydrate	< LOQ	< LOQ
gamma-Terpinene	< LOQ	< LOQ	alpha-Terpinene	< LOQ	< LOQ
Terpineol	0.02186	0.2186	Terpinolene	< LOQ	< LOQ
B Y-Terpineol	< LOQ	< LOQ	Nerol	< LOQ	< LOQ
A-Terpineol	0.03469	0.3469	Borneol	< LOQ	< LOQ
Ocimene isomer II	< LOQ	< LOQ	Ocimene isomer I	< LOQ	< LOQ
Sesquiterpenes	%	mg/g	Sesquiterpenes	%	mg/g
alpha-Bisabolol	0.02099	0.2099	beta-Caryophyllene	0.01017	0.1017
Caryophyllene Oxide	0.01192	0.1192	Guaiol	0.06466	0.6466
alpha-Humulene	0.01393	0.1393	trans-Nerolidol	< LOQ	< LOQ
Valencene	< LOQ	< LOQ	cis-Nerolidol	< LOQ	< LOQ
Total Terpenes	0.6828	6.828			

<LOQ - Results below the Limit of Quantitation - Terpenes profile/analysis are not accredited to ORELAP TNI 2009 Quality Standards.



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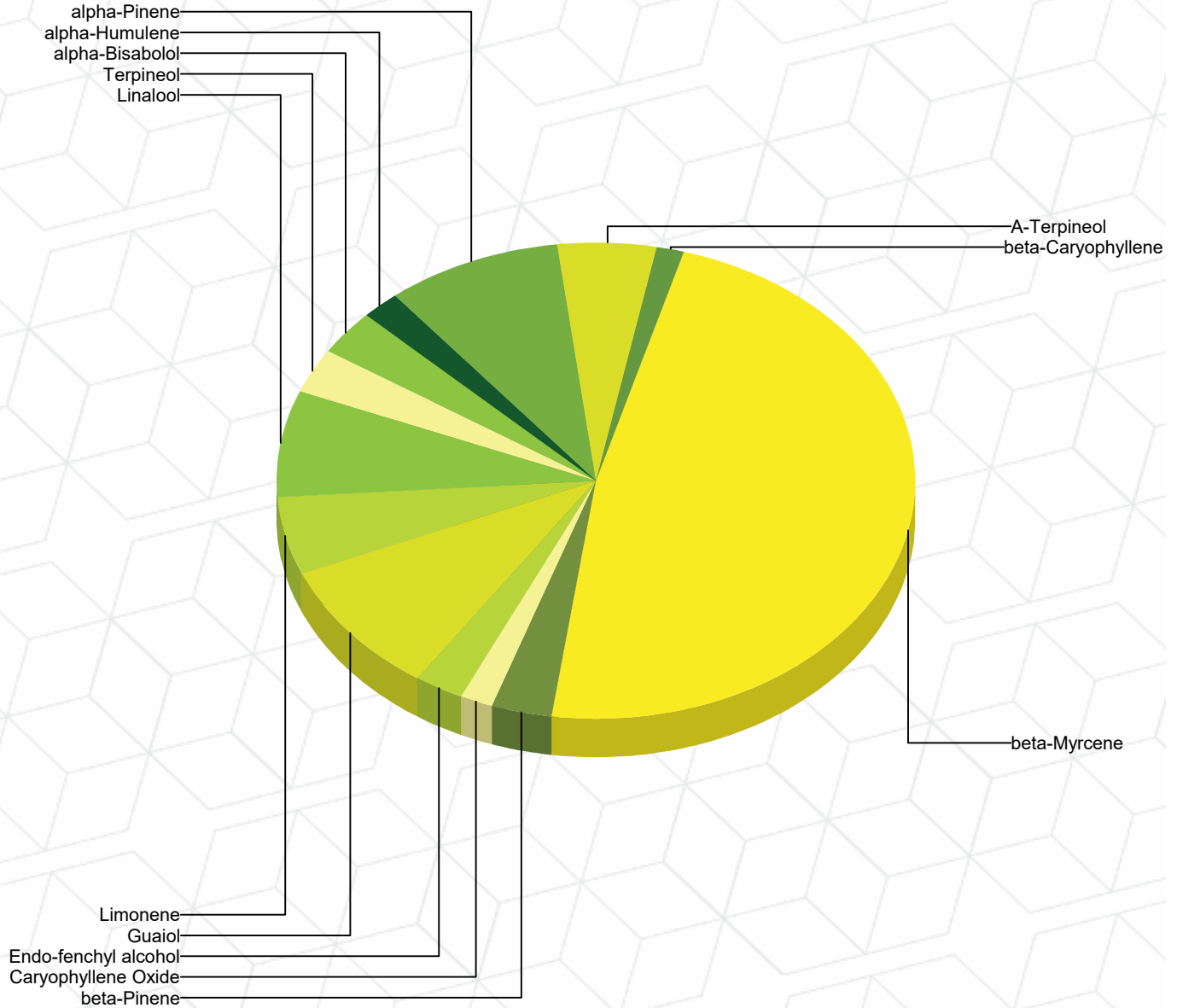
Source ID:

Date Sampled: 07/23/20

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Terpene Profile



Percentage of Total Terpenes Identified



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Quality Control Potency

Batch: 2030060 - 215-Hemp

Blank(2030060-BLK2)						
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	< LOQ	0.0117	%		07/25/20 13:01	07/25/20 21:48
delta 9-THC	< LOQ	0.0363	%		07/25/20 13:01	07/25/20 21:48
THCV	< LOQ	0.0202	%		07/25/20 13:01	07/25/20 21:48
THCVA	< LOQ	0.0075	%		07/25/20 13:01	07/25/20 21:48
CBD	< LOQ	0.0062	%		07/25/20 13:01	07/25/20 21:48
CBDA	< LOQ	0.0083	%		07/25/20 13:01	07/25/20 21:48
CBDV	< LOQ	0.0200	%		07/25/20 13:01	07/25/20 21:48
CBDVA	< LOQ	0.0066	%		07/25/20 13:01	07/25/20 21:48
CBN	< LOQ	0.0120	%		07/25/20 13:01	07/25/20 21:48
CBG	< LOQ	0.0032	%		07/25/20 13:01	07/25/20 21:48
CBGA	< LOQ	0.0032	%		07/25/20 13:01	07/25/20 21:48
CBC	< LOQ	0.0359	%		07/25/20 13:01	07/25/20 21:48

Reference(2030060-SRM2)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	96.0	0.0024	%	80-120	07/25/20 13:01	07/25/20 22:11
delta 9-THC	95.0	0.0074	%	80-120	07/25/20 13:01	07/25/20 22:11
CBD	98.9	0.0013	%	80-120	07/25/20 13:01	07/25/20 22:11
CBDA	101	0.0017	%	80-120	07/25/20 13:01	07/25/20 22:11

Terpene Analysis

Batch: 2030060 - 215-Hemp

Blank(2030060-BLK1)						
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed
alpha-Bisabolol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Camphene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Camphor	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
3-Carene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
beta-Caryophyllene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Caryophyllene Oxide	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
alpha-Cedrene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Cedrol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Endo-fenchyl alcohol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Eucalyptol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Fenchone	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Geraniol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Geranyl acetate	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Guaiol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Hexahydrothymol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12



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Quality Control Terpene Analysis (Continued)

Batch: 2030060 - 215-Hemp (Continued)

Blank(2030060-BLK1)						
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed
alpha-Humulene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Isoborneol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Isopulegol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Limonene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Linalool	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
p-Mentha-1,5-diene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
beta-Myrcene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
trans-Nerolidol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
alpha-Pinene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
beta-Pinene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Pulegone	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Sabinene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Sabinene hydrate	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
gamma-Terpinene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
alpha-Terpinene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Terpineol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Terpinolene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Valencene	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
B Y-Terpineol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Nerol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
A-Terpineol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
cis-Nerolidol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Borneol	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Ocimene isomer II	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12
Ocimene isomer I	< LOQ	0.002000	%		07/25/20 13:01	07/25/20 19:12

Reference(2030060-SRM1)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
beta-Caryophyllene	72.9	4.069E-4	%	70-130	07/25/20 13:01	07/25/20 19:31
alpha-Humulene	94.2	4.069E-4	%	70-130	07/25/20 13:01	07/25/20 19:31
beta-Myrcene	39.4	4.069E-4	%	70-130	07/25/20 13:01	07/25/20 19:31

Batch: 2031012 - 103

Reference(2031012-SRM1)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
Percent Moisture	96.2		%	80-120	07/27/20 15:29	07/27/20 15:29

Reference(2031012-SRM2)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
Percent Moisture	93.6		%	80-120	07/27/20 15:29	07/27/20 15:29



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