



Steep Hill Arkansas

11711 HERMITAGE ROAD, SUITE #5, LITTLE ROCK, AR 72211 LICENSE #: BL157155

CERTIFICATE OF ANALYSIS

Sample Name: CBD Hemp Golden Chai 40mg
 Steep Hill ID: AR85572
 Batch ID: CHP888002
 State ID:
 Sample Type: Edible
 Date Received: 5/12/2020
 Date Reported: 5/15/2020
 Pkg. Mass: 291 g
 # of Servings: 30

Customer: Beyond Organic Nutritionals
 5488 Country Rd. 333
 Koshkonong, MO 65692

OVERALL BATCH SUMMARY: **PASS**

Cannabinoids	Residual Pesticides	Microbial Impurities	Heavy Metals	Residual Solvents	Moisture	Water Activity
Tested	Pass	Pass	Pass	Pass	Pass	Pass



Total THC
 Not Detected
 Not Detected
 Not Detected
 Not Detected

Total CBD
 0.408 %
 4.08 mg/g
 1185 mg/pkg
 39.5 mg/serv

Total Cannabinoids
 0.408 %
 4.08 mg/g
 1188 mg/pkg
 39.6 mg/serv

Brandon Thornton
 Pharm D. Co-Owner & CEO
 Date: 5/20/2020

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Cannabinoid Results

5/14/2020

Standard potency analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; SOP-068-AR)

Analyte	%	mg/g	mg/pkg	mg/serv	LOD mg/g	LOQ mg/g
CBC	NT	NT	NT	NT	NT	NT
CBD	0.402	4.02	1170	39.0	0.000355	0.00118
CBDA	0.00602	0.0602	17.5	0.584	0.000968	0.00323
CBDV	NT	NT	NT	NT	NT	NT
CBG	NT	NT	NT	NT	NT	NT
CBGA	NT	NT	NT	NT	NT	NT
CBN	NT	NT	NT	NT	NT	NT
THC	ND	ND	ND	ND	0.000513	0.00171
delta-8-THC	NT	NT	NT	NT	NT	NT
THCA	ND	ND	ND	ND	0.000726	0.00242
THCV	NT	NT	NT	NT	NT	NT
Total	0.408	4.08	1188	39.6		

Terpenoid Results

5/15/2020

Standard terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS; SOP-069-AR)
This method is not included in our ISO accreditation scope.

Analyte	%	mg/g	LOD mg/g	LOQ mg/g	Analyte	%	mg/g	LOD mg/g	LOQ mg/g
α -Bisabolol	NT	NT	NT	NT	Linalool	ND	ND	0.00592	0.0197
endo-Borneol	NT	NT	NT	NT	Menthol	NT	NT	NT	NT
Camphene	NT	NT	NT	NT	β -Myrcene	ND	ND	0.00268	0.00895
Camphor	NT	NT	NT	NT	Nerol	NT	NT	NT	NT
3-Carene	NT	NT	NT	NT	cis-Nerolidol	NT	NT	NT	NT
Caryophyllene Oxide	ND	ND	0.00991	0.0330	trans-Nerolidol	NT	NT	NT	NT
β -Caryophyllene	0.0217	0.217	0.00523	0.0174	cis- β -Ocimene	NT	NT	NT	NT
α -Cedrene	NT	NT	NT	NT	trans- β -Ocimene	NT	NT	NT	NT
Cedrol	NT	NT	NT	NT	α -Phellandrene	NT	NT	NT	NT
Eucalyptol	NT	NT	NT	NT	α -Pinene	ND	ND	0.00302	0.0101
β -Farnesene	NT	NT	NT	NT	β -Pinene	ND	ND	0.00286	0.00953
Fenchol	NT	NT	NT	NT	Pulegone	NT	NT	NT	NT
Fenchone	NT	NT	NT	NT	Sabinene	NT	NT	NT	NT
Geraniol	NT	NT	NT	NT	Sabinene Hydrate	NT	NT	NT	NT
Geranyl Acetate	NT	NT	NT	NT	α -Terpinene	NT	NT	NT	NT
Guaiol	NT	NT	NT	NT	γ -Terpinene	NT	NT	NT	NT
α -Humulene	0.0188	0.188	0.00363	0.0121	Terpineol	NT	NT	NT	NT
Isoborneol	NT	NT	NT	NT	Terpinolene	ND	ND	0.00799	0.0266
Isopulegol	NT	NT	NT	NT	Valencene	NT	NT	NT	NT
Limonene	ND	ND	0.00216	0.00721	Total	0.0405	0.405		

LOD: Limit of Detection
 LOQ: Limit of Quantitation
 NT: Not Tested
 ND: Not Detected

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CERTIFICATE OF ANALYSIS

Residual Pesticides Results

Pass

5/14/2020

Residual pesticide analysis utilizing Liquid and Gas Chromatography – Mass Spectrometry (LC-MSMS + GC-MSMS); SOP-070-AR + SOP-073-AR) - Limit units: ug/g = ppm

Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g	Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g
Abamectin	Pass	ND	0.5	0.0811	0.270	Imazail	Pass	ND	0.2	0.0104	0.0348
Acephate	Pass	ND	0.4	0.00631	0.0210	Imidacloprid	Pass	ND	0.4	0.00491	0.0164
Acequinocyl	Pass	ND	2	0.0904	0.301	Kresoxim-methyl	Pass	ND	0.4	0.00435	0.0145
Acetamiprid	Pass	ND	0.2	0.00637	0.0212	Malathion	Pass	ND	0.2	0.00302	0.0101
Aldicarb	Pass	ND	0.4	0.0406	0.135	Metalaxyl	Pass	ND	0.2	0.00446	0.0149
Azoxystrobin	Pass	ND	0.2	0.00573	0.0191	Methiocarb	Pass	ND	0.2	0.00429	0.0143
Bifenazate	Pass	ND	0.2	0.00400	0.0133	Methomyl	Pass	ND	0.4	0.00643	0.0214
Bifenthrin	Pass	ND	0.2	0.0322	0.107	Methyl Parathion	Pass	ND	0.2	0.00715	0.0210
Boscalid	Pass	ND	0.4	0.0102	0.0340	MGK-264	Pass	ND	0.2	0.000954	0.00238
Carbaryl	Pass	ND	0.2	0.00382	0.0127	Myclobutanil	Pass	ND	0.2	0.00538	0.0180
Carbofuran	Pass	ND	0.2	0.00449	0.0150	Naled	Pass	ND	0.5	0.00962	0.0321
Chlorantraniliprole	Pass	ND	0.2	0.00700	0.0233	Oxamyl	Pass	ND	1	0.00907	0.0302
Chlorfenapyr	Pass	ND	1	0.00715	0.0210	Paclobutrazol	Pass	ND	0.4	0.00762	0.0254
Chlorpyrifos	Pass	ND	0.2	0.00650	0.0217	Permethrins	Pass	ND	0.2	0.00668	0.0196
Clofentezine	Pass	ND	0.2	0.00897	0.0299	Phosmet	Pass	ND	0.2	0.00674	0.0225
Cyfluthrin	Pass	ND	1	0.0110	0.0320	Piperonyl Butoxide	Pass	ND	2	0.00442	0.0147
Cypermethrin	Pass	ND	1	0.0110	0.0329	Prallethrin	Pass	ND	0.2	0.0146	0.0487
Daminozide	Pass	ND	1	0.0131	0.0437	Propiconazole	Pass	ND	0.4	0.00314	0.0105
Diazinon	Pass	ND	0.2	0.00464	0.0155	Propoxur	Pass	ND	0.2	0.00345	0.0115
DDVP (Dichlorvos)	Pass	ND	0.1	0.00611	0.0204	Pyrethrins	Pass	ND	1	0.00487	0.0162
Dimethoate	Pass	ND	0.2	0.00642	0.0214	Pyridaben	Pass	ND	0.2	0.00735	0.0245
Ethoprophos	Pass	ND	0.2	0.00623	0.0208	Spinosad	Pass	ND	0.2	0.00832	0.0277
Etofenprox	Pass	ND	0.4	0.00881	0.0294	Spiromesifen	Pass	ND	0.2	0.00723	0.0241
Etoxazole	Pass	ND	0.2	0.00711	0.0237	Spirotetramat	Pass	ND	0.2	0.00352	0.0117
Fenoxycarb	Pass	ND	0.2	0.00566	0.0188	Spiroxamine	Pass	ND	0.4	0.0107	0.0357
Fenpyroximate	Pass	ND	0.4	0.00456	0.0152	Tebuconazole	Pass	ND	0.4	0.00319	0.0106
Fipronil	Pass	ND	0.4	0.00885	0.0295	Thiacloprid	Pass	ND	0.2	0.00374	0.0125
Flonicamid	Pass	ND	1	0.0113	0.0376	Thiamethoxam	Pass	ND	0.2	0.00375	0.0125
Fludioxonil	Pass	ND	0.4	0.0107	0.0356	Trifloxystrobin	Pass	ND	0.2	0.00461	0.0154
Hexythiazox	Pass	ND	1	0.00470	0.0157						

Heavy Metals Results

Pass

5/15/2020

Heavy metals analysis utilizing Inductively Coupled Plasma Mass Spectrometry (ICP-MS; SOP-072-AR) - Limit units: µg/kg

Analyte	Pass/Fail	µg/kg	Limit	LOD µg/kg	LOQ µg/kg
Arsenic	Pass	34.9	200	1.48	4.93
Cadmium	Pass	26.4	200	0.483	1.61
Lead	Pass	274	500	1.28	4.27
Mercury	Pass	4.41	100	0.791	2.64

Microbial Impurities Results

Pass

5/13/2020

Microbiological screening utilizing 3M Petrifilm (SOP-700-AR) - Limit units: CFU/g

Analyte	Pass/Fail	Result	Limit	LOQ
Coliform	Pass	ND		Not Detected in 1 gram
General E. coli	NT	NT	NT	NT
Salmonella		NT	NT	NT

Moisture Results

Pass

5/12/2020

Moisture content analysis utilizing Moisture Balance (MB; SOP-055-AR)

Analyte	Pass/Fail	%	Limit
Moisture	Pass	4.33	15

Water Activity Results

Pass

5/12/2020

Water activity analysis utilizing Water Activity Meter (WAM; SOP-059-AR) - Limit units: Aw

Analyte	Pass/Fail	Aw	Limit
Water Activity	Pass	0.344	0.65

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Pharm D. Co-Owner & CEO
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CERTIFICATE OF ANALYSIS

Residual Solvents Results

Pass

5/15/2020

Residual solvents and processing chemicals analysis utilizing Headspace Gas Chromatography – Mass Spectrometry (HS-GC-MS; SOP-010-AR) - Limit units: µg/g

Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g	Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g
1-Butanol	Pass	ND	5000	13.3	44.3	Dimethyl Sulfoxide	Pass	ND	5000	11.5	38.4
1-Pentanol	Pass	ND	5000	22.2	73.9	Ethanol	Pass	ND	5000	16.1	53.7
1-Propanol	Pass	ND	5000	33.1	110	Ethyl Acetate	Pass	ND	5000	5.79	19.3
1,2-Dimethoxyethane	Pass	ND	100	17.8	59.2	Ethyl Ether	Pass	ND	5000	2.03	6.78
1,4-Dioxane	Pass	ND	380	17.3	57.5	Ethylene Glycol	Pass	ND	620	1.90	6.34
2-Butanol	Pass	ND	5000	16.8	56.0	Ethylene Oxide	Pass	ND	50	1.34	4.46
2-Butanone	Pass	ND	5000	9.30	31.0	n-Heptane	Pass	ND	5000	7.34	24.5
2-Ethoxyethanol	Pass	ND	160	12.4	41.4	n-Hexane	Pass	ND	290	2.12	7.06
2-Methylbutane	Pass	ND	5000	1.60	5.33	Isopropyl Acetate	Pass	ND	5000	10.1	33.6
2-Methylpentane	Pass	ND	290	1.90	6.33	Methanol	Pass	ND	3000	7.22	24.1
2-Propanol (IPA)	Pass	ND	5000	23.6	76.5	Methylpropane	Pass	ND	5000	1.92	6.41
2,2-Dimethylbutane	Pass	ND	290	3.55	11.8	N,N-Dimethylacetamide	Pass	ND	1090	13.5	44.9
2,3-Dimethylbutane	Pass	ND	290	1.54	5.15	N,N-Dimethylformamide	Pass	ND	880	18.2	60.8
3-Methylpentane	Pass	ND	290	1.96	6.55	n-Pentane	Pass	ND	5000	1.69	5.63
Acetone	Pass	ND	5000	37.2	124	Propane	Pass	ND	5000	1.91	6.37
Acetonitrile	Pass	ND	410	15.1	45.2	Pyridine	Pass	ND	200	11.1	37.1
Benzene	Pass	ND	2	0.339	1.13	Sulfolane	Pass	ND	160	6.71	22.4
n-Butane	Pass	ND	5000	1.52	5.08	Tetrahydrofuran	Pass	ND	720	7.85	26.2
Cumene	Pass	ND	70	6.61	22.0	Toluene	Pass	ND	890	17.5	58.4
Cyclohexane	Pass	ND	3880	4.04	13.5	Xylenes	Pass	ND	2170	24.2	80.5
Dichloromethane	Pass	ND	600	1.70	5.68						

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