

# CERTIFICATE OF ANALYSIS

Sample Name: Batch #930102  
Steep Hill ID: AR72106  
Batch ID:  
State ID:  
Sample Type: Capsule  
Date Received: 8/23/2019  
Date Reported: 8/28/2019  
Pkg. Mass: 16.9954 g  
# of Servings:  
Capsule Mass: 0.5664 g



Customer: Kat's Naturals  
5876 SR 28  
Dunlap, TN 37327  
LIC.# Hemp - Kat's Naturals

**Cannabinoid Results – Standard Potency** 8/28/2019  
Standard potency analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; SOP-068-AR)

Analyte	%	mg/g	mg/pkg	mg/capsule	LOD mg/g	LOQ mg/g
CBD	4.0	40	680	23	0.039	0.131
CBDA	ND	ND	ND	ND	0.039	0.128
THC	ND	ND	ND	ND	0.043	0.145
THCA	ND	ND	ND	ND	0.0185	0.062
Total	4.0	40	680	23		

Total THC	Total CBD
Not Detected	4.0 %
Not Detected	40 mg/g
Not Detected	680 mg/pkg
Not Detected	23 mg/capsule

**Cannabinoid Results – Extended Cannabinoids** NT

Extended cannabinoid analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; SOP-068-AR)

Analyte	%	mg/g	mg/pkg	mg/capsule	LOD mg/g	LOQ mg/g
CBC	NT	NT	NT	NT	NT	NT
CBD	NT	NT	NT	NT	NT	NT
CBDA	NT	NT	NT	NT	NT	NT
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	NT	NT	NT	NT	NT	NT
Δ8-THC	NT	NT	NT	NT	NT	NT
THCA	NT	NT	NT	NT	NT	NT
THCV	NT	NT	NT	NT	NT	NT
Total	NT	NT	NT	NT	NT	NT

**Moisture Results** NT

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

Analyte	%
Moisture	NT

**Water Activity Results** NT

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

Analyte	Pass/Fail	Aw	Limit
Water Activity		NT	NT

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



Brandon Thornton  
Pharm D. Co-Owner & CEO  
Date: 8/28/2019

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**Residual Pesticides Results**

NT

 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	NT	NT	NT	NT	NT	Imazail	NT	NT	NT	NT	NT
Acephate	NT	NT	NT	NT	NT	Imidacloprid	NT	NT	NT	NT	NT
Acequinocyl	NT	NT	NT	NT	NT	Kresoxim-methyl	NT	NT	NT	NT	NT
Acetamiprid	NT	NT	NT	NT	NT	Malathion	NT	NT	NT	NT	NT
Aldicarb	NT	NT	NT	NT	NT	Metalaxyl	NT	NT	NT	NT	NT
Azoxystrobin	NT	NT	NT	NT	NT	Methiocarb	NT	NT	NT	NT	NT
Bifenazate	NT	NT	NT	NT	NT	Methomyl	NT	NT	NT	NT	NT
Bifenthrin	NT	NT	NT	NT	NT	Methyl Parathion	NT	NT	NT	NT	NT
Boscalid	NT	NT	NT	NT	NT	MGK-264	NT	NT	NT	NT	NT
Carbaryl	NT	NT	NT	NT	NT	Myclobutanil	NT	NT	NT	NT	NT
Carbofuran	NT	NT	NT	NT	NT	Naled	NT	NT	NT	NT	NT
Chlorantraniliprole	NT	NT	NT	NT	NT	Oxamyl	NT	NT	NT	NT	NT
Chlorfenapyr	NT	NT	NT	NT	NT	Paclobutrazol	NT	NT	NT	NT	NT
Chlorpyrifos	NT	NT	NT	NT	NT	Permethrins	NT	NT	NT	NT	NT
Clofentezine	NT	NT	NT	NT	NT	Phosmet	NT	NT	NT	NT	NT
Cyfluthrin	NT	NT	NT	NT	NT	Piperonyl Butoxide	NT	NT	NT	NT	NT
Cypermethrin	NT	NT	NT	NT	NT	Prallethrin	NT	NT	NT	NT	NT
Daminozide	NT	NT	NT	NT	NT	Propiconazole	NT	NT	NT	NT	NT
Diazinon	NT	NT	NT	NT	NT	Propoxur	NT	NT	NT	NT	NT
DDVP (Dichlorvos)	NT	NT	NT	NT	NT	Pyrethrins	NT	NT	NT	NT	NT
Dimethoate	NT	NT	NT	NT	NT	Pyridaben	NT	NT	NT	NT	NT
Ethoprophos	NT	NT	NT	NT	NT	Spinosad	NT	NT	NT	NT	NT
Etofenprox	NT	NT	NT	NT	NT	Spiromesifen	NT	NT	NT	NT	NT
Etoxazole	NT	NT	NT	NT	NT	Spirotetramat	NT	NT	NT	NT	NT
Fenoxycarb	NT	NT	NT	NT	NT	Spiroxamine	NT	NT	NT	NT	NT
Fenpyroximate	NT	NT	NT	NT	NT	Tebuconazole	NT	NT	NT	NT	NT
Fipronil	NT	NT	NT	NT	NT	Thiacloprid	NT	NT	NT	NT	NT
Fonicamid	NT	NT	NT	NT	NT	Thiamethoxam	NT	NT	NT	NT	NT
Fludioxonil	NT	NT	NT	NT	NT	Trifloxystrobin	NT	NT	NT	NT	NT
Hexythiazox	NT	NT	NT	NT	NT						

**Microbial Impurities Results**

NT

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

Analyte	Pass/Fail	Result	Limit	LOQ
Coliform	NT	NT	NT	NT
General E. coli	NT	NT	NT	NT

**Heavy Metals Results**

Pass

8/28/2019

 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	ND	200	1.52	5.1
Cadmium	Pass	ND	200	0.50	1.65
Lead	Pass	ND	500	1.32	4.4
Mercury	Pass	3.7	100	0.81	2.7

**Terpenoid Results - Standard Terpenes**

NT

Standard terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS; SOP-069-AR)

Analyte	%	mg/g	LOD mg/g	LOQ mg/g
Caryophyllene Oxide	NT	NT	NT	NT
β-Caryophyllene	NT	NT	NT	NT
α-Humulene	NT	NT	NT	NT
Limonene	NT	NT	NT	NT
Linalool	NT	NT	NT	NT
β-Myrcene	NT	NT	NT	NT
α-Pinene	NT	NT	NT	NT
β-Pinene	NT	NT	NT	NT
Terpinolene	NT	NT	NT	NT
Total	NT	NT	NT	NT



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 Pharm D. Co-Owner & CEO  
 Date: 8/28/2019

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**Terpenoid Results - Extended Terpenes**

NT

Extended terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS; SOP-069-AR)

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	NT	NT	NT	NT
endo-Borneol	NT	NT	NT	NT	Menthol	NT	NT	NT	NT
Camphene	NT	NT	NT	NT	β-Myrcene	NT	NT	NT	NT
Camphor	NT	NT	NT	NT	Nerol	NT	NT	NT	NT
3-Carene	NT	NT	NT	NT	cis-Nerolidol	NT	NT	NT	NT
Caryophyllene Oxide	NT	NT	NT	NT	trans-Nerolidol	NT	NT	NT	NT
β-Caryophyllene	NT	NT	NT	NT	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	NT	NT	NT	NT
β-Farnesene	NT	NT	NT	NT	β-Pinene	NT	NT	NT	NT
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	NT	NT	NT	NT	Terpineol	NT	NT	NT	NT
Isoborneol	NT	NT	NT	NT	Terpinolene	NT	NT	NT	NT
Isopulegol	NT	NT	NT	NT	Valencene	NT	NT	NT	NT
Limonene	NT	NT	NT	NT	Total	NT	NT	NT	NT

**Residual Solvents Results**

NT

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		NT	NT	NT	NT	Dimethyl Sulfoxide		NT	NT	NT	NT
1-Pentanol		NT	NT	NT	NT	Ethanol		NT	NT	NT	NT
1-Propanol		NT	NT	NT	NT	Ethyl Acetate		NT	NT	NT	NT
1,2-Dimethoxyethane		NT	NT	NT	NT	Ethyl Ether		NT	NT	NT	NT
1,4-Dioxane		NT	NT	NT	NT	Ethylene Glycol		NT	NT	NT	NT
2-Butanol		NT	NT	NT	NT	Ethylene Oxide		NT	NT	NT	NT
2-Butanone		NT	NT	NT	NT	Heptane		NT	NT	NT	NT
2-Ethoxyethanol		NT	NT	NT	NT	n-Hexane		NT	NT	NT	NT
2-Methylbutane		NT	NT	NT	NT	Isopropyl Acetate		NT	NT	NT	NT
2-Methylpentane		NT	NT	NT	NT	Methanol		NT	NT	NT	NT
2-Propanol (IPA)		NT	NT	NT	NT	Methylpropane		NT	NT	NT	NT
2,2-Dimethylbutane		NT	NT	NT	NT	N,N-Dimethylacetamide		NT	NT	NT	NT
2,3-Dimethylbutane		NT	NT	NT	NT	N,N-Dimethylformamide		NT	NT	NT	NT
3-Methylpentane		NT	NT	NT	NT	Pentane		NT	NT	NT	NT
Acetone		NT	NT	NT	NT	Propane		NT	NT	NT	NT
Acetonitrile		NT	NT	NT	NT	Pyridine		NT	NT	NT	NT
Benzene		NT	NT	NT	NT	Sulfolane		NT	NT	NT	NT
Butane		NT	NT	NT	NT	Tetrahydrofuran		NT	NT	NT	NT
Cumene		NT	NT	NT	NT	Toluene		NT	NT	NT	NT
Cyclohexane		NT	NT	NT	NT	Xylenes		NT	NT	NT	NT
Dichloromethane		NT	NT	NT	NT						



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