

High CBN Sleep Pen

FARM BILL
COMPLIANTSAMPLE ID
169972SAMPLE NAME
High CBN Sleep PenMATRIX
Inhalable ConcentrateCOLLECTED, RECEIVED
02/03/2020 16:11, 02/03/2020 16:11CULTIVATOR INFO
Lift Brands North AmericaTOTAL
CBD

51.88 %

TOTAL
THC

ND

TOTAL
CANNABINOIDS

59.70 %

TOTAL
TERPENES

3.65 %

Chemical Residue

No Analytes Detected



Chemical Residue GC

No Analytes Detected



Residual Solvent

Pentane: 74.47 ug/g, Methanol: 2.864 ug/g, Isopropyl Alcohol: 2.014 ug/g, and 1 more analytes detected



Microbial qPCR

No Analytes Detected



Heavy Metals

Lead: <LLOQ, Mercury: <LLOQ



Mycotoxins

No Analytes Detected



Vitamin E Acetate

No Analytes Detected



Indicates that the hemp product passes
some of the strictest testing standards available
for cannabis and hemp.





CANNABINOID ANALYSIS

TOTAL THC: ND
 TOTAL CBD: 518.8 mg/g (51.88 %)
 TOTAL CANNABINOIDS: 597.0 mg/g (59.70 %)

UNIT OF MEASUREMENT: Milligrams per Gram(mg/g)

ANALYTE	RESULT	LOD	LLOQ
THCa	ND	0.1000	0.2000
D9THC	ND	0.1000	0.2000
D8THC	8.537 mg/g (0.8537 %)	0.1000	0.2000
THCv	ND	0.1000	0.2000
CBDa	ND	0.1000	0.2000
CBD	518.8 mg/g (51.88 %)	0.1000	0.2000

ANALYTE	RESULT	LOD	LLOQ
CBDv	0.9642 mg/g (0.0964 %)	0.1000	0.2000
CBGa	ND	0.1000	0.2000
CBG	ND	0.1000	0.2000
CBN	68.77 mg/g (6.877 %)	0.1000	0.2000
CBC	ND	0.1000	0.2000

ADDITIONAL INFORMATION

Method: SOP-TECH-001
 Instrument: UPLC-DAD

Sample Prepped 02/13/2020 08:01
 Sample Analyzed 02/13/2020 09:40

Sample Approved 02/14/2020 14:34



TERPENE ANALYSIS

UNIT OF MEASUREMENT: Milligrams per Gram(mg/g)

ANALYTE	RESULT	LOD	LLOQ
3-Carene	ND	0.0100	0.0200
Alpha cedrene	ND	0.0100	0.0200
Alpha pinene	0.4268 mg/g (0.0427 %)	0.0100	0.0200
Alpha terpineol	0.1489 mg/g (0.0149 %)	0.0100	0.0200
Beta caryophyllene	0.9324 mg/g (0.0932 %)	0.0100	0.0200
Beta pinene	0.6354 mg/g (0.0635 %)	0.0100	0.0200
Borneol	ND	0.0100	0.0200
Camphor	ND	0.0100	0.0200
Cedrol	ND	0.0100	0.0200
Cis nerolidol	ND	0.0100	0.0200
Fenchol	ND	0.0100	0.0200
Gamma terpinene	0.1495 mg/g (0.0150 %)	0.0100	0.0200
Geranyl acetate	ND	0.0100	0.0200
Isoborneol	0.7547 mg/g (0.0755 %)	0.0100	0.0200
Limonene	1.244 mg/g (0.1244 %)	0.0100	0.0200
Menthol	26.84 mg/g (2.684 %)	0.0100	0.0200
P-mentha-1,5-diene	0.0218 mg/g (0.0022 %)	0.0100	0.0200
Sabinene	0.2279 mg/g (0.0228 %)	0.0100	0.0200
Trans beta ocimene	0.1153 mg/g (0.0115 %)	0.0100	0.0200
Trans nerolidol	ND	0.0100	0.0200

ANALYTE	RESULT	LOD	LLOQ
Alpha bisabolol	0.0301 mg/g (0.0030 %)	0.0100	0.0200
Alpha humulene	0.0503 mg/g (0.0050 %)	0.0100	0.0200
Alpha terpinene	0.0897 mg/g (0.0090 %)	0.0100	0.0200
Alpha terpinolene	0.0595 mg/g (0.0059 %)	0.0100	0.0200
Beta myrcene	0.0947 mg/g (0.0095 %)	0.0100	0.0200
Beta terpineol	ND	0.0100	0.0200
Camphene	0.0206 mg/g (0.0021 %)	0.0100	0.0200
Caryophyllene oxide	0.0308 mg/g (0.0031 %)	0.0100	0.0200
Cis beta ocimene	<LLOQ	0.0100	0.0200
Eucalyptol	2.991 mg/g (0.2991 %)	0.0100	0.0200
Fenchone	ND	0.0100	0.0200
Gamma terpineol	ND	0.0100	0.0200
Guaiol	ND	0.0100	0.0200
Isopulegol	0.6625 mg/g (0.0663 %)	0.0100	0.0200
Linalool	0.0842 mg/g (0.0084 %)	0.0100	0.0200
P-cymene	0.1308 mg/g (0.0131 %)	0.0100	0.0200
Pulegone	0.4836 mg/g (0.0484 %)	0.0100	0.0200
Sabinene hydrate	0.3165 mg/g (0.0317 %)	0.0100	0.0200
Trans geraniol	ND	0.0100	0.0200
Valencene	ND	0.0100	0.0200



ADDITIONAL INFORMATION

Method: SOP-TECH-027
Instrument: GC-MS-FID

Sample Prepped 02/12/2020 13:34
Sample Analyzed 02/12/2020 13:36

Sample Approved 02/13/2020 17:16



CHEMICAL RESIDUE ANALYSIS

UNIT OF MEASUREMENT: Micrograms per Gram(ug/g)

ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL	ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL
Abamectin	ND	0.0200	0.0400	0.1000	Acephate	ND	0.0200	0.0400	0.1000
Acequinocyl	ND	0.0200	0.0400	0.1000	Acetamiprid	ND	0.0200	0.0400	0.1000
Aldicarb	ND	0.0200	0.0400	0.0	Azoxystrobin	ND	0.0200	0.0400	0.2000
Bifenazate	ND	0.0200	0.0400	0.1000	Bifenthrin	ND	0.0200	0.0400	3.000
Boscalid	ND	0.0200	0.0400	0.1000	Carbaryl	ND	0.0200	0.0400	0.5000
Carbofuran	ND	0.0200	0.0400	0.0	Chlorantraniliprole	ND	0.0200	0.0400	10.00
Chlorfenapyr	ND	0.0400	0.1000	0.0	Chlorpyrifos	ND	0.0200	0.0400	0.0
Clofentezine	ND	0.0200	0.0400	0.1000	Coumaphos	ND	0.0200	0.0400	0.0
Cyfluthrin	ND	0.4000	1.000	2.000	Cypermethrin	ND	0.4000	1.000	1.000
Daminozide	ND	0.0200	0.0400	0.0	Diazinon	ND	0.0200	0.0400	0.1000
Dichlorvos	ND	0.0200	0.0400	0.0	Dimethoate	ND	0.0200	0.0400	0.0
Dimethomorph	ND	0.0196	0.0392	2.000	Ethoprophos	ND	0.0200	0.0400	0.0
Etofenprox	ND	0.0200	0.0400	0.0	Etoazole	ND	0.0200	0.0400	0.1000
Fenhexamid	ND	0.0200	0.0400	0.1000	Fenoxycarb	ND	0.0200	0.0400	0.0
Fenpyroximate	ND	0.0200	0.0400	0.1000	Fipronil	ND	0.0400	0.1000	0.0
Flonicamid	ND	0.0200	0.0400	0.1000	Fludioxonil	ND	0.0200	0.0400	0.1000
Hexythiazox	ND	0.0200	0.0400	0.1000	Imazalil	ND	0.0200	0.0400	0.0
Imidacloprid	ND	0.0200	0.0400	5.000	KresoximMethyl	ND	0.0200	0.0400	0.1000
Malathion	ND	0.0200	0.0400	0.5000	Metalaxyl	ND	0.0200	0.0400	2.000
Methiocarb	ND	0.0200	0.0400	0.0	Methomyl	ND	0.0200	0.0400	1.000
Mevinphos	ND	0.0200	0.0400	0.0	Myclobutanil	ND	0.0200	0.0400	0.1000
Naled	ND	0.0200	0.0400	0.1000	Oxamyl	ND	0.0200	0.0400	0.5000
Paclobutrazol	ND	0.0200	0.0400	0.0	Permethrins	ND	0.0396	0.0990	0.5000
Phosmet	ND	0.0200	0.0400	0.1000	PiperonylButoxide	ND	0.0200	0.0400	3.000
Prallethrin	ND	0.0200	0.0400	0.1000	Propiconazole	ND	0.0200	0.0400	0.1000
Propoxur	ND	0.0200	0.0400	0.0	Pyrethrins	ND	0.0184	0.0368	0.5000
Pyridaben	ND	0.0200	0.0400	0.1000	Spinetoram	ND	0.0200	0.0400	0.1000
Spinosad	ND	0.0283	0.0649	0.1000	Spiromesifen	ND	0.0200	0.0400	0.1000
Spirotetramat	ND	0.0200	0.0400	0.1000	Spiroxamine	ND	0.0200	0.0400	0.0
Tebuconazole	ND	0.0200	0.0400	0.1000	Thiacloprid	ND	0.0200	0.0400	0.0
Thiamethoxam	ND	0.0200	0.0400	5.000	Trifloxystrobin	ND	0.0200	0.0400	0.1000

ADDITIONAL INFORMATION

Method: SOP-TECH-002
Instrument: LC-MS/MS

Sample Prepped 02/13/2020 08:01
Sample Analyzed 02/13/2020 09:40

Sample Approved 02/14/2020 12:32



CHEMICAL RESIDUE GC ANALYSIS

UNIT OF MEASUREMENT: Micrograms per Gram(ug/g)

ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL	ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL
Captan	ND	0.1000	0.2000	0.7000	Chlordane	ND	0.0400	0.1000	0.0
MethylParathion	ND	0.0400	0.1000	0.0	PCNB	ND	0.0200	0.0400	0.1000

ADDITIONAL INFORMATION

Method: SOP-TECH-010
Instrument: GC-MS/MS

Sample Prepped 02/13/2020 08:01
Sample Analyzed 02/13/2020 09:40

Sample Approved 02/14/2020 11:52

RESIDUAL SOLVENT ANALYSIS

UNIT OF MEASUREMENT: Micrograms per Gram(ug/g)

ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL	ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL
Acetone	ND	2.500	5.000	5000	Acetonitrile	ND	0.5000	1.000	410.0
Benzene	ND	0.5000	1.000	1.000	Butane	ND	24.00	48.00	5000
Chloroform	ND	0.5000	1.000	1.000	Ethanol	ND	1.000	2.500	5000
Ethyl Acetate	ND	2.500	5.000	5000	Ethyl Ether	ND	10.00	50.00	5000
Ethylene oxide	ND	0.5000	1.000	1.000	Heptane	ND	0.2500	0.5000	5000
Hexane	ND	0.2500	0.5000	290.0	Isopropyl Alcohol	2.014 ug/g	0.2500	0.5000	5000
Methanol	2.864 ug/g	1.000	2.500	3000	Methylene chloride	ND	0.2500	0.5000	1.000
Pentane	74.47 ug/g	1.000	2.500	5000	Propane	ND	5.000	10.00	5000
Toluene	0.6666 ug/g	0.2500	0.5000	890.0	Xylenes	ND	0.5000	1.000	2170
Trichloroethylene	ND	0.2500	0.5000	1.000	1,2-Dichloroethane	ND	0.2500	0.5000	1.000

ADDITIONAL INFORMATION

Method: SOP-TECH-021
Instrument: HS-GC-MS/FID

Sample Prepped 02/12/2020 18:00
Sample Analyzed 02/12/2020 18:01

Sample Approved 02/13/2020 16:49

MICROBIAL qPCR ANALYSIS

UNIT OF MEASUREMENT: Cycle Threshold (Ct)

ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL	ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL
A.fumigatus	ND	33.00	0.0	0.0	A. flavus	ND	33.00	0.0	0.0
A. niger	ND	33.00	0.0	0.0	A. terreus	ND	33.00	0.0	0.0
STEC	ND	33.00	0.0	0.0	Salmonella spp	ND	33.00	0.0	0.0

ADDITIONAL INFORMATION

Method: SOP-TECH-016, SOP-TECH-022
Instrument: qPCR

Sample Prepped 02/13/2020 05:52
Sample Analyzed 02/13/2020 06:29

Sample Approved 02/13/2020 14:46



HEAVY METALS ANALYSIS

UNIT OF MEASUREMENT: Micrograms per Gram(ug/g)

ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL	ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL
Arsenic	ND	0.0200	0.0500	0.2000	Cadmium	ND	0.0050	0.0500	0.2000
Lead	<LLOQ	0.0100	0.0500	0.5000	Mercury	<LLOQ	0.0030	0.0500	0.1000

ADDITIONAL INFORMATION

Method: SOP-TECH-013
Instrument: ICP-MS

Sample Prepped 02/13/2020 13:16
Sample Analyzed 02/13/2020 13:18

Sample Approved 02/14/2020 13:09

MYCOTOXINS ANALYSIS

UNIT OF MEASUREMENT: Micrograms per Kilogram(ug/kg)

ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL	ANALYTE	RESULT	LOD	LLOQ	ACTION LEVEL
Aflatoxin B1	ND	1.000	2.000		Aflatoxin B2	ND	2.000	5.000	
Aflatoxin G1	ND	2.000	5.000		Aflatoxin G2	ND	2.000	5.000	
Total Aflatoxins	ND	10.00	14.00	20.00	Ochratoxin A	ND	1.000	2.000	20.00

ADDITIONAL INFORMATION

Method: SOP-TECH-020
Instrument: LC-MS/MS

Sample Prepped 02/12/2020 16:24
Sample Analyzed 02/12/2020 16:24

Sample Approved 02/13/2020 10:26

VITAMIN E ACETATE ANALYSIS

UNIT OF MEASUREMENT: Micrograms per Gram(ug/g)

ANALYTE	RESULT	LOD	LLOQ	ANALYTE	RESULT	LOD	LLOQ
Vitamin E Acetate	ND	10.00	20.00				

ADDITIONAL INFORMATION

Method: SOP-TECH-XX
Instrument:

Sample Prepped 02/13/2020 14:06
Sample Analyzed 02/13/2020 14:11

Sample Approved 02/14/2020 14:14



This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. This report provides technical results for a specific sample and the report shall not be altered, modified, supplemented, or abstracted in any manner. Any violation of these conditions renders the report and its results void.

All LQC samples required by state regulations were performed and met the acceptance criteria.

The Vitamin E Acetate test is not ISO accredited.

THIS COA WAS REVIEWED AND APPROVED ON 02/14/2020, BY THE FOLLOWING:



Cody Sheppard, PhD
Co-Scientific Director



Kathryn Riker
Quality Control Manager

