10427 Cogdill Road, Suite 500
Knoxville, TN, 37932, US
DEA Number: RK0595249

Kaycha Labs
Kratom Cookie
N/A
Matrix: Derivative

Certificate of Analysis

Sample:KN20524013-001
Harvest/Lot ID: 0520KRAT
Batch#: 1002
Seed to Sale# N/A
Batch Date: 05/20/22
Sample Size Received: 90 gram
Total Weight/Volume: N/A
Retail Product Size: 9 gram
ordered : 05/20/22
sampled : 05/20/22
Completed: 06/01/22
Sampling Method: SOP Client Method

Jun 01, 2022 | Nava Leaf
2232 Dell Range Blvd.
Cheyenne, WY, 82009, US

PASSED

PRODUCT IMAGE

SAFETY RESULTS

Pesticides	Heavy Metals	Microbials	Mycotoxins	Residuals Solvents	Filth	Water Activity	Moisture
PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	NOT TESTED	NOT TESTED

MISC.

Terpenes
NOT TESTED

Kratom — PASSED

Analyte	LOD (%)	LOD(%)	Result (%)	LOD (mg/g)	Result (mg/g)	Pass/Fail	Action Level
7-HYDROXYMITRAGYNINE	0.001	ND	0.01	ND		PASS	2
CORYNOXINE	0.001	ND	0.01	ND		TESTED	
ISORHYNCHOPHYLLINE	0.001	ND	0.01	ND		TESTED	
MITRAGYNINE	0.001	0.1779	0.01	1.779		TESTED	
PAYNANTHEINE	0.001	0.0319	0.01	0.319		TESTED	
SPECIOCILIATINE	0.001	0.02	0.01	0.2002		TESTED	
SPECIOGYNINE	0.001	0.0216	0.01	0.216		TESTED	
TOTAL ALKALOIDS	0.001	0.2514	0.01	2.514		TESTED	

Total Alkaloids
0.251%

Analyzed by	Weight	Extraction date	Extracted By
12	0.2272g	05/24/22 18:07:15	12

Analysis Method -SOP.T.40.068
Analytical Batch -KN002446KRA | Reviewed On - 05/25/22 17:17:03
Instrument Used : E-SHI-125 Kratom
Running On :
Batch Date : 05/23/22 19:04:34

Sue Ferguson
Lab Director
State License # n/a
ISO Accreditation # 17025:2017

Signature

06/01/22
Signed On

10427 Cogdill Road, Suite 500
Knoxville, TN, 37932, US
DEA Number: RK0595249

Kaycha Labs

Kratom Cookie
N/A
Matrix : Derivative

Certificate of Analysis

PASSED

Nava Leaf
2232 Dell Range Blvd.
Cheyenne, WY, 82009, US

Telephone: (954) 778-3071
Email: info@virag.bio

Sample : KN20524013-001
Harvest/Lot ID: 0520KRAT
Batch# : 1002
Sampled : 05/20/22
Ordered : 05/20/22

Sample Size Received : 90 gram
Total Weight/Volume : N/A
Completed : 06/01/22 **Expires:** 06/01/23
Sample Method : SOP Client Method

Pesticides

PASSED

Pesticide	LOD	Units	Action Level	Pass/Fail	Result
ABAMECTIN B1A	0.01	ppm	0.3	PASS	ND
ACEPHATE	0.01	ppm	3	PASS	ND
ACEQUINOCYL	0.01	ppm	2	PASS	ND
ACETAMIPRID	0.01	ppm	3	PASS	ND
ALDICARB	0.01	ppm	0.1	PASS	ND
AZOXYSTROBIN	0.01	ppm	3	PASS	ND
BIFENAZATE	0.01	ppm	3	PASS	ND
BIFENTHRIN	0.01	ppm	0.5	PASS	ND
BOSCALID	0.01	ppm	3	PASS	ND
CARBARYL	0.01	ppm	0.5	PASS	ND
CARBOFURAN	0.01	ppm	0.1	PASS	ND
CHLORANTRANILIPROLE	0.01	ppm	3	PASS	ND
CHLORMEQUAT CHLORIDE	0.01	ppm	3	PASS	ND
CHLORPYRIFOS	0.01	ppm	0.1	PASS	ND
CLOFENTEZINE	0.01	ppm	0.5	PASS	ND
COUMAPHOS	0.01	ppm	0.1	PASS	ND
CYPERMETHRIN	0.01	ppm	1	PASS	ND
DAMINOZIDE	0.01	ppm	0.1	PASS	ND
DIAZANON	0.01	ppm	0.2	PASS	ND
DICHLORVOS	0.01	ppm	0.1	PASS	ND
DIMETHOATE	0.01	ppm	0.1	PASS	ND
DIMETHOMORPH	0.01	ppm	3	PASS	ND
ETHOPROPHOS	0.01	ppm	0.1	PASS	ND
ETOFENPROX	0.01	ppm	0.1	PASS	ND
ETOXAZOLE	0.01	ppm	1.5	PASS	ND
FENHEXAMID	0.01	ppm	3	PASS	ND
FENOXYCARB	0.01	ppm	0.1	PASS	ND
FENPYROXIMATE	0.01	ppm	2	PASS	ND
FIPRONIL	0.01	ppm	0.1	PASS	ND
FLONICAMID	0.01	ppm	2	PASS	ND
FLUDIOXONIL	0.01	ppm	3	PASS	ND
HEXYTHIAZOX	0.01	ppm	2	PASS	ND
IMAZALIL	0.01	ppm	0.1	PASS	ND
IMIDACLOPRID	0.01	ppm	3	PASS	ND
KRESOXIM-METHYL	0.01	ppm	1	PASS	ND
MALATHION	0.01	ppm	2	PASS	ND
METALAXYL	0.01	ppm	3	PASS	ND
METHIOCARB	0.01	ppm	0.1	PASS	ND
METHOMYL	0.01	ppm	0.1	PASS	ND
MEVINPHOS	0.01	ppm	0.1	PASS	ND
MYCLOBUTANIL	0.01	ppm	3	PASS	ND
NALED	0.01	ppm	0.5	PASS	ND
OXAMYL	0.01	ppm	0.5	PASS	ND
PACLOBUTRAZOL	0.01	ppm	0.1	PASS	ND
PERMETHRINS	0.01	ppm	1	PASS	ND
PHOSMET	0.01	ppm	0.2	PASS	ND
PIPERONYL BUTOXIDE	0.01	ppm	3	PASS	ND
PRALLETHRIN	0.01	ppm	0.4	PASS	ND
PROPICONAZOLE	0.01	ppm	1	PASS	ND
PROPOXUR	0.01	ppm	0.1	PASS	ND
PYRETHRINS	0.01	ppm	1	PASS	ND
PYRIDABEN	0.01	ppm	3	PASS	ND
SPINETORAM	0.01	ppm	3	PASS	ND
SPIROMESIFEN	0.01	ppm	3	PASS	ND
SPIROTETRAMAT	0.01	ppm	3	PASS	ND
SPIROXAMINE	0.01	ppm	0.1	PASS	ND
TEBUCONAZOLE	0.01	ppm	1	PASS	ND
THIACLOPRID	0.01	ppm	0.1	PASS	ND
THIAMETHOXAM	0.01	ppm	1	PASS	ND
TOTAL SPINOSAD	0.01	ppm	3	PASS	ND
TRIFLOXYSTROBIN	0.01	ppm	3	PASS	ND

Pesticides

PASSED

Analysis Method - SOP.T.30.060, SOP.T.40.060
Analytical Batch - KN002490PES
Instrument Used : E-SHI-125 Pesticides
Running on :

Reviewed On : 06/01/22 20:20:24
Batch Date : 06/01/22 19:43:33

Analyzed by:	Weight:	Extraction date:	Extracted by:
1, 12	1.024g	NA	NA

Dilution : 1
Reagent :
Consumables :

Pesticide analysis is performed using LC-MSMS which can quantify down to below single digit ppb concentrations for regulated Pesticides. Currently we analyze for 61 Pesticides. (Methods: SOP.T.30.065 Sample Preparation for Pesticides Analysis via LCMSMS and SOP.T40.065 Procedure for Pesticide Quantification Using LCMSMS). *Based on FL action limits.

Sue Ferguson
Lab Director

State License # n/a
ISO Accreditation # 17025:2017

Signature

06/01/22
Signed On

10427 Cogdill Road, Suite 500
Knoxville, TN, 37932, US
DEA Number: RK0595249

Kaycha Labs
Kratom Cookie
N/A
Matrix : Derivative

Certificate of Analysis

PASSED

Nava Leaf
2232 Dell Range Blvd.
Cheyenne, WY, 82009, US

Telephone: (954) 778-3071
Email: info@virag.bio

Sample : KN20524013-001
Harvest/Lot ID: 0520KRAT
Batch# : 1002
Sampled : 05/20/22
Odered : 05/20/22

Sample Size Received : 90 gram
Total Weight/Volume : N/A
Completed : 06/01/22 **Expires:** 06/01/23
Sample Method : SOP Client Method

Residual Solvents

PASSED

Solvents	LOD	Units	Action Level	Pass/Fail	Result
PROPANE	500	ppm	2100	PASS	ND
BUTANES (N-BUTANE)	500	ppm	2000	PASS	ND
METHANOL	25	ppm	3000	PASS	ND
ETHYLENE OXIDE	0.5	ppm	5	PASS	ND
PENTANES (N-PENTANE)	75	ppm	5000	PASS	ND
ETHANOL	500	ppm	5000	PASS	ND
ETHYL ETHER	50	ppm	5000	PASS	ND
1,1-DICHLOROETHENE	0.8	ppm	8	PASS	ND
ACETONE	75	ppm	5000	PASS	ND
2-PROPANOL	50	ppm	500	PASS	ND
ACETONITRILE	6	ppm	410	PASS	ND
DICHLOROMETHANE	12.5	ppm	600	PASS	ND
N-HEXANE	25	ppm	290	PASS	ND
ETHYL ACETATE	40	ppm	5000	PASS	ND
CHLOROFORM	0.2	ppm	60	PASS	ND
BENZENE	0.1	ppm	2	PASS	ND
1,2-DICHLOROETHANE	0.2	ppm	5	PASS	ND
HEPTANE	500	ppm	5000	PASS	ND
TRICHLOROETHYLENE	2.5	ppm	80	PASS	ND
TOLUENE	15	ppm	890	PASS	ND
TOTAL XYLENES - M, P & O - DIMETHYLBENZENE	15	ppm	2170	PASS	ND

Solvents

PASSED

Analyzed by	Weight	Extraction date	Extracted By
1, 138, 12	0.02659g	05/26/22 17:21:13	138

Analysis Method -SOP.T.40.032
Analytical Batch -KN002463SOL
Instrument Used : E-SHI-106 Residual Solvents
Running On :
Batch Date : 05/26/22 13:01:22

Reviewed On - 06/01/22 16:20:43

Dilution : 1
Reagent :
Consumables : R2017.120; G201.126

Residual solvents analysis is performed using GC-MS which can detect below single digit ppm concentrations. Currently we analyze for 22 residual solvents. (Method: SOP.T.40.032 Residual Solvents Analysis via GC-MS). *Based on FL action limits.

Sue Ferguson
Lab Director

State License # n/a
ISO Accreditation # 17025:2017

Signature

06/01/22
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10427 Cogdill Road, Suite 500
Knoxville, TN, 37932, US
DEA Number: RK0595249

Kaycha Labs

Kratom Cookie
N/A
Matrix : Derivative

Certificate of Analysis

PASSED

Nava Leaf
2232 Dell Range Blvd.
Cheyenne, WY, 82009, US

Telephone: (954) 778-3071
Email: info@virag.bio

Sample : KN20524013-001
Harvest/Lot ID: 0520KRAT
Batch# : 1002
Sampled : 05/20/22
Odered : 05/20/22

Sample Size Received : 90 gram
Total Weight/Volume : N/A
Completed : 06/01/22 **Expires:** 06/01/23
Sample Method : SOP Client Method

Microbial — PASSED

Analyte	LOD	Units	Result	Pass / Fail	Action Level
LISTERIA MONOCYTOGENE	2000	RFU	ND	PASS	2000
ESCHERICHIA COLI SHIGELLA SPP	1726	RFU	ND	PASS	1726
SALMONELLA SPECIFIC GENE	10000	RFU	ND	PASS	10000
ASPERGILLUS FLAVUS	10000	RFU	ND	PASS	10000
ASPERGILLUS FUMIGATUS	10000	RFU	ND	PASS	10000
ASPERGILLUS NIGER	10000	RFU	ND	PASS	10000
ASPERGILLUS TERREUS	10000	RFU	ND	PASS	10000

Analysis Method - SOP.T.40.043
Analytical Batch - KN002448MIC
Instrument Used : Micro E-HEW-069
Running on : 05/25/22 12:18:49

Reviewed On : 05/26/22 15:26:54
Batch Date : 05/24/22 10:25:55

Analyzed by:	Weight:	Extraction date:	Extracted by:
NA		NA	NA

Dilution : 1
Reagent : 042222.01; 031022.01; 122021.03
Consumables : 190215119C

Microbiological testing for Fungal and Bacterial Identification via Polymerase Chain Reaction (PCR) method consisting of sample DNA amplified via tandem Polymerase Chain Reaction (PCR) as a crude lysate which avoids purification. (Method SOP.T.40.043) If a pathogenic Escherichia Coli, Salmonella, Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, or Aspergillus terreus is detected in 1g of a sample, the sample fails the microbiological-impurity testing.

Mycotoxins — PASSED

Analyte	LOD	Units	Result	Pass / Fail	Action Level
AFLATOXIN G2	0.002	ppm	ND	PASS	0.02
AFLATOXIN G1	0.002	ppm	ND	PASS	0.02
AFLATOXIN B2	0.002	ppm	ND	PASS	0.02
AFLATOXIN B1	0.002	ppm	ND	PASS	0.02
OCHRATOXIN A+	0.002	ppm	ND	PASS	0.02
TOTAL MYCOTOXINS	0.002	ppm	ND	PASS	0.02

Analysis Method -SOP.T.30.060, SOP.T.40.060
Analytical Batch -KN002489MYC | Reviewed On - 06/01/22 17:25:47
Instrument Used : E-SHI-125 Mycotoxins
Running On : | Batch Date : 06/01/22 17:04:27

Analyzed by	Weight	Extraction date	Extracted By
1, 12	1.024g	NA	NA

Aflatoxins B1, B2, G1, G2, and Ochratoxins A testing using LC-MS. (Method: SOP.T.30.060 for Sample Preparation and SOP.T40.065 Procedure for Mycotoxins Quantification Using LCMSMS. LOQ 5.0 ppb). *Based on FL action limits.

Heavy Metals — PASSED

Metal	LOD	Units	Result	Pass / Fail	Action Level
ARSENIC-AS	0.02	ppm	ND	PASS	1.5
CADMIUM-CD	0.02	ppm	<0.1	PASS	0.5
MERCURY-HG	0.02	ppm	ND	PASS	3
LEAD-PB	0.02	ppm	<0.1	PASS	0.5

Analyzed by	Weight	Extraction date	Extracted By
1, 12	0.2625g	05/27/22 15:53:53	12

Analysis Method -SOP.T.40.050, SOP.T.30.052
Analytical Batch -KN002462HEA | Reviewed On - 05/27/22 17:24:50
Instrument Used : Metals ICP/MS
Running On : | Batch Date : 05/26/22 10:56:40

Dilution : 50
Reagent : 121621.02; 011022.R08; 032522.01; 040822.01; 020422.R07; 030422.R15; 011022.R07
Consumables : 108779-06-102921; CFT415500

Heavy Metals screening is performed using ICP-MS (Inductively Coupled Plasma – Mass Spectrometer) which can screen down to single digit ppb concentrations for regulated heavy metals using Method SOP.T.30.082 Sample Preparation for Heavy Metals Analysis via ICP-MS and SOP.T.40.082TN Heavy Metals Analysis via ICP-MS.

Sue Ferguson
Lab Director

State License # n/a
ISO Accreditation # 17025:2017

Signature

06/01/22
Signed On

10427 Cogdill Road, Suite 500
Knoxville, TN, 37932, US
DEA Number: RK0595249

Kaycha Labs

Kratom Cookie
N/A
Matrix : Derivative

Certificate of Analysis

PASSED

Nava Leaf
2232 Dell Range Blvd.
Cheyenne, WY, 82009, US

Telephone:(954) 778-3071
Email: info@virag.bio

Sample : KN20524013-001
Harvest/Lot ID: 0520KRAT
Batch# : 1002
Sampled : 05/20/22
Ordered : 05/20/22

Sample Size Received : 90 gram
Total Weight/Volume : N/A
Completed : 06/01/22 **Expires:** 06/01/23
Sample Method : SOP Client Method

Filth/Foreign Material — PASSED

Analyte	LOD	Units	Result	P/F	Action Level
Filth and Foreign Material	1	detect/g	ND	PASS	3

Analyzed By	Weight	Extraction date	Extracted By
1692	2.7861g	05/24/22	1692

Analysis Method -SOP.T.40.013 **Batch Date :** 05/24/22 10:31:07
Analytical Batch -KN002449FIL **Reviewed On -** 05/24/22 14:36:59
Instrument Used : E-AMS-138 Microscope
Running On :

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. A SW-2T13 Stereo Microscope is use for inspection.

Sue Ferguson
Lab Director

State License # n/a
ISO Accreditation # 17025:2017

Signature

06/01/22
Signed On