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CERTIFICATE OF ANALYSIS

STATUS: RELEASED **REVISION**: 00
DATE: 11/21/2022

Analysis ID No. 225085
TDA License No. 2020002
ISO/IEC No. 1055838
Purchase Order: 20221387
Page No. Page 1 of 4

CUSTOMER INFORMATION	SAMPLE INFORMATION
Company Name:	**Submitted Sample Name:**
Kats Botanicals	Kratom Shot 60mL
Address:	**Submitted Sample Lot:**
619 Old Hickory Blvd, Old Hickory, TN 37138	101065
Phone Number:	**Submitted Sample Description:**
877-3019923	Brown Liquid in White Bottle; Stored at Rm Temp
Contact Name / Email:	**Submitted Sample Product Type / Matrix:**
NA	Kratom Extract / Beverage

ALKALOIDS ASSAY

Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
Mitragynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	0.150 w/w% 1.496 mg/g 1.668 mg/mL	Results Reported
Paynantheine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	0.031 w/w% 0.309 mg/g 0.344 mg/mL	Results Reported
Speciogynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	0.022 w/w% 0.221 mg/g 0.246 mg/mL	Results Reported
Speciociliatine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	0.023 w/w% 0.235 mg/g 0.262 mg/mL	Results Reported
7-OH-Mitragynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only * % of Total Alkaloids: NMT 2%	< 0.010 w/w%	PASS
Mitraphylline	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	< 0.010 w/w%	Results Reported
Isorhynchophylline	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	< 0.010 w/w%	Results Reported
Corynoxine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	< 0.010 w/w%	Results Reported
Total Alkaloids	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only *	0.226 w/w% 2.261 mg/g 2.521 mg/mL	Results Reported

MICROBIOLOGICAL ASSAY

Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
Total Aerobic Plate Count (TAPC)	Isolation Agar	10 CFU/gm	NMT 10,000 CFU/gm	< LOQ	PASS
Total Yeast & Mold (TYM)	Isolation Agar	10 CFU/gm	NMT 1,000 CFU/gm	< LOQ	PASS
Coliforms	Isolation Agar	10 CFU/gm	NMT 100 CFU/gm	< LOQ	PASS
Esherichia coli (E. coli)	Isolation Agar	1 CFU/10 gm	Absent in 10 gm	Absent	PASS
Salmonella	Isolation Agar	1 CFU/10 gm	Absent in 10 gm	Absent	PASS

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HEAVY METALS ASSAY					
Analysis	**Test Method**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Lead	USP <232> <233> by ICP-MS	10 ppb	NMT 1,000 ppb	< LOQ	PASS
Mercury	USP <232> <233> by ICP-MS	5 ppb	NMT 500 ppb	< LOQ	PASS
Arsenic	USP <232> <233> by ICP-MS	10 ppb	NMT 1500 ppb	< LOQ	PASS
Cadmium	USP <232> <233> by ICP-MS	10 ppb	NMT 300 ppb	< LOQ	PASS
Nickel	USP <232> <233> by ICP-MS	50 ppb	NMT 200,000 ppb	< LOQ	PASS

RESIDUAL SOLVENTS ASSAY					
Analysis	**Test Method**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
1,1-Dichloroethene	USP <467> by GC-MS	0.020 ppm	NMT 8 ppm	< LOQ	PASS
1,1,1-Trichloroethane	USP <467> by GC-MS	3.75 ppm	NMT 1,500 ppm	< LOQ	PASS
1,2-Dichloroethane	USP <467> by GC-MS	0.013 ppm	NMT 5 ppm	< LOQ	PASS
Benzene	USP <467> by GC-MS	0.005 ppm	NMT 2 ppm	< LOQ	PASS
Carbon tetrachloride	USP <467> by GC-MS	0.010 ppm	NMT 4 ppm	< LOQ	PASS
1,2-dichloroethene (E,Z)	USP <467> by GC-MS	4.675 ppm	NMT 1870 ppm	< LOQ	PASS
1,2-Dimethoxyethane	USP <467> by GC-MS	0.25 ppm	NMT 100 ppm	< LOQ	PASS
1,2,3,4-tetrahydronapthalene	USP <467> by GC-MS	0.25 ppm	NMT 100 ppm	< LOQ	PASS
1,4-Dioxane	USP <467> by GC-MS	0.95 ppm	NMT 380 ppm	< LOQ	PASS
2-Hexanone	USP <467> by GC-MS	0.125 ppm	NMT 50 ppm	< LOQ	PASS
4-methyl-2-pentanone	USP <467> by GC-MS	12.5 ppm	NMT 4,500 ppm	< LOQ	PASS
Acetonitrile	USP <467> by GC-MS	1.025 ppm	NMT 410 ppm	< LOQ	PASS
Chlorobenzene	USP <467> by GC-MS	0.9 ppm	NMT 360 ppm	< LOQ	PASS
Chloroform	USP <467> by GC-MS	0.15 ppm	NMT 60 ppm	< LOQ	PASS
Cumene	USP <467> by GC-MS	0.175 ppm	NMT 70 ppm	< LOQ	PASS
Cyclohexane	USP <467> by GC-MS	9.7 ppm	NMT 3,880 ppm	< LOQ	PASS
Dichloromethane	USP <467> by GC-MS	1.5 ppm	NMT 600 ppm	< LOQ	PASS
Ethylbenzene	USP <467> by GC-MS	5.425 ppm	NMT 2,170 ppm	< LOQ	PASS
Hexane, n-	USP <467> by GC-MS	0.725 ppm	NMT 290 ppm	< LOQ	PASS
Methanol	USP <467> by GC-MS	7.5 ppm	NMT 3,000 ppm	< LOQ	PASS

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RESIDUAL SOLVENTS ASSAY					
Analysis	**Test Method**	**LOQ**	**Specifications**	**Test Results**	**Pass / Fail**
Methylcyclohexane	USP <467> by GC-MS	2.95 ppm	NMT 1,180 ppm	< LOQ	PASS
Nitromethane	USP <467> by GC-MS	0.125 ppm	NMT 50 ppm	< LOQ	PASS
Pyridine	USP <467> by GC-MS	0.50 ppm	NMT 200 ppm	< LOQ	PASS
Tetrahydrofuran	USP <467> by GC-MS	1.8 ppm	NMT 720 ppm	< LOQ	PASS
Toluene	USP <467> by GC-MS	2.225 ppm	NMT 890 ppm	< LOQ	PASS
Trichloroethene	USP <467> by GC-MS	0.20 ppm	NMT 80 ppm	< LOQ	PASS
Xylene, m-	USP <467> by GC-MS	108.5 ppm	NMT 2,170 ppm	< LOQ	PASS
Xylene, o-	USP <467> by GC-MS	5.425 ppm	NMT 2,170 ppm	< LOQ	PASS
Xylene, p-	USP <467> by GC-MS	5.425 ppm	NMT 2,170 ppm	< LOQ	PASS
1-Butanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
1-Pentanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
1-Propanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
2-Butanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
2-Butanone	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
2-methyl-1-propanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
2-Propanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
3-methyl-1-butanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Acetone	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Anisole	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Butyl acetate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Ethanol	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Ethyl acetate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Ethyl ether	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Ethyl formate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Heptane, n-	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Isobutyl acetate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS

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CERTIFICATE OF ANALYSIS

STATUS: RELEASED **REVISION**: 00
DATE: 11/21/2022

RESIDUAL SOLVENTS ASSAY

Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
Isopropyl acetate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Methyl acetate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
N,N-Dimethylsulfoxide	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Pentane, n-	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Propyl acetate	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
t-Butyl Methyl Ether	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Butane, iso-	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Butane, n-	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Propane	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS

TESTING FACILITY INFORMATION	SAMPLE INFORMATION
Santé Laboratories 8201 East Riverside Drive, STE 650 Austin, Texas 78744 USA	**Santé Sample ID:** 225085 **Receipt Date:** 11/11/2022 / 01:00 PM CST / C. Ritchie **Receipt Condition:** Good **Analysis Start Date:** 11/14/2022

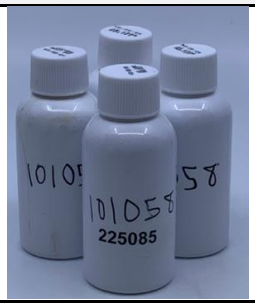
ADDITIONAL REPORT NOTES

The reported results presented in this document is only applicable to samples submitted to Santé Laboratories for testing and may not represent the entire lot and/or batch produced by the manufacturer. **Heavy metal specifications according to limits defined by Texas DSHS for consumable hemp. Nickel and Chromium specification according to oral drug products per USP <232>. Microbiological limits according to specifications defined by AHPA for botanical extracts. * Density: 1.115 g/mL.**
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VERSION HISTORY

Version	Effective Date	Summary of Changes
00	11/21/2022	Initial Release

PRODUCT SAMPLE / IMAGE



REVIEWED AND APPROVED BY

DocuSigned by:
Brian Sloat
1DA7685D65C740B...

Brian Sloat, Ph.D.
Chief Scientific Officer / Quality Manager
Santé Laboratories

21 November 2022 | 3:08:29 PM PST
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Date

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