



# CERTIFICATE OF ANALYSIS

STATUS: **RELEASED** REVISION: 00

DATE: 11/06/2021

Analysis ID No. 214015  
 TDA License No. 2020002  
 ISO/IEC No. 1055838  
 Purchase Order: 20210935  
 Page No. Page 1 of 5

CUSTOMER INFORMATION	SAMPLE INFORMATION
<b>Company Name:</b> Kats Botanicals	<b>Submitted Sample Name:</b> Kratom Shot 15ML
<b>Address:</b> 619 Old Hickory Blvd, Old Hickory, TN 37138	<b>Submitted Sample Lot:</b> E2122821
<b>Phone Number:</b> 877-301-9923	<b>Submitted Sample Description:</b> Amber Liquid in Sealed Retail Bottle; Stored at Room Temp
<b>Contact Name / Email:</b> NA	<b>Submitted Sample Product Type / Matrix:</b> Kratom Extract / Beverage

## LABEL CLAIM

Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
Mitragynine	UHPLC-DAD	0.01 w/w%	mg/mL: Report Only*	8.078 mg/mL	Results Report
Mitragynine	UHPLC-DAD	0.01 w/w%	mg/unit: Report Only**	121.174 mg/unit	Results Report

\*Solution Density = 1.141 g/mL; \*\*Unit Size = 15 mL (1 bottle)

## 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*	0.708 w/w% 7.080 mg/g 8.078 mg/mL	Results Reported
Paynantheine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.175 w/w% 1.746 mg/g 1.993 mg/mL	Results Reported
Speciogynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.127 w/w% 1.273 mg/g 1.452 mg/mL	Results Reported
Speciociliatine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.189 w/w% 1.888 mg/g 2.155 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* % Total Alkaloids: NMT 2%	< 0.01 w/w%	PASS
Mitraphylline	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	< 0.01 w/w%	Results Reported
Isorhynchophylline	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.019 w/w% 0.186 mg/g 0.212 mg/mL	Results Reported
Corynoxine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.039 w/w% 0.395 mg/g 0.450 mg/mL	Results Reported
Total Alkaloids	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	1.257 w/w% 12.568 mg/g 14.340 mg/mL	Results Reported

Santé Laboratories, LLC - 8201 East Riverside Drive, STE 650, Austin, Texas 78744 USA  
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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
Escherichia coli (E. coli)	Isolation Agar	1 CFU/10 gm	Absent in 10 gm	Absent	PASS
Salmonella	Isolation Agar	1 CFU/25 gm	Absent in 25 gm	Absent	PASS

HEAVY METALS					
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
Cadmium	USP <232> <233> by ICP-MS	10 ppb	NMT 300 ppb	< LOQ	PASS
Arsenic	USP <232> <233> by ICP-MS	10 ppb	NMT 1,500 ppb	< LOQ	PASS
Nickel	USP <232> <233> by ICP-MS	10 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-tetrahydronaphthalene	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

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Page No. Page 3 of 5

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Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
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
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

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 Page No. Page 4 of 5

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Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
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
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
<b>Santé Laboratories</b> 8201 East Riverside Drive, STE 650 Austin, Texas 78744 USA	<b>Santé Sample ID:</b> 214015 <b>Receipt Date:</b> 10/21/2021 / 01:03 PM CST / M. Cardona <b>Receipt Condition:</b> Good <b>Analysis Start Date:</b> 10/22/2021

ADDITIONAL REPORT NOTES
<p>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. <b>Heavy metal specifications according to limits defined by Texas DSHS for consumable hemp. Nickel specification according to oral drug products per USP &lt;232&gt;. Microbiological specifications according to limited defined by AHPA for botanical extracts.</b></p> <p>©2020 Santé Laboratories, LLC – All Rights Reserved</p>



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Page No. Page 5 of 5

VERSION HISTORY		
Version	Effective Date	Summary of Changes
00	11/06/2021	Initial Release

REVIEWED AND APPROVED BY	
<p>DocuSigned by: <i>Brian Sloat</i></p> <hr/> <p><b>Brian Sloat, Ph.D.</b> Chief Scientific Officer / Quality Manager Santé Laboratories</p>	<p>06 November 2021   4:03:03 PM PDT <small>DD-MM-YY</small></p> <hr/> <p>Date</p>