

**CERTIFICATE OF ANALYSIS**STATUS: **RELEASED** REVISION: 02

DATE: 11/02/2021

Analysis ID No. 213522  
TDA License No. 2020002  
ISO/IEC No. 1055838  
Purchase Order: 20210870  
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CUSTOMER INFORMATION	SAMPLE INFORMATION
<b>Company Name:</b>	<b>Submitted Sample Name:</b>
Steding & Sons Mercantile	La Luna Roja, Red Vein Kratom Extract
<b>Address:</b>	<b>Submitted Sample Lot:</b>
13200 Pond Springs Rd. #E39, Austin, Texas 78729 USA	161902
<b>Phone Number:</b>	<b>Submitted Sample Description:</b>
512-704-3680	Amber Liquid in Glass Bottle w/ Label; Stored at Room Temp.
<b>Contact Name / Email:</b>	<b>Submitted Sample Product Type / Matrix:</b>
Jeremy Steding / info@1836kratom.com	Kratom Extract / Aqueous 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*	0.268 w/w% 2.676 mg/g 2.767 mg/mL	Results Reported
Paynantheine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.055 w/w% 0.555 mg/g 0.574 mg/mL	Results Reported
Speciogynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.041 w/w% 0.411 mg/g 0.425 mg/mL	Results Reported
Speciociliatine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.059 w/w% 0.586 mg/g 0.606 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*	< 0.01 w/w%	Results Reported
Corynoxine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	< 0.01 w/w%	Results Reported
Total Alkaloids	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only mg/mL: Report Only*	0.423 w/w% 4.228 mg/g 4.371 mg/mL	Results Reported

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
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

RESIDUAL SOLVENTS ASSAY					
Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
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	Report Only	97,644.1 ppm	Results Reported
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

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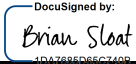
RESIDUAL SOLVENTS ASSAY					
Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
Butane, iso-	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Butane, n-	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS
Propane	USP <467> by GC-MS	12.5 ppm	NMT 5,000 ppm	< LOQ	PASS

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/10g	Absent in 10 gm	Absent	PASS
Salmonella**	Isolation Agar	1 CFU/10g	Absent in 10 gm	Absent	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> 213522 <b>Receipt Date:</b> 10/01/2021 / 11:48 AM CST / M. Cardona <b>Receipt Condition:</b> Good <b>Analysis Start Date:</b> 10/04/2021

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. <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 follow AHPA guidelines for botanical ingredients (non-extract).</b> ** Insufficient material to test for salmonella based on AHPA guidelines. ©2021 Santé Laboratories, LLC – All Rights Reserved

VERSION HISTORY		
Version	Effective Date	Summary of Changes
00	10/08/2021	Initial Release
01	10/21/2021	Updated reporting specifications
02	11/02/2021	Updated reporting specifications

REVIEWED AND APPROVED BY	
DocuSigned by:  <b>Brian Sloat, Ph.D.</b> Chief Scientific Officer / Quality Manager Santé Laboratories	02 November 2021   1:56:04 PM PDT <small>DD-MM-YY</small> Date

PRODUCT SAMPLE / IMAGE
