

CERTIFICATE OF ANALYSISSTATUS: **RELEASED** REVISION: 00

DATE: 05/02/2023

Analysis ID No. 231309
TDA License No. 2020002
ISO/IEC No. 1055838
Customer No. NA
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CUSTOMER INFORMATION	SAMPLE INFORMATION
Company Name: Durity Distribution, LLC	Submitted Sample Name: Mitragyna Speciosa Extract, Aqueous Micelles, Black Tea
Address:	Submitted Sample Lot: 230420-5
Phone Number:	Submitted Sample Description: Amber Liquid in Sealed Container; Stored at Room Temp
Contact Name / Email:	Submitted Sample Product Type / Matrix: Kratom Extract / Aqueous-Nanoencapsulated

LABEL CLAIM					
Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
Mitragynine	UHPLC-DAD	0.01 w/w%	mg/mL: Report Only* Target: 10.5 mg/mL	10.934 mg/mL	Results Report
Mitragynine	UHPLC-DAD	0.01 w/w%	% Label Claim: 90.0% to 110.0% Target: 100%	106.3%	PASS
*Solution Density = 1.015 g/mL					

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	1.093 w/w% 10.934 mg/g	Results Reported
Paynantheine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	0.252 w/w% 2.519 mg/g	Results Reported
Speciogynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	0.131 w/w% 1.314 mg/g	Results Reported
Speciociliatine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	0.378 w/w% 3.783 mg/g	Results Reported
7-OH-Mitragynine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	< 0.010 w/w%	Results Reported
Mitaphylline	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	< 0.010 w/w%	Results Reported
Isorynchophylline	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	< 0.010 w/w%	Results Reported
Corynoxine	UHPLC-DAD	0.01 w/w%	w/w%: Report Only mg/g: Report Only	< 0.010 w/w%	Results Reported
Total Alkaloids	UHPLC-DAD	0.01 w/w%	% Total Alkaloids: NMT 2% w/w%: Report Only mg/g: Report Only	1.836 w/w% 18.359 mg/g	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 1000 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

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

RESIDUAL SOLVENTS ASSAY					
Analysis	Test Method	LOQ	Specifications	Test Results	Pass / Fail
1,1-Dichloroethene	GC-MS	0.4 ppm	NMT 8 ppm	< LOQ	PASS
1,1,1-Trichloroethane	GC-MS	75 ppm	NMT 1500 ppm	< LOQ	PASS
1,2-Dichloroethane	GC-MS	0.25 ppm	NMT 5 ppm	< LOQ	PASS
Benzene	GC-MS	0.1 ppm	NMT 2 ppm	< LOQ	PASS
Carbon tetrachloride	GC-MS	0.2 ppm	NMT 4 ppm	< LOQ	PASS
1,2-dichloroethene (E,Z)	GC-MS	93.5 ppm	NMT 1870 ppm	< LOQ	PASS
1,2-Dimethoxyethane	GC-MS	5 ppm	NMT 100 ppm	< LOQ	PASS
1,2,3,4-tetrahydronaphthalene	GC-MS	5 ppm	NMT 100 ppm	< LOQ	PASS
1,4-Dioxane	GC-MS	19 ppm	NMT 380 ppm	< LOQ	PASS
2-Hexanone	GC-MS	2.5 ppm	NMT 50 ppm	< LOQ	PASS
4-methyl-2-pentanone	GC-MS	225 ppm	NMT 4500 ppm	< LOQ	PASS
Acetonitrile	GC-MS	20.5 ppm	NMT 410 ppm	< LOQ	PASS
Chlorobenzene	GC-MS	18 ppm	NMT 360 ppm	< LOQ	PASS
Chloroform	GC-MS	3 ppm	NMT 60 ppm	< LOQ	PASS
Cumene	GC-MS	3.5 ppm	NMT 70 ppm	< LOQ	PASS
Cyclohexane	GC-MS	194 ppm	NMT 3880 ppm	< LOQ	PASS
Dichloromethane	GC-MS	30 ppm	NMT 600 ppm	< LOQ	PASS

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Ethylbenzene	GC-MS	108.5 ppm	NMT 2170 ppm	< LOQ	PASS
Hexane, n-	GC-MS	14.5 ppm	NMT 290 ppm	< LOQ	PASS
Methanol	GC-MS	150 ppm	NMT 3000 ppm	< LOQ	PASS
Methylcyclohexane	GC-MS	59 ppm	NMT 1180 ppm	< LOQ	PASS
Nitromethane	GC-MS	2.5 ppm	NMT 50 ppm	< LOQ	PASS
Pyridine	GC-MS	10 ppm	NMT 200 ppm	< LOQ	PASS
Tetrahydrofuran	GC-MS	36 ppm	NMT 720 ppm	< LOQ	PASS
Toluene	GC-MS	44.5 ppm	NMT 890 ppm	< LOQ	PASS
Trichloroethene	GC-MS	4 ppm	NMT 80 ppm	< LOQ	PASS
Xylene, m-	GC-MS	108.5 ppm	NMT 2170 ppm	< LOQ	PASS
Xylene, o-	GC-MS	108.5 ppm	NMT 2170 ppm	< LOQ	PASS
Xylene, p-	GC-MS	108.5 ppm	NMT 2170 ppm	< LOQ	PASS
1-Butanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
1-Pentanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
1-Propanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
2-Butanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
2-Butanone	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
2-methyl-1-propanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
2-Propanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
3-methyl-1-butanol	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Acetone	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Anisole	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Butyl acetate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Ethanol	GC-MS	250 ppm	NMT 5000 ppm	375.19 ppm	PASS
Ethyl acetate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Ethyl ether	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Ethyl formate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Heptane, n-	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Isobutyl acetate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Isopropyl acetate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Methyl acetate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
N,N-Dimethylsulfoxide	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Pentane, n-	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS



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Propyl acetate	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
t-Butyl Methyl Ether	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Triethylamine	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Butane, iso-	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Butane, n-	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
Propane	GC-MS	250 ppm	NMT 5000 ppm	< LOQ	PASS
1,1-Dichloroethene	GC-MS	0.4 ppm	NMT 8 ppm	< LOQ	PASS
1,1,1-Trichloroethane	GC-MS	75 ppm	NMT 1500 ppm	< LOQ	PASS

TESTING FACILITY INFORMATION	SAMPLE INFORMATION
Santé Laboratories 8201 East Riverside Drive, STE 650 Austin, Texas 78744 USA	Santé Sample ID: 231305 Receipt Date: 04/27/2023 Receipt Condition: Good Analysis Start Date: 04/27/2023

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 specification according to oral drug products per USP <232>. Microbiological specifications follow AHPA guidelines for botanical extracts. ©2020 Santé Laboratories, LLC – All Rights Reserved

VERSION HISTORY		
Version	Effective Date	Summary of Changes
00	05/02/2023	Initial Release

REVIEWED AND APPROVED BY
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">  Christopher Rodriguez Director of Quality Assurance Santé Laboratories </div> <div style="width: 55%; text-align: right;"> 03 May 2023 12:08:29 PM PDT <small>DD-MM-YY</small> Date </div> </div>