Certificate of Analysis

Customer Information

Client: Steding and Sons Mercantile
Attention: (737) 895-2303
Address: 1501 Panther Loop #7A
Pflugerville, TX 78660

Testing Facility

Lab: Cora Science, LLC
Address 8000 Anderson Square, STE 113
Austin, Texas 78757
Contact: info@corascience.com
(512) 856-5007

Sample Image(s)

Sample Information

Name: Lazy Luau
Lot Number: SSLL00101
Description: Ready-to-drink beverage
Condition: Good
Job ID: ISO05537
Sample ID: I15371
Received: 14NOV2025
Completed: 24NOV2025
Issued: 24NOV2025

Test Results

Mitragyna Alkaloids (UHPLC-DAD) **Method Code: T102** **Tested: 19NOV2025 | 2213**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Mitragynine	Report Results	48.3	mg/unit	0.023	N/A
7-Hydroxymitragynine	Report Results	<LOQ	mg/unit	0.0031	N/A
Paynantheine	Report Results	0.509	mg/unit	0.023	N/A
Speciogynine	Report Results	0.255	mg/unit	0.023	N/A
Speciociliatine	Report Results	<LOQ	mg/unit	0.023	N/A
Total Mitragyna Alkaloids	Report Results	49.0	mg/unit	0.023	N/A

Mitragyna Alkaloids (UHPLC-DAD) **Method Code: T102** **Tested: 19NOV2025 | 2213**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Mitragynine	Report Results	0.157	w/w%	0.000075	N/A
7-Hydroxymitragynine	Report Results	<LOQ	w/w%	0.0000100	N/A
Paynantheine	Report Results	0.00166	w/w%	0.000075	N/A
Speciogynine	Report Results	0.000830	w/w%	0.000075	N/A
Speciociliatine	Report Results	<LOQ	w/w%	0.000075	N/A
Total Mitragyna Alkaloids	Report Results	0.160	w/w%	0.000075	N/A

Loss on Drying **Method Code: T505** **Tested: 19NOV2025 | 1413**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Loss on Drying	Report Results	95.2	%	0.1	N/A

Elemental Impurities (ICP-MS) **Method Code: T301** **Tested: 18NOV2025 | 1358**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Arsenic	NMT 2.00	<LOQ	ug/g	0.006	PASS

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PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Cadmium	NMT 0.82	0.063	ug/g	0.002	PASS
Mercury	NMT 0.40	<LOQ	ug/g	0.002	PASS
Lead	NMT 1.20	<LOQ	ug/g	0.002	PASS

Residual Solvents: Class I (GC-MS) **Method Code: T201** **Tested: 18NOV2025 | 2130**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
1,1-Dichloroethene	NMT 8	<LOQ	ug/g	0.40	PASS
1,1,1-Trichloroethane	NMT 1500	<LOQ	ug/g	75	PASS
Tetrachloromethane	NMT 4	<LOQ	ug/g	0.20	PASS
Benzene	NMT 2	<LOQ	ug/g	0.10	PASS
1,2-Dichloroethane	NMT 5	<LOQ	ug/g	0.25	PASS

Residual Solvents: Class II (GC-MS) **Method Code: T201** **Tested: 18NOV2025 | 2130**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Methanol	NMT 3000	<LOQ	ug/g	75	PASS
Acetonitrile	NMT 410	<LOQ	ug/g	41	PASS
Dichloromethane	NMT 600	<LOQ	ug/g	15	PASS
1,2-Dichloroethene, (E)	NMT 1870	<LOQ	ug/g	47	PASS
1,2-Dichloroethene, (Z)	NMT 1870	<LOQ	ug/g	47	PASS
Tetrahydrofuran	NMT 720	<LOQ	ug/g	18	PASS
Cyclohexane	NMT 3880	<LOQ	ug/g	97	PASS
Methylcyclohexane	NMT 1180	<LOQ	ug/g	30	PASS
1,4-Dioxane	NMT 380	<LOQ	ug/g	38	PASS
Toluene	NMT 890	<LOQ	ug/g	22	PASS
Chlorobenzene	NMT 360	<LOQ	ug/g	9.0	PASS
Ethylbenzene	NMT 2170	<LOQ	ug/g	54	PASS
o/p-Xylene	NMT 2170	<LOQ	ug/g	54	PASS
m-Xylene	NMT 2170	<LOQ	ug/g	54	PASS
Isopropylbenzene	NMT 70	<LOQ	ug/g	1.8	PASS
Hexane	NMT 290	<LOQ	ug/g	7.3	PASS
Nitromethane	NMT 50	<LOQ	ug/g	1.3	PASS
Chloroform	NMT 60	<LOQ	ug/g	1.5	PASS
1,2-Dimethoxyethane	NMT 100	<LOQ	ug/g	2.5	PASS
Trichloroethene	NMT 80	<LOQ	ug/g	2.0	PASS
Pyridine	NMT 200	<LOQ	ug/g	5.0	PASS
2-Hexanone	NMT 50	<LOQ	ug/g	5.0	PASS
Tetralin	NMT 100	<LOQ	ug/g	2.5	PASS

Residual Solvents: Class III (GC-MS) **Method Code: T201** **Tested: 18NOV2025 | 2130**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Pentane	NMT 5000	<LOQ	ug/g	125	PASS
Ethanol	NMT 5000	<LOQ	ug/g	125	PASS
Diethyl Ether	NMT 5000	<LOQ	ug/g	125	PASS
Acetone	NMT 5000	<LOQ	ug/g	125	PASS
Ethyl Formate	NMT 5000	<LOQ	ug/g	125	PASS

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PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Isopropanol	NMT 5000	<LOQ	ug/g	125	PASS
Methyl Acetate	NMT 5000	<LOQ	ug/g	125	PASS
Methyl tert-Butyl Ether	NMT 5000	<LOQ	ug/g	125	PASS
1-Propanol	NMT 5000	<LOQ	ug/g	125	PASS
2-Butanone	NMT 5000	<LOQ	ug/g	125	PASS
Ethyl Acetate	NMT 5000	<LOQ	ug/g	125	PASS
2-Butanol	NMT 5000	<LOQ	ug/g	125	PASS
2-Methyl-1-Propanol	NMT 5000	<LOQ	ug/g	125	PASS
Isopropyl Acetate	NMT 5000	<LOQ	ug/g	125	PASS
Heptane	NMT 5000	<LOQ	ug/g	125	PASS
1-Butanol	NMT 5000	<LOQ	ug/g	125	PASS
Propyl Acetate	NMT 5000	<LOQ	ug/g	125	PASS
4-Methyl-2-Pentanone	NMT 5000	<LOQ	ug/g	125	PASS
Isoamyl Alcohol	NMT 5000	<LOQ	ug/g	125	PASS
Isobutyl Acetate	NMT 5000	<LOQ	ug/g	125	PASS
1-Pentanol	NMT 5000	<LOQ	ug/g	125	PASS
Butyl Acetate	NMT 5000	<LOQ	ug/g	125	PASS
Anisole	NMT 5000	<LOQ	ug/g	125	PASS
Dimethylsulfoxide	NMT 5000	<LOQ	ug/g	125	PASS

Pesticides (GC-MS/MS) **Method Code: T401** **Tested: 19NOV2025 | 1941**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Acephate	NMT 0.1	ND	mg/Kg	0.01	PASS
Azinphos-ethyl	NMT 0.1	ND	mg/Kg	0.01	PASS
Azinphos-methyl	NMT 1	ND	mg/Kg	0.01	PASS
Bromophos-ethyl	NMT 0.05	ND	mg/Kg	0.01	PASS
Bromophos-methyl	NMT 0.05	ND	mg/Kg	0.01	PASS
Chlorfenvinphos	NMT 0.5	ND	mg/Kg	0.01	PASS
Deltamethrin	NMT 0.5	ND	mg/Kg	0.01	PASS
Diazinon	NMT 0.5	ND	mg/Kg	0.01	PASS
Dichlofluanid	NMT 0.1	ND	mg/Kg	0.01	PASS
Dichlorvos	NMT 1	ND	mg/Kg	0.02	PASS
Dimethoate (and Omethoate, sum)	NMT 0.1	ND	mg/Kg	0.01	PASS
Omethaote	Report Results	ND	mg/Kg	0.01	N/A
Dithiocarbamates (sum, as CS2)	NMT 2	ND	mg/Kg	0.10	PASS
Dithiocarbamate, manganese	Report Results	ND	mg/Kg	0.05	N/A
Dithiocarbamate, zinc	Report Results	ND	mg/Kg	0.05	N/A
Ethion	NMT 2	ND	mg/Kg	0.01	PASS
Etrimphos	NMT 0.05	ND	mg/Kg	0.01	PASS
Fenchlorphos	NMT 0.1	ND	mg/Kg	0.02	PASS
Fenchlorphos oxon	Report Results	ND	mg/Kg	0.01	N/A
Fenitrothion	NMT 0.5	ND	mg/Kg	0.01	PASS
Fenpropathrin	NMT 0.03	ND	mg/Kg	0.01	PASS
Fensulfothions (sum)	NMT 0.05	ND	mg/Kg	0.04	PASS
Fensulfothion-oxon	Report Results	ND	mg/Kg	0.01	N/A
Fensulfothion-oxonsulfone	Report Results	ND	mg/Kg	0.01	N/A

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PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Fensulfothion-sulfone	Report Results	ND	mg/Kg	0.01	N/A
Fenthions (sum)	NMT 0.05	ND	mg/Kg	0.02	PASS
Fenthion oxon	Report Results	ND	mg/Kg	0.02	N/A
Fenthion oxonsulfone	Report Results	ND	mg/Kg	0.02	N/A
Fenthion oxonsulfoxide	Report Results	ND	mg/Kg	0.02	N/A
Fenthion sulfone	Report Results	ND	mg/Kg	0.02	N/A
Fenthion sulfoxide	Report Results	ND	mg/Kg	0.02	N/A
Flucythrinate	NMT 0.05	ND	mg/Kg	0.01	PASS
Fluvalinate	NMT 0.05	ND	mg/Kg	0.01	PASS
Fonophos	NMT 0.05	ND	mg/Kg	0.01	PASS
Malathion (and oxon, sum)	NMT 1	ND	mg/Kg	0.02	PASS
Malathion oxon	Report Results	ND	mg/Kg	0.01	N/A
Mecarbam	NMT 0.05	ND	mg/Kg	0.01	PASS
Methacriphos	NMT 0.05	ND	mg/Kg	0.01	PASS
Methamidophos	NMT 0.05	ND	mg/Kg	0.01	PASS
Methadathion	NMT 0.2	ND	mg/Kg	0.01	PASS
Monocrotophos	NMT 0.1	ND	mg/Kg	0.01	PASS
Parathion-ethyl (and oxon, sum)	NMT 0.5	ND	mg/Kg	0.02	PASS
Paraoxon ethyl	Report Results	ND	mg/Kg	0.01	N/A
Parathion-methyl (and oxon, sum)	NMT 0.2	ND	mg/Kg	0.02	PASS
Paraoxon methyl	Report Results	ND	mg/Kg	0.01	N/A
Pendimethalin	NMT 0.1	ND	mg/Kg	0.01	PASS
Phosalone	NMT 0.1	ND	mg/Kg	0.01	PASS
Pirimiphos ethyl	NMT 0.05	ND	mg/Kg	0.01	PASS
Pirimphos methyl (and N-desethyl-, sum)	NMT 4	ND	mg/Kg	0.03	PASS
N-desethylpirimiphos methyl	Report Results	ND	mg/Kg	0.02	N/A
Procymidone	NMT 0.1	ND	mg/Kg	0.01	PASS
Profenofos	NMT 0.1	ND	mg/Kg	0.01	PASS
Prothiophos	NMT 0.05	ND	mg/Kg	0.01	PASS
Pyrethrum (sum of following six)	NMT 3	ND	mg/Kg	0.05	PASS
Cinerin I	Report Results	ND	mg/Kg	0.05	N/A
Cinerin II	Report Results	ND	mg/Kg	0.05	N/A
Jasmoline I	Report Results	ND	mg/Kg	0.05	N/A
Jasmoline II	Report Results	ND	mg/Kg	0.05	N/A
Pyrethrin I	Report Results	ND	mg/Kg	0.05	N/A
Pyrethrin II	Report Results	ND	mg/Kg	0.05	N/A
Quinalphos	NMT 0.05	ND	mg/Kg	0.01	PASS
Tetradifon	NMT 0.3	ND	mg/Kg	0.01	PASS
Vinclozolin	NMT 0.4	ND	mg/Kg	0.01	PASS
Aldrin (and Dieldrin, sum)	NMT 0.05	ND	mg/Kg	0.02	PASS
Dieldrin	Report Results	ND	mg/Kg	0.01	N/A
Alachlor	NMT 0.05	ND	mg/Kg	0.01	PASS
Bromopropylate	NMT 3	ND	mg/Kg	0.01	PASS
Chlordanes (sum)	NMT 0.05	ND	mg/Kg	0.02	PASS
cis-Chlordane	Report Results	ND	mg/Kg	0.01	N/A
trans-Chlordane	Report Results	ND	mg/Kg	0.01	N/A

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PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
oxy-Chlordane	Report Results	ND	mg/Kg	0.02	N/A
Chlorpyrifos-ethyl	NMT 0.2	ND	mg/Kg	0.01	PASS
Chlorpyrifos-methyl	NMT 0.1	ND	mg/Kg	0.01	PASS
Chlorthal-dimethyl	NMT 0.01	ND	mg/Kg	0.01	PASS
Cyfluthrin	NMT 0.1	ND	mg/Kg	0.02	PASS
lambda-Cyhalothrin	NMT 1	ND	mg/Kg	0.01	PASS
Cypermethrins	NMT 1	ND	mg/Kg	0.02	PASS
DDT (sum of DDT, DDE, DDD)	NMT 1	ND	mg/Kg	0.01	PASS
o,p-DDT	Report Results	ND	mg/Kg	0.01	N/A
p,p-DDT	Report Results	ND	mg/Kg	0.01	N/A
o,p-DDE	Report Results	ND	mg/Kg	0.01	N/A
p,p-DDE	Report Results	ND	mg/Kg	0.01	N/A
o,p-DDD	Report Results	ND	mg/Kg	0.01	N/A
p,p-DDD	Report Results	ND	mg/Kg	0.01	N/A
Dicofol	NMT 0.5	ND	mg/Kg	0.01	PASS
Endosulfans	NMT 3	ND	mg/Kg	0.01	PASS
Endosulfan I	Report Results	ND	mg/Kg	0.01	N/A
Endosulfan II	Report Results	ND	mg/Kg	0.01	N/A
Endosulfan sulfate	Report Results	ND	mg/Kg	0.01	N/A
Endrin	NMT 0.05	ND	mg/Kg	0.01	PASS
Fenvalderate (and esfen-, sum)	NMT 1.5	ND	mg/Kg	0.02	PASS
Esfenvalerate	Report Results	ND	mg/Kg	0.02	N/A
Heptachlor (and epoxide, sum)	NMT 0.05	ND	mg/Kg	0.02	PASS
Heptachlor epoxide (cis/trans)	Report Results	ND	mg/Kg	0.01	N/A
Hexachlorobenzene	NMT 0.1	ND	mg/Kg	0.01	PASS
Hexachlorohexanes (sum)	NMT 0.3	ND	mg/Kg	0.01	PASS
alpha-Hexachlorocyclohexane	Report Results	ND	mg/Kg	0.01	N/A
beta-Hexachlorocyclohexane	Report Results	ND	mg/Kg	0.01	N/A
delta-Hexachlorocyclohexane	Report Results	ND	mg/Kg	0.01	N/A
Lindane	NMT 0.6	ND	mg/Kg	0.01	PASS
Methoxychlor	NMT 0.05	ND	mg/Kg	0.01	PASS
Mirex	NMT 0.01	ND	mg/Kg	0.01	PASS
Pentachloroanisole	NMT 0.01	ND	mg/Kg	0.01	PASS
Permethrins (sum)	NMT 1	ND	mg/Kg	0.01	PASS
cis-Permethrin	Report Results	ND	mg/Kg	0.01	N/A
trans-Permethrin	Report Results	ND	mg/Kg	0.01	N/A
Piperonyl butoxide	NMT 3	ND	mg/Kg	0.01	PASS
Quintozene (sum of following two)	NMT 1	ND	mg/Kg	0.09	PASS
Pentachloroaniline	Report Results	ND	mg/Kg	0.02	N/A
Methyl pentachlorophenyl sulfide	Report Results	ND	mg/Kg	0.05	N/A
Tecnazene	NMT 0.05	ND	mg/Kg	0.01	PASS
S-421	NMT 0.02	ND	mg/Kg	0.01	PASS

Microbiological Examination **Method Code: T005** **Tested: 17NOV2025 | 1455**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Total Aerobic Plate Count	NMT 10,000 CFU/g	<LOQ	CFU/g	10 CFU/g	PASS

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PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Total Yeast and Mold	NMT 1,000 CFU/g	<LOQ	CFU/g	10 CFU/g	PASS
Salmonella spp.	Not Detected in 1 g	Not Detected	N/A	1 CFU/1g	PASS
Shiga-toxin producing E. coli	Not Detected in 1 g	Not Detected	N/A	1 CFU/1g	PASS

Kavalactones (UHPLC-DAD) **Method Code: T104** **Tested: 20NOV2025 | 0355**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Kavain	Report Results	49.4	mg/unit	0.48	N/A
Dihydrokavain	Report Results	98.0	mg/unit	0.48	N/A
Methysticin	Report Results	38.7	mg/unit	0.48	N/A
Dihydromethysticin	Report Results	58.1	mg/unit	0.48	N/A
Yangonin	Report Results	28.3	mg/unit	0.48	N/A
Desmethoxyyangonin	Report Results	24.7	mg/unit	0.48	N/A
Flavokawain A	Report Results	2.65	mg/unit	0.48	N/A
Flavokawain B	Report Results	5.10	mg/unit	0.48	N/A
Flavokawain C	Report Results	<LOQ	mg/unit	0.48	N/A
Total Kavalactones	Report Results	297	mg/unit	0.48	N/A

Kavalactones (UHPLC-DAD) **Method Code: T104** **Tested: 20NOV2025 | 0355**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Kavain	Report Results	0.161	w/w%	0.0016	N/A
Dihydrokavain	Report Results	0.319	w/w%	0.0016	N/A
Methysticin	Report Results	0.126	w/w%	0.0016	N/A
Dihydromethysticin	Report Results	0.189	w/w%	0.0016	N/A
Yangonin	Report Results	0.0923	w/w%	0.0016	N/A
Desmethoxyyangonin	Report Results	0.0804	w/w%	0.0016	N/A
Flavokawain A	Report Results	0.00864	w/w%	0.0016	N/A
Flavokawain B	Report Results	0.0166	w/w%	0.0016	N/A
Flavokawain C	Report Results	<LOQ	w/w%	0.0016	N/A
Total Kavalactones	Report Results	0.968	w/w%	0.0016	N/A

7-Hydroxymitragynine Limit (0.04%) **Method Code: 813** **Tested: 19NOV2025 | 2213**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
7-Hydroxymitragynine	NMT 400 PPM	<2	ppm	2	PASS

Foreign Matter Inspection **Method Code: T501** **Tested: 24NOV2025 | 1533**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Foreign Matter	NMT 3%	<LOQ	%	0.03	PASS

Additional Report Notes

T102 result, LOQ and unit converted from w/w% to mg/unit using a laboratory measured density of 1.023 g/mL and package specified fill volume of 30.0 mL. T813 results are reported on a dry-weight basis (DWB). Reported values converted from T102 results using the laboratory-measured loss on drying by T505 for each sample:
DWB w/w% = (as-received w/w%) ÷ (1 − moisture%/100).

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Revision History

rev 00 - Initial release.

Abbreviations

ID: identification, **N/A:** not applicable, **LOQ:** limit of quantitation, **CFU:** colony forming units, **w/w%:** weight by weight percent, **mg:** milligrams, **g:** grams, **ug:** micrograms, **mL:** milliliters, **ND:** not detected, **<LOQ:** below limit of quantitation, **NMT:** no more than, **NLT:** no less than, **UHPLC:** ultra-high performance liquid chromatography, **GC:** gas chromatography, **DAD:** diode array detection/detector, **MS:** mass spectroscopy/spectrometer, **ICP:** inductively coupled plasma, **ISO:** International Organization for Standardization, **USP:** United States Pharmacopeia

Authorization

This report has been authorized for release from Cora Science by:

Signature:	Tyler West	**Position:**	Laboratory Director
		Department:	Management
Name:	Tyler West	**Date:**	24NOV2025

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