



Certificate of Analysis

Customer Information		Testing Facility	
Client:	Sunstone Organics	Lab:	Cora Science, LLC
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Sample Image(s)	Sample Information
	Name: 161 A3 Lot Number: 161 A3 Description: Finely ground plant material Condition: Good Job ID: ISO05558 Sample ID: I15420 Received: 18NOV2025 Completed: 21NOV2025 Issued: 24NOV2025

Test Results

Mitragyna Alkaloids (UHPLC-DAD)		Method Code: T102		Tested: 21NOV2025 0444		
PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES	
Mitragynine	Report Results	1.31	w/w%	0.0054	N/A	
7-Hydroxymitragynine	Report Results	0.00559	w/w%	0.0014	N/A	
Paynantheine	Report Results	0.240	w/w%	0.0054	N/A	
Speciogynine	Report Results	0.181	w/w%	0.0054	N/A	
Speciociliatine	Report Results	0.422	w/w%	0.0054	N/A	
Total Mitragyna Alkaloids	Report Results	2.16	w/w%	0.0054	N/A	

Elemental Impurities (ICP-MS)		Method Code: T301		Tested: 19NOV2025 1411		
PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES	
Arsenic	NMT 2.00	0.213	ug/g	0.006	PASS	
Cadmium	NMT 0.50	<LOQ	ug/g	0.002	PASS	
Mercury	NMT 0.20	0.016	ug/g	0.002	PASS	
Lead	NMT 5.00	0.517	ug/g	0.002	PASS	

Microbiological Examination		Method Code: T005		Tested: 18NOV2025 1502		
PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES	
Total Aerobic Plate Count	NMT 10,000,000 CFU/g	1,200	CFU/g	20 CFU/g	PASS	
Total Yeast and Mold	NMT 100,000 CFU/g	<LOQ	CFU/g	20 CFU/g	PASS	
Total Coliforms	NMT 10,000 CFU/g	<LOQ	CFU/g	20 CFU/g	PASS	
Escherichia coli	Not Detected in 10 g	Not Detected	N/A	1 CFU/10g	PASS	
Salmonella spp.	Not Detected in 25 g	Not Detected	N/A	1 CFU/25g	PASS	

Residual Solvents: Class I (GC-MS)		Method Code: T201		Tested: 21NOV2025 1016		
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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: 21NOV2025 1016		
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: 21NOV2025 1016		
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	
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	

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
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 1713		
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	
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	

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PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
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
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

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
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

Additional Report Notes

T401 results performed by a registered outsourcing facility.

Revision History

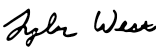
rev 00 - Initial release.

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