

## Certificate of Analysis



## Customer Information

**Client:** Sunstone Organics  
**Attention:** secure@sunstoneorganics.com  
**Address:** 4061 Main St., Suite D  
 Springfield, OR 97478

## 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:** WMD  
**Lot Number:** 155 E6  
**Description:** Finely ground plant material  
**Condition:** Good  
**Job ID:** ISO02706  
**Sample ID:** I06723  
**Received:** 28OCT2024  
**Completed:** 04NOV2024  
**Issued:** 05NOV2024

## Test Results

## Mitragyna Alkaloids (UHPLC-DAD)

Method Code: T102

Tested: 02NOV2024 | 0646

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Mitragynine	Report Results	1.06	w/w%	0.011	N/A
7-Hydroxymitragynine	Report Results	<LOQ	w/w%	0.0029	N/A
Paynantheine	Report Results	0.193	w/w%	0.011	N/A
Speciogynine	Report Results	0.138	w/w%	0.011	N/A
Speciociliatine	Report Results	0.395	w/w%	0.011	N/A
Total Mitragyna Alkaloids	Report Results	1.79	w/w%	0.011	N/A

## Elemental Impurities (ICP-MS)

Method Code: T301

Tested: 30OCT2024 | 1554

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Arsenic	NMT 2.00	0.147	ug/g	0.006	PASS
Cadmium	NMT 0.50	0.014	ug/g	0.002	PASS
Mercury	NMT 0.20	0.008	ug/g	0.002	PASS
Lead	NMT 5.00	0.366	ug/g	0.002	PASS

## Residual Solvents: Class I (GC-MS)

Method Code: T201

Tested: 01NOV2024 | 0305

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	75.0	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: 01NOV2024 | 0305

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Methanol	NMT 3000	<LOQ	ug/g	94	PASS
Acetonitrile	NMT 410	<LOQ	ug/g	20.5	PASS
Dichloromethane	NMT 600	<LOQ	ug/g	30.0	PASS
1,2-Dichloroethene, (E)	NMT 1870	<LOQ	ug/g	93.5	PASS
1,2-Dichloroethene, (Z)	NMT 1870	<LOQ	ug/g	93.5	PASS
Tetrahydrofuran	NMT 720	<LOQ	ug/g	36.0	PASS
Cyclohexane	NMT 3880	<LOQ	ug/g	194	PASS
Methylcyclohexane	NMT 1180	<LOQ	ug/g	59.0	PASS
1,4-Dioxane	NMT 380	<LOQ	ug/g	19.0	PASS
Toluene	NMT 890	<LOQ	ug/g	44.5	PASS
Chlorobenzene	NMT 360	<LOQ	ug/g	18.0	PASS
Ethylbenzene	NMT 2170	<LOQ	ug/g	109	PASS
o/p-Xylene	NMT 2170	<LOQ	ug/g	109	PASS
m-Xylene	NMT 2170	<LOQ	ug/g	109	PASS
Isopropylbenzene	NMT 70	<LOQ	ug/g	3.50	PASS
Hexane	NMT 290	<LOQ	ug/g	14.5	PASS
Nitromethane	NMT 50	<LOQ	ug/g	2.50	PASS
Chloroform	NMT 60	<LOQ	ug/g	3.00	PASS
1,2-Dimethoxyethane	NMT 100	<LOQ	ug/g	5.00	PASS
Trichloroethene	NMT 80	<LOQ	ug/g	4.00	PASS
Pyridine	NMT 200	<LOQ	ug/g	10.00	PASS
2-Hexanone	NMT 50	<LOQ	ug/g	2.50	PASS
Tetralin	NMT 100	<LOQ	ug/g	5.00	PASS

**Residual Solvents: Class III (GC-MS)**      **Method Code: T201**      **Tested: 01NOV2024 | 0305**

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
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
Dimethylsulfoxide	NMT 5000	<LOQ	ug/g	125	PASS
Anisole	NMT 5000	<LOQ	ug/g	125	PASS

**Microbiological Examination**      **Method Code: T005**      **Tested: 30OCT2024 | 1715**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Total Aerobic Plate Count	10,000,000 CFU / g	140	CFU/g	20 CFU / g	PASS
Total Yeast and Mold	100,000 CFU / g	Not Detected	CFU/g	20 CFU / g	PASS
Total Coliforms	10,000 CFU / g	Not Detected	CFU/g	20 CFU / g	PASS
Escherichia coli	Not Detected in 10 g	Not Detected	N/A	1 CFU / 10 g	PASS
Salmonella	Not Detected in 25 g	Not Detected	N/A	1 CFU / 25 g	PASS

**Pesticides (GC-MS/MS:1/5)****Method Code: T401****Tested: 04NOV2024 | 2207**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Acephate	NMT 0.1	<LOQ	mg/Kg	0.0292	PASS
Azinphos-ethyl	NMT 0.1	ND	mg/Kg	0.0292	PASS
Azinphos-methyl	NMT 1	ND	mg/Kg	0.0292	PASS
Bromophos-ethyl	NMT 0.05	ND	mg/Kg	0.0292	PASS
Bromophos-methyl	NMT 0.05	ND	mg/Kg	0.0292	PASS
Chlorfenvinphos	NMT 0.5	ND	mg/Kg	0.0292	PASS
Deltamethrin	NMT 0.5	ND	mg/Kg	0.0292	PASS
Diazinon	NMT 0.5	ND	mg/Kg	0.0292	PASS
Dichlofuanid	NMT 0.1	ND	mg/Kg	0.0292	PASS
Dichlorvos	NMT 1	ND	mg/Kg	0.0585	PASS
Dimethoate (and Omethoate, sum)	NMT 0.1	<LOQ	mg/Kg	0.0292	PASS
Omethoate	Report Results	ND	mg/Kg	0.0292	N/A
Dithiocarbamates (sum, as CS2)	NMT 2	ND	mg/Kg	0.2924	PASS
Dithiocarbamate, manganese	Report Results	ND	mg/Kg	0.1462	N/A
Dithiocarbamate, zinc	Report Results	ND	mg/Kg	0.1462	N/A
Ethion	NMT 2	ND	mg/Kg	0.0292	PASS
Etrimphos	NMT 0.05	ND	mg/Kg	0.0292	PASS
Fenchlorphos	NMT 0.1	ND	mg/Kg	0.0585	PASS
Fenchlorphos oxon	Report Results	ND	mg/Kg	0.0292	N/A
Fenitrothion	NMT 0.5	ND	mg/Kg	0.0292	PASS
Fenpropathrin	NMT 0.03	ND	mg/Kg	0.0292	PASS

**Pesticides (GC-MS/MS:2/5)****Method Code: T401****Tested: 04NOV2024 | 2207**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Fensulfothions (sum)	NMT 0.05	ND	mg/Kg	0.117	PASS
Fensulfothion-oxon	Report Results	ND	mg/Kg	0.0292	N/A
Fensulfothion-oxonsulfone	Report Results	ND	mg/Kg	0.0292	N/A
Fensulfothion-sulfone	Report Results	ND	mg/Kg	0.0292	N/A
Fenthions (sum)	NMT 0.05	ND	mg/Kg	0.0585	PASS
Fenthion oxon	Report Results	ND	mg/Kg	0.0585	N/A
Fenthion oxonsulfone	Report Results	ND	mg/Kg	0.0585	N/A
Fenthion oxonsulfoxide	Report Results	ND	mg/Kg	0.0585	N/A
Fenthion sulfone	Report Results	ND	mg/Kg	0.0585	N/A
Fenthion sulfoxide	Report Results	ND	mg/Kg	0.0585	N/A
Flucythrinate	NMT 0.05	ND	mg/Kg	0.0292	PASS
Fluvalinate	NMT 0.05	ND	mg/Kg	0.0292	PASS
Fonophos	NMT 0.05	ND	mg/Kg	0.0292	PASS
Malathion (and oxon, sum)	NMT 1	ND	mg/Kg	0.0585	PASS
Malathion oxon	Report Results	ND	mg/Kg	0.0292	N/A
Mecarbam	NMT 0.05	ND	mg/Kg	0.0292	PASS
Methacriphos	NMT 0.05	ND	mg/Kg	0.0292	PASS
Methamidophos	NMT 0.05	ND	mg/Kg	0.0292	PASS
Methadathion	NMT 0.2	ND	mg/Kg	0.0292	PASS
Monocrotophos	NMT 0.1	ND	mg/Kg	0.0292	PASS

**Pesticides (GC-MS/MS:3/5)****Method Code: T401****Tested: 04NOV2024 | 2207**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Parathion-ethyl (and oxon, sum)	NMT 0.5	<LOQ	mg/Kg	0.0585	PASS
Paraoxon ethyl	Report Results	ND	mg/Kg	0.0292	N/A
Parathion-methyl (and oxon, sum)	NMT 0.2	ND	mg/Kg	0.0585	PASS
Paraoxon methyl	Report Results	ND	mg/Kg	0.0292	N/A
Pendimethalin	NMT 0.1	ND	mg/Kg	0.0292	PASS
Phosalone	NMT 0.1	ND	mg/Kg	0.0292	PASS
Pirimiphos ethyl	NMT 0.05	ND	mg/Kg	0.0292	PASS
Pirimiphos methyl (and N-desethyl-, sum)	NMT 4	ND	mg/Kg	0.0877	PASS
N-desethylpirimiphos methyl	Report Results	ND	mg/Kg	0.0585	N/A
Procymidone	NMT 0.1	ND	mg/Kg	0.0292	PASS
Profenofos	NMT 0.1	ND	mg/Kg	0.0292	PASS
Prothiophos	NMT 0.05	ND	mg/Kg	0.0292	PASS
Pyrethrum (sum of following six)	NMT 3	ND	mg/Kg	0.1462	PASS
Cinerin I	Report Results	ND	mg/Kg	0.1462	N/A
Cinerin II	Report Results	ND	mg/Kg	0.1462	N/A
Jasmoline I	Report Results	ND	mg/Kg	0.1462	N/A
Jasmoline II	Report Results	ND	mg/Kg	0.1462	N/A
Pyrethrin I	Report Results	ND	mg/Kg	0.1462	N/A
Pyrethrin II	Report Results	ND	mg/Kg	0.1462	N/A
Quinalphos	NMT 0.05	ND	mg/Kg	0.0292	PASS
Tetradifon	NMT 0.3	ND	mg/Kg	0.0292	PASS
Vinclozolin	NMT 0.4	ND	mg/Kg	0.0292	PASS

**Pesticides (GC-MS/MS:4/5)****Method Code: T401****Tested: 04NOV2024 | 2207**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Aldrin (and Dieldrin, sum)	NMT 0.05	ND	mg/Kg	0.0585	PASS
Dieldrin	Report Results	ND	mg/Kg	0.0292	N/A
Alachlor	NMT 0.05	ND	mg/Kg	0.0292	PASS
Bromopropylate	NMT 3	ND	mg/Kg	0.0292	PASS
Chlordanes (sum)	NMT 0.05	ND	mg/Kg	0.0585	PASS
cis-Chlordane	Report Results	ND	mg/Kg	0.0292	N/A
trans-Chlordane	Report Results	ND	mg/Kg	0.0292	N/A
oxy-Chlordane	Report Results	ND	mg/Kg	0.0585	N/A
Chlorpyrifos-ethyl	NMT 0.2	ND	mg/Kg	0.0292	PASS
Chlorpyrifos-methyl	NMT 0.1	ND	mg/Kg	0.0292	PASS
Chlorthal-dimethyl	NMT 0.01	ND	mg/Kg	0.0292	PASS
Cyfluthrin	NMT 0.1	ND	mg/Kg	0.0585	PASS
lambda-Cyhalothrin	NMT 1	ND	mg/Kg	0.0292	PASS
Cypermethrins	NMT 1	ND	mg/Kg	0.0585	PASS
DDT (sum of DDT, DDE, DDD)	NMT 1	ND	mg/Kg	0.0292	PASS
o,p-DDT	Report Results	ND	mg/Kg	0.0292	N/A
p,p-DDT	Report Results	ND	mg/Kg	0.0292	N/A
o,p-DDE	Report Results	ND	mg/Kg	0.0292	N/A
p,p-DDE	Report Results	ND	mg/Kg	0.0292	N/A
o,p-DDD	Report Results	ND	mg/Kg	0.0292	N/A
p,p-DDD	Report Results	ND	mg/Kg	0.0292	N/A
Dicofol	NMT 0.5	ND	mg/Kg	0.0292	PASS

**Pesticides (GC-MS/MS:5/5)****Method Code: T401****Tested: 04NOV2024 | 2207**

PARAMETER	SPECIFICATION	RESULT	UNIT	LOQ	NOTES
Endosulfans	NMT 3	ND	mg/Kg	0.0292	PASS
Endosulfan I	Report Results	ND	mg/Kg	0.0292	N/A
Endosulfan II	Report Results	ND	mg/Kg	0.0292	N/A
Endosulfan sulfate	Report Results	ND	mg/Kg	0.0292	N/A
Endrin	NMT 0.05	ND	mg/Kg	0.0292	PASS
Fenvalderate (and esfen-, sum)	NMT 1.5	ND	mg/Kg	0.0585	PASS
Esfenvalerate	Report Results	ND	mg/Kg	0.0585	N/A
Heptachlor (and epoxide, sum)	NMT 0.05	ND	mg/Kg	0.0585	PASS
Heptachlor epoxide (cis/trans)	Report Results	ND	mg/Kg	0.0292	N/A
Hexachlorobenzene	NMT 0.1	ND	mg/Kg	0.0292	PASS
Hexachlorohexanes (sum)	NMT 0.3	ND	mg/Kg	0.0292	PASS
alpha-Hexachlorocyclohexane	Report Results	ND	mg/Kg	0.0292	N/A
beta-Hexachlorocyclohexane	Report Results	ND	mg/Kg	0.0292	N/A
delta-Hexachlorocyclohexane	Report Results	ND	mg/Kg	0.0292	N/A
Lindane	NMT 0.6	ND	mg/Kg	0.0292	PASS
Methoxychlor	NMT 0.05	ND	mg/Kg	0.0292	PASS
Mirex	NMT 0.01	ND	mg/Kg	0.0292	PASS
Pentachloroanisole	NMT 0.01	ND	mg/Kg	0.0292	PASS
Permethrins (sum)	NMT 1	ND	mg/Kg	0.0292	PASS
cis-Permethrin	Report Results	ND	mg/Kg	0.0292	N/A
trans-Permethrin	Report Results	ND	mg/Kg	0.0292	N/A
Piperonyl butoxide	NMT 3	ND	mg/Kg	0.0292	PASS
Quintozene (sum of following two)	NMT 1	ND	mg/Kg	0.2632	PASS
Pentachloroaniline	Report Results	ND	mg/Kg	0.0585	N/A
Methyl pentachlorophenyl sulfide	Report Results	ND	mg/Kg	0.1462	N/A
Tecnazene	NMT 0.05	ND	mg/Kg	0.0292	PASS
S-421	NMT 0.02	ND	mg/Kg	0.0292	PASS

## Additional Report Notes

N/A

## 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:**

05NOV2024

