CERTIFICATE OF ANALYSIS

SAMPLE NAME: PART # 10100 - GOLDEN MONK RED POWDER (250 G)

SAMPLE CODE: DTS-241030-024

CLIENT: MIT45

BATCH RESULT: PASS

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License #:

MATRIX NAME: Botanical Powder - Plant
SAMPLE TYPE: Quality Assurance
RECEIVED DATE: Thu, Oct 31, 2024
PUBLISHED DATE: Tue, Nov 5, 2024
BATCH/LOT CODE: 1883R
BATCH SIZE: 3U
SAMPLE SIZE: 750g

MITRAGYNINE	1.296 %
TOTAL MAJOR ALKALOIDS	2.135 %
TOTAL MINOR ALKALOIDS	0.00218 %

ALKU ✓ Kratom Alkaloids — High Level	ALKL ✓ Kratom Alkaloids — Low Level	SOL ✓ Residual Solvents — USP <467>	SAL ✓ Salmonella — 25g qPCR	ECOLI ✓ Total E. Coli & Coliforms — Plate
PGUSP ✓ Pesticides — USP <561>	PLUSP ✓ Pesticides — USP <561>	TAMC ✓ Total Aerobic Bacteria — Plate	SAUR ✓ Staphylococcus aureus — Plate	HVMET ✓ Heavy Metals — 4
TYMFD ✓ Total Yeast & Mold — Plate	FTIRR ✓ Identification by FTIR — Report			

RESULTS REVIEWED BY: Leslie Varela
Laboratory Director
Cambium Analytica
Tuesday, Nov 5, 2024

RESULTS CERTIFIED BY: Douglas Smith
VP - Scientific Operations
Cambium Analytica
Tuesday, Nov 5, 2024

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ALKU

KRATOM ALKALOIDS - HIGH LEVEL

LAB-TM-052 - DETERMINATION OF KRATOM ALKALOID CONTENT BY UPLC-DAD
ALKU-DTS-241030-024-01 - TUE, NOV 5, 2024

ANALYTE	VALUE	VALUE (MG/G)	ACTION LIMIT	LOD	LOQ	STATUS
Mitragynine	1.296 %	12.960 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Speciociliatine	0.405 %	4.050 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Paynantheine	0.273 %	2.727 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Speciogynine	0.161 %	1.611 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Total Major Alkaloids	**2.135 %**	**21.348 mg/g**	N/A	N/A	N/A	N/A

ALKL

KRATOM ALKALOIDS - LOW LEVEL

LAB-TM-047 - DETERMINATION OF KRATOM ALKALOID CONTENT BY LC-TQ
ALKL-DTS-241030-024-01 - TUE, NOV 5, 2024

ISO 17025 ACC#108157

ANALYTE	VALUE	VALUE (MG/G)	ACTION LIMIT	LOD	LOQ	STATUS
7-Hydroxymitragynine	0.00216 %	0.02164 mg/g	N/A	0.002 ug/g	0.011 ug/g	N/A
Mitraphylline	0.00002 %	0.00021 mg/g	N/A	0.004 ug/g	0.019 ug/g	N/A
Total Minor Alkaloids	**0.00218 %**	**0.02185 mg/g**	N/A	0.006 ug/g	0.03 ug/g	N/A

SOL

RESIDUAL SOLVENTS - USP <467>

LAB-TM-004 - DETERMINATION OF RESIDUAL SOLVENTS
SOL-DTS-241030-024-01 - TUE, NOV 5, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
1,2-Dichloroethane	ND	5 ug/g	0.4 ug/g	1.34 ug/g	PASS
2-Methylbutane	ND	N/A	1.54 ug/g	5.14 ug/g	N/A
2-Methylpentane	ND	N/A	0.046 ug/g	0.154 ug/g	N/A
2,2-Dimethylbutane	ND	N/A	0.98 ug/g	3.27 ug/g	N/A
2,3-Dimethylbutane	ND	N/A	2.19 ug/g	7.32 ug/g	N/A
3-Methylpentane	ND	N/A	0.73 ug/g	2.44 ug/g	N/A
Acetone	ND	5000 ug/g	1.57 ug/g	5.23 ug/g	PASS
Acetonitrile	ND	410 ug/g	1.85 ug/g	6.17 ug/g	PASS
Benzene	ND	2 ug/g	0.18 ug/g	0.59 ug/g	PASS
Butane	ND	N/A	1.68 ug/g	5.59 ug/g	N/A
Chloroform	ND	60 ug/g	0.78 ug/g	2.59 ug/g	PASS
Ethanol	ND	5000 ug/g	6.02 ug/g	20.1 ug/g	PASS
Ethyl Acetate	ND	5000 ug/g	1.95 ug/g	6.49 ug/g	PASS
Ethyl Ether	ND	5000 ug/g	1.37 ug/g	4.55 ug/g	PASS
Ethylene Oxide	ND	N/A	0.15 ug/g	0.49 ug/g	N/A
Heptane	ND	5000 ug/g	1.31 ug/g	4.37 ug/g	PASS
Hexane	ND	290 ug/g	1.42 ug/g	4.74 ug/g	PASS
Isobutane	ND	N/A	1.6 ug/g	5.34 ug/g	N/A
Isopropyl Alcohol	ND	N/A	4.9 ug/g	16.3 ug/g	N/A
Methanol	55.416 ug/g	3000 ug/g	7.89 ug/g	26.4 ug/g	PASS
Methylene Chloride	ND	600 ug/g	1.36 ug/g	4.53 ug/g	PASS
Neopentane	ND	N/A	1.49 ug/g	4.97 ug/g	N/A
Pentane	ND	5000 ug/g	1.46 ug/g	4.87 ug/g	PASS
Propane	ND	N/A	1.95 ug/g	6.51 ug/g	N/A
Toluene	ND	890 ug/g	1.88 ug/g	6.26 ug/g	PASS
Total Xylenes	ND	2170 ug/g	2.02 ug/g	6.72 ug/g	PASS
Trichloroethylene	ND	80 ug/g	0.29 ug/g	0.96 ug/g	PASS
Butanes (Sum of Butane and Isobutane)	**ND**	N/A			N/A
Hexanes (Sum of Hexane, 2,2-Dimethylbutane, 2,3-Dimethylbutane, 2-Methylpentane, and 3-Methylpentane)	**ND**	290 ug/g			PASS
Pentanes (Sum of Pentane, 2-Methylbutane, and Neopentane)	**ND**	5000 ug/g			PASS

SAL

SALMONELLA - 25G QPCR

LAB-TM-063 - DETECTION AND ISOLATION OF SALMONELLA SPP. IN FOODS AND DIETARY SUPPLEMENTS
SAL-DTS-241030-024-01 - TUE, NOV 5, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Salmonella Spp	ND	Detection	N/A	N/A	PASS

ECOLI

TOTAL E. COLI & COLIFORMS - PLATE

LAB-TM-059 - ENUMERATION OF ESCHERICHIA COLI AND TOTAL COLIFORM IN FOODS AND DIETARY SUPPLEMENTS
ECOLI-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
E. coli	ND	Detection	10 CFU/g	10 CFU/g	PASS
Total Coliforms	ND	1000 CFU/g	10 CFU/g	10 CFU/g	PASS

PGUSP

PESTICIDES - USP <561> - GC/TQ

LAB-TM-039 - USP 561 PESTICIDES ANALYSIS IN ARTICLES OF BOTANICAL ORIGIN BY GC/TQ
PGUSP-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Aldrin + Dieldrin	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Bromophos Ethyl	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Bromophos Methyl	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Bromopropylate	ND	3 ug/g	6 ng/g	12 ng/g	PASS
Chlordane (Sum of -Cis, -Trans, Oxychlordane)	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Chlorthal-Dimethyl	ND	0.01 ug/g	0.02 ng/g	0.04 ng/g	PASS
DDT (Sum of O,P-DDE, P,P-DDE, O,P-DDT, P,P-DDT, O,P-TDE, and P,P-TDE)	ND	1 ug/g	2 ng/g	4 ng/g	PASS
Dicofol	ND	0.5 ug/g	1 ng/g	2 ng/g	PASS
Endosulfan (Sum of Isomers and Sulphate)	ND	3 ug/g	6 ng/g	12 ng/g	PASS
Endrin	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Fenchlorophos (Sum of Fenchlorophos and Fenchlorophos-Oxon)	ND	0.1 ug/g	0.2 ng/g	0.4 ng/g	PASS
Fenitrothion	ND	0.5 ug/g	1 ng/g	2 ng/g	PASS
Fenvalerate	ND	1.5 ug/g	3 ng/g	6 ng/g	PASS
Fluvalinate-Tau	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Heptachlor (Sum of Heptachlor, Cis-Heptachlorepoxide, and Trans-Heptachlorepoxide)	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Hexachlorobenzene	ND	0.1 ug/g	0.2 ng/g	0.4 ng/g	PASS
Hexachlorocyclohexane (Sum of Isomers Alpha-, Beta-, Delta-, and Epsilon-)	ND	0.3 ug/g	0.6 ng/g	1.2 ng/g	PASS
Lindane (Gamma-Hexachlorocyclohexane)	ND	0.6 ug/g	1.2 ng/g	2.4 ng/g	PASS
Methacriphos	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Methoxychlor	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Mirex	ND	0.01 ug/g	0.02 ng/g	0.04 ng/g	PASS
Parathion Ethyl + Paraoxon Ethyl	ND	0.5 ug/g	1 ng/g	2 ng/g	PASS
Pentachloroanisole	ND	0.01 ug/g	0.02 ng/g	0.04 ng/g	PASS
Procymidone	ND	0.1 ug/g	0.2 ng/g	0.4 ng/g	PASS
Quintozene (Sum of Quintozene, Pentachloroaniline, and Methyl-Pentachlorophenyl Sulfide)	ND	1 ug/g	2 ng/g	4 ng/g	PASS

PGUSP

PESTICIDES - USP <561> - GC/TQ

LAB-TM-039 - USP 561 PESTICIDES ANALYSIS IN ARTICLES OF BOTANICAL ORIGIN BY GC/TQ
PGUSP-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
S-421	ND	0.02 ug/g	0.04 ng/g	0.08 ng/g	PASS
Tecnazene	ND	0.05 ug/g	0.1 ng/g	0.2 ng/g	PASS
Tetradifon	ND	0.3 ug/g	0.6 ng/g	1.2 ng/g	PASS
Vinclozolin	ND	0.4 ug/g	0.8 ng/g	1.6 ng/g	PASS

PLUSP

PESTICIDES - USP <561> - LC/TQ

LAB-TM-038 - USP 561 PESTICIDE ANALYSIS IN ARTICLES OF BOTANICAL ORIGIN BY LC/TQ
PLUSP-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Acephate	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Alachlor	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Azinphos Ethyl	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Azinphos Methyl	ND	1 ug/g	12.5 ng/g	25 ng/g	PASS
Chlorfenvinphos	ND	0.5 ug/g	12.5 ng/g	25 ng/g	PASS
Chlorpyrifos Ethyl	ND	0.2 ug/g	12.5 ng/g	25 ng/g	PASS
Cyfluthrin	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Cypermethrin	0.640 ug/g	1 ug/g	12.5 ng/g	25 ng/g	PASS
Deltamethrin	ND	0.5 ug/g	12.5 ng/g	25 ng/g	PASS
Diazinon	ND	0.5 ug/g	12.5 ng/g	25 ng/g	PASS
Dichlorvos	ND	1 ug/g	12.5 ng/g	25 ng/g	PASS
Dimethoate + Omethoate	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Ethion	ND	2 ug/g	12.5 ng/g	25 ng/g	PASS
Etrimphos	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Fenpropathrin	ND	0.03 ug/g	12.5 ng/g	25 ng/g	PASS
Fensulfothion (Sum of Fensulfothion, Fensulfothion-Oxon, Fensulfothion-Oxon-Sulfone, and Fensulfothion-Sulfone)	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Fenthion (Sum of Fenthion, Fenthion-Oxon, Fenthion-Oxon-Sulfone, Fenthion-Oxon-Sulfoxide, Fenthion-Sulfone, and Fenthion-Sulfoxide)	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Flucythrinate	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Fonophos	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Lambda-Cyhalothrin	ND	1 ug/g	12.5 ng/g	25 ng/g	PASS
Malathion + Malaoxon	ND	1 ug/g	12.5 ng/g	25 ng/g	PASS
Mecarbam	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Methamidophos	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Methidathion	ND	0.2 ug/g	12.5 ng/g	25 ng/g	PASS
Monocrotophos	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Pendimethalin	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Permethrins (Sum of Cis- and Trans-Permethrin)	ND	1 ug/g	12.5 ng/g	25 ng/g	PASS
Phosalone	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Phosmet	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS

PLUSP

PESTICIDES - USP <561> - LC/TQ

LAB-TM-038 - USP 561 PESTICIDE ANALYSIS IN ARTICLES OF BOTANICAL ORIGIN BY LC/TQ
PLUSP-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Piperonyl Butoxide	ND	3 ug/g	12.5 ng/g	25 ng/g	PASS
Pirimiphos Ethyl	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Pirimiphos Methyl (Sum of Pirimiphos-Methyl and n-Desethyl-Pirimiphos-Methyl)	ND	4 ug/g	12.5 ng/g	25 ng/g	PASS
Profenophos	ND	0.1 ug/g	12.5 ng/g	25 ng/g	PASS
Prothiophos	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Pyrethrins (Sum of Cinerin 1, Jasmolin 1, and Pyrethrin 1)	ND	3 ug/g	12.5 ng/g	25 ng/g	PASS
Quinalphos	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS

TAMC

TOTAL AEROBIC BACTERIA - PLATE

LAB-TM-060 - ENUMERATION OF TOTAL AEROBIC COUNT IN FOODS AND DIETARY SUPPLEMENTS
TAMC-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Total Aerobic Count	ND	10000 CFU/g	100 CFU/g	100 CFU/g	PASS

SAUR

STAPHYLOCOCCUS AUREUS - PLATE

LAB-TM-062 - ENUMERATION OF STAPHYLOCOCCUS AUREUS IN FOODS AND DIETARY SUPPLEMENTS
SAUR-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
S. aureus	ND	Detection	10 CFU/g	10 CFU/g	PASS

HVMET

HEAVY METALS - 4

LAB-TM-044 - DETERMINATION OF HEAVY METALS BY ICP-MS
HVMET-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	VALUE (MG/G)	ACTION LIMIT	LOD	LOQ	STATUS
Arsenic	0.232 ug/g	N/A	1.0 ug/g	0.198 ug/kg	0.662 ug/kg	PASS
Cadmium	0.023 ug/g	N/A	1.0 ug/g	0.082 ug/kg	0.272 ug/kg	PASS
Lead	0.908 ug/g	N/A	3.0 ug/g	0.155 ug/kg	0.515 ug/kg	PASS
Mercury	0.027 ug/g	N/A	1.0 ug/g	0.017 ug/kg	0.057 ug/kg	PASS

TYMFD

TOTAL YEAST & MOLD - PLATE

LAB-TM-061 - ENUMERATION OF YEAST AND MOLD IN FOODS AND DIETARY SUPPLEMENTS
TYMFD-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Total Yeast and Mold	ND	100 CFU/g	10 CFU/g	10 CFU/g	PASS

FTIRR

IDENTIFICATION BY FTIR - REPORT

NULL IDENTIFICATION BY FTIR
FTIRR-DTS-241030-024-01 - MON, NOV 4, 2024

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Quality Index Score	99.771 %	95-100 N/A			PASS