

Certificate of Analysis

Sample Name: Part # X30036 - MIT45 Super K Extra Strong (30mL) 12 Pack
Client: MIT45
Sample Code: DTS-251201-027
Matrix Name: Tincture - Oil Based
Type / Result: Quality Assurance - Pass



Received Date: Thu, Dec 4, 2025
Published Date: Wed, Dec 10, 2025
Batch/Lot Code: 00-2634-S
Batch Size: 270mL
Sample Size: 270mL
Average Unit Weight: 34.527g (Density (g/mL) x 30mL package. 15 servings/package.)

RESULT SUMMARY	
Mitragynine	24.08 mg /serv
Total Major Alkaloids	30.27 mg /serv

ALKU Kratom Alkaloids High Level	ALKL Kratom Alkaloids Low Level	SAL Salmonella spp. qPCR	ECOLI Total Coliforms & E. coli Plate	PGUSP Pesticides USP <561>m
PLUSP Pesticides USP <561>m	TAMC Total Aerobic Bacteria Plate	DEN Density of Liquids	SAUR Staphylococcus aureus Plate	AWA Water Activity
HVMET Heavy Metals Big 4	TYMFD Total Yeast & Mold Plate	FTIRR Identification by FTIR Report	SOLHM Residual Solvents National Panel	

Approvals					
RESULTS REVIEWED BY:			RESULTS CERTIFIED BY:		
	Leslie Varela Laboratory Director	Cambium Analytica Wednesday, Dec 10, 2025		Douglas Smith VP - Scientific Operations	Cambium Analytica Wednesday, Dec 10, 2025
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Lab Information		
Address: 1230 Woodmere Ave, Traverse City, MI 49686	Phone: 231.252.3669	Accreditation: ISO/IEC 17025:2017 – #108157



ALKU Kratom Alkaloids - High Level LAB-TM-052 - Determination of Kratom Alkaloid Content by UPLC-DAD ALKU-DTS-251201-027-01 - MON, DEC 8, 2025								
Analyte	Value	Value (mg/g)	Per Serving	Per Package	Action Limit	LOD	LOQ	Status
Mitragynine	1.0461 %	10.4606 mg/g	24.08 mg	361.17 mg	N/A	0.3 ug/g	0.5 ug/g	N / A
Paynantheine	0.1588 %	1.5884 mg/g	3.66 mg	54.84 mg	N/A	0.3 ug/g	0.5 ug/g	N / A
Speciogynine	0.0636 %	0.6360 mg/g	1.46 mg	21.96 mg	N/A	0.3 ug/g	0.5 ug/g	N / A
Speciociliatine	0.0467 %	0.4672 mg/g	1.08 mg	16.13 mg	N/A	0.3 ug/g	0.5 ug/g	N / A
Total Major Alkaloids*	1.3152 %	13.1523 mg/g	30.27 mg	454.11 mg	N/A	N/A	N/A	N / A

*Total Major Alkaloids is calculated as the sum of Mitragynine, Paynantheine, Speciociliatine and Speciogynine.

ALKL Kratom Alkaloids - Low Level LAB-TM-047 - Determination of Kratom Alkaloid Content by LC-TQ ALKL-DTS-251201-027-01 - TUE, DEC 9, 2025								
Analyte	Value	Value (mg/g)	Per Serving	Per Package	Action Limit	LOD	LOQ	Status
7-Hydroxymitragynine	0.00019 %	0.00188 mg/g	0.00 mg	0.06 mg	N/A	0.002 ug/g	0.011 ug/g	N / A
Mitraphylline	0.00009 %	0.00091 mg/g	0.00 mg	0.03 mg	N/A	0.004 ug/g	0.019 ug/g	N / A
Total Minor Alkaloids*	0.00028 %	0.00279 mg/g	0.01 mg	0.10 mg	N/A	N/A	N/A	N / A

*Total Minor Alkaloids is calculated as the sum of 7-Hydroxymitragynine and Mitraphylline.

SAL Salmonella spp. - qPCR 25g LAB-TM-063 - Detection of Presumptive Salmonella spp. in Foods and Dietary Supplements SAL-DTS-251201-027-01 - TUE, DEC 9, 2025 					
Analyte	Value	Action Limit	LOD	LOQ	Status
Salmonella spp.	ND	Detection	N/A	N/A	PASS

ECOLI Total Coliforms & E. coli - Plate - 25g - Full Range LAB-TM-059 - Enumeration of Escherichia coli and Total Coliform in Foods and Dietary Supplements ECOLI-DTS-251201-027-01 - SAT, DEC 6, 2025					ISO ISO 17025 ACCREDITED
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





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
Chlorpyrifos Methyl	ND	N/A	0.2 ng/g	0.4 ng/g	N/A
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-Heptachlorepoxyde, and Trans-Heptachlorepoxyde)	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
Parathion Methyl + Paraoxon Methyl	ND	N/A	0.4 ng/g	0.8 ng/g	N/A
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
S-421	ND	0.02 ug/g	0.04 ng/g	0.08 ng/g	PASS

Modified test method does not include the following analytes: Bromide, inorganic (calculated as bromide ion), Dichlofluanid, Dithiocarbamates (as CS2), N-desethyl-pirimiphos-methyl





Analyte	Value	Action Limit	LOD	LOQ	Status
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

Modified test method does not include the following analytes: Bromide, inorganic (calculated as bromide ion), Dichlofluanid, Dithiocarbamates (as CS2), N-desethyl-pirimiphos-methyl



PLUSP

Pesticides - USP <561>m - LC/TQ

LAB-TM-038 - USP 561 Pesticide Analysis in Articles of Botanical Origin by LC/TQ

PLUSP-DTS-251201-027-01 - MON, DEC 8, 2025



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	0.341 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	ND	N/A	12.5 ng/g	25 ng/g	N/A
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	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fensulfothion-Oxon	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fensulfothion-Oxonsulfone	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fensulfothion-Sulfone	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fenthion	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fenthion-Oxon	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fenthion-Oxon-Sulfone	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fenthion-Oxon-Sulfoxide	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fenthion-Sulfone	ND	N/A	12.5 ng/g	25 ng/g	N/A
Fenthion-Sulfoxide	ND	N/A	12.5 ng/g	25 ng/g	N/A
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	<LOQ	1 ug/g	12.5 ng/g	25 ng/g	PASS
Malaoxon	ND	N/A	12.5 ng/g	25 ng/g	N/A
Malathion	ND	N/A	12.5 ng/g	25 ng/g	N/A
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
Omethoate	ND	N/A	12.5 ng/g	25 ng/g	N/A

*Total Fensulfothions is calculated as the sum of Fensulfothion, Fensulfothion-Oxon, Fensulfothion-Oxonsulfone, and Fensulfothion-Sulfone

*Total Fenthions is calculated as the sum of Fenthion, Fenthion-Oxon, Fenthion-Oxon-Sulfone, Fenthion-Oxon-Sulfoxide, Fenthion-Sulfone, and Fenthion-Sulfoxide

*Total Pyrethrins is calculated as the sum of Cinerin I, Cinerin II, Jasmolin I, Jasmolin II, Pyrethrin I, and Pyrethrin II.

Modified test method does not include the following analytes: Bromide, inorganic (calculated as bromide ion), Dichlofluanid, Dithiocarbamates (as CS2), N-desethyl-pirimiphos-methyl



Analyte	Value	Action Limit	LOD	LOQ	Status
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
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	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 Cinerin I	ND	N/A	3.75 ng/g	7.5 ng/g	N/A
Pyrethrins Cinerin II	ND	N/A	2.5 ng/g	5 ng/g	N/A
Pyrethrins Jasmolin I	ND	N/A	0.5 ng/g	2.5 ng/g	N/A
Pyrethrins Jasmolin II	ND	N/A	1.25 ng/g	2.5 ng/g	N/A
Pyrethrins Pyrethrin I	ND	N/A	6.75 ng/g	33.75 ng/g	N/A
Pyrethrins Pyrethrin II	ND	N/A	3.25 ng/g	16.25 ng/g	N/A
Quinalphos	ND	0.05 ug/g	12.5 ng/g	25 ng/g	PASS
Dimethoate + Omethoate	0.000 ug/g	0.1 ug/g	N/A	N/A	PASS
Malathion + Malaoxon	0.000 ug/g	1 ug/g	N/A	N/A	PASS
Total Fensulfothions*	0.000 ug/g	0.05 ug/g	N/A	N/A	PASS
Total Fenthions*	0.000 ug/g	0.05 ug/g	N/A	N/A	PASS
Total Pyrethrins*	0.000 ug/g	3 ug/g	N/A	N/A	PASS

*Total Fensulfothions is calculated as the sum of Fensulfothion, Fensulfothion-Oxon, Fensulfothion-Oxonsulfone, and Fensulfothion-Sulfone

*Total Fenthions is calculated as the sum of Fenthion, Fenthion-Oxon, Fenthion-Oxon-Sulfone, Fenthion-Oxon-Sulfoxide, Fenthion-Sulfone, and Fenthion-Sulfoxide

*Total Pyrethrins is calculated as the sum of Cinerin I, Cinerin II, Jasmolin I, Jasmolin II, Pyrethrin I, and Pyrethrin II.

Modified test method does not include the following analytes: Bromide, inorganic (calculated as bromide ion), Dichlofluanid, Dithiocarbamates (as CS2), N-desethyl-pirimiphos-methyl



TAMC Total Aerobic Bacteria - Plate - 25g - Full Range LAB-TM-060 - Enumeration of Total Aerobic Count in Foods and Dietary Supplements TAMC-DTS-251201-027-01 - SAT, DEC 6, 2025 					
Analyte	Value	Action Limit	LOD	LOQ	Status
Total Aerobic Count	ND	10000 CFU/g	10 CFU/g	10 CFU/g	PASS

DEN Density of Liquids LAB-TM-017 - Brix & Density Analysis DEN-DTS-251201-027-01 - FRI, DEC 5, 2025 					
Analyte	Value	Action Limit	LOD	LOQ	Status
Density	1.1509 g/mL	N/A	N/A	N/A	N / A
Specific Gravity*	1.1530	N/A	N/A	N/A	N / A

*Specific gravity is calculated using the density of water at 20 °C (0.9982 g/mL) using the equation:
[Specific Gravity = (Density of sample in g/mL) ÷ 0.9982 g/mL]

SAUR Staphylococcus aureus - Plate - 25g LAB-TM-062 - Enumeration of Staphylococcus aureus in Foods and Dietary Supplements SAUR-DTS-251201-027-01 - SAT, DEC 6, 2025 					
Analyte	Value	Action Limit	LOD	LOQ	Status
S. aureus	ND	Detection	10 CFU/g	10 CFU/g	PASS

AWA Water Activity LAB-TM-009 - Determination of Water Activity AWA-DTS-251201-027-01 - MON, DEC 8, 2025 					
Analyte	Value	Action Limit	LOD	LOQ	Status
Water Activity	0.758 aw	N/A	N/A	N/A	N / A

HVMET Heavy Metals - Big 4 LAB-TM-044 - Determination of Heavy Metals by ICP-MS HVMET-DTS-251201-027-01 - MON, DEC 8, 2025 								
Analyte	Value	Value (mg/g)	Per Serving	Per Package	Action Limit	LOD	LOQ	Status
Arsenic	ND	N/A	N/A	N/A	1 ug/g	0.509 ug/kg	2.062 ug/kg	PASS
Cadmium	0.001 ug/g	0.000 mg/g	0.00 ug	0.04 ug	1 ug/g	0.256 ug/kg	0.509 ug/kg	PASS
Lead	0.005 ug/g	0.000 mg/g	0.01 ug	0.19 ug	3 ug/g	0.255 ug/kg	0.515 ug/kg	PASS
Mercury	0.001 ug/g	0.000 mg/g	0.00 ug	0.04 ug	1 ug/g	0.025 ug/kg	0.057 ug/kg	PASS



TYMFD Total Yeast & Mold - Plate - 25g - Full Range LAB-TM-061 - Enumeration of Yeast and Mold in Foods and Dietary Supplements TYMFD-DTS-251201-027-01 - MON, DEC 8, 2025 					
Analyte	Value	Action Limit	LOD	LOQ	Status
Total Mold	ND	N/A	10 CFU/g	10 CFU/g	N / A
Total Yeast	ND	N/A	10 CFU/g	10 CFU/g	N / A
Total Yeast and Mold*	ND	100 CFU/g	10 CFU/g	10 CFU/g	PASS

*Total Yeast and Mold is calculated as the sum of Total Yeast and Total Mold

FTIRR Identification by FTIR - Report ANA-TM-113 - Identification by FTIR FTIRR-DTS-251201-027-01 - MON, DEC 8, 2025					
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Analyte	Value	Action Limit	LOD	LOQ	Status
Quality Index Score	99.9 %	95 - 100 %	N/A	N/A	PASS

Super K Extra Strong



Analyte	Value	Action Limit	LOD	LOQ	Status
1,1-Dichloroethene	ND	N/A	5 ug/g	10 ug/g	N/A
1,2-Dichloroethane	ND	5 ug/g	0.5 ug/g	1.00 ug/g	PASS
2-Methylbutane	ND	N/A	5 ug/g	10 ug/g	N/A
2-Methylpentane	ND	N/A	5 ug/g	10 ug/g	N/A
2,2-Dimethylbutane	ND	N/A	5 ug/g	10 ug/g	N/A
2,3-Dimethylbutane	ND	N/A	5 ug/g	10 ug/g	N/A
3-Methylpentane	ND	N/A	5 ug/g	10 ug/g	N/A
Acetone	ND	5000 ug/g	5 ug/g	10 ug/g	PASS
Acetonitrile	ND	410 ug/g	5 ug/g	10 ug/g	PASS
Benzene	ND	2 ug/g	0.18 ug/g	0.50 ug/g	PASS
Butane	ND	N/A	5 ug/g	10 ug/g	N/A
Chloroform	ND	60 ug/g	0.78 ug/g	1 ug/g	PASS
Ethanol	ND	5000 ug/g	5 ug/g	10 ug/g	PASS
Ethyl Acetate	ND	5000 ug/g	5 ug/g	10 ug/g	PASS
Ethyl Ether	ND	5000 ug/g	5 ug/g	10 ug/g	PASS
Ethylene Oxide	ND	N/A	2 ug/g	4 ug/g	N/A
Heptane	ND	5000 ug/g	5 ug/g	10 ug/g	PASS
Hexane	ND	290 ug/g	5 ug/g	10 ug/g	PASS
Isobutane	ND	N/A	5 ug/g	10 ug/g	N/A
Isopropyl Alcohol	ND	N/A	5 ug/g	10 ug/g	N/A
Methanol	16.273 ug/g	3000 ug/g	5 ug/g	10 ug/g	PASS
Methylene Chloride	ND	600 ug/g	5 ug/g	10 ug/g	PASS
Neopentane	ND	N/A	5 ug/g	10 ug/g	N/A
Pentane	ND	5000 ug/g	5 ug/g	10 ug/g	PASS
Propane	ND	N/A	5 ug/g	10 ug/g	N/A
Toluene	ND	890 ug/g	5 ug/g	10 ug/g	PASS
Total Xylenes	ND	2170 ug/g	5 ug/g	10 ug/g	PASS
Trichloroethylene	ND	80 ug/g	0.5 ug/g	1 ug/g	PASS
Total Butanes*	0.000 ug/g	N/A	N/A	N/A	N/A
Total Hexanes*	0.000 ug/g	290 ug/g	N/A	N/A	PASS
Total Pentanes*	0.000 ug/g	5000 ug/g	N/A	N/A	PASS

*Total Butanes is calculated as the sum of Butane and Isobutane

*Total Hexanes is calculated as the sum of Hexane, 2,2-Dimethylbutane, 2,3-Dimethylbutane, 2-Methylpentane, and 3-Methylpentane.

*Total Pentanes is calculated as the sum of Pentane, 2-Methylbutane, and Neopentane.

