Certificate of Analysis

Sample Name: Part # X30036 - MIT45 Super K Extra Strong (30 mL) 12 Pack
Client: MIT45
Sample Code: DTS-260113-006
Matrix Name: Tincture - Oil Based
Type / Result: Quality Assurance - Pass

cambium analytica

Received Date:	Wed, Jan 14, 2026
Published Date:	Tue, Jan 27, 2026
Revision Date:	Wed, Feb 04, 2026
Batch/Lot Code:	00-2684-S
Batch Size:	9 U
Sample Size:	9 U
Average Unit Weight:	34.524 g (Density (g/mL) x 30mL package. 15 servings/package.)

RESULT SUMMARY

Total Major Alkaloids	32.36 mg/serv
Mitragynine	25.08 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:

Leslie Varela
Laboratory Director
Cambium Analytica
Tue, Jan 27, 2026

RESULTS CERTIFIED BY:

Douglas Smith
VP - Scientific Operations
Cambium Analytica
Tue, Jan 27, 2026

ALKU

Kratom Alkaloids - High Level

LAB-TM-052 - Determination of Kratom Alkaloid Content by UPLC-DAD
ALKU-DTS-260113-006-01 - MON, JAN 19, 2026

Analyte	Value	Value (mg)	Per Serving	Per Package	Action Limit	LOD	LOQ	Status
Mitragynine	1.0899 %	10.8987 mg/g	25.08 mg	376.27 mg	N/A	0.3 ug/g	0.5 ug/g	N/A
Paynantheine	0.1551 %	1.5513 mg/g	3.57 mg	53.56 mg	N/A	0.3 ug/g	0.5 ug/g	N/A
Speciogynine	0.0852 %	0.8517 mg/g	1.96 mg	29.41 mg	N/A	0.3 ug/g	0.5 ug/g	N/A
Speciociliatine	0.0756 %	0.7562 mg/g	1.74 mg	26.11 mg	N/A	0.3 ug/g	0.5 ug/g	N/A
Total Major Alkaloids*	1.4058 %	14.0579 mg/g	32.36 mg	485.34 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-260113-006-01 - FRI, JAN 16, 2026

Analyte	Value	Value (mg)	Per Serving	Per Package	Action Limit	LOD	LOQ	Status
7-Hydroxymitragynine	0.00009 %	0.00088 mg/g	0 mg	0.03 mg	N/A	0.002 ug/g	0.011 ug/g	N/A
Mitraphylline	0.00007 %	0.00066 mg/g	0 mg	0.02 mg	N/A	0.004 ug/g	0.019 ug/g	N/A
Total Minor Alkaloids*	0.00015 %	0.00153 mg/g	0 mg	0.05 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-260113-006-01 - SUN, JAN 18, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Salmonella spp.	ND	Detection	N/A	N/A	Pass

References: USP <62> - Vendor Modified, USP <2022> - Vendor Modified, USP <1223>, AOAC PTM 121802, AOAC OMA 2020.02

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-260113-006-01 - FRI, JAN 16, 2026

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

References: USP <61> - Vendor Modified, USP <2021> - Vendor Modified, USP <1223>, AOAC PTM 051801, AOAC OMA 2018.13

PGUSP

Pesticides - USP <561>m - GC/TQ

LAB-TM-039 - USP 561 Pesticides Analysis in Articles of Botanical Origin by GC/TQ
PGUSP-DTS-260113-006-01 - THU, JAN 29, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Aldrin	ND	N/A	0.002 ug/g	0.006 ug/g	N/A
Bromophos-ethyl	ND	0.05 ug/g	0.002 ug/g	0.005 ug/g	Pass
Bromophos-methyl	ND	0.05 ug/g	0.002 ug/g	0.005 ug/g	Pass
Bromopropylate	ND	3 ug/g	0.002 ug/g	0.005 ug/g	Pass
Chlorpyrifos-methyl	ND	0.1 ug/g	0.002 ug/g	0.005 ug/g	Pass
Chlorthal-dimethyl	ND	0.01 ug/g	0.002 ug/g	0.005 ug/g	Pass
Dicofol	ND	0.5 ug/g	0.002 ug/g	0.005 ug/g	Pass
Dieldrin	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Endosulfan Sulfate	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Endrin	ND	0.05 ug/g	0.002 ug/g	0.007 ug/g	Pass
Fenchlorophos	ND	N/A	0.002 ug/g	0.005 ug/g	N/A

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

PGUSP

Pesticides - USP <561>m - GC/TQ

LAB-TM-039 - USP 561 Pesticides Analysis in Articles of Botanical Origin by GC/TQ
PGUSP-DTS-260113-006-01 - THU, JAN 29, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Fenchlorophos-oxon	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Fenitrothion	ND	0.5 ug/g	0.002 ug/g	0.005 ug/g	Pass
Fenvalerate	ND	1.5 ug/g	0.002 ug/g	0.005 ug/g	Pass
Heptachlor	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Hexachlorobenzene	ND	0.1 ug/g	0.002 ug/g	0.005 ug/g	Pass
Lindane (gamma-Hexachlorocyclohexane)	ND	0.6 ug/g	0.002 ug/g	0.005 ug/g	Pass
Methacriphos	ND	0.05 ug/g	0.004 ug/g	0.012 ug/g	Pass
Methoxychlor	ND	0.05 ug/g	0.004 ug/g	0.013 ug/g	Pass
Methylpentachlorphenyl Sulfide	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Mirex	ND	0.01 ug/g	0.002 ug/g	0.005 ug/g	Pass
Oxychlordane	ND	N/A	0.005 ug/g	0.01 ug/g	N/A
Paraoxon-ethyl	ND	N/A	0.005 ug/g	0.01 ug/g	N/A
Paraoxon-methyl*	ND	N/A	0.005 ug/g	0.01 ug/g	N/A
Parathion-ethyl	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Parathion-methyl	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Pentachloroaniline	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Pentachloroanisole*	ND	0.01 ug/g	0.002 ug/g	0.005 ug/g	Pass
Pentachloronitrobenzene (Quintozene)	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
Procymidone	ND	0.1 ug/g	0.002 ug/g	0.005 ug/g	Pass
S-421*	ND	0.02 ug/g	0.002 ug/g	0.005 ug/g	Pass
Tecnazene	ND	0.05 ug/g	0.002 ug/g	0.005 ug/g	Pass
Tetradifon	ND	0.3 ug/g	0.002 ug/g	0.005 ug/g	Pass
Vinclozolin	ND	0.4 ug/g	0.002 ug/g	0.005 ug/g	Pass
alpha-Endosulfan	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
alpha-Hexachlorocyclohexane	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
beta-Endosulfan	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
beta-Hexachlorocyclohexane	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
cis-Chlordane	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
cis-Heptachlorepoxide	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
delta-Hexachlorocyclohexane	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
epsilon-Hexachlorocyclohexane	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
o,p'-DDE	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
o,p'-DDT	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
o,p'-TDE	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
p,p'-DDE	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
p,p'-DDT	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
p,p'-TDE	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
tau-Fluvalinate	ND	0.05 ug/g	0.002 ug/g	0.005 ug/g	Pass
trans-Chlordane	ND	N/A	0.002 ug/g	0.005 ug/g	N/A
trans-Heptachlorepoxide	ND	N/A	0.004 ug/g	0.012 ug/g	N/A

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

PGUSP

Pesticides - USP <561>m - GC/TQ

LAB-TM-039 - USP 561 Pesticides Analysis in Articles of Botanical Origin by GC/TQ
PGUSP-DTS-260113-006-01 - THU, JAN 29, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Aldrin + Dieldrin	0 ug/g	0.05 ug/g	N/A	N/A	Pass
Parathion-ethyl + Paraoxon-ethyl	0 ug/g	0.5 ug/g	N/A	N/A	Pass
Parathion-methyl + Paraoxon-methyl	0 ug/g	0.2 ug/g	N/A	N/A	Pass
Total Chlordanes - USP*	0 ug/g	0.05 ug/g	N/A	N/A	Pass
Total DDTs*	0 ug/g	1 ug/g	N/A	N/A	Pass
Total Endosulfans*	0 ug/g	3 ug/g	N/A	N/A	Pass
Total Fenchlorophos*	0 ug/g	0.1 ug/g	N/A	N/A	Pass
Total Heptachlors*	0 ug/g	0.05 ug/g	N/A	N/A	Pass
Total Hexachlorocyclohexanes*	0 ug/g	0.3 ug/g	N/A	N/A	Pass
Total Quintozenes*	0 ug/g	1 ug/g	N/A	N/A	Pass

** Total Chlordanes is calculated as the sum of cis-Chlordane, trans-Chlordane, and Oxychlordane.*
** Total DDTs is calculated as the sum of o,p'-DDE, p,p'-DDE, o,p'-DDT, p,p'-DDT, o,p'-TDE, and p,p'-TDE.*
** Total Endosulfans is calculated as the sum of alpha-Endosulfan, beta-Endosulfan, and Endosulfan Sulfate.*
** Total Fenchlorophos is calculated as the sum of Fenchlorophos and Fencholorophos-oxon.*
** Total Heptachlors is calculated as the sum of Heptachlor, cis-Heptachlorepoxide, and trans-Heptachlorepoxide.*
** Total Hexachlorocyclohexanes is calculated as the sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, and epsilon-Hexachlorocyclohexane.*
** Total Quintozenes is calculated as the sum of Pentachloronitrobenzene (Quintozene), Pentachloroaniline, and Methylpentachlorphenyl Sulfide.*
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-260113-006-01 - THU, JAN 29, 2026

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	0.152 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

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-260113-006-01 - THU, JAN 29, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
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
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
Pendimethalin	ND	0.1 ug/g	12.5 ng/g	25 ng/g	Pass
Permethrins (Sum of cis-Permethrin 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
lambda-Cyhalothrin	ND	1 ug/g	12.5 ng/g	25 ng/g	Pass
Dimethoate + Omethoate	0 ug/g	0.1 ug/g	N/A	N/A	Pass
Malathion + Malaoxon	0 ug/g	1 ug/g	N/A	N/A	Pass
Total Fensulfothions*	0 ug/g	0.05 ug/g	N/A	N/A	Pass
Total Fenthions*	0 ug/g	0.05 ug/g	N/A	N/A	Pass
Total Pyrethrins*	0 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-260113-006-01 - FRI, JAN 16, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Total Aerobic Count	ND	10000 CFU/g	10 CFU/g	10 CFU/g	Pass

References: USP <61> - Vendor Modified, USP <1223>, AOAC PTM 121403, AOAC OMA 2015.13

DEN — Density of Liquids

LAB-TM-017 - Brix & Density Analysis
DEN-DTS-260113-006-01 - THU, JAN 15, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Density	1.1508 g/mL	N/A	N/A	N/A	N/A
Specific Gravity*	1.1529	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-260113-006-01 - FRI, JAN 16, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
S. aureus	ND	Detection	10 CFU/g	10 CFU/g	Pass

References: USP <61> - Vendor Modified, USP <2021> - Vendor Modified, USP <1223>, AOAC OMA 2003.07

AWA — Water Activity

LAB-TM-009 - Determination of Water Activity
AWA-DTS-260113-006-01 - FRI, JAN 16, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Water Activity	0.756 aw	N/A	N/A	N/A	N/A

References: USP <922>

HVMET — Heavy Metals - Big 4

LAB-TM-044 - Determination of Heavy Metals by ICP-MS
HVMET-DTS-260113-006-01 - FRI, JAN 16, 2026

Analyte	Value	Value (mg)	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	ND	N/A	N/A	N/A	1 ug/g	0.256 ug/kg	0.509 ug/kg	Pass
Lead	0.014 ug/g	0 mg/g	0.03 ug	0.47 ug	3 ug/g	0.255 ug/kg	0.515 ug/kg	Pass
Mercury	0.003 ug/g	0 mg/g	0.01 ug	0.1 ug	1 ug/g	0.025 ug/kg	0.057 ug/kg	Pass

References: USP <233>, USP <730>, USP <1730>

TYMFD — Total Yeast & Mold - Plate - 25g - Full Range

LAB-TM-061 - Enumeration of Yeast and Mold in Foods and Dietary Supplements
TYMFD-DTS-260113-006-01 - MON, JAN 19, 2026

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*
References: USP <61> - Vendor Modified, USP <1223>, AOAC PTM 121301, AOAC OMA 2014.05

FTIRR — Identification by FTIR - Report

ANA-TM-113 - Identification by FTIR
FTIRR-DTS-260113-006-01 - THU, JAN 15, 2026

Analyte	Value	Action Limit	LOD	LOQ	Status
Quality Index Score	99.9 %	95 - 100 %	N/A	N/A	Pass

References: USP <197>, USP <854>, USP <1854>