

Certificate of Analysis



Sample Name: Dec. Red
Client: Top Tree Herbs
Sample Code: DTS-251210-035
Matrix Name: Botanical Powder - Plant
Type / Result: Quality Assurance - Pass



Received Date: Fri, Dec 19, 2025
Published Date: Tue, Dec 23, 2025
Batch/Lot Code: TTHLLR03125
Batch Size: N/A
Sample Size: 1U

RESULT SUMMARY

Mitragynine	1.0641 %
Total Major Alkaloids	1.7541 %

ALKU
Kratom Alkaloids
High Level

ALKL
Kratom Alkaloids
Low Level

TAMC
Total Aerobic Bacteria
Plate

SS
Salmonella & STEC
qPCR

HVMET
Heavy Metals
Big 4

Approvals

RESULTS REVIEWED BY:

Leslie Varela
Laboratory Director

Cambium Analytica
Tuesday, Dec 23, 2025

RESULTS CERTIFIED BY:

Douglas Smith
VP - Scientific Operations

Cambium Analytica
Tuesday, Dec 23, 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 LevelLAB-TM-052 - Determination of Kratom Alkaloid Content by UPLC-DAD
ALKU-DTS-251210-035-01 - TUE, DEC 23, 2025

Analyte	Value	Value (mg/g)	Action Limit	LOD	LOQ	Status
Mitragynine	1.0641 %	10.6410 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Speciociliatine	0.3068 %	3.0679 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Paynantheine	0.2479 %	2.4790 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Speciogynine	0.1354 %	1.3536 mg/g	N/A	0.3 ug/g	0.5 ug/g	N/A
Total Major Alkaloids*	1.7541 %	17.5415 mg/g	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 LevelLAB-TM-047 - Determination of Kratom Alkaloid Content by LC-TQ
ALKL-DTS-251210-035-01 - TUE, DEC 23, 2025

Analyte	Value	Value (mg/g)	Action Limit	LOD	LOQ	Status
7-Hydroxymitragynine	0.00145 %	0.01449 mg/g	N/A	0.002 ug/g	0.011 ug/g	N/A
Mitraphylline	0.00001 %	0.00011 mg/g	N/A	0.004 ug/g	0.019 ug/g	N/A
Total Minor Alkaloids*	0.00146 %	0.01460 mg/g	N/A	N/A	N/A	N/A

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

TAMC

Total Aerobic Bacteria - Plate - 25g - Full RangeLAB-TM-060 - Enumeration of Total Aerobic Count in Foods and Dietary Supplements
TAMC-DTS-251210-035-01 - TUE, DEC 23, 2025

Analyte	Value	Action Limit	LOD	LOQ	Status
Total Aerobic Count	22000 CFU/g	N/A	1000 CFU/g	1000 CFU/g	N/A

SS

Salmonella & STEC - qPCRLAB-TM-006 - Microbial Analysis by qPCR
SS-DTS-251210-035-01 - TUE, DEC 23, 2025

Analyte	Value	Action Limit	LOD	LOQ	Status
Salmonella spp.	ND	N/A	N/A	N/A	N/A
Shiga Toxin Producing E. coli	ND	N/A	N/A	N/A	N/A

HVMET

Heavy Metals - Big 4LAB-TM-044 - Determination of Heavy Metals by ICP-MS
HVMET-DTS-251210-035-01 - TUE, DEC 23, 2025

Analyte	Value	Value (mg/g)	Action Limit	LOD	LOQ	Status
Arsenic	0.220 ug/g	0.000 mg/g	N/A	0.509 ug/kg	2.062 ug/kg	N/A
Cadmium	0.024 ug/g	0.000 mg/g	N/A	0.256 ug/kg	0.509 ug/kg	N/A
Lead	0.172 ug/g	0.000 mg/g	N/A	0.255 ug/kg	0.515 ug/kg	N/A
Mercury	0.019 ug/g	0.000 mg/g	N/A	0.025 ug/kg	0.057 ug/kg	N/A

