



12423 NE Whitaker Way  
 Portland, OR 97230  
 503-254-1794

**Report Number:** 22-001416/D002.R000  
**Report Date:** 02/14/2022  
**Purchase Order:**  
**Received:** 02/07/22 11:43 AM



**Customer:** Top Tree Herbs  
 2000 S. Colorado Blvd.  
 Tower One, Suite 2000 #1046  
 Denver, CO 80222

**Sample ID:** 2212010, 2301016M, 2301016L  
**Sample Matrix:** Kratom Leaf  
**Laboratory ID:** 22-001416-0001  
**Evidence of Cooling:** No  
**Temp:** 20 °C  
**Relinquished by:** Courier

### Sample Results

#### Metals

##### Heavy Metals Profile K

Analyte	Result	Units	LOQ	Analyzed	Method	Threshold	Pass/Fail	Notes
Arsenic	0.249	mg/kg	0.008	02/10/22	AOAC2013.06(mod.) <sub>1</sub>	2.08	pass	
Cadmium	0.0277	mg/kg	0.008	02/10/22	AOAC2013.06(mod.) <sub>1</sub>	0.850	pass	
Lead	0.455	mg/kg	0.008	02/10/22	AOAC2013.06(mod.) <sub>1</sub>	1.25	pass	
Mercury	0.0175	mg/kg	0.004	02/10/22	AOAC2013.06(mod.) <sub>1</sub>	0.410	pass	
Nickel	2.09	mg/kg	0.017	02/10/22	AOAC2013.06(mod.) <sub>1</sub>	20.0	pass	

1) trace metals in food by Inductively Coupled Mass Spectrometry

#### Microbiology

##### Microbiology Profile B

Analyte	Result	Units	LOQ	Analyzed	Method	Threshold	Pass/Fail	Notes
Aerobic Plate Count	890,000	cfu/g	1,000	02/10/22	AOAC 990.12 (Petrifilm)	10,000,000	pass	
E.coli	< LOQ	cfu/g	100	02/10/22	AOAC 991.14 (Petrifilm)	100	pass	
Enterobacteriaceae	100	cfu/g	100	02/09/22	AOAC 2003.01	10,000	pass	
Mold (RAPID Petrifilm)	8,000	cfu/g	1,000	02/11/22	AOAC 2014.05 (RAPID)	50,000	pass	
Yeast (RAPID Petrifilm)	41,000	cfu/g	1,000	02/11/22	AOAC 2014.05 (RAPID)	50,000	pass	
Salmonella, 375g, by PCR	Negative	/375g	-	02/09/22	AOAC 2020.02 <sub>2</sub>	Negative	pass	

2) GENE-UP® Assay

#### Mitragynine

##### Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed	Method	Threshold	Pass/Fail	Notes
7-Hydroxymitragynine†	0.0100	%	0.010	02/10/22	In house method by HPLC-DAD			
Isorhynchophylline	< LOQ	%	0.050	02/10/22	In house method by HPLC-DAD			



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### Mitragynine

#### Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed	Method	Threshold	Pass/Fail	Notes
Mitragynine†	0.940	%	0.050	02/10/22	In house method by HPLC-DAD			
Mitraphylline	< LOQ	%	0.050	02/10/22	In house method by HPLC-DAD			
Paynantheine	0.143	%	0.050	02/10/22	In house method by HPLC-DAD			
Speciociliatine	0.350	%	0.050	02/10/22	In house method by HPLC-DAD			
Speciogynine	0.125	%	0.050	02/10/22	In house method by HPLC-DAD			



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**Report Number:** 22-015117/D002.R000  
**Report Date:** 12/19/2022  
**Purchase Order:**  
**Received:** 02/07/22 11:43 AM



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2000 S. Colorado Blvd.  
Tower One, Suite 2000 #1046  
Denver, CO 80222

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**Sample Matrix:** Kratom Leaf

**Laboratory ID:** 22-001216-0001

**Evidence of Cooling:** No

**Temp:** 20 °C

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### Sample Results

#### Microbiology

Analyte	Result	Units	LOQ	AnalyzedMethod	Threshold	Pass/Fail	Notes
Salmonella, 375g, by PCR	Negative	/375g	-	02/09/22 AOAC 2020.02 <sub>1</sub>	Negative	pass	

1) GENE-UP® Assay

#### Abbreviations

**Limit(s) of Quantitation (LOQ):** The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

**Threshold Note:** limits based on AHPA recommended limits for unprocessed herbs and supplements and ingredients and 4.8 g daily c

† = Analyte not ISO accredited

#### Units of Measure

cfu/g = Colony forming units per gram

mg/kg = Milligram per kilogram = parts per million (ppm)

/375g = Per 375 grams

% = Percentage of sample

Approved Signatory

Derrick Tanner  
General Manager