



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

**Report Number:** 22-007272/D002.R000  
**Report Date:** 06/28/2022  
**Purchase Order:**  
**Received:** 06/21/22 02:21 PM



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

**Sample ID:** TTHGRL03073, TTHGTB04073  
**Sample Matrix:** Kratom Leaf  
**Laboratory ID:** 22-007272-0001  
**Evidence of Cooling:** No  
**Temp:** 23.8 °C  
**Relinquished by:** Courier

### Sample Results

#### Metals

##### Heavy Metals Profile K

Analyte	Result	Units	LOQ	Analyzed	Method	Threshold	Pass/Fail	Notes
Arsenic	0.0545	mg/kg	0.00958	06/22/22	AOAC 2013.06 (mod.) <sub>1</sub>	2.08	pass	
Cadmium	0.0107	mg/kg	0.00958	06/22/22	AOAC 2013.06 (mod.) <sub>1</sub>	0.850	pass	
Lead	0.248	mg/kg	0.00958	06/22/22	AOAC 2013.06 (mod.) <sub>1</sub>	1.25	pass	
Mercury	0.0143	mg/kg	0.00479	06/22/22	AOAC 2013.06 (mod.) <sub>1</sub>	0.410	pass	
Nickel	1.55	mg/kg	0.0192	06/22/22	AOAC 2013.06 (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	7,300	cfu/g	100	06/24/22	AOAC 990.12 (Petrifilm)	10,000,000	pass	
E.coli	< LOQ	cfu/g	100	06/24/22	AOAC 991.14 (Petrifilm)	100	pass	
Enterobacteriaceae	<LOQ	cfu/g	100	06/23/22	AOAC 2003.01	10,000	pass	
Mold (RAPID Petrifilm)	200	cfu/g	100	06/25/22	AOAC 2014.05 (RAPID)	50,000	pass	
Yeast (RAPID Petrifilm)	<LOQ	cfu/g	100	06/25/22	AOAC 2014.05 (RAPID)	50,000	pass	
Salmonella, 375g, by PCR	Negative	/375g	-	06/23/22	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 <sup>†</sup>	0.0139	%	0.0100	06/23/22	In house method by HPLC-DAD			
Isorhynchophylline	< LOQ	%	0.0500	06/23/22	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†	1.28	%	0.0500	06/23/22	In house method by HPLC-DAD			
Mitraphylline	< LOQ	%	0.0500	06/23/22	In house method by HPLC-DAD			
Paynantheine	0.276	%	0.0500	06/23/22	In house method by HPLC-DAD			
Speciociliatine	0.285	%	0.0500	06/23/22	In house method by HPLC-DAD			
Speciogynine	0.192	%	0.0500	06/23/22	In house method by HPLC-DAD			

*Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.*



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Salmonella, 375g, by PCR	Negative	/375g	-	06/23/22	AOAC 2020.02 <sub>1</sub>	Negative	pass	

1) GENE-UP® Assay