



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

Report Number: 26-004237/D001.R000
Report Date: 04/15/2026
Purchase Order: P/2 (2026)
Received: 04/08/26 09:13 AM

Project Name: NAK-P/2 (2026)

Cover Letter

MAK Operations LLC
MAK Kratom
502 W 7th St (STE 100)
Erie Pennsylvania 16502
United States of America (USA)

Dear Michael Trujillo,

Enclosed please find Columbia Laboratories analytical report for samples received as order number 26-004237 on 04/08/2026 at 09:13. Should you have any questions about this report or any other matter, please do not hesitate to contact us. We are here to help you.

Thank you for allowing Columbia Laboratories to be of service to you, we appreciate your business.

Sincerely,

Derrick Tanner
General Manager



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Portland, OR 97230
503-254-1794

Report Number: 26-004237/D001.R000
Report Date: 04/15/2026
Purchase Order: P/2 (2026)
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Project Name: NAK-P/2 (2026)

Customer: MAK Operations LLC
MAK Kratom
502 W 7th St (STE 100)
Erie Pennsylvania 16502
United States of America (USA)

Sample ID: MAK-P/2G26-WK(1)

Sample Matrix: Kratom powder

Laboratory ID: 26-004237-0001

Evidence of Cooling: No

Temp: 21.1 °C

Serving Size #1: 1 g

Sample Results

Metals

Heavy Metals Profile K

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Arsenic	0.272	mg/kg	0.0181	04/09/26 AOAC 2013.06 (mod.)	1.50	pass	
Cadmium	0.0206	mg/kg	0.0181	04/09/26 AOAC 2013.06 (mod.)	0.500	pass	
Lead	0.500	mg/kg	0.0181	04/09/26 AOAC 2013.06 (mod.)	1.00	pass	
Mercury	0.0244	mg/kg	0.00907	04/09/26 AOAC 2013.06 (mod.) ^b	0.200	pass	
Nickel	1.55	mg/kg	0.0181	04/09/26 AOAC 2013.06 (mod.)	20.0	pass	

Microbiology

Kratom Micro Profile

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Aerobic Plate Count	900	cfu/g	100	04/11/26 AOAC 990.12 (Petrifilm)	10,000,000	pass	
E.coli	< LOQ	cfu/g	100	04/11/26 AOAC 991.14 (Petrifilm)	100	pass	
Total Coliforms	< LOQ	cfu/g	100	04/11/26 AOAC 991.14 (Petrifilm)	10,000	pass	
Enterobacteriaceae	< LOQ	cfu/g	100	04/10/26 AOAC 2003.01	10,000	pass	
Mold (RAPID Petrifilm)	< LOQ	cfu/g	100	04/12/26 AOAC 2014.05 (RAPID)	50,000	pass	
Yeast (RAPID Petrifilm)	< LOQ	cfu/g	100	04/12/26 AOAC 2014.05 (RAPID)	50,000	pass	
Salmonella spp.	Negative	/10g	-	04/10/26 AOAC 2020.02	Negative	pass	I

Mitragynine

Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
7-Hydroxymitragynine	< LOQ	%	0.0100	04/15/26 In house method by HPLC-DAD			
Isorhynchophylline	< LOQ	%	0.0500	04/15/26 In house method by HPLC-DAD			
Mitragynine	1.25	%	0.0500	04/15/26 In house method by HPLC-DAD			

Mitragynine

Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed Method		Threshold	Pass/Fail	Notes
Mitraphylline	< LOQ	%	0.0500	04/15/26	In house method by HPLC-DAD			
Paynantheine	0.234	%	0.0500	04/15/26	In house method by HPLC-DAD			Q7
Speciociliatine	0.313	%	0.0500	04/15/26	In house method by HPLC-DAD			
Speciogynine	0.160	%	0.0500	04/15/26	In house method by HPLC-DAD			
Total Alkaloids	1.96	%	-	04/15/26	In house method by HPLC-DAD			Q7

Customer: MAK Operations LLC
 MAK Kratom
 502 W 7th St (STE 100)
 Erie Pennsylvania 16502
 United States of America (USA)

Sample ID: MAK-P/2W26-WK(1)

Sample Matrix: Kratom powder

Laboratory ID: 26-004237-0002

Evidence of Cooling: No

Temp: 21.1 °C

Serving Size #1: 1 g

Sample Results

Metals

Heavy Metals Profile K

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Arsenic	0.272	mg/kg	0.0180	04/09/26 AOAC 2013.06 (mod.)	1.50	pass	
Cadmium	0.0192	mg/kg	0.0180	04/09/26 AOAC 2013.06 (mod.)	0.500	pass	
Lead	0.443	mg/kg	0.0180	04/09/26 AOAC 2013.06 (mod.)	1.00	pass	
Mercury	0.0237	mg/kg	0.00901	04/09/26 AOAC 2013.06 (mod.) ^b	0.200	pass	
Nickel	1.72	mg/kg	0.0180	04/09/26 AOAC 2013.06 (mod.)	20.0	pass	

Microbiology

Kratom Micro Profile

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Aerobic Plate Count	900	cfu/g	100	04/11/26 AOAC 990.12 (Petrifilm)	10,000,000	pass	
E.coli	< LOQ	cfu/g	100	04/11/26 AOAC 991.14 (Petrifilm)	100	pass	
Total Coliforms	< LOQ	cfu/g	100	04/11/26 AOAC 991.14 (Petrifilm)	10,000	pass	
Enterobacteriaceae	< LOQ	cfu/g	100	04/10/26 AOAC 2003.01	10,000	pass	
Mold (RAPID Petrifilm)	< LOQ	cfu/g	100	04/12/26 AOAC 2014.05 (RAPID)	50,000	pass	
Yeast (RAPID Petrifilm)	< LOQ	cfu/g	100	04/12/26 AOAC 2014.05 (RAPID)	50,000	pass	
Salmonella spp.	Negative	/15g	-	04/10/26 AOAC 2020.02	Negative	pass	I

Mitragynine

Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
7-Hydroxymitragynine	< LOQ	%	0.0100	04/15/26 In house method by HPLC-DAD			
Isorhynchophylline	< LOQ	%	0.0500	04/15/26 In house method by HPLC-DAD			
Mitragynine	1.21	%	0.0500	04/15/26 In house method by HPLC-DAD			

Mitragynine

Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed Method		Threshold	Pass/Fail	Notes
Mitraphylline	< LOQ	%	0.0500	04/15/26	In house method by HPLC-DAD			
Paynantheine	0.228	%	0.0500	04/15/26	In house method by HPLC-DAD			Q7
Speciociliatine	0.297	%	0.0500	04/15/26	In house method by HPLC-DAD			
Speciogynine	0.154	%	0.0500	04/15/26	In house method by HPLC-DAD			
Total Alkaloids	1.89	%	-	04/15/26	In house method by HPLC-DAD			Q7

Customer: MAK Operations LLC
 MAK Kratom
 502 W 7th St (STE 100)
 Erie Pennsylvania 16502
 United States of America (USA)

Sample ID: MAK-P/2R26-WK(1)

Sample Matrix: Kratom powder

Laboratory ID: 26-004237-0003

Evidence of Cooling: No

Temp: 21.1 °C

Serving Size #1: 1 g

Sample Results

Metals

Heavy Metals Profile K

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Arsenic	0.278	mg/kg	0.0179	04/09/26 AOAC 2013.06 (mod.)	1.50	pass	
Cadmium	< LOQ	mg/kg	0.0179	04/09/26 AOAC 2013.06 (mod.)	0.500	pass	
Lead	0.441	mg/kg	0.0179	04/09/26 AOAC 2013.06 (mod.)	1.00	pass	
Mercury	0.0213	mg/kg	0.00895	04/09/26 AOAC 2013.06 (mod.) ^b	0.200	pass	
Nickel	1.94	mg/kg	0.0179	04/09/26 AOAC 2013.06 (mod.)	20.0	pass	

Microbiology

Kratom Micro Profile

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Aerobic Plate Count	1,700	cfu/g	100	04/11/26 AOAC 990.12 (Petrifilm)	10,000,000	pass	
E.coli	< LOQ	cfu/g	100	04/11/26 AOAC 991.14 (Petrifilm)	100	pass	
Total Coliforms	< LOQ	cfu/g	100	04/11/26 AOAC 991.14 (Petrifilm)	10,000	pass	
Enterobacteriaceae	< LOQ	cfu/g	100	04/10/26 AOAC 2003.01	10,000	pass	
Mold (RAPID Petrifilm)	< LOQ	cfu/g	100	04/12/26 AOAC 2014.05 (RAPID)	50,000	pass	
Yeast (RAPID Petrifilm)	< LOQ	cfu/g	100	04/12/26 AOAC 2014.05 (RAPID)	50,000	pass	
Salmonella spp.	Negative	/10g	-	04/10/26 AOAC 2020.02	Negative	pass	I

Mitragynine

Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
7-Hydroxymitragynine	< LOQ	%	0.0100	04/15/26 In house method by HPLC-DAD			
Isorhynchophylline	< LOQ	%	0.0500	04/15/26 In house method by HPLC-DAD			
Mitragynine	1.13	%	0.0500	04/15/26 In house method by HPLC-DAD			

Mitragynine

Mitragynine Full Alkaloid Panel

Analyte	Result	Units	LOQ	Analyzed Method	Threshold	Pass/Fail	Notes
Mitraphylline	< LOQ	%	0.0500	04/15/26 In house method by HPLC-DAD			
Paynantheine	0.215	%	0.0500	04/15/26 In house method by HPLC-DAD			Q7
Speciociliatine	0.295	%	0.0500	04/15/26 In house method by HPLC-DAD			
Speciogynine	0.146	%	0.0500	04/15/26 In house method by HPLC-DAD			
Total Alkaloids	1.79	%	-	04/15/26 In house method by HPLC-DAD			Q7

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 (10g daily consumption)

Threshold limits referenced herein are based on AHPA recommended limits for unprocessed herbs, supplements, and ingredients, assuming a 10 g daily intake. Threshold evaluations are provided at the client's request for quality assurance purposes only. These evaluations apply solely to the submitted samples and do not constitute a guarantee of safety, efficacy, or regulatory compliance. Columbia Laboratories recommends further evaluation in the context of the specific product formulation, intended use, and applicable regulatory requirements.

Glossary of Qualifiers

I: Insufficient sample received to meet method requirements.

Q7: Quality control outside limits.

Units of Measure

/15g = Per 15g

cfu/g = Colony forming units per gram

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

/10g = Per 10 grams

% = Percentage of sample

Approved Signatory



Derrick Tanner
General Manager

