

Medicine Creek Analytics Certificate of Analysis

3700 Pacific HWY E, Ste 400, Fife, WA 98424
WA State I502 Certification 0018 | ISO 17025 91428 | Accreditation #91428



Sample: Organic Kratom

#COC/INVOICE: 6558

Sample ID 230505-001	Matrix Kratom powder	Lot or Batch #	External Inv ID
Tested for Buffalo Distro Inc	Address 319 Business Lane #100 Ashland, VA 23005		License
Received 05/08/2023			Reported 05/16/2023

Analyses executed **MET, MIC, KRM, PES_WAC****Report Comments:** WRL Limits are not applicable to this sample.

MET - Heavy Metals Detection

Pass

Analyzed **May 10, 2023** | Instrument **ICP-MS**

Analyte	LOD ug/g	LOQ ug/g	Result ug/g (ppm)	Analyte	LOD ug/g	LOQ ug/g	Result ug/g (ppm)
Arsenic (As)	0.049	0.164	0.553	Cadmium (Cd)	0.01	0.034	DET
Lead (Pb)	0.034	0.114	0.743	Mercury (Hg)	0.01	0.035	DET

MIC - Microbial- I502 panel (3)

Pass

Analyzed **May 11, 2023** | Instrument **Plating**

Analyte	LOD CFU/g	LOQ CFU/g	Result CFU/g	WRL CFU/g	Analyte	LOD CFU/g	LOQ CFU/g	Result CFU/g	WRL CFU/g
E. coli			ND	DET/ND	Bile Tolerant gram neg	100.0		200	1000
Salmonella	100.0		ND	DET/ND					

KRM - Kratom-Mitragynine Analysis

Analyzed **May 12, 2023**

Analyte	Findings	(mg/g)	Analyte	Findings	(mg/g)
Mitragynine	1.4%	14.37	7-Hydroxymitragynine	NT	NT

PES_WAC - WA Compliance Pesticide (short list)

Pass

Analyzed **May 12, 2023** | Instrument **LC-MS/MS (ESI) & GC-MS/MS**

Analyte	Result ug/g (ppm)	WA State Action Limit	LOD (ppm)	LOQ (ppm)	Analyte	Result ug/g (ppm)	WA State Action Limit	LOD (ppm)	LOQ (ppm)
3-Hydroxycarbofuran	ND	0.2	0.072	0.216	Abamectin B1a	ND	0.5		
Acephate	ND	0.4	0.025	0.076	Acequinocyl	ND	2		
Acetamiprid	ND	0.2	0.025	0.076	Aldicarb	ND	0.4	0.05	0.15
Aldicarb Sulfone	ND	0.4	0.05	0.15	Azoxystrobin	ND	0.2	0.039	0.116
Bifenazate	ND	0.2	0.5	0.15	Bifenthrin - GC	ND	0.2	0.028	0.094
Boscalid - GC	ND	0.4	0.029	0.097	Carbaryl	ND	0.2	0.039	0.116
Carbofuran	ND	0.2	0.05	0.15	Chlorantraniliprole	ND	0.2	0.065	0.196
Chlorfenapyr	ND	1	0.033	0.111	Chlorpyrifos - GC	ND	0.2	0.007	0.022

NR Not Reported
ND Not Detected
<LOD Below Lod
NT Not Tested
LOD Limit of Detection
LOQ Limit of Quantitation
DET Detected below quantitation limit

CFU/g Colony Forming Units per 1 gram
TNTC Too Numerous to Count
mg/g Milligrams per gram
ppm Parts per million
WRL Washington Regulatory Limit
ug/g Microgram per gram
CFM Confirmed or Alternate Method



Authorized Signature

Amber R. Wise

Amber R. Wise, PhD
Science Director
05/16/2023

Analyte	Result µg/g (ppm)	WA State Action Limit	LOD (ppm)	LOQ (ppm)	Analyte	Result µg/g (ppm)	WA State Action Limit	LOD (ppm)	LOQ (ppm)
Chlorpyrifos - LC	ND	0.2	0.043	0.13	Clofentezine	ND	0.2		
Cyfluthrin (Sum)	ND	1	0.016	0.053	Cypermethrin (Sum)	ND	1	0.022	0.074
Daminozide	ND	1			DDVP (Dichlorvos)	ND	0.1	0.022	0.072
Diazinon	ND	0.2	0.032	0.096	Dimethoate	ND	0.2	0.025	0.076
Ethoprophos	ND	0.2	0.05	0.15	Etofenprox	ND	0.4	0.128	0.383
Ettoxazole	ND	0.2	0.043	0.13	Fenoxycarb	ND	0.2	0.032	0.096
Fenpyroximate	ND	0.4	0.032	0.096	Fipronil	ND	0.4	0.043	0.13
Flonicamid	ND	1	0.05	0.15	Fludioxonil	ND	0.4	0.1	0.3
Hexythiazox	ND	1	0.089	0.266	Imazalil	ND	0.2	0.05	0.15
Imidacloprid	ND	0.4	0.05	0.15	Kresoxym-methyl	ND	0.4		
Malathion	ND	0.2			Metalaxyl	ND	0.2	0.043	0.13
Methiocarb	ND	0.2			Methomyl	ND	0.4	0.065	0.196
MGK-264 (Sum)	ND	0.2	0.01	0.03	Myclobutanil	ND	0.2	0.05	0.15
Naled	ND	0.5	0.022	0.072	Oxamyl	ND	1	0.032	0.096
Paclobutrazol	ND	0.4	0.05	0.15	Parathion-Methyl	ND	0.2	0.017	0.058
Permethrins (Sum) - LC	ND	0.2	0.189	0.567	Permethrins (Sum) - GC	ND	0.2	0.039	0.129
Phosmet	ND	0.2			Piperonyl Butoxide	ND	2		
Prallethrin	ND	0.2			Propiconazole (Sum)	ND	0.4		
Propoxur	ND	0.2			Pyrethrins (Sum) - LC	ND	1		
Pyridaben	ND	0.2			Spinosad (Sum)	ND	0.2		
Spiromesifen	ND	0.2			Spirotetramat	ND	0.2		
Spiroxamine	ND	0.4			Tebuconazole	ND	0.4		
Thiacloprid	ND	0.2			Thiamethoxam	ND	0.2		
Trifloxystrobin	ND	0.2							



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LOQ Limit of Quantification

DET Detected below quantitation limit

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