Certificate of Analysis

02 OCTOBER 2024

3241909-13

Client:	**Motark Kratom**	SAMPLE SET:	185480
Sample Type:	Powder	Prepped By:	Keith C.
Sample Weight:	200mg	Acquisition Method:	MIT-EVO_R2023-01
Dilution:	1.0	Testing ID:	GRD-MIT_163272.D
Vial:	Vial 57	Date Processed:	09/25/2024

---------- ID/POTENCY ----------

#	Analyte	RT (min)	Area (mAU*s)	Amt (µg/mL)	Alkaloid	Total %
1	Mitragynine	14	2727	137	$C_{23}H_{30}N_2O_4$	1.37
2	7-Hydroxymitragynine	6	N/D	N/D	$C_{23}H_{30}N_2O_5$	N/D
3	Paynantheine	10	430	21	$C_{23}H_{28}N_2O_4$	0.21
4	Speciogynine	11	679	33	$C_{23}H_{30}N_2O_4$	0.33
5	Speciociliatine	12	351	17	$C_{23}H_{30}N_2O_4$	0.17

---------- BIOLOGICAL ----------

		USP NF Total Viable Count		USP.NF Total Yeast		USP NF Total Mold	
Sample	**Lot #**	**Spec**	**Result**	**Spec**	**Result**	**Spec**	**Result**
3241909-13		<10k CFU/g	PASS	POS/NEG	NEG	POS/NEG	NEG

		FDA(BAM)CH.4 Coliform		USP NF E. Coli		USP NF Salmonella		USP NF Staphylococcus	
Sample	**Lot #**	**Spec**	**Result**	**Spec**	**Result**	**Spec**	**Result**	**Spec**	**Result**
3241909-13		<10k CFU/g	PASS	POS/NEG	NEG	POS/NEG	NEG	POS/NEG	NEG

---------- HEAVY METALS ----------

Product #	Lot #	Metals	Spec	Results
3241909-13		Arsenic	< 10,000 ppb	110 ppb
		Cadmium	< 4,100 ppb	N/D
		Lead	< 900 ppb**	500 ppb
		Mercury*	< 300 ppb	10 ppb

Mitragynine Content: **1.4%** (ONE PERIOD FOUR PERCENT)

Heavy Metals: **PASS**

Biological: **PASS**

SEAL OF AUTHENTICITY

VERIFIED BY:

Quality Assurance:

USP HEAVY METALS LIMITS

*** Methyl mercury is included in total Mercury. Method AOAC 993.14 is equivalent to method ICP-MS USP <730>.**

**** California's Proposition 65 set up overly restrictive limits for many natural plant materials in relation to lead. There are many plants that have higher levels of lead than is acceptable in the State of California. If your CA result comes back as a "HI-LEAD", you may be required to place notices on your material, or it may be a material that cannot technically be sold for consumption in the state of California.**

United States Pharmacopeia (USP) Limit for Nutritional Supplements:

- Arsenic 3.000 ppm / 3000.000 ppb
- Cadmium 3.000 ppm / 3000.000 ppb
- Lead 10.000 ppm / 10000.000 ppb
- Mercury 3.000 ppm / 3000.000 ppb

California Proposition 65 Daily Limits for Heavy Metals:

- Arsenic 10 ppm / 10,000.000 ppb
- Cadmium 4.1 ppm / 4,1000.000 ppb
- Lead 0.5 ppm / 500.000 ppb
- Methyl Mercury 0.3 ppm / 300.000 ppb

For labels with a single daily dose of 500mg, the PPM in products cannot be higher than:

- Arsenic = 20.000 ppm / 20,000.000 ppb
- Cadmium = 8.000 ppm / 8,000.000 ppb
- Lead = 0.900 ppm / 900.000 ppb
- Mercury = 0.600 ppm / 600.000 ppb

FDA Tolerable Daily Diet Lead intake:

- Children <6 years old = 6.000 ppm / 6000.000 ppb
- Pregnant women = 25.000 ppm / 25000.000 ppb
- Adults = 75.000 ppm / 75000.000 ppb