



## Certificate of Analysis for

Firefly Kratom  
7920 52nd Way North  
Pinellas Park, FL 33781  
Phone: (727) 641-7611

Received: 4/16/2022 @ 19.9 °C  
Report ID: 2204550

Sample ID	Analyzed	Sample Description	Analysis	Result	Units	Method Code
2204550-001	4/22/2022	Mitragyna Speciosa	Arsenic (As)	0.309	mg/kg (ppm)	ICPMS.1
	4/22/2022		Cadmium (Cd)	0.057	mg/kg (ppm)	ICPMS.1
	4/22/2022		Lead (Pb)	0.516	mg/kg (ppm)	ICPMS.1
	4/22/2022		Mercury (Hg)	0.022	mg/kg (ppm)	ICPMS.1
	4/19/2022		7-Hydroxymitragynine	0.002	%	MIT.1
	4/19/2022		Mitragynine	1.52	%	MIT.1
	4/18/2022		Salmonella spp.	Negative	/25 g	Salm.1a
	4/18/2022		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1.a
	4/18/2022		stx and eae genes	Negative	/25 g	STEC.1.a
	4/19/2022		Aerobic Plate Count	11,000	CFU/g	AC.1a
	4/18/2022		Total Coliform Bacteria	< 100	CFU/g	TC.1a
	4/18/2022		Escherichia coli	< 100	CFU/g	EC.1a
	4/19/2022		Staphylococcus aureus	< 100	CFU/g	STA.1a
	4/18/2022		Yeast and Mold	1,800	CFU/g	YM.1a

Mitragynine concentration includes Paynantheine at approximately 0.2 - 0.4%.

7-Hydroxymitragynine reported at actual values found below limit of quantitation.

RPC 4-21-22

Reported By: \_\_\_\_\_

Ryan Connelly, Chemistry Laboratory Manager, 4/22/2022

### Methodology:

AC.1a : AC by mass via AOAC 990.12 (Petriefilm™) Prep: Initial Dilution  
ICPMS.1 : Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave  
Salm.1a : Salmonella via AOAC 081201, 2013.02 (BAX® PCR System)  
STEC.1.a : Shiga toxin (stx) & Intimin (eae) genes via AOAC 091301 (BAX® PCR System, STEC Screen)  
YM.1a : YM by mass via AOAC RI 121301 (Petriefilm™) Prep: Initial Dilution

EC.1a : EC by mass via AOAC 991.14, 998.08 (Petriefilm™) Prep: Initial Dilution  
MIT.1 : Mitragynine via AOAC 2017.14  
STA.1a : S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petriefilm™) Prep: Initial Dilution  
TC.1a : TC by mass via AOAC 991.14, 998.03 (Petriefilm™) Prep: Initial Dilution