



Certificate of Analysis for

**NK NEJLEVNĚJŠÍ
KVALITA**

Received: 7/21/2023 @ 23.3 °C
Report ID: 2307827

Sample ID	Analyzed	Sample Description	Analysis	Result	Units	Method Code
2307827-005	7/28/2023	Brown Premium Nano Powder	Arsenic (As)	0.373	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.017	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.456	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.021	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.10	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	2.66	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	300	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	< 100	CFU/g	YM.1a

Mitragynine concentration includes Paynantheine at approximately 5 - 20% of the total mitragynine concentration.

RPC 7-27-23

Reported By:

Ryan Connelly, Chemistry Laboratory Manager, 7/28/2023

Methodology:

ACR.1a : AC by mass via AOAC 2015.13 (Petrifilm™) Prep: Quantitative Initial Dilution
ECR.1a : EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution
MIT.1 : Mitragynine via AOAC 2017.14
STA.1a : S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution
YM.1a : YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a : CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution
ICPMS.1 : Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave
Salm.1 : Salmonella via AOAC 081201, 2013.02 (BAX® PCR)
STEC.1 : E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)



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2307827-004	7/28/2023	Red Premium Nano Powder	Arsenic (As)	0.340	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.019	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.386	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.021	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.16	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	2.55	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	300	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	200	CFU/g	YM.1a

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Methodology:

ACR.1a: AC by mass via AOAC 2015.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ECR.1a: EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

MIT.1: Mitragynine via AOAC 2017.14

STA.1a: S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution

YM.1a: YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a: CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ICPMS.1: Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1: Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

STEC.1: E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)

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Sample ID	Analyzed	Sample Description	Analysis	Result	Units	Method Code
2307827-003	7/28/2023	Yellow Premium Nano Powder	Arsenic (As)	0.283	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.024	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.416	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.019	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.04	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	5.13	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	400	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	< 100	CFU/g	YM.1a

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Methodology:

ACR.1a: AC by mass via AOAC 2015.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ECR.1a: EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

MIT.1: Mitragynine via AOAC 2017.14

STA.1a: S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution

YM.1a: YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a: CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ICPMS.1: Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1: Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

STEC.1: E. coli (O157 H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)



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Sample ID	Analyzed	Sample Description	Analysis	Result	Units	Method Code
2307827-002	7/28/2023	White Premium Nano Powder	Arsenic (As)	0.274	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.025	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.408	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.018	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.16	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	3.62	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	400	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	< 100	CFU/g	YM.1a

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Methodology:

ACR.1a - AC by mass via AOAC 2015.13 (Petrifilm™) Prep: Quantitative Initial Dilution
ECR.1a - EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution
MIT.1 - Mitragynine via AOAC 2017.14
STA.1a - S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution
YM.1a - YMI by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a - CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution
ICPMS.1 - Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave
Salm.1 - Salmonella via AOAC 081201, 2013.02 (BAX® PCR)
STEC.1 - E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)



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2307827-001	7/28/2023	Green Premium Nano Powder	Arsenic (As)	0.059	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.041	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.398	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.016	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.31	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	1.31	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	< 100	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	< 100	CFU/g	YM.1a

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ECR.1a : EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

MIT.1 : Mitragynine via AOAC 2017.14

STA.1a : S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution

YM.1a : YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a : CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ICPMS.1 : Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1 : Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

STEC.1 : E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)



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2307827-010	7/28/2023	Brown Standard Nano Powder	Arsenic (As)	0.385	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.021	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.392	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.021	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.09	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	2.79	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	300	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	500	CFU/g	YM.1a

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Ryan Connelly, Chemistry Laboratory Manager, 7/28/2023

Methodology:

ACR.1a: AC by mass via AOAC 2015.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ECR.1a: EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

MIT.1: Mitragynine via AOAC 2017.14

STA.1a: S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution

YM.1a: YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a: CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ICPMS.1: Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1: Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

STEC.1: E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)



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2307827-009	7/28/2023	Red Standard Nano Powder	Arsenic (As)	0.274	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.027	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.520	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.018	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.03	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	5.11	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	700	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	100	CFU/g	YM.1a

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ECR.1a: EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

MIT.1: Mitragynine via AOAC 2017.14

STA.1a: S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution

YM.1a: YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a: CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ICPMS.1: Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1: Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

STEC.1: E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)


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2307827-008	7/28/2023	Yellow Standard Nano Powder	Arsenic (As)	0.271	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.013	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.506	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.021	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.14	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	2.85	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	< 100	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	400	CFU/g	YM.1a

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 ECR.1a : FC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution
 MIT.1 : Mitragynine via AOAC 2017.14
 STA.1a : S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution
 YM.1a : YM by mass via AOAC RI 121.301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a : CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution
 ICPMS.1 : Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave
 Salm.1 : Salmonella via AOAC 081201, 2013.02 (BAX® PCR)
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2307827-006	7/28/2023	Green Standard Nano Powder	Arsenic (As)	0.256	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.012	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.350	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.022	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.38	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	2.29	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	< 100	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	< 100	CFU/g	YM.1a

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ICPMS.1 : Metals via FDA - FAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1 : Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

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2307827-007	7/28/2023	White Standard Nano Powder	Arsenic (As)	0.263	mg/kg (ppm)	ICPMS.1
	7/28/2023		Cadmium (Cd)	0.022	mg/kg (ppm)	ICPMS.1
	7/28/2023		Lead (Pb)	0.430	mg/kg (ppm)	ICPMS.1
	7/28/2023		Mercury (Hg)	0.018	mg/kg (ppm)	ICPMS.1
	7/25/2023		7-Hydroxymitragynine	< 0.010	%	MIT.1
	7/25/2023		Mitragynine	1.14	%	MIT.1
	7/24/2023		Salmonella spp.	Negative	/25 g	Salm.1
	7/24/2023		Shiga toxin-producing E. coli	Negative	/25 g	STEC.1
	7/28/2023		Nickel (Ni)	3.59	mg/kg (ppm)	ICPMS.1
	7/24/2023		Aerobic Plate Count	300	CFU/g	ACR.1a
	7/24/2023		Total Coliform Bacteria	< 100	CFU/g	CCR.1a
	7/24/2023		Escherichia coli	< 100	CFU/g	ECR.1a
	7/24/2023		Staphylococcus aureus	< 100	CFU/g	STA.1a
	7/24/2023		Yeast and Mold	100	CFU/g	YM.1a

Mitragynine concentration includes Paynantheine at approximately 5 - 20% of the total mitragynine concentration.

RPC 7-27-23

Reported By:

Ryan Connelly, Chemistry Laboratory Manager, 7/28/2023

Methodology:

ACR.1a : AC by mass via AOAC 2015.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ECR.1a : EC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

MIT.1 : Mitragynine via AOAC 2017.14

STA.1a : S. aureus by mass via AOAC 2003.07, 2003.08, 2003.11 (Petrifilm™) Prep: Quantitative Initial Dilution

YM.1a : YM by mass via AOAC RI 121301 (Petrifilm™) Prep: Quantitative Initial Dilution

CCR.1a : CC by mass via AOAC OM 2018.13 (Petrifilm™) Prep: Quantitative Initial Dilution

ICPMS.1 : Metals via FDA - EAM:2008 (ICP/MS) Prep: Digestion, Microwave

Salm.1 : Salmonella via AOAC 081201, 2013.02 (BAX® PCR)

STEC.1 : E. coli (O157:H7, O26, O45, O103, O111, O121, O145) via AOAC 091301 (BAX® PCR, STEC Screen)