## **Certificate of Analysis**

Final Product: Cannabidiol Isolate Lot Number: IL1910I-048A

Date of Manufacture: 10/2019



Test		Methodology	Specification	Test Results (Average) <sup>1</sup>	Pass/Fail
Color and Appearance		TM-004 (Visual)	White, crystalline powder free of particulates	Conforms	Pass
CBD Identification		TM-001 (DAD Retention Time)	Retention time of the primary peak in sample chromatogram matches that in the analytical reference standard.	Conforms	Pass
		TM-001 (DAD UV Spectrum)	UV Spectrum of the primary peak in sample chromatogram matches that in the analytical reference standard.	Conforms	Pass
CBD Potency (% w/w)		TM-001 (HPLC-DAD)	≥ 98%	98	Pass
THC Content (% w/w)	THC	TM-001 (HPLC-DAD)	≤ LOQ <sup>2</sup>	ND	Pass
	THCA	TM-001 (HPLC-DAD)	≤ LOQ <sup>2</sup>	ND	Pass
Related Cannabinoid Content (%w/w)	CBDA	TM-001 (HPLC-DAD)	Report	ND	NA
	CBN	TM-001 (HPLC-DAD)	Report	ND	NA
	CBDV	TM-001 (HPLC-DAD)	Report	0.29	NA
	CBG	TM-001 (HPLC-DAD)	Report	ND	NA
	Other (Highest)	TM-001 (HPLC-DAD)	Report	0.26	NA
	Total	TM-001 (HPLC-DAD)	Report	0.55	NA
Total Cannabinoids (CBD plus total RC		TM-001 (HPLC-DAD)	Report	98.34	NA
Residual Solvents (ppm)	Pentane	TM-005 (HS-GC-FID)	≤ 500 ppm	117	Pass
	Acetone	TM-005 (HS-GC-FID)	≤ 500 ppm	< LOQ	Pass
	Isopropyl Alcohol	TM-005 (HS-GC-FID)	≤ 500 ppm	< LOQ	Pass
	Hexane	TM-005 (HS-GC-FID)	≤ 25 ppm	ND	Pass
Pesticides (Highest, ppm)	Individual Pesticide Content Test List <sup>3</sup>	LC-MS <sup>4</sup>	See FP-001 <sup>3</sup>	< LOQ	Pass
Elemental Impurities (ppm)	Arsenic	ICP-MS <sup>4</sup>	< 1.0 ppm	< LOQ	Pass
	Cadmium	ICP-MS <sup>4</sup>	< 0.4 ppm	< LOQ	Pass
	Lead	ICP-MS <sup>4</sup>	< 0.5 ppm	< LOQ	Pass
	Mercury	ICP-MS <sup>4</sup>	< 0.2 ppm	< LOQ	Pass
Mycotoxins (ppb)	B <sub>1</sub> (AFB <sub>1</sub> )	USP <561>4	≤ 2 ppb	< LOQ	Pass
	B <sub>2</sub> (AFB <sub>2</sub> )	USP <561>4	≤ 0.5 ppb	< LOQ	Pass
	G <sub>1</sub> (AFG <sub>1</sub> )	USP <561>4	≤ 0.5 ppb	< LOQ	Pass
	G <sub>2</sub> (AFG <sub>2</sub> )	USP <561>4	≤ 0.5 ppb	< LOQ	Pass
	Total	USP <561> <sup>4</sup>	≤ 4 ppb	< LOQ	Pass

<sup>&</sup>lt;sup>1</sup>Number of replicates: <sup>3</sup>

## **Prepared By**

DocuSigned by:

Chris Cogell



Signer Name: Chris Cogell

Signing Reason: I am the author of this document Signing Time: 1/6/2020 | 6:29:14 PM MST

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## **Quality Approval**

DocuSigned by:

Beth Grant



Signer Name: Beth Grant

Signing Reason: I approve this document Signing Time: 2/3/2020 | 2:24:34 PM PST

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 $<sup>^2\</sup>text{TM-001 LOQ}$  of 0.05% w/w for related cannabinoids.

<sup>&</sup>lt;sup>3</sup>See FP-001 for full list of individual pesticide residues and associated limits.

<sup>&</sup>lt;sup>4</sup>Contract Testing performed by Eurofins BioDiagnostics.