



## Certificate of Analysis

**Product:** T010 Hemp Direct Tincture 2,500 mg CBD Full Spectrum

**Batch Number:** 11973

**Best-By Date:** 09/04/2022

Characteristic	Instrument	Specification	Result	Pass/ Fail/ N/A
<b>Identity</b>				
Color & Appearance	Visual	Golden tinted oily liquid	Complies	Pass
Odor	Organoleptic	Characteristic of standard	Complies	Pass
Taste	Organoleptic	Neutral to bitter	Complies	Pass
<b>Composition</b>				
Density	Density Meter	0.908 – 0.955 g/mL	Complies	Pass
Fill Volume	In-Process Verification	30.0 - 31.5 mL/bottle	Complies	Pass
<b>Strength - Cannabinoids</b>				
Total CBD <sup>1</sup>	HPLC	2,500.0 - 3,400.0 mg/bottle	2,924.0 mg/bottle <sup>4</sup>	Pass
Total THC <sup>1</sup>	HPLC	≤ 0.30%	Complies <sup>4</sup>	Pass
<b>Contaminants - Residual Solvents</b>				
Acetone	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Butanes	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Ethanol	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Heptanes	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Isopropyl Alcohol	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Propane	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Benzene	GC-FID	< 2 ppm	Complies <sup>4</sup>	Pass
Toluene	GC-FID	< 180 ppm	Complies <sup>4</sup>	Pass
Pentane	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass
Hexane	GC-FID	< 60 ppm	Complies <sup>4</sup>	Pass
Total Xylenes (m,p,o-xylenes)	GC-FID	< 430 ppm	Complies <sup>4</sup>	Pass
Methanol	GC-FID	< 600 ppm	Complies <sup>4</sup>	Pass
Ethyl Acetate	GC-FID	< 1,000 ppm	Complies <sup>4</sup>	Pass

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Characteristic	Instrument	Specification	Result	Pass/ Fail/ N/A
<b>Contaminants - Pesticides</b>				
Abamectin (avermectins: B1a & B1b)	GC-MS / LC-MS	< 0.07 ppm	Complies <sup>4</sup>	Pass
Azoxystrobin	GC-MS / LC-MS	< 0.02 ppm	Complies <sup>4</sup>	Pass
Bifenazate	GC-MS / LC-MS	< 0.02 ppm	Complies <sup>4</sup>	Pass
Etoxazole	GC-MS / LC-MS	< 0.01 ppm	Complies <sup>4</sup>	Pass
Imazalil	GC-MS / LC-MS	< 0.04 ppm	Complies <sup>4</sup>	Pass
Imidacloprid	GC-MS / LC-MS	< 0.02 ppm	Complies <sup>4</sup>	Pass
Malathion	GC-MS / LC-MS	< 0.05 ppm	Complies <sup>4</sup>	Pass
Myclobutanil	GC-MS / LC-MS	< 0.04 ppm	Complies <sup>4</sup>	Pass
Permethrin (mix of isomers)	GC-MS / LC-MS	< 0.04 ppm	Complies <sup>4</sup>	Pass
Spinosad (mixture of A and D)	GC-MS / LC-MS	< 0.06 ppm	Complies <sup>4</sup>	Pass
Spiromesifen	GC-MS / LC-MS	< 0.03 ppm	Complies <sup>4</sup>	Pass
Spirotetramat	GC-MS / LC-MS	< 0.02 ppm	Complies <sup>4</sup>	Pass
Tebuconazole	GC-MS / LC-MS	< 0.01 ppm	Complies <sup>4</sup>	Pass
<b>Contaminants - Heavy Metals</b>				
Arsenic	ICP-MS USP <730>	< 1.36 µg/mL	Complies <sup>4</sup>	Pass
Cadmium	ICP-MS USP <730>	< 0.45 µg/mL	Complies <sup>4</sup>	Pass
Lead	ICP-MS USP <730>	< 0.50 µg/mL	Complies <sup>4</sup>	Pass
Mercury	ICP-MS USP <730>	< 0.30 µg/mL	Complies <sup>4</sup>	Pass
<b>Microbial Purity</b>				
Total Plate Count	USP <2021>	< 10,000 CFU/g	Complies <sup>4</sup>	Pass
Yeast & Mold	USP <2021>	≤ 1,000 CFU/g	Complies <sup>4</sup>	Pass
<i>E. coli</i>	FDA BAM	< 3 MPN/g	Complies <sup>4</sup>	Pass
Shiga-Toxin Producing <i>Escherichia coli</i> (STEC)	qPCR	< 1 CFU/g	S.L. <sup>2</sup>	N/A
<i>Salmonella spp.</i>	USP <2022>	Absent/10 g	Complies <sup>4</sup>	Pass

<sup>1</sup> All cannabinoids in their acid forms (ending in "a") are convertible to their non-acid forms via a decarboxylation process (heating). The THC and CBD maximum values reported are the maximum theoretical amounts of THC and CBD the tested product would have if it were fully decarboxylated.

<sup>2</sup> S.L. means "Skip Lot". Parameters are being monitored through product qualification testing and are currently in skip lot protocol.

<sup>3</sup> Cannabinoid detected below Limit of Quantitation (LOQ).

<sup>4</sup> Result was acquired by 3<sup>rd</sup> party laboratory.

Reviewed By:  \_\_\_\_\_

Date: 09.02.20

Approved By:  \_\_\_\_\_

Date: 04.02.20