

## CERTIFICATE OF QUALITY ASSURANCE

**PRODUCT NAME:** Phytocannabinoid-Rich Hemp Oil Tinctures

**PRODUCT CODE:** T-TO-250mg-OR-GS-BL-1oz

**LOT NUMBER:** JP101618T1 (Sales Order# PRPR-003-MS-A, Total of (400) 1 oz tinctures)

**OIL BATCH NUMBER:** COTO18-45

**DATE OF MANUFACTURE:** 16Oct2018

*Expiration date is 18 months under sealed conditions.*

**ACTIVE INGREDIENTS:** Phytocannabinoid-Rich Hemp Oil

**INACTIVE INGREDIENTS:** Grape Seed Oil, Orange Oil

Attributes	Acceptance Criteria	Results	Test Method
Appearance	Thin Oil	Conforms	QCU002 or QAU005
Odor	Characteristic	Conforms	QCU002 or QAU005
Color	Light Amber	Conforms	QCU002 or QAU005
Cannabinoid Content	95 - 110% of target concentration, THC - Report results	250 mg total Phytocannabinoids per 1 oz, THC > 0.3%	QCU001 or QAU005

Package	Acceptance Criteria	Results
Primary Package	Container dedusted and wiped clean Container caps screwed on tight	Conforms
Secondary Package	Carton Sturdy and clean Sufficient cushion material exists Carton taped on all sides	Conforms

Note: Bulk tinctures assume an oil density of 0.92g/mL. Therefore, to fill 30mL tinctures, we recommend filling them to 27g in order to ensure accurate dosing. The density can be used to calculate the fill weight for other package sizes.

Prepared by *Gabrielle O'Neal* QC Release, Folium Biosciences

Reviewed by *Amanda Proud* QC Release Supervisor, Folium Biosciences  
 Senior Fulfillment Manager, Amanda Proud  
 Lab Director, Raj Gupta, Ph.D.

# CERTIFICATE OF INTERNAL ANALYSIS

**TYPE:** Phytocannabinoid-Rich Hemp Oil

**BATCH No:** COTO18-45

**Date of Manufacture:** 08Oct2018

**Date of Analysis:** 10Oct2018

**POTENCY RESULTS:**

Cannabinoid	Wt. (%)	(mg/g)
CBD	61.67	616.72
CBG	1.30	12.97
CBN	0.12	1.20
THC	2.85	28.48
CBC	2.36	23.58
THC-A	< 0.03	< 0.30
CBD-A	< 0.03	< 0.30
MAX THC	2.85	28.48
MAX CBD	61.67	616.72
TOTAL ACTIVE	68.30	682.95

**TERPENE RESULTS\*:**

	Wt. (%)		Wt. (%)
β-Bisabolene	1.0-3.0	Camphene	0.1-0.2
β-Farnesene	1.0-2.0	E-Farnesene	0.1-0.2
Guaiol	0.5-2.0	Farnesol	0.1-0.1
β-Maaliene	0.5-2.0	α-Bisabolol	< 0.1
Calarene	0.5-1.5	P-Cymene	< 0.1
β-Caryophyllene	0.1-1.0	Linalool	< 0.1
α-Humulene	0.1-1.0	Myrcene	< 0.1
Cadinene	0.1-1.0	Phytol	< 0.1
α-Gurjunene	0.1-0.5	Isopulegol	< 0.1
d-Limonene	0.1-0.5	Terpinene	< 0.1
Nerolidol	0.1-0.5	Geraniol	< 0.1
α-Pinene	0.1-0.5	Myrcene	< 0.1
Aristolene	0.1-0.3	γ-Terpinene	< 0.1
Eucalyptol	0.1-0.2	δ-3-Carene	< 0.1

**Residual Solvents\*:**

Propane	Compliant with USP<467>	Pentane	Compliant with USP<467>
Isobutane	Compliant with USP<467>	Isopropanol	Compliant with USP<467>
Butane	Compliant with USP<467>	Hexane	Compliant with USP<467>
Ethanol	Compliant with USP<467>	Acetone	Compliant with USP<467>

**Heavy Metals\*:**

Cadmium	Compliant with USP<233>
Lead	Compliant with USP<233>
Arsenic	Compliant with USP<233>
Mercury	Compliant with USP<233>

**Pesticides\*:**

Acequinocyl	ND***	Spinosad	ND***
Pyrethrium	ND***	Spirotetramat	ND***
Spiromesifen	ND***	Bifenazate	ND***
Abamectin	ND***	Fenoxycarb	ND***
Imidacloprid	ND***	Paclbutrazol	ND***

Test ID:100918KP

\*Batches are sent out regularly for testing, not all batches tested

\*\* ND = Not Detected using a validated high-performance liquid chromatography test method, LOD = 0.03%

\*\*\* Pesticides are tested by a third party lab, ND = Not Detected at the Reporting Limit (RL)

**Batch Release:**

Chemist: Kimberly Zick

*Kimberly Zick* 10 Oct 2018

Manager: Jennifer Berkbigler

*Jennifer Berkbigler* 10 Oct 2018

10 Oct 2018  
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