

# JOY<sup>TM</sup>

## ORGANICS

### CERTIFICATE OF QUALITY ASSURANCE

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

**PRODUCT CODE:** T-NO-250mg/1oz-NF-STD-BULK

**LOT NUMBER:** CG080818T1 (Sales Order# TOSM-006-JH-A, 901.25 g cannabinoids in total formulation of 98,000 g)

**OIL BATCH NUMBER:** CONO18-39

**DATE OF MANUFACTURE:** 08Aug2018

*Expiration date is 18 months under sealed conditions.*

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

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

Attributes	Acceptance Criteria	Results	Test Method
Appearance	Thin Oil	Conforms	QCU002 or QAU005
Odor	Characteristic	Conforms	QCU002 or QAU005
Color	Light Green	Conforms	QCU002 or QAU005
Cannabinoid Content	95 - 110% of target concentration, THC - Report results	250 mg total Phytocannabinoids per 1 oz, THC Not Detected	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.

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### CERTIFICATE OF INTERNAL ANALYSIS

**BATCH No:** CONO18-39

**TEST ID:** 080218KZ

**TYPE:** Phytocannabinoid-Rich Hemp Oil/  
THC-free

**DATE:** 02Aug2018

#### POTENCY RESULTS:

Cannabinoid	Wt. (%)	(mg/g)
CBD	84.77	847.72
CBG	< 0.03	< 0.30
CBN	< 0.03	< 0.30
THC	ND**	ND**
CBC	< 0.03	< 0.30
THC-A	ND**	ND**
CBD-A	< 0.03	< 0.30
MAX THC	ND**	ND**
MAX CBD	84.77	847.72
TOTAL ACTIVE	84.77	847.72

#### 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>

#### TERPENE RESULTS\*:

	Wt. (%)		Wt. (%)
$\beta$ -Bisabolene	1.0-3.0	Camphene	0.1-0.2
$\beta$ -Farnesene	1.0-2.0	E-Farnesene	0.1-0.2
Guaiol	0.5-2.0	Farnesol	0.1-0.2
$\beta$ -Maaliene	0.5-2.0	$\alpha$ -Bisabolol	< 0.1
Calarene	0.5-1.5	P-Cymene	< 0.1
$\beta$ -Caryophyllene	0.1-1.0	Linalool	< 0.1
$\alpha$ -Humulene	0.1-1.0	Myrcene	< 0.1
Cadinene	0.1-1.0	Phytol	< 0.1
$\alpha$ -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
$\alpha$ -Pinene	0.1-0.5	Myrcene	< 0.1
Aristolene	0.1-0.3	$\gamma$ -Terpinene	< 0.1
Eucalyptol	0.1-0.2	$\delta$ -3-Carene	< 0.1

#### Pesticides\*

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

\* 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%