

# JOY<sup>TM</sup>

## ORGANICS

### CERTIFICATE OF QUALITY ASSURANCE

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

**PRODUCT CODE:** NO-800g-BU

**LOT NUMBER:** MRV111418B15 (Sales Order# TOSM-013-JH, 808 g cannabinoids, Total of 920.1 g Oil)

**OIL BATCH NUMBER:** CONO18-79

**DATE OF MANUFACTURE:** 13Nov2018

*Expiration date is 24 months under sealed conditions.*

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

**INACTIVE INGREDIENTS:** N/A

Attributes	Acceptance Criteria	Results	Test Method
Appearance	Viscous Amber Oil Possible Crystal Formation	Conforms	QCU002 or QAU005
Odor	Characteristic	Conforms	QCU002 or QAU005
Color	Dark Amber	Conforms	QCU002 or QAU005
Dissolution	Not cloudy or turbid, characteristic color	Conforms	QCU002 or QAU005
Cannabinoid Content	80% total Phytocannabinoids, THC - report results	87.82% total Phytocannabinoids THC Not Detected	QCU001 or QAU005
Microbial Testing	Total Aerobic Count <2000 CFU/g Total Yeast & Mold <200 CFU/g	Conforms	USP<2021>

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

**When sampling, manufacturing, or formulating with this oil, the oil MUST first be heated and liquefied at 70-75°C and mixed thoroughly. Attempting to sample the oil when it is in a semi-solid state will not result in accurate analytical results.**

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### CERTIFICATE OF INTERNAL ANALYSIS

TYPE: Phytocannabinoid-Rich Hemp Oil/ THC-free

BATCH No: CONO18-79

Date of Manufacture: 13Nov2018

Date of Analysis: 13Nov2018

#### POTENCY RESULTS:

Cannabinoid	Wt. (%)	(mg/g)
CBD	87.82	878.19
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	87.82	878.19
TOTAL ACTIVE	87.82	878.19

#### 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. (%)
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	0.1-0.2
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

#### Pesticides\*:

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

Test ID: 111318KP

\*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)