

Certificate of Quality Assurance

PRODUCT NAME: Orange Tincture

PRODUCT STRENGTH: 500mg

LOT NUMBER: TO500-407

OIL BATCH NUMBER: CONO18-100

DATE OF MANUFACTURE: 1/31/19

Expiration date is 18 months under sealed conditions.

DATE OF ANALYSIS: 1/31/19

ACTIVE INGREDIENTS: Phytocannabinoid-Rich Hemp Oil

INACTIVE INGREDIENTS: Fractionated Coconut Oil (MCT Oil), Orange Essential Oil



PHYSICAL ATTRIBUTION OF RAW HEMP OIL

Attributes	Acceptance Criteria	Results
Appearance	Viscous Dark Amber Oil Possible Crystal Formation	Conforms
Aroma	Characteristic Hemp Aroma	Conforms
Dissolution	Not Cloudy or Turbid, Characteristic Color	Conforms
Microbial Testing	Total Aerobic Count<2000CFU/g Total Yeast & Mold<200 CFU/g	Conforms

POTENCY OF RAW HEMP OIL

Cannabinoid	Wt. (%)
CBD	92.12
CBG	<0.03
CBN	<0.03
THC	ND
CBC	<0.03
THC-A	ND
CBD-A	<0.03

PESTICIDES*

Compound	Results	Compound	Results
Acequinocyl	ND	Spinosad	ND
Pyrethrium	ND	Spirotetramat	ND
Spiromesifen	ND	Bifenazate	ND
Abamectin	ND	Fenoxycarb	ND
Imidacloprid	ND	Paclobutrazol	ND

TERPENE RESULTS*:

Compound	Wt. (%)	Compound	Wt. (%)
β -Bisabolene	1.0-3.0	Camphene	0.1-0.2
β -Farnesene	1.0-2.0	E-Farnesene	0.1-0.2
Cuaiol	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

RESIDUAL SOLVENTS*:

Solvent	Weight %
Acetone	Compliant with USP<467>
Butane	Compliant with USP<467>
Ethanol	Compliant with USP<467>
Hexane	Compliant with USP<467>
Isobutane	Compliant with USP<467>
Isopropanol	Compliant with USP<467>
Pentane	Compliant with USP<467>

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HEAVY METALS*

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

ANALYSIS RESULTS FOR FINISHED PRODUCT

Attributes	Acceptance Criteria	Results
Appearance	Clear Colorless to Light Yellow Liquid	Conforms
Aroma	Characteristic Orange Aroma	Conforms
Cannabinoid Content	Label Claim $\pm 10\%$	Conforms
THC Content	None Detected	Conforms

*Results based on testing of multiple batches of hemp oil raw material.

Certified by:

Matthew Plenert, Ph.D
Head Chemist and Quality Manager

2-5-19

Date