

Certificate of Quality Assurance

PRODUCT NAME: Tranquil Mint Tincture

PRODUCT STRENGTH: 900 mg

LOT NUMBER: HTM1000-T208

OIL BATCH NUMBER: CONO19-89

DATE OF MANUFACTURE: 9/6/2019

Expiration date is 18 months under sealed conditions.

DATE OF ANALYSIS: 9/6/2019

ACTIVE INGREDIENT: Phytocannabinoid-Rich Hemp Oil

INACTIVE INGREDIENTS: Organic Olive Oil, Organic Peppermint Oil, Humulene, Myrcene, Beta-caryophyllene

JOY[™]
ORGANICS

Physical Attributes of Raw Hemp Oil

Attribute	Acceptance Criteria	Result
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 <2000 cfu/g Total Yeast and Mold <2000 cfu/g	Conforms

Cannabinoid Potency of Raw Hemp Oil

Cannabinoid	Weight %
CBD	84.99
CBG	<0.03
CBN	<0.03
THC	ND
CBC	<0.03
THC-A	ND
CBD-A	<0.03

Pesticides*

Compound	Result	Compound	Result
Acequinocil	ND	Spinosad	ND
Pyrethrium	ND	Spirotetramat	ND
Spiromesifin	ND	Bifenazate	ND
Abamectin	ND	Fenoxycarb	ND
Imidacloprid	ND	Paclobutrazol	ND

Terpene Results*

Compound	Weight %	Compound	Weight %
β -Bisabolene	1.0-3.0	Camphene	0.1-0.2
β -Farnesene	1.0-2.0	E-Farnesene	0.1-0.2
Gualol	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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JOY[™]

ORGANICS

Heavy Metals*

Metal	Result
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

Attribute	Acceptance Criteria	Result
Appearance	Clear Colorless to Light Yellow Liquid	Conforms
Aroma	Characteristic Mint Flavor	Conforms
Cannabidiol Content	95 to 110% of Label Claim	Conforms
THC Content	None Detected	Conforms

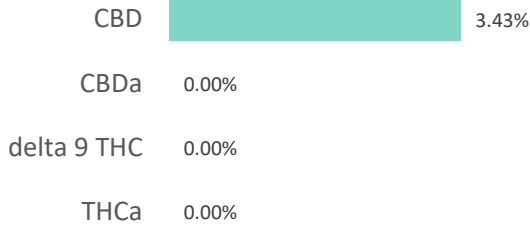
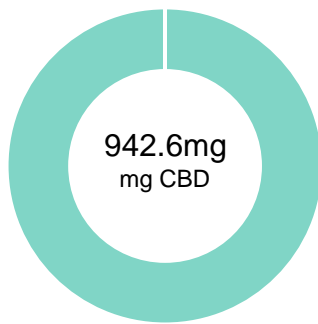
* Results based on testing of multiple batches of hemp oil raw material.

Quality Certified by:  9-16-19
Matthew Plenert, Ph.D. Date
Head Chemist and Laboratory Manager

QC Unit released by:  9-16-19
David Boaz Date
QC Manager

MINT TINCTURE 1000mg

Batch ID:	T208	Test ID:	2035154.0064
Reported:	23-Sep-2019	Method:	TM14
Type:	Unit		
Test:	Potency		

CANNABINOID PROFILE


Compound	LOQ (mg)	Result (mg)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	16.00	0.00	0.0
Delta 9-Tetrahydrocannabinol (Delta 9THC)	7.99	0.00	0.0
Cannabidiolic acid (CBDA)	13.57	0.00	0.0
Cannabidiol (CBD)	7.58	942.60	34.3
Delta 8-Tetrahydrocannabinol (Delta 8THC)	8.75	0.00	0.0
Cannabinolic Acid (CBNA)	21.94	0.00	0.0
Cannabinol (CBN)	9.72	0.00	0.0
Cannabigerolic acid (CBGA)	13.98	0.00	0.0
Cannabigerol (CBG)	7.88	0.00	0.0
Tetrahydrocannabivarinic Acid (THCVA)	13.73	0.00	0.0
Tetrahydrocannabivarin (THCV)	7.13	0.00	0.0
Cannabidivarinic Acid (CBDVA)	12.61	0.00	0.0
Cannabidivarin (CBDV)	6.91	0.00	0.0
Cannabichromenic Acid (CBCA)	11.99	0.00	0.0
Cannabichromene (CBC)	14.45	0.00	0.0
Total Cannabinoids		942.60	34.25
Total Potential THC**		0.00	0.00
Total Potential CBD**		942.60	34.25

NOTES:


of Servings = 1, Sample Weight=27.519g

N/A

% = % (w/w) = Percent (Weight of Analyte / Weight of Product)


* Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.

** Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.

$$\text{Total THC} = \text{THC} + (\text{THCa} * (0.877)) \text{ and Total CBD} = \text{CBD} + (\text{CBDa} * (0.877))$$
FINAL APPROVAL


Daniel Weidensaul
 23-Sep-2019
 7:39 PM

PREPARED BY / DATE



Greg Zimpfer
 23-Sep-2019
 7:43 PM

APPROVED BY / DATE

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC. ISO/IEC 17025:2005 Accredited A2LA Certificate Number 4329.02





This report cannot be used for ODA, OHA or OLCC compliance requirements.

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
E.coli	< LOQ		cfu/g	10	1908244	09/15/19	AOAC 991.14 (Petrifilm)	X
Total Coliforms	< LOQ		cfu/g	10	1908244	09/15/19	AOAC 991.14 (Petrifilm)	X
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	1908242	09/15/19	AOAC 2014.05 (RAPID)	X
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	1908242	09/15/19	AOAC 2014.05 (RAPID)	X

Pesticides Method AOAC 2007.01 & EN 15662 (mod) Units mg/kg Batch 1908349 Analyze 09/17/19 05:38 PM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
Abamectin	< LOQ	0.50	0.250	pass		Acephate	< LOQ	0.40	0.250	pass	
Acequinocyl	< LOQ	2.0	1.00	pass		Acetamiprid	< LOQ	0.20	0.100	pass	
Aldicarb	< LOQ	0.40	0.200	pass		Azoxystrobin	< LOQ	0.20	0.100	pass	
Bifenazate	< LOQ	0.20	0.100	pass		Bifenthrin	< LOQ	0.20	0.100	pass	
Boscalid	< LOQ	0.40	0.100	pass		Carbaryl	< LOQ	0.20	0.100	pass	
Carbofuran	< LOQ	0.20	0.100	pass		Chlorantraniliprole	< LOQ	0.20	0.100	pass	
Chlorfenapyr	< LOQ	1.0	0.500	pass		Chlorpyrifos	< LOQ	0.20	0.100	pass	
Clofentezine	< LOQ	0.20	0.100	pass		Cyfluthrin (incl.	< LOQ	1.0	0.500	pass	
Cypermethrin	< LOQ	1.0	0.500	pass		Daminozide	< LOQ	1.0	0.500	pass	
Diazinon	< LOQ	0.20	0.100	pass		Dichlorvos	< LOQ	1.0	0.500	pass	
Dimethoate	< LOQ	0.20	0.100	pass		Ethoprophos	< LOQ	0.20	0.100	pass	
Etofenprox	< LOQ	0.40	0.200	pass		Etoxazole	< LOQ	0.20	0.100	pass	
Fenoxycarb	< LOQ	0.20	0.100	pass		Fenpyroximate	< LOQ	0.40	0.200	pass	
Fipronil	< LOQ	0.40	0.200	pass		Fonicamid	< LOQ	1.0	0.400	pass	
Fludioxonil	< LOQ	0.40	0.200	pass		Hexythiazox	< LOQ	1.0	0.400	pass	
Imazalil	< LOQ	0.20	0.100	pass		Imidacloprid	< LOQ	0.40	0.200	pass	
Kresoxim-methyl	< LOQ	0.40	0.200	pass		Malathion	< LOQ	0.20	0.100	pass	
Metalaxyl	< LOQ	0.20	0.100	pass		Methiocarb	< LOQ	0.20	0.100	pass	
Methomyl	< LOQ	0.40	0.200	pass		MGK-264	< LOQ	0.20	0.100	pass	
Myclobutanil	< LOQ	0.20	0.100	pass		Naled	< LOQ	0.50	0.250	pass	
Oxamyl	< LOQ	1.0	0.500	pass		Paclobutrazole	< LOQ	0.40	0.200	pass	
Parathion-Methyl	< LOQ	0.20	0.200	pass		Permethrin	< LOQ	0.20	0.100	pass	
Phosmet	< LOQ	0.20	0.100	pass		Piperonyl butoxide	< LOQ	2.0	1.00	pass	
Prallethrin	< LOQ	0.20	0.100	pass		Propiconazole	< LOQ	0.40	0.200	pass	
Propoxur	< LOQ	0.20	0.100	pass		Pyrethrin I (total)	< LOQ	1.0	0.500	pass	
Pyridaben	< LOQ	0.20	0.100	pass		Spinosad	< LOQ	0.20	0.100	pass	
Spiromesifen	< LOQ	0.20	0.100	pass		Spirotetramat	< LOQ	0.20	0.100	pass	
Spiroxamine	< LOQ	0.40	0.200	pass		Tebuconazole	< LOQ	0.40	0.200	pass	
Thiacloprid	< LOQ	0.20	0.100	pass		Thiamethoxam	< LOQ	0.20	0.100	pass	
Trifloxystrobin	< LOQ	0.20	0.100	pass							



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Metals								
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Arsenic	< LOQ		mg/kg	0.100	1908295	09/13/19	AOAC 2013.06 (mod.)	X
Cadmium	< LOQ		mg/kg	0.100	1908295	09/13/19	AOAC 2013.06 (mod.)	X
Lead	< LOQ		mg/kg	0.100	1908295	09/13/19	AOAC 2013.06 (mod.)	X
Mercury	< LOQ		mg/kg	0.100	1908295	09/13/19	AOAC 2013.06 (mod.)	X



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Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

† = Analyte not NELAP accredited.

Units of Measure

cfu/g = Colony forming units per gram

g = Gram

mg/kg = Milligram per kilogram = parts per million (ppm)

mg/27.52g = Milligram per 27.52g

% = Percentage of sample

% wt = µg/g divided by 10,000

Glossary of Qualifiers

X: Not ORELAP accredited.

Approved Signatory

Derrick Tanner
General Manager