

Certificate of Analysis

PRODUCT INFORMATION

Product: Hemp Derived Whole Plant Concentrate
Description: 1000 mg Total CBD per 1 fl oz in Organic Hempseed Oil
Mfg Process: Cold Ethanol Extraction
Mfg Date: 26-Jun-19
Product Batch ID: WNC01B1218X0-33B03MA
Production Order ID: VS062619W3033



Product of Vermont USA

PRODUCT DATA

Parameter	Test Procedure	Specification	Units	Result
Appearance (20 - 25°C)	ASTM E1627 - 11	Amber amorphous solid	-	PASS
Odor (20 - 25°C)	ASTM E1627 - 11	Floral, earthy	-	PASS
Total CBD (Potency)	C5210-LCUV (Internal)	960 - 1040	mg/30 mL	1004 PASS
CBDA	C5210-LCUV (Internal)	≤ 10	%w/w	< 0.05 PASS
Delta 9-THC	C5210-LCUV (Internal)	≤ 0.34	%w/w	0.11 PASS
THCA-A	C5210-LCUV (Internal)	≤ 0.05	%w/w	< 0.05 PASS
Minor Cannabinoids	C6194-LCMSMS (Internal)	≥ 0.01	%w/w	0.06 PASS
Terpenes	C5933-GCMS (Internal)	≥ 25	ppm	129 PASS
Water Activity	D8196-18	≤ 0.350	Aw	0.301 PASS
Residual Solvent	C5923-GCMS (Internal)	USP 467**	ppm	PASS
Microbiological Screen*	MCR-TM-00006 (External)	MDH Exhibit 6	-	PASS
Heavy Metals	MCR-TM-00006 (External)	MDH Exhibit 4	ppb	PASS
Pesticides*	MCR-TM-00009 (External)	MDH Exhibit 5	ppb	PASS
Mycotoxins*	MCR-TM-00013 (External)	MDH Exhibit 6	ppb	PASS

*Results based on source whole plant concentrate prior to distillation; MCR Labs (Framingham, MA).

**Class I & II solvents methanol, pentane, ethanol, acetone, 2-propanol, acetonitrile, n-hexane, tetrahydrofuran, chloroform, n-heptane, toluene, xylene (m,p).


***Specification limits are set based on internal process monitoring and represent expected levels depending on the type of material described in this document.

****MDH - Massachusetts Department of Health

PRODUCT STABILITY

Recommended Storage: 20-25 ° C (68-77° F), Refrigerate for long term storage (> 3 months).
Retest Date: 1-Jul-21 Avoid exposure to extreme hot or cold and protect from exposure to light.
NOTE: Product will grow darker in color with exposure to light.

IMPORTANT: Some data for this product are collected using NEP internal analytical testing procedures undergoing validation. Testing results will vary within reasonable procedure performance limits. Results demonstrating regulatory compliance are provided by NEP are for directional purposes in support of manufacturing processes and are not a substitute for 3rd party lab testing of this material. External testing denoted by "(External)" in procedure field is performed by MCR Labs (Framingham, MA USA); reports available upon request.

Approved by: 
Date: 12-Jul-19
Name: Keith Griswold, M.S.
Title: Director of Analytics & Formulations

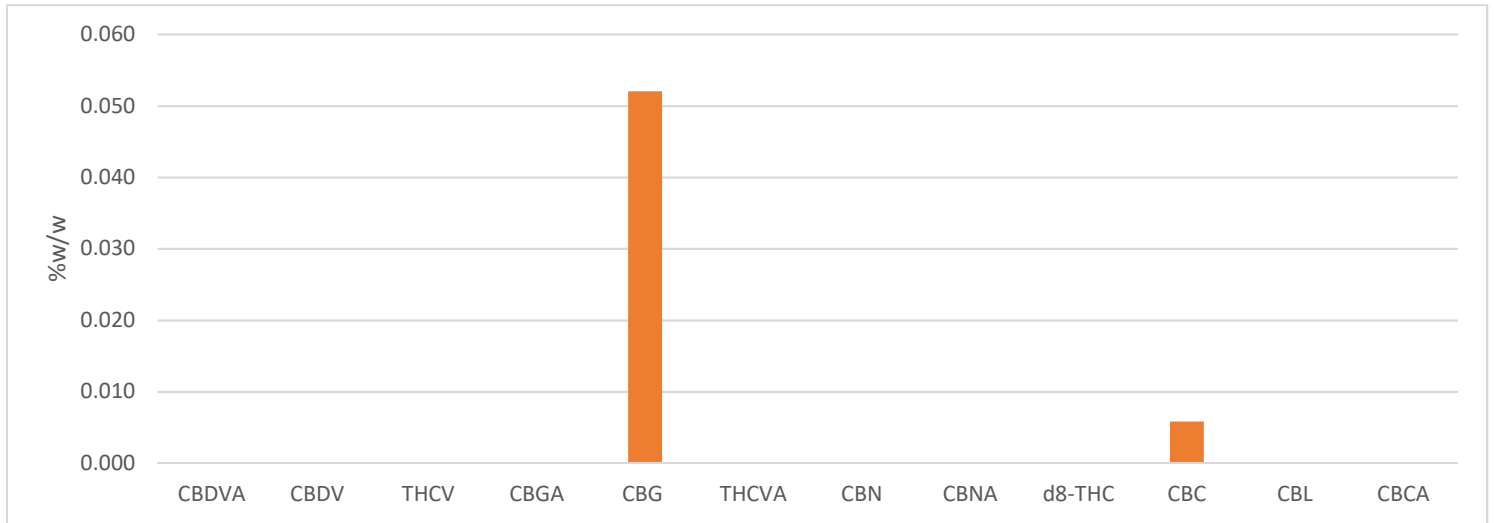
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Minor Cannabinoids

Product: Hemp Derived Whole Plant Concentrate
Procedure ID: C6198 LCMSMS (Internal)

Product Batch ID: WNC01B1218X0-33B03MA

Total Minor Cannabinoids: **0.06** %w/w



Analyte	Reporting Limit	%W/W	MG/G
Cannabidivarinic Acid (CBDVA)	0.005 %w/w	Non Detect	-
Cannabidivarin (CBDV)	0.005 %w/w	Non Detect	-
Tetrahydrocannabivarin (THCV)	0.005 %w/w	< 0.005	-
Cannabigerolic Acid (CBGA)	0.005 %w/w	Non Detect	-
Cannabigerol (CBG)	0.005 %w/w	0.052	0.52
Tetrahydrocannabivarinic Acid (THCVA)	0.005 %w/w	Non Detect	-
Cannabinol (CBN)	0.005 %w/w	< 0.005	-
Cannabinolic Acid (CBNA)	0.005 %w/w	Non Detect	-
Delta 8-THC	0.005 %w/w	< 0.005	-
Cannabichromene (CBC)	0.005 %w/w	0.006	0.06
Cannabicyclol (CBL)	0.005 %w/w	< 0.005	-
Cannabichromic Acid (CBCA)	0.005 %w/w	Non Detect	-



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Terpene Profile

Product: Hemp Derived Whole Plant Concentrate
Procedure ID: C5933-GCMS (Internal)

Product Batch ID: WNC01B1218X0-33B03MA

Total Terpenes: 129 ppm

Analyte	Units	Reporting Limit	Results
α -Pinene	PPM	2	< 2
Camphene	PPM	2	Non Detect
Sabinene-	PPM	2	Non Detect
β -Pinene	PPM	2	Non Detect
β -Myrcene	PPM	2	3.5
α -Phellandrene	PPM	2	Non Detect
Carene	PPM	2	Non Detect
α -Terpinene	PPM	2	Non Detect
D-Limonene	PPM	2	< 2
o-Cymene	PPM	2	Non Detect
Eucalyptol	PPM	2	Non Detect
β -Ocimene	PPM	2	Non Detect
γ Terpinene	PPM	2	Non Detect
Terpinolene	PPM	2	Non Detect
Sabinene Hydrate	PPM	2	Non Detect
Fenchone	PPM	2	Non Detect
Linalool	PPM	2	2.4
Fenchol	PPM	2	Non Detect
Isopulegol	PPM	2	Non Detect
Camphor	PPM	2	Non Detect
Isoborneol	PPM	2	Non Detect
Menthol	PPM	2	Non Detect
endo-Borneol	PPM	2	Non Detect
α -Terpineol	PPM	2	4.7
γ Terpineol	PPM	2	Non Detect
Nerol	PPM	2	Non Detect
Pulegone	PPM	2	Non Detect
Geraniol	PPM	2	Non Detect
Geranyl acetate	PPM	2	Non Detect
α -Cedrene	PPM	2	Non Detect
(E)- β -Famesene	PPM	2	Non Detect
Caryophyllene	PPM	2	67
α -Humulene	PPM	2	25
trans-Neradiol	PPM	2	Non Detect
cis-Neradiol	PPM	2	Non Detect
Valencene	PPM	2	Non Detect
Guaiol	PPM	2	3.0
Caryophyllene Oxide	PPM	2	18
Cedrol	PPM	2	Non Detect
α -Bisabolol	PPM	2	5.7

*BQL - Below quantitation limit



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Residual Solvents

Product: Hemp Derived Whole Plant Concentrate
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Analyte	Units	Reporting Limit	MRL (USP 467)		Result
Methanol	ppm	25	< 3000	< 25	PASS
Pentane	ppm	25	< 5000	<25	PASS
Ethanol	ppm	25	< 5000	669	PASS
Acetone	ppm	25	< 5000	<25	PASS
Isopropanol	ppm	25	< 5000	<25	PASS
Acetonitrile	ppm	25	< 410	42	PASS
n-Hexane	ppm	25	< 290	<25	PASS
Tetrahydrofuran	ppm	25	< 720	<25	PASS
Chloroform	ppm	25	< 60	<25	PASS
n-Heptane	ppm	25	< 5000	84	PASS
Toluene	ppm	25	< 890	<25	PASS
m & p Xylene	ppm	25	< 2170	<25	PASS