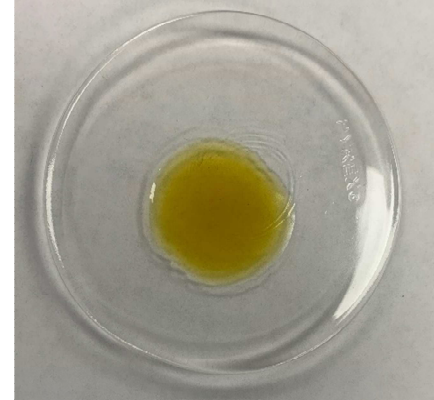


# Certificate of Analysis

## PRODUCT INFORMATION

**Product:** Hemp Derived Distilled Concentrate  
**Description:** 50 mg/mL Total CBD in Organic Hempseed Oil  
**Mfg Process:** Cold Ethanol Extraction/Distillation  
**Mfg Date:** 25-Jul-19  
**Cultivar:** Blend  
**Product Batch ID:** D1N01T1218X0-50B1HV  
**Product Code:** D1N50HV



**Product of Vermont USA**

## PRODUCT DATA

Parameter	Test Procedure	Specification	Units	Result
Appearance (20 - 25°C)	ASTM E1627 - 11	Light amber viscous liquid		PASS
Odor (20 - 25°C)	ASTM E1627 - 11	Nutty	-	PASS
Total CBD (Potency)	C5210-LCUV (Internal)	20 - 23	mg/mL	51.6 PASS
CBDA	C5210-LCUV (Internal)	≤ 0.05	%w/w	< 0.05 PASS
Delta 9-THC	C5210-LCUV (Internal)	≤ 0.34	%w/w	0.33 PASS
THCA-A	C5210-LCUV (Internal)	≤ 0.05	%w/w	< 0.05 PASS
Minor Cannabinoids	C5938A-LCMSMS (Internal)	≥ 0.01	%w/w	0.17 PASS
Terpenes	C5933-GCMS (Internal)	≤ 100	ppm	563 PASS
Water Activity	D8196-18	≤ 0.600	Aw	0.327 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

\*\*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:** 8-Aug-19

**Name:** Keith Griswold, M.S.

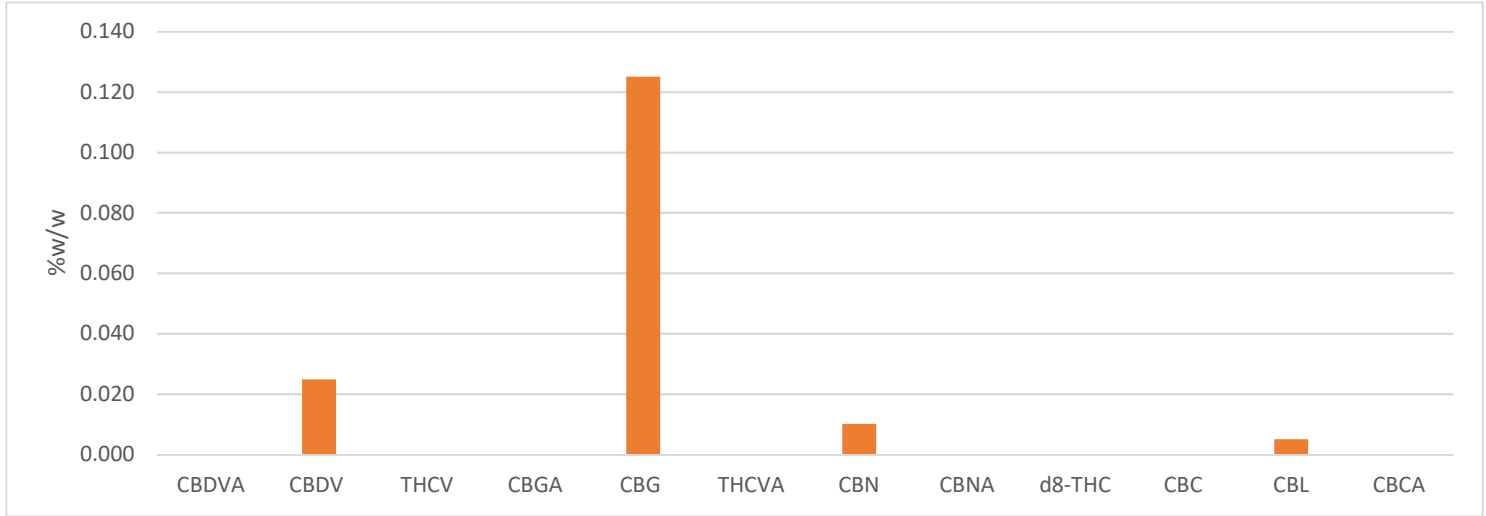
**Title:** Director of Analytics & Formulations

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## Minor Cannabinoids

**Product:** Hemp Derived Distilled Concentrate      **Product Batch ID:** D1N01T1218X0-50B1HV  
**Procedure ID:** C6194 LCMSMS (Internal)

**Total Minor Cannabinoids: 0.17 %w/w**



Analyte	Reporting Limit	%W/W	MG/G
Cannabidivarinic Acid (CBDVA)	0.005 %w/w	Non Detect	-
Cannabidivarin (CBDV)	0.005 %w/w	0.025	0.25
Tetrahydrocannabivarin (THCV)	0.005 %w/w	Non Detect	-
Cannabigerolic Acid (CBGA)	0.005 %w/w	Non Detect	-
Cannabigerol (CBG)	0.005 %w/w	0.125	1.25
Tetrahydrocannabivarinic Acid (THCVA)	0.005 %w/w	Non Detect	-
Cannabinol (CBN)	0.005 %w/w	0.010	0.10
Cannabinolic Acid (CBNA)	0.005 %w/w	Non Detect	-
Delta 8-THC	0.005 %w/w	< 0.005	-
Cannabichromene (CBC)	0.005 %w/w	Non Detect	-
Cannabicyclol (CBL)	0.005 %w/w	0.005	0.05
Cannabichromic Acid (CBCA)	0.005 %w/w	Non Detect	-

# Certificate of Analysis

## Terpene Profile

**Product:** Hemp Derived Distilled Concentrate  
**Procedure ID:** C5933-GCMS (Internal)

**Product Batch ID:** D1N01T1218X0-50B1HV

**Total Terpenes:** **563** ppm

Analyte	Units	Reporting Limit	Results
α-Pinene	PPM	20	< 20
Camphene	PPM	20	Non Detect
Sabinene-	PPM	20	Non Detect
β-Pinene	PPM	20	< 20
β-Myrcene	PPM	20	< 20
.α-Phellandrene	PPM	20	Non Detect
Carene	PPM	20	< 20
α-Terpinene	PPM	20	Non Detect
D-Limonene	PPM	20	< 20
o-Cymene	PPM	20	Non Detect
Eucalyptol	PPM	20	< 20
β-Ocimene	PPM	20	< 20
γTerpinene	PPM	20	Non Detect
Terpinolene	PPM	20	< 20
Sabinene Hydrate	PPM	20	Non Detect
Fenchone	PPM	20	Non Detect
Linalool	PPM	20	< 20
Fenchol	PPM	20	Non Detect
Isopulegol	PPM	20	Non Detect
Camphor	PPM	20	Non Detect
Isoborneol	PPM	20	Non Detect
Menthol	PPM	20	Non Detect
endo-Borneol	PPM	20	< 20
α-Terpineol	PPM	20	20
γ Terpineol	PPM	20	Non Detect
Nerol	PPM	20	Non Detect
Pulegone	PPM	20	Non Detect
Geraniol	PPM	20	< 20
Geranyl acetate	PPM	20	Non Detect
α-Cedrene	PPM	20	Non Detect
(E)-β-Famesene	PPM	20	Non Detect
Caryophyllene	PPM	20	327
α-Humulene	PPM	20	118
trans-Neradiol	PPM	20	Non Detect
cis-Neradiol	PPM	20	< 20
Valencene	PPM	20	Non Detect
Guaiol	PPM	20	20
Caryophyllene Oxide	PPM	20	39
Cedrol	PPM	20	Non Detect
α-Bisabolol	PPM	20	39

\*BQL - Below quantitation limit



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## Residual Solvents

**Product:** Hemp Derived Distilled Concentrate      **Product Batch ID:** D1N01T1218X0-50B1HV  
**Procedure ID:** C5923-GCMS (Internal)

Analyte	Units	Reporting Limit	MRL (USP 467)	Result
Methanol	ppm	25	< 3000	< 25 PASS
Pentane	ppm	25	< 5000	< 25 PASS
Ethanol	ppm	25	< 5000	726 PASS
Acetone	ppm	25	< 5000	< 25 PASS
Isopropanol	ppm	25	< 5000	69 PASS
Acetonitrile	ppm	25	< 410	< 25 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	51 PASS
Toluene	ppm	25	< 890	< 25 PASS
m & p Xylene	ppm	25	< 2170	< 25 PASS