



# Green Leaf Lab®

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## Quality Control Testing Official Report

### 500mg Full Spectrum CBD Tincture

Sample ID: G1E0287-01

Matrix: Hemp Products

Test ID: 5015664

Source ID: Batch #4A01

Date Sampled: 05/14/21

Date Accepted: 05/14/21



High Tide Holistics Inc.

### Results at a Glance

Total THC : <LOQ (0.0609%) %

Total CBD : 1.808 %

Residual Solvent Analysis : PASS

Total Terpenes : 0.04796 % PASS



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LABORATORY

*Brittany Wiemer*

Brittany Wiemer  
Quality Officer - 5/18/2021

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High Tide Holistics Inc.

### Potency Analysis

Date/Time Extracted: 05/17/21 09:52

Analysis Method/SOP: 215

Batch Identification: 2121004

Cannabinoids	LOQ (%)	mg/g	Cannabinoids Profile
Total THC	0.0609	< LOQ	
Total CBD	0.0635	18.08	
THCA	0.0879	< LOQ	
delta 9-THC	0.0609	< LOQ	
THCV	0.0597	< LOQ	
THCVA	0.0894	< LOQ	
CBD	0.0635	18.08	
CBDA	0.0875	< LOQ	
CBDV	0.0614	< LOQ	
CBDVA	0.0844	< LOQ	
CBN	0.0552	< LOQ	
CBG	0.0642	< LOQ	
CBGA	0.0851	< LOQ	
CBC	0.0805	1.228	

Total THC = delta 9-THC + (THCA \* 0.877)

Total CBD = CBD + (CBDA \* 0.877)

Total CBG = CBG + (CBGA \* 0.878)

LOQ=Limit of Quantification, the lowest measurable concentration of an analyte.



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### Terpene Analysis

Date/Time Extracted: 05/17/21 09:52

Analysis Method/SOP: 204

Monoterpenes	%	mg/g	Monoterpenes	%	mg/g
Camphene	< LOQ	< LOQ	Camphor	< LOQ	< LOQ
3-Carene	< LOQ	< LOQ	alpha-Cedrene	< LOQ	< LOQ
Cedrol	< LOQ	< LOQ	Endo-fenchyl alcohol	< LOQ	< LOQ
Eucalyptol	< LOQ	< LOQ	Fenchone	< LOQ	< LOQ
Geraniol	< LOQ	< LOQ	Geranyl acetate	< LOQ	< LOQ
Hexahydrothymol	< LOQ	< LOQ	Isoborneol	< LOQ	< LOQ
Isopulegol	< LOQ	< LOQ	Limonene	< LOQ	< LOQ
Linalool	< LOQ	< LOQ	p-Mentha-1,5-diene	< LOQ	< LOQ
beta-Myrcene	< LOQ	< LOQ	alpha-Pinene	< LOQ	< LOQ
beta-Pinene	< LOQ	< LOQ	Pulegone	< LOQ	< LOQ
Sabinene	< LOQ	< LOQ	Sabinene hydrate	< LOQ	< LOQ
gamma-Terpinene	< LOQ	< LOQ	alpha-Terpinene	< LOQ	< LOQ
Terpineol	< LOQ	< LOQ	Terpinolene	< LOQ	< LOQ
B Y-Terpineol	< LOQ	< LOQ	Nerol	< LOQ	< LOQ
A-Terpineol	< LOQ	< LOQ	Borneol	< LOQ	< LOQ
Ocimene isomer II	< LOQ	< LOQ	Ocimene isomer I	< LOQ	< LOQ
Sesquiterpenes	%	mg/g	Sesquiterpenes	%	mg/g
alpha-Bisabolol	0.01570	0.157	beta-Caryophyllene	0.01951	0.1951
Caryophyllene Oxide	< LOQ	< LOQ	Guaiol	< LOQ	< LOQ
alpha-Humulene	< LOQ	< LOQ	trans-Nerolidol	< LOQ	< LOQ
Valencene	0.01275	0.1275	cis-Nerolidol	< LOQ	< LOQ
<b>Total Terpenes</b>	<b>0.04796</b>	<b>0.4796</b>			

<LOQ - Results below the Limit of Quantitation - Terpenes profile/analysis are not accredited to ORELAP TNI 2009 Quality Standards.



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### 500mg Full Spectrum CBD Tincture

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Source ID: Batch #4A01

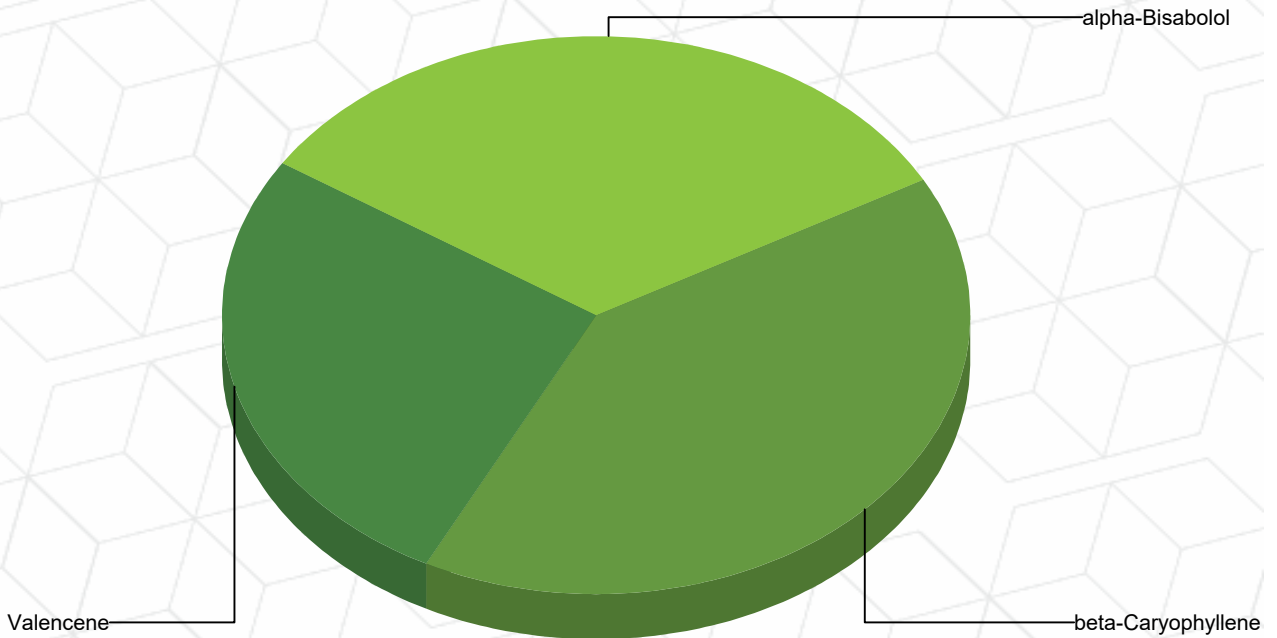
Date Sampled: 05/14/21

Date Accepted: 05/14/21



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### Terpene Profile



Percentage of Total Terpenes Identified



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High Tide Holistics Inc.

### Residual Solvents

Date/Time Extracted: 05/17/21 10:36

Analysis Method/SOP: 205

Analyte	Result	Action Level	LOD	LOQ	Units	Notes
1,4-Dioxane	< LOQ	380		50.00	ppm	
2-Butanol	< LOQ	5000		1000	ppm	
2-Ethoxyethanol	< LOQ	160		80.00	ppm	
2-Propanol (IPA)	< LOQ	5000		1000	ppm	
Acetone	< LOQ	5000		1000	ppm	
Acetonitrile	< LOQ	410		50.00	ppm	
Benzene	< LOQ	2		1.000	ppm	
Butanes	< LOQ	5000		1000	ppm	
Cumene	< LOQ	70		35.00	ppm	
Cyclohexane	< LOQ	3880		50.00	ppm	
Dichloromethane	< LOQ	600		50.00	ppm	
Ethyl acetate	< LOQ	5000		1000	ppm	
Ethyl benzene	< LOQ	2170		35.00	ppm	
Ethyl ether	< LOQ	5000		1000	ppm	
Ethylene glycol	< LOQ	620		310.0	ppm	
Ethylene oxide	< LOQ	50		25.00	ppm	
Heptane	< LOQ	5000		1000	ppm	
Hexanes	< LOQ	290		50.00	ppm	
Isopropyl acetate	< LOQ	5000		1000	ppm	
Methanol	< LOQ	3000		1000	ppm	
Pentanes	< LOQ	5000		1000	ppm	
Propane	< LOQ	5000		1000	ppm	
Tetrahydrofuran	< LOQ	720		50.00	ppm	
Toluene	< LOQ	890		50.00	ppm	
Xylenes	< LOQ	2170		50.00	ppm	

<LOQ - Results below the Limit of Quantitation

Results above the Action Level fail state testing requirements and will be highlighted **Red**.



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### Quality Control Potency

Batch: 2121004 - 215-Products

Blank(2121004-BLK2)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	< LOQ	0.0221	%		05/17/21 09:52	05/17/21 19:10	
delta 9-THC	< LOQ	0.0153	%		05/17/21 09:52	05/17/21 19:10	
THCV	< LOQ	0.0150	%		05/17/21 09:52	05/17/21 19:10	
THCVA	< LOQ	0.0224	%		05/17/21 09:52	05/17/21 19:10	
CBD	< LOQ	0.0159	%		05/17/21 09:52	05/17/21 19:10	
CBDA	< LOQ	0.0220	%		05/17/21 09:52	05/17/21 19:10	
CBDV	< LOQ	0.0154	%		05/17/21 09:52	05/17/21 19:10	
CBDVA	< LOQ	0.0212	%		05/17/21 09:52	05/17/21 19:10	
CBN	< LOQ	0.0138	%		05/17/21 09:52	05/17/21 19:10	
CBG	< LOQ	0.0161	%		05/17/21 09:52	05/17/21 19:10	
CBGA	< LOQ	0.0213	%		05/17/21 09:52	05/17/21 19:10	
CBC	< LOQ	0.0202	%		05/17/21 09:52	05/17/21 19:10	

Reference(2121004-SRM2)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
delta 9-THC	94.0	0.0153	%	80-120	05/17/21 09:52	05/17/21 19:45	
CBD	102	0.0159	%	80-120	05/17/21 09:52	05/17/21 19:45	

### Solvent Analysis

Batch: 2121010 - 205

Blank(2121010-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Acetone	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Acetonitrile	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	
Benzene	< LOQ	1.000	ppm		05/17/21 10:36	05/18/21 08:38	
Butanes	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
2-Butanol	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Cumene	< LOQ	35.00	ppm		05/17/21 10:36	05/18/21 08:38	
Cyclohexane	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	
Dichloromethane	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	
1,4-Dioxane	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	
2-Ethoxyethanol	< LOQ	80.00	ppm		05/17/21 10:36	05/18/21 08:38	
Ethyl acetate	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Ethyl benzene	< LOQ	35.00	ppm		05/17/21 10:36	05/18/21 08:38	
Ethylene glycol	< LOQ	310.0	ppm		05/17/21 10:36	05/18/21 08:38	
Ethylene oxide	< LOQ	25.00	ppm		05/17/21 10:36	05/18/21 08:38	
Ethyl ether	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Heptane	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Hexanes	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	



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### Quality Control Solvent Analysis (Continued)

Batch: 2121010 - 205 (Continued)

Blank(2121010-BLK1)							
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Isopropyl acetate	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Methanol	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Pentanes	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Propane	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
2-Propanol (IPA)	< LOQ	1000	ppm		05/17/21 10:36	05/18/21 08:38	
Tetrahydrofuran	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	
Toluene	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	
Xylenes	< LOQ	50.00	ppm		05/17/21 10:36	05/18/21 08:38	

LCS(2121010-BS1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Acetone	90.6	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Acetonitrile	106	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Benzene	84.0	1.000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
n-Butane	98.2	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Butanes	96.2	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
2-Butanol	95.4	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Cumene	84.1	35.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Cyclohexane	81.5	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Dichloromethane	96.0	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
1,4-Dioxane	84.1	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
2-Ethoxyethanol	125	80.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Ethyl acetate	87.6	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Ethyl benzene	85.3	35.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Ethylene glycol	118	310.0	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Ethylene oxide	106	25.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Ethyl ether	96.1	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Heptane	101	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
n-Hexane	97.0	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Hexanes	95.8	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
iso-Butane	94.3	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Isopropyl acetate	86.8	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
iso-Pentane	133	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	BSH
Methanol	114	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
2-Methylpentane	113	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
3-Methylpentane	98.6	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
neo-Pentane	92.8	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
n-Pentane	115	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Pentanes	114	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	



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### Quality Control Solvent Analysis (Continued)

Batch: 2121010 - 205 (Continued)

LCS(2121010-BS1)							
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Propane	78.0	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
2-Propanol (IPA)	115	1000	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Tetrahydrofuran	105	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	
Toluene	82.1	50.00	ppm	70-130	05/17/21 10:36	05/17/21 12:43	



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### Notes and Definitions

- ATM Non-cannabis matrix related interference or suppression of Internal standard
- BLI Baseline Interference - Cannabinoid peak interference in chromatographic baseline affecting QC recovery .
- BLK Analyte detected in method blank, but not associated samples.
- BSH Blank Spike High - Blank Spike recovery above method limit. no detections in samples.
- BSL Blank Spike Low - Blank Spike recovery below lower method limit, analyte chromatography reviewed manually for all samples.
- C Interference due to co-elution
- CBD Interference due to co-elution
- CV1 CBD matrix interference on GC Pest chromatography
- CV2 CCV was above acceptance criteria, Non-detect samples are considered acceptable.
- INF CCV was below acceptance criteria, sample still exceeds regulatory limit.
- ISH One or more QC falls outside acceptance criteria. Data entered into LIMS for informational purposes only.
- ISL Internal Standard concentration is above acceptance criteria.
- MSH Internal Standard concentration is below acceptance criteria.
- MSI Matrix Spike High - Matrix Spike recovery above method limits.
- MSL Matrix Spike Interference - Matrix spike source sample contains analyte hit above calibration affecting recovery accuracy in Matrix Spike.
- TPP
- U Matrix Spike Low - Matrix Spike recovery below lower method limit, analyte chromatography reviewed manually for all samples.  
Internal Standard concentration outside control limit due to matrix interference



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