



12025 NE Marx St. Portland, OR 97220
503-253-3511 / www.greenleaflab.org

Green Leaf Lab proudly follows TNI 2009
Quality Standards

T Free Distillate 2085

Date Sampled: 12/17/18 00:00

Date Accepted: 12/17/18

Sample ID: G8L0307-03

Results at a Glance

Total CBD : 92.35 %

Residual Solvent Analysis : PASS

Eric Wendt
Chief Science Officer - 12/21/2018

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T Free Distillate 2085

Date Sampled: 12/17/18 00:00

Date Accepted: 12/17/18

M #: 1005581

Sample ID: G8L0307-03

Matrix: Extracts and Concentrates

Potency Analysis

Date/Time Extracted: 12/18/18 15:06

Analysis Method/SOP: 215

Date/Time Analyzed: 12/19/18 11:32

Batch Identification: 1851033

Cannabinoids (% weight)	Decarboxylated* %	Cannabinoids Profile
Total THC ((THCA*0.877)+Δ9)	< LOQ	<p>A 3D pie chart illustrating the cannabinoid profile. The largest slice is CBD at 92.3%. Other slices include CBC at 3.0%, CBN at 1.0%, and CBG at 0.9%. The total percentage is 97.2%.</p>
Total CBD ((CBDA*0.877)+CBD)	92.35	
THCA	< LOQ	
delta 9-THC	< LOQ	
delta 8-THC	< LOQ	
THCV	< LOQ	
CBD	92.35	
CBDA	< LOQ	
CBDV	< LOQ	
CBDVA	< LOQ	
CBN	0.9802	
CBG	0.8795	
CBGA	< LOQ	
CBC	2.966	
CBCA	< LOQ	
CBLA	< LOQ	
Total Cannabinoids	97.42	

<LOQ - Results below the Limit of Quantitation - Compound not detected. LOQ = 5 PPM (mg/L)

For Potency only delta 9-THC, THCA, CBD, CBDA are ORELAP accredited analytes.

Water Activity Action Level is 0.65. Results above 0.65 fail state testing requirements and will be highlighted Red.

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T Free Distillate 2085

Date Sampled: 12/17/18 00:00

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M #: 1005581

Sample ID: G8L0307-03

Matrix: Extracts and Concentrates

Residual Solvents

Solvent	Results in ppm	LOQ	Action Level	
Acetone	< LOQ	1000	5000	
Acetonitrile	< LOQ	50.00	410	
Benzene	< LOQ	0.5000	2	
Butanes	< LOQ	1000	5000 3	
2-Butanol	< LOQ	1000	5000	
Cumene	< LOQ	50.00	70	
Cyclohexane	< LOQ	50.00	3880	
Dichloromethane	< LOQ	50.00	600	
1,4-Dioxane	< LOQ	50.00	380	
2-Ethoxyethanol	< LOQ	50.00	160	
Ethyl acetate	< LOQ	1000	5000	
Ethylene glycol	< LOQ	50.00	620	
Ethylene oxide	< LOQ	50.00	50	
Ethyl ether	< LOQ	1000	5000	
Heptane	< LOQ	1000	5000	
Hexanes	< LOQ	50.00	290 4	
Isopropyl acetate	< LOQ	1000	5000	
Methanol	< LOQ	100.0	3000	
Pentanes	< LOQ	1000	5000 5	
Propane	< LOQ	1000	5000	
2-Propanol (IPA)	< LOQ	1000	5000	
Tetrahydrofuran	< LOQ	50.00	720	
Toluene	< LOQ	50.00	890	

Date/Time Extracted: 12/19/18 10:14

Date/Time Analyzed: 12/20/18 03:59

Analysis Method/SOP: 205

Batch Identification: 1851038

3 - Total butanes should be calculated as sum of n-butanes (CAS# 106-97-8) and iso-butane (CAS# 75-28-5)**4** - Total hexanes should be calculated as sum of n-hexane (CAS# 110-54-3), 2-methylpentane (CAS# 107-83-5), 3-methylpentane (CAS# 96-14-0), 2,2-dimethylbutane (CAS# 75-83-2), 2,3-dimethylbutane (CAS# 79-29-8)**5** - Total pentanes should be calculated as sum of n-pentane (CAS# 109-66-0), iso-pentane (CAS# 78-78-4), and neo-pentane (CAS# 463-82-1)**6** - Total xylenes are 1,2-dimethylbenzene (CAS# 95-47-6), 1,3-dimethylbenzene (CAS# 106-42-3), and 1,4-dimethylbenzene (CAS# 106-42-3)

<LOQ - Results below the Limit of Quantitation - Compound not detected

Results above the Action Level fail state testing requirements and will be highlighted **Red**.Eric Wendt
Chief Science Officer - 12/21/2018



Quality Control Potency

Batch: 1851033 - 215-Concentrates

Blank(1851033-BLK1)						
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
delta 9-THC	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
delta 8-THC	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
THCV	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBD	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBDA	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBDV	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBDVA	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBN	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBG	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBGA	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBC	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBCA	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07
CBLA	< LOQ	0.4100	%		12/18/18 15:06	12/19/18 09:07

LCS(1851033-BS1)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	114	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:18
delta 9-THC	112	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:18
CBD	111	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:18
CBDA	109	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:18

LCS(1851033-BS2)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
THCA	118	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:30
delta 9-THC	117	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:30
CBD	115	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:30
CBDA	113	0.0100	%	80-120	12/18/18 15:06	12/19/18 09:30

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Quality Control Solvent Analysis

Batch: 1851038 - 205

Blank(1851038-BLK1)						
Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed
Acetone	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Acetonitrile	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Benzene	< LOQ	0.5000	ppm		12/19/18 10:14	12/20/18 11:25
Butanes	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
2-Butanol	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Cumene	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Cyclohexane	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Dichloromethane	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
1,4-Dioxane	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
2-Ethoxyethanol	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Ethyl acetate	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Ethylene glycol	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Ethylene oxide	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Ethyl ether	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Heptane	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Hexanes	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Isopropyl acetate	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Methanol	< LOQ	100.0	ppm		12/19/18 10:14	12/20/18 11:25
Pentanes	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Propane	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
2-Propanol (IPA)	< LOQ	1000	ppm		12/19/18 10:14	12/20/18 11:25
Tetrahydrofuran	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25
Toluene	< LOQ	50.00	ppm		12/19/18 10:14	12/20/18 11:25

LCS(1851038-BS1)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
Acetone	84.5	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Acetonitrile	81.4	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Benzene	83.6	0.5000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
n-Butane	80.3	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Butanes	80.8	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
2-Butanol	83.9	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Cumene	84.5	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Cyclohexane	83.2	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Dichloromethane	87.5	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
1,4-Dimethylbenzene	82.5	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
1,4-Dioxane	88.8	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
2-Ethoxyethanol	85.2	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Ethyl acetate	85.8	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37

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Quality Control

Solvent Analysis (Continued)

Batch: 1851038 - 205 (Continued)

LCS(1851038-BS1)						
Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed
Ethyl benzene	82.4	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Ethylene glycol	111	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Ethylene oxide	86.0	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Ethyl ether	84.0	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Heptane	86.4	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
n-Hexane	85.2	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Hexanes	83.8	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
iso-Butane	81.3	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Isopropyl acetate	87.4	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
iso-Pentane	83.8	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Methanol	83.3	100.0	ppm	70-130	12/19/18 10:14	12/19/18 19:37
2-Methylpentane	83.6	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
3-Methylpentane	85.2	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
neo-Pentane	79.4	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
n-Pentane	83.0	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Pentanes	82.1	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Propane	85.5	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
2-Propanol (IPA)	85.4	1000	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Tetrahydrofuran	87.5	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37
Toluene	84.5	50.00	ppm	70-130	12/19/18 10:14	12/19/18 19:37

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