ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

Hemp Potency Analysis by High Performance Liquid Chromatography

Testing Accreditation #: 4092-002

Test Certificate #: 114531-001

Client Name, Sample Details
Black Tie CBD, LLC
Sample: Candyland
Type: Industrial Hemp
Method: FE58 HPLC1100-OR1
***Moisture:** 10.13%

Test Conditions
Scale: XS205-OR1
Temp: 21.8 °C
Baro Pressure: 1014 hPa
Analyst: HRM
Technician: EDT

Sample ID#: 114531
Lot #: R&D
Batch #: 114531
Harvest/Process Date: 01/16/2019
Date Received: 01/17/2019
Test Date: 01/23/2019
Valid Through: 01/23/2020

Test Compounds	CBDV	CBDA	CBD	CBC	CBG	CBN	THC	THCA	THCV	Total THC	Total CBD
Amount	N/D	24.71%	0.82%	0.12%	0.12%	N/D	N/D	0.96%	N/D	0.84%	22.49%
LOQ	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%		
Uncertainty	±5% RPD	±5% RPD	±5% RPD	±5% RPD	±5% RPD	±5% RPD	±5% RPD	±5% RPD	±5% RPD		

THC = Delta-9-THC

LOQ = Limit of Quantitation

RPD is relative percent difference between the LCS and LCS duplicate.

%RPD = Relative Percent Difference; Min. Value = Minimum Detectable Amount, CFU = Colony Forming Units, N/D = Not Detected

*** Designated tests that use the method FE-45.

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Joseph Rutkowski, Quality Manager

Himashi Mead, Technical Manager

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Tested by Iron Laboratories Oregon, 71 Cenntenial Loop Suite D Eugene, OR 97401

ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

Pesticide Analysis by Mass Spectrometer

Testing Accreditation #: 4092-002

Test Certificate #: 114516-001

Client Name, Sample Details
Black Tie CBD, LLC
Sample: Candyland
Type: Industrial Hemp
Method: FE-52 (EN 15662 & AOAC 2007.01)

Test Conditions
Prepsheet ID#: ORPS190123a
Scale: Veritas-OR1
Temp: 21.4 °C
Baro PE: 1014 hPa
Analyst: JDM
Technician: JDM

Sample ID#: 114516
Lot #: R&D
Batch #: 114516
Harvest/Process Date: 01/16/2019
Date Received: 01/17/2019
Test Date: 01/24/2019
Valid Through: 01/24/2020

Compound	MRL (µg/g)	LOD (µg/g)	Status (µg/g)	Compound	MRL (µg/g)	LOD (µg/g)	Status (µg/g)
Aldicarb	0.400	0.124	Pass/<LOD	Abamectin****	0.500	0.124	Pass/<LOD
Acephate	0.400	0.124	Pass/<LOD	Acequinocyl	2.000	0.247	Pass/<LOD
Acetamiprid	0.200	0.124	Pass/<LOD	Azoxystrobin	0.200	0.124	Pass/<LOD
Bifenazate	0.200	0.124	Pass/<LOD	Bifenthrin	0.200	0.124	Pass/<LOD
Boscalid	0.400	0.124	Pass/<LOD	Carbaryl	0.200	0.124	Pass/<LOD
Carbofuran	0.200	0.124	Pass/<LOD	Chlorantraniliprole	0.200	0.124	Pass/<LOD
Chlorfenapyr	1.000	0.494	Pass/<LOD	Chlorpyrifos	0.200	0.124	Pass/<LOD
Clofentezine	0.200	0.124	Pass/<LOD	Cyfluthrin**	1.000	0.494	Pass/<LOD
Cypermethrin***	1.000	0.494	Pass/<LOD	Daminozide	1.000	0.124	Pass/<LOD
DDVP (Dichlorvos)	1.000	0.247	Pass/<LOD	Diazinon	0.200	0.124	Pass/<LOD
Dimethoate	0.200	0.124	Pass/<LOD	Ethoprophos	0.200	0.124	Pass/<LOD
Etofenprox	0.400	0.124	Pass/<LOD	Etoxazole	0.200	0.124	Pass/<LOD
Fenoxycarb	0.200	0.124	Pass/<LOD	Fenpyroximate	0.400	0.124	Pass/<LOD
Fipronil	0.400	0.124	Pass/<LOD	Flonicamid	1.000	0.124	Pass/<LOD
Fludioxonil	0.400	0.124	Pass/<LOD	Hexythiazox	1.000	0.124	Pass/<LOD
Imazalil	0.200	0.124	Pass/<LOD	Imidacloprid	0.400	0.124	Pass/<LOD
Kresoxim Methyl	0.400	0.124	Pass/<LOD	Malathion	0.200	0.124	Pass/<LOD
Metalaxyl	0.200	0.124	Pass/<LOD	Methiocarb	0.200	0.124	Pass/<LOD
Methomyl	0.400	0.124	Pass/<LOD	Methyl Parathion	0.200	0.124	Pass/<LOD
MGK-264‡	0.200	0.124	Pass/<LOD	Myclobutanil	0.000	0.124	Pass/<LOD
Naled	0.500	0.124	Pass/<LOD	Oxamyl	1.000	0.124	Pass/<LOD
Paclobutrazol	0.400	0.124	Pass/<LOD	Permethrins†	0.200	0.124	Pass/<LOD
Phosmet	0.200	0.124	Pass/<LOD	Piperonyl Butoxide	2.000	0.124	Pass/<LOD
Prallethrin	0.200	0.124	Pass/<LOD	Propiconazole	0.400	0.124	Pass/<LOD
Propoxur	0.200	0.124	Pass/<LOD	Pyrethrins*	1.000	0.124	Pass/<LOD
Pyridaben	0.200	0.124	Pass/<LOD	Spinosad*****	0.200	0.124	Pass/<LOD
Spiromesifen	0.200	0.124	Pass/<LOD	Spirotetramat	0.200	0.124	Pass/<LOD
Spiroxamine‡	0.400	0.124	Pass/<LOD	Tebuconazole	0.400	0.124	Pass/<LOD
Fenoxycarb	0.200	0.124	Pass/<LOD	Thiamethoxam	0.200	0.124	Pass/<LOD
Trifloxystrobin	0.200	0.124	Pass/<LOD				

* Pyrethrins are reported as the sum of Jasmolin I, Cinerin I, and Pyrethrin I
** Cyfluthrins are reported as the sum of isomers Cyfluthrin I, II, III, and IV
*** Cypermethrins are reported as the sum of isomers Cypermethrin I, II, III, and IV
**** Abamectin is reported as the sum of Avermectin B1a and Avermectin B1b
***** Spinosad is reported as the sum of Spinosyn A and Spinosyn D
† Permethrin and Prallethrin are reported as the sum of cis and trans isomers
‡ MGK-264 and Spiroximine are reported as the sum of isomers I and II
MRL - Maximum Residue Limit; LOD - Limit of Detection

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Joseph Rutkowski, Quality Manager

Himashi Mead, Technical Manager

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ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

Pesticide QC Report

Testing Accreditation #: 4092-002

Test Certificate #: 114516-001

Client Name, Sample Details
Black Tie CBD, LLC
Sample: Candyland
Type: Industrial Hemp
Method: FE-52 (EN 15662 & AOAC 2007.01)

Test Conditions
Prepsheet ID#: ORPS190123a
Scale: Veritas-OR1
Temp: 21.4 °C
Baro PE: 1014 hPa
Analyst: JDM
Technician: JDM

Sample ID#: 114516
Lot #: R&D
Batch #: 114516
Harvest/Process Date: 01/16/2019
Date Received: 01/17/2019
Test Date: 01/24/2019
Valid Through: 01/24/2020

Target Compound Name	Method Blank (µg/g)	QC Spike (µg/g)	Matrix Spike (µg/g)	Matrix Spike Duplicate (µg/g)	MS recovery%	MSD recovery%	Relative Percent Difference (%)	QC Flag
Acephate	N.D.	1	0.911	0.968	91.10	96.80	6.07	
Acequinocyl	N.D.	1	0.765	0.705	76.50	70.50	8.16	
Acetamiprid	N.D.	1	0.91	0.88	91.00	88.00	3.35	
Aldicarb	N.D.	1	0.979	0.937	97.90	93.70	4.38	
Avermectin B1a	N.D.	0.97	0.851	0.939	87.73	96.80	9.83	
Azoxystrobin	N.D.	1	0.714	0.71	71.40	71.00	0.56	
Bifenazate	N.D.	1	0.605	0.719	60.50	71.90	17.22	LR
Bifenthrin	N.D.	1	0.738	0.81	73.80	81.00	9.30	
Boscalid	N.D.	1	0.668	0.77	66.80	77.00	14.19	LR
Carbaryl	N.D.	1	0.926	0.913	92.60	91.30	1.41	
Carbofuran	N.D.	1	0.9	0.867	90.00	86.70	3.74	
Chlorantraniliprole	N.D.	1	0.6	0.702	60.00	70.20	15.67	LR
Chlorfenapyr	N.D.	1	0.854	0.802	85.40	80.20	6.28	
Chlorpyriphos	N.D.	1	0.86	0.939	86.00	93.90	8.78	
Clofentezine	N.D.	1	0.565	0.684	56.50	68.40	19.06	LR
Cyfluthrin	N.D.	1	0.694	0.788	69.40	78.80	12.69	LR
Cypermethrin	N.D.	1	0.746	0.857	74.60	85.70	13.85	
Daminoside	N.D.	1	0.426	0.468	42.60	46.80	9.40	LR
Diazanon	N.D.	1	0.562	0.668	56.20	66.80	17.24	LR
Dichlorvos	N.D.	1	0.843	0.857	84.30	85.70	1.65	
Dimethoate	N.D.	1	0.909	0.857	90.90	85.70	5.89	
Ethoprophos	N.D.	1	0.703	0.674	70.30	67.40	4.21	LR
Etofenprox	N.D.	1	0.827	0.81	82.70	81.00	2.08	
Etoxazole	N.D.	1	0.881	0.944	88.10	94.40	6.90	
Fenoxycarb	N.D.	1	0.624	0.746	62.40	74.60	17.81	LR
Fenpyroximate	N.D.	1	0.966	0.959	96.60	95.90	0.73	
Fipronil	N.D.	1	0.939	0.95	93.90	95.00	1.16	
Flonicamid	N.D.	1	0.855	0.829	85.50	82.90	3.09	
Fludioxonil	N.D.	1	1	0.94	100.00	94.00	6.19	
Hexythiazox	N.D.	1	0.592	0.545	59.20	54.50	8.27	LR
Imazalil	N.D.	1	0.633	0.755	63.30	75.50	17.58	LR
Imidacloprid	N.D.	1	0.83	0.895	83.00	89.50	7.54	
Kresoxim-methyl	N.D.	1	0.569	0.674	56.90	67.40	16.89	LR
Malathion	N.D.	1	0.653	0.789	65.30	78.90	18.86	LR
Metalaxyl	N.D.	1	0.73	0.813	73.00	81.30	10.76	
Methiocarb	N.D.	1	0.838	0.762	83.80	76.20	9.50	
Methomyl	N.D.	1	0.713	0.887	71.30	88.70	21.75	Q
MGK-264	N.D.	1	0.573	0.68	57.30	68.00	17.08	LR
Myclobutanil	N.D.	1	0.654	0.803	65.40	80.30	20.45	LRQ
Naled (dibrom)	N.D.	1	0.692	0.647	69.20	64.70	6.72	LR
Oxamyl	N.D.	1	0.839	0.839	83.90	83.90	0.00	

Paclobutrazol	N.D.	1	0.638	0.764	63.80	76.40	17.97	LR
Parathion-methyl	N.D.	1	0.836	0.832	83.60	83.20	0.48	
Permethrins	N.D.	1	0.865	0.88	86.50	88.00	1.72	
Phosmet	N.D.	1	0.642	0.768	64.20	76.80	17.87	LR
Piperonyl butoxide	N.D.	1	0.925	0.961	92.50	96.10	3.82	
Prallethrin	N.D.	1	0.543	0.656	54.30	65.60	18.85	LR
Propiconazole	N.D.	1	0.653	0.723	65.30	72.30	10.17	LR
Propoxur	N.D.	1	0.986	0.954	98.60	95.40	3.30	
Pyrethrin	N.D.	0.65	0.428	0.476	65.85	73.23	10.62	LR
Pyridaben	N.D.	1	0.815	0.863	81.50	86.30	5.72	
SpinosynA	N.D.	0.84	0.619	0.702	73.69	83.57	12.57	
SpinosynD	N.D.	0.16	0.135	0.133	84.38	83.13	1.49	
Spiromesifen	N.D.	1	0.365	0.385	36.50	38.50	5.33	LR
Spirotetramat	N.D.	1	0.724	0.742	72.40	74.20	2.46	
Spiroxamine	N.D.	1	0.704	0.808	70.40	80.80	13.76	
Tebuconazole	N.D.	1	0.595	0.744	59.50	74.40	22.26	LRQ
Thiacloprid	N.D.	1	0.776	0.8	77.60	80.00	3.05	
Thiamethoxam	N.D.	1	0.647	0.752	64.70	75.20	15.01	LR
Trifloxystrobin	N.D.	1	0.84	0.838	84.00	83.80	0.24	

N.D. = Not Detected

I = indicates that an amount of an interfering compound greater than the methods limit of detection was detected in the method blank sample. May indicate contamination of analytical system or consumables.

Q = indicates that the relative percent diference of two identicly prepared Matrix Spike samples for a target analyte was greater than 20%

R = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) Low recovery could indicate there is actually more compound present than detected; while high recoveries should be scrutinized for possible fails as more compound may be detected than is actually residual on the sample.

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IRON LABORATORIES

Terpene Report by Mass Spectrometer

Test Certificate #: 114516-001

Client Name, Sample Details	Test Conditions	Sample ID#: 114516
Black Tie CBD, LLC	**Scale**: XS205-OR1	**Lot #:** R&D
Sample: Candyland	**Temp**: 19.1 °C	**Batch #:** 114516
Type: Industrial Hemp **Method:** SOP FE-44-OR3	**Baro Pressure**: 1001 hPa	**Harvest/Process Date**: 01/16/2019
	Analyst: HRM	**Date Received**: 01/17/2019
	Technician: HRM	

Mono Terpenes

Weight Percentage Dry Matter (wt/wt%)

α-Pinene:	0.030 %	**β-Ocimene:**	0.020 %
Camphene:	N/D	**Eucalyptol (1,8-Cineol):**	N/D
Sabinene:	N/D	**γ-Terpinene:**	N/D
Myrcene:	0.120 %	**α-Terpinolene:**	N/D
β-Pinene:	0.020 %	**Linalool:**	0.020 %
Δ3-Carene:	N/D	**Fenchone:**	N/D
α-Terpinene:	N/D	**Fenchol:**	0.020 %
Ocimene:	N/D	**Isopulegol:**	N/D
Limonene:	0.040 %	**Geraniol:**	N/D
4-Cymene:	N/D		

Sequi Terpenes

Weight Percentage Dry Matter (wt/wt%)

β-Caryophyllene:	0.180 %
α-Humulene:	0.090 %
Nerolidol 1:	N/D
Nerolidol 2:	N/D
Guaiol:	0.130 %
Caryophyllene Oxide:	0.040 %
α-Bisabolol:	0.110 %

Other Terpenes

Total: 0.820%

a-Phellandrene = 0.00 % a-Terpineol = 0.02 % Valencene = 0.04 %

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