



This report cannot be used for ODA, OHA or OLCC compliance requirements.

Product identity: Vital Leaf Hazelnut Sea Salt CBD Chocolate Batch #19194
Laboratory ID: 19-010258-0001

Summary

Potency:

Analyte	Result	Limits	Units	LOQ	
CBD	0.162		%	0.00	CBD-Total per 16.98g 30.5 mg/16.98g
CBD-A	0.0202		%	0.00	THC-Total per 16.98g < 1.063 mg/16.9
					(Reported in milligrams per serving)
Analyte per 16.98g	Result	Limits	Units	LOQ	
CBD per 16.98g	27.5		mg/16.98g	0.57	
CBD-A per 16.98g	3.43		mg/16.98g	0.57	

Microbiology:

Less than LOQ for all analytes.



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Customer: Sovereign Medicinals Inc
4207 SE Woodstock Blvd #507
Portland Oregon 97206
United States

Product identity: Vital Leaf Hazelnut Sea Salt CBD Chocolate Batch #19194

Client/Metric ID: PO-00255 19194

Sample Date: 08/27/19

Laboratory ID: 19-010258-0001

Relinquished by: Tait Christensen

Temp: 23.2 °C

Serving Size #1: 16.98 g

Sample Results

Potency		Batch: 1907826					
Analyte	Result	Limits	Units	LOQ	Analyze	Method	Notes
CBC†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBC-A†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBC-Total†	< LOQ		%	0.0061	08/30/19	J AOAC 2015 V98-6	
CBD	0.162		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBD-A	0.0202		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBD-Total	0.180		%	0.0061	08/30/19	J AOAC 2015 V98-6	
CBDV†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBDV-A†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBDV-Total†	< LOQ		%	0.0061	08/30/19	J AOAC 2015 V98-6	
CBG†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBG-A†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBG-Total†	< LOQ		%	0.0061	08/30/19	J AOAC 2015 V98-6	
CBL†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
CBN	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
Δ8-THC†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
Δ9-THC	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
THC-A	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
THC-Total	0.000		%	0.0061	08/30/19	J AOAC 2015 V98-6	
THCV†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
THCV-A†	< LOQ		%	0.0033	08/28/19	J AOAC 2015 V98-6	
THCV-Total†	0.000		%	0.0061	08/30/19	J AOAC 2015 V98-6	

Potency per 16.98g		Batch: 1907826					
Analyte	Result	Limits	Units	LOQ	Analyze	Method	Notes
CBC per 16.98g†	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6	
CBC-A per 16.98g†	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6	
CBC-Total per 16.98g†	< LOQ		mg/16.98g	1.06	08/30/19	J AOAC 2015 V98-6	



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Potency per 16.98g		Batch: 1907826						
Analyte	Result	Limits	Units	LOQ	Analyze	Method	Notes	
CBD per 16.98g	27.5		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBD-A per 16.98g	3.43		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBD-Total per 16.98g	30.5		mg/16.98g	1.06	08/30/19	J AOAC 2015 V98-6		
CBDV per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBDV-A per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBDV-Total per 16.98g [†]	< LOQ		mg/16.98g	1.06	08/30/19	J AOAC 2015 V98-6		
CBG per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBG-A per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBG-Total per 16.98g [†]	< LOQ		mg/16.98g	1.06	08/30/19	J AOAC 2015 V98-6		
CBL per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
CBN per 16.98g	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
Δ8-THC per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
Δ9-THC per 16.98g	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
THC-A per 16.98g	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
THC-Total per 16.98g	< LOQ		mg/16.98g	1.06	08/30/19	J AOAC 2015 V98-6		
THCV per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
THCV-A per 16.98g [†]	< LOQ		mg/16.98g	0.566	08/30/19	J AOAC 2015 V98-6		
THCV-Total per 16.98g [†]	< LOQ		mg/16.98g	1.06	08/30/19	J AOAC 2015 V98-6		

Microbiology								
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
E.coli	< LOQ		cfu/g	10	1907707	08/29/19	AOAC 991.14 (Petrifilm)	X
Total Coliforms	< LOQ		cfu/g	10	1907707	08/29/19	AOAC 991.14 (Petrifilm)	X
Mold	< LOQ		cfu/g	10	1907706	08/29/19	AOAC 2014.05 (RAPID)	X
Yeast	< LOQ		cfu/g	10	1907706	08/29/19	AOAC 2014.05 (RAPID)	X



This report cannot be used for ODA, OHA or OLCC compliance requirements.

Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

† = Analyte not NELAP accredited.

Units of Measure

cfu/g = Colony forming units per gram

g = Gram

mg/16.98g = Milligram per 16.98g

% = Percentage of sample

% wt = $\mu\text{g/g}$ divided by 10,000

Glossary of Qualifiers

X: Not ORELAP accredited.

Approved Signatory

Derrick Tanner
General Manager



This report cannot be used for OHA or OLCC compliance requirements.

Customer: Sovereign Medicinals Inc
4207 SE Woodstock Blvd
#507
Portland, OR 97206

Product identity: UB110918RO High CDB Hemp Extract

Client/Metric ID: .

Sample Date: 10/22/18

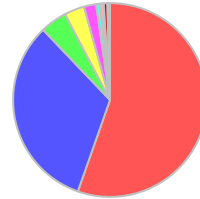
Laboratory ID: 18-009409-0001

Relinquished by: Hendrick vanRensberg

Temp: 23.2 °C

Sample Results

Potency	Method J AOAC 2015 V98-6			Units %	Batch 1806565	Analyze 10/25/18 04:47 PM
Analyte	As Received	Dry weight	LOQ	Notes		
CBC [†]	2.42		0.100			
CBC-A [†]	3.20		0.100			
CBC-Total [†]	5.22		0.188			
CBD	23.4		0.100			
CBD-A	39.9		0.100			
CBD-Total	58.5		0.188			
CBDV [†]	0.119		0.100			
CBDV-A [†]	0.197		0.100			
CBDV-Total [†]	0.290		0.187			
CBG [†]	0.473		0.100			
CBG-A [†]	0.423		0.100			
CBG-Total [†]	0.844		0.188			
CBL [†]	< LOQ		0.100			
CBN	< LOQ		0.100			
Δ9-THC	1.46		0.100			
Δ8-THC [†]	< LOQ		0.100			
THC-A	0.441		0.100			
THC-Total	1.85		0.187			
THCV [†]	< LOQ		0.100			
THCV-A [†]	< LOQ		0.100			
THCV-Total [†]	< LOQ		0.187			



- CBD-A
- CBD
- CBC-A
- CBC
- Δ9-THC
- CBG
- THC-A
- CBG-A
- CBDV-A
- CBDV

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Pixis quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be kept a maximum of 15 days from the report date unless prior arrangements have been made.



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Solvents					Method EPA5021A	Units µg/g	Batch 1806688	Analyze 10/26/18 11:35 AM			
Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
1,4-Dioxane	< LOQ	380	100	pass		2-Butanol	< LOQ	5000	200	pass	
2-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane	< LOQ		200		
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass	
2,2-Dimethylbutane	< LOQ		60.0			2,2-Dimethylpropane	< LOQ		2,800		
2,3-Dimethylbutane	< LOQ		60.0			3-Methylpentane	< LOQ		30.0		
Acetone	< LOQ	5000	200	pass		Acetonitrile	< LOQ	410	100	pass	
Benzene	< LOQ	2.00	2.00	pass		Butanes (sum)	< LOQ	5000	4,400	pass	
Cyclohexane	< LOQ	3880	200	pass		Ethyl acetate	657	5000	200	pass	
Ethyl benzene	< LOQ		200			Ethyl ether	< LOQ	5000	200	pass	
Ethylene glycol	< LOQ	620	200	pass		Ethylene oxide	< LOQ	50.0	30.0	pass	
Hexanes (sum)	< LOQ	290	210	pass		Isopropyl acetate	< LOQ	5000	200	pass	
Isopropylbenzene	< LOQ	70.0	30.0	pass		m,p-Xylene	< LOQ		200		
Methanol	< LOQ	3000	200	pass		Methylene chloride	< LOQ	600	200	pass	
Methylpropane	< LOQ		2,200			n-Butane	< LOQ		2,200		
n-Heptane	< LOQ	5000	200	pass		n-Hexane	< LOQ		30.0		
n-Pentane	< LOQ		200			o-Xylene	< LOQ		200		
Pentanes (sum)	< LOQ	5000	3,200	pass		Propane	< LOQ	5000	1,700	pass	
Tetrahydrofuran	< LOQ	720	100	pass		Toluene	< LOQ	890	100	pass	
Total Xylenes	< LOQ		400			Total Xylenes and Ethyl	< LOQ	2170	600	pass	



This report cannot be used for OHA or OLCC compliance requirements.

Pesticides											
Method AOAC 2007.01 & EN 15662 (mod) Units mg/kg Batch 1806633 Analyze 10/25/18 08:17 AM											
Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
Abamectin	< LOQ	0.50	0.250	pass		Acephate	< LOQ	0.40	0.250	pass	
Acequinocyl	< LOQ	2.0	1.00	pass		Acetamiprid	< LOQ	0.20	0.100	pass	
Aldicarb	< LOQ	0.40	0.200	pass		Azoxystrobin	< LOQ	0.20	0.100	pass	
Bifenazate	< LOQ	0.20	0.100	pass		Bifenthrin	< LOQ	0.20	0.100	pass	
Boscalid	< LOQ	0.40	0.100	pass		Carbaryl	< LOQ	0.20	0.100	pass	
Carbofuran	< LOQ	0.20	0.100	pass		Chlorantraniliprole	< LOQ	0.20	0.100	pass	
Chlorfenapyr	< LOQ	1.0	0.500	pass		Chlorpyrifos	< LOQ	0.20	0.100	pass	
Clofentezine	< LOQ	0.20	0.100	pass		Cyfluthrin (incl.	< LOQ	1.0	0.500	pass	
Cypermethrin	< LOQ	1.0	0.500	pass		Daminozide	< LOQ	1.0	0.500	pass	
Diazinon	< LOQ	0.20	0.100	pass		Dichlorvos	< LOQ	1.0	0.500	pass	
Dimethoate	< LOQ	0.20	0.100	pass		Ethoprophos	< LOQ	0.20	0.100	pass	
Etofenprox	< LOQ	0.40	0.200	pass		Etoazole	< LOQ	0.20	0.100	pass	
Fenoxycarb	< LOQ	0.20	0.100	pass		Fenpyroximate	< LOQ	0.40	0.200	pass	
Fipronil	< LOQ	0.40	0.200	pass		Fonicamid	< LOQ	1.0	0.400	pass	
Fludioxonil	< LOQ	0.40	0.200	pass		Hexythiazox	< LOQ	1.0	0.400	pass	
Imazalil	< LOQ	0.20	0.100	pass		Imidacloprid	< LOQ	0.40	0.200	pass	
Kresoxim-methyl	< LOQ	0.40	0.200	pass		Malathion	< LOQ	0.20	0.100	pass	
Metalaxyl	< LOQ	0.20	0.100	pass		Methiocarb	< LOQ	0.20	0.100	pass	
Methomyl	< LOQ	0.40	0.200	pass		MGK-264	< LOQ	0.20	0.100	pass	
Myclobutanil	< LOQ	0.20	0.100	pass		Naled	< LOQ	0.50	0.250	pass	
Oxamyl	< LOQ	1.0	0.500	pass		Paclobutrazole	< LOQ	0.40	0.200	pass	
Parathion-Methyl	< LOQ	0.20	0.200	pass		Permethrin	< LOQ	0.20	0.100	pass	
Phosmet	< LOQ	0.20	0.100	pass		Piperonyl butoxide	< LOQ	2.0	1.00	pass	
Prallethrin	< LOQ	0.20	0.100	pass		Propiconazole	< LOQ	0.40	0.200	pass	
Propoxur	< LOQ	0.20	0.100	pass		Pyrethrins	< LOQ	1.0	0.500	pass	
Pyridaben	< LOQ	0.20	0.100	pass		Spinosad	< LOQ	0.20	0.100	pass	
Spiromesifen	< LOQ	0.20	0.100	pass		Spirotetramat	< LOQ	0.20	0.100	pass	
Spiroxamine	< LOQ	0.40	0.200	pass		Tebuconazole	< LOQ	0.40	0.200	pass	
Thiacloprid	< LOQ	0.20	0.100	pass		Thiamethoxam	< LOQ	0.20	0.100	pass	
Trifloxystrobin	< LOQ	0.20	0.100	pass							

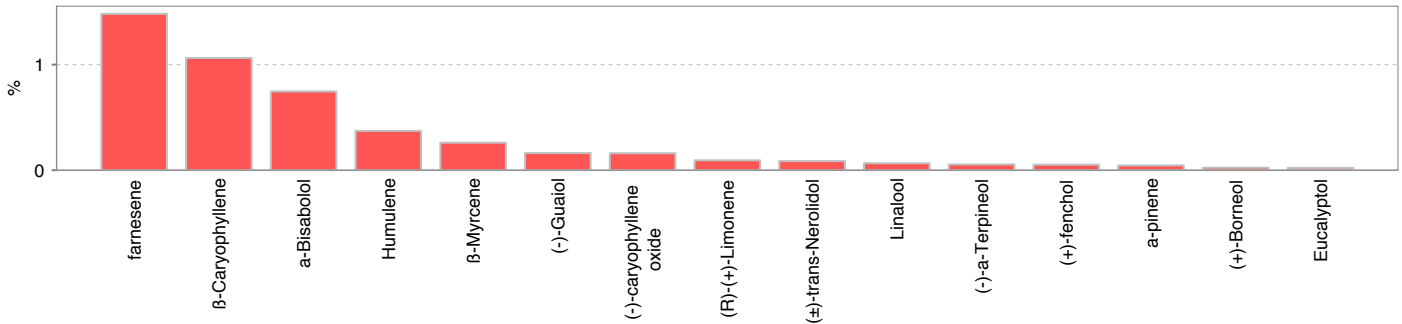
Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Pixis quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be kept a maximum of 15 days from the report date unless prior arrangements have been made.



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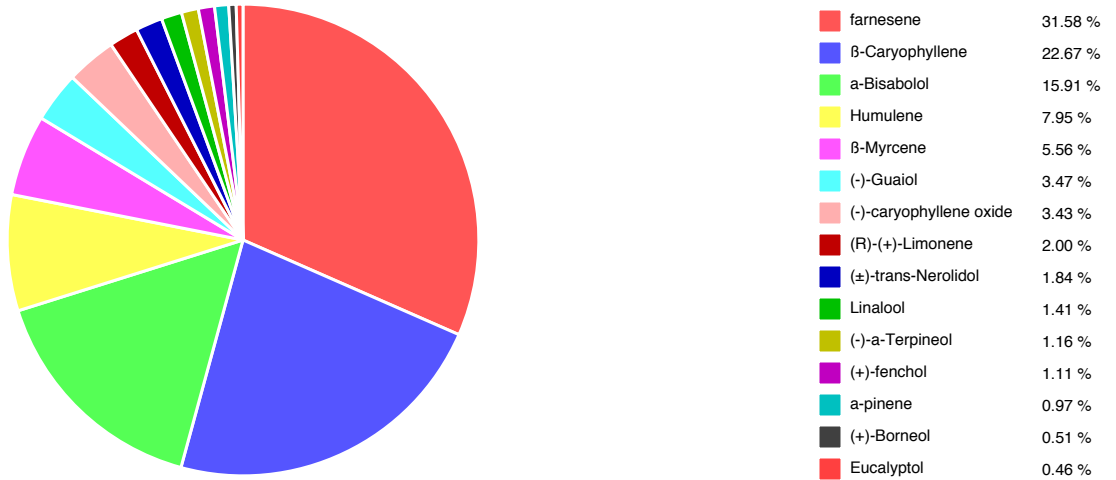
Terpenes				Method J AOAC 2015 V98-6	Units %	Batch 1806708	Analyze 10/29/18 08:36 AM		
Analyte	Result	LOQ	% of Total	Notes	Analyte	Result	LOQ	% of Total	Notes
farnesene [†]	1.48	0.020	31.58%		β-Caryophyllene [†]	1.06	0.020	22.67%	
α-Bisabolol [†]	0.746	0.020	15.91%		Humulene [†]	0.373	0.020	7.95%	
β-Myrcene [†]	0.261	0.020	5.56%		(-)-Guaiaol [†]	0.163	0.020	3.47%	
(-)-caryophyllene oxide [†]	0.161	0.020	3.43%		(R)-(+)-Limonene [†]	0.0936	0.020	2.00%	
(±)-trans-Nerolidol [†]	0.0865	0.020	1.84%		Linalool [†]	0.0660	0.020	1.41%	
(-)-α-Terpineol [†]	0.0546	0.020	1.16%		(+)-fenchol [†]	0.0520	0.020	1.11%	
α-pinene [†]	0.0453	0.020	0.97%		(+)-Borneol [†]	0.0237	0.020	0.51%	
Eucalyptol [†]	0.0217	0.020	0.46%		(-)-β-Pinene [†]	< LOQ	0.020	0.00%	
valencene [†]	< LOQ	0.020	0.00%		(-)-Isopulegol [†]	< LOQ	0.020	0.00%	
(+)-Cedrol [†]	< LOQ	0.020	0.00%		(+)-Pulegone [†]	< LOQ	0.020	0.00%	
(±)-Camphor [†]	< LOQ	0.020	0.00%		(±)-cis-Nerolidol [†]	< LOQ	0.020	0.00%	
(±)-fenchone [†]	< LOQ	0.020	0.00%		α-cedrene [†]	< LOQ	0.020	0.00%	
α-phellandrene [†]	< LOQ	0.020	0.00%		α-Terpinene [†]	< LOQ	0.020	0.00%	
Camphene [†]	< LOQ	0.020	0.00%		cis-β-Ocimene [†]	< LOQ	0.006	0.00%	
d-3-Carene [†]	< LOQ	0.020	0.00%		γ-Terpinene [†]	< LOQ	0.020	0.00%	
Geraniol [†]	< LOQ	0.020	0.00%		Geranyl acetate [†]	< LOQ	0.020	0.00%	
Isoborneol [†]	< LOQ	0.020	0.00%		Menthol [†]	< LOQ	0.020	0.00%	
nerol [†]	< LOQ	0.020	0.00%		p-Cymene [†]	< LOQ	0.020	0.00%	
Sabinene [†]	< LOQ	0.020	0.00%		Sabinene hydrate [†]	< LOQ	0.020	0.00%	
Terpinolene [†]	< LOQ	0.020	0.00%		trans-β-Ocimene [†]	< LOQ	0.013	0.00%	

Total Terpenes 4.69





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Metals								
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Arsenic	< LOQ		mg/kg	0.0468	1806666	10/25/18	AOAC 2013.06 (mod)	
Cadmium	< LOQ		mg/kg	0.0468	1806666	10/25/18	AOAC 2013.06 (mod)	
Lead	< LOQ		mg/kg	0.0468	1806666	10/25/18	AOAC 2013.06 (mod)	
Mercury	< LOQ		mg/kg	0.0234	1806666	10/25/18	AOAC 2013.06 (mod)	

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Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

Units of Measure

- $\mu\text{g/g}$ = Microgram per gram
- mg/kg = Milligram per kilogram
- % = Percentage of sample
- % wt = $\mu\text{g/g}$ divided by 10,000

Approved Signatory

Derrick Tanner
General Manager