## **HEMP LABORATORY TEST**

# CERTIFICATE OF ANALYSIS



# Hemp Analysis - Summary

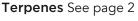
Tested by high-performance liquid chromatography with ultraviolet detection (HPLC-UV).

TOTAL THC1

**0.0585**%<sup>2</sup>

## **CANNABINOID PROFILE**

2.3306% Total CBD1 2.5141% Total Cannabinoids3









- 1) Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step: Total THC =  $\Delta 9 THC + (THCa (0.877))$  and Total CBD = CBD + (CBDa (0.877)).
- 2) As defined by the 2018 Farm Bill, hemp must contain no more than 0.3% Total THC, defined as the concentration of delta-9 tetrahydrocannabinol ( $\Delta$ -9-THC) post-decarboxylation - see formula above.
- 3) Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.

# Additional Testing

Pass/Fail defined at action limits set by California Code of Regulations Title 16. Effective date: January 16, 2019. Authority: Section 26013, Business Professions Code. Reference: Sections 26100, 26104, and 26110, Business Professions Code.

**RESIDUAL PESTICIDES** 

**PASSED** 

MICROBIAL IMPURITIES

**PASSED** 

**RESIDUAL SOLVENTS** 

**PASSED** 

# 200mg CBD Roll On - 19322

Tested for: Can Be Done

Address:

CA

Sample ID:

200130S017

**Date Collected:** 

01/30/2020

**Date Received:** 

01/30/2020

Batch #:

# Final Approval

Michael Pham, LQC Verified By

Date: 02/12/2020

Date: 02/12/2020

These results relate only to the sample included on this report. This report shall not be reproduced except in full, without written approval of the laboratory. The uncertainty of measurement associated with the measurement result reported in this certificate is available from SC Laboratories upon request.



SC Laboratories, LLC 100 Pioneer Street, Suite E Santa Cruz, CA 95060 (866) 435-0709 | sclabs.com

Sample Name: 200mg CBD Roll On - 19322

LIMS Sample ID: 200130S017

Batch #:

Source METRC UID:

Sample Type: Other

Batch Count: Sample Count:

Unit Volume: 10 Milliliters per Unit

Serving Mass:

0.9322 g/mL Density:

Date Collected: 01/30/2020 Date Received: 01/30/2020 Tested for: Can Be Done

License #:

Address: CA

Produced by:

License #:

Address:

### **Moisture Test Results**

Results (%)

## **Cannabinoid Test Results**

02/02/2020

Cannabinoid analysis utilizing High Performance Liquid Chromatography (HPLC, QSP 5-4-4-4)

Δ9THC Δ8THC THCa THCV THCVa CBD CBDa CBDV CBDVa CBG		mg/mL 0.545 ND ND ND ND 21.687 0.045 0.096 ND 0.314	% 0.0585 ND ND ND ND 2.3264 0.0048 0.0103 ND 0.0337	LOD / LOQ mg/mL 0.0009 / 0.003 0.0009 / 0.003 0.0009 / 0.003 0.0004 / 0.001 0.0013 / 0.004 0.0009 / 0.003 0.0009 / 0.003 0.0004 / 0.001 0.0003 / 0.001 0.001 / 0.003
CBGa CBL CBN CBC CBCa		ND 0.018 <loq 0.731 ND</loq 	ND 0.0019 <loq 0.0784 ND</loq 	0.0008 / 0.002 0.0021 / 0.006 0.0009 / 0.003 0.0011 / 0.003 0.0015 / 0.005
Sum of Cannabinoids: Total THC (Δ9THC+0.877*THCa) Total CBD (CBD+0.877*CBDa)		<b>23.436</b> 0.545 21.726	<b>2.5141</b> 0.0585 2.3306	<b>234.360 mg/Unit</b> 5.450 mg/Unit 217.260 mg/Unit

Action Limit mg

Δ9THC per Unit Δ9THC per Serving

5.450 mg/Unit

## **Batch Photo**





## **Terpene Test Results**

02/04/2020

Terpene analysis utilizing Gas Chromatography - Flame Ionization Detection (GC - FID)

	mg/g	%	LOD / LOQ mg/g
2 Pinene	ND	ND	0.022 / 0.067
Camphene	ND	ND	0.027 / 0.08
Sabinene	ND	ND	0.027 / 0.082
2 Pinene	ND	ND	0.027 / 0.081
Myrcene	ND	ND	0.027 / 0.082
2 Phellandrene	ND	ND	0.037 / 0.111
3 Carene	ND	ND	0.029 / 0.087
2 Terpinene	ND	ND	0.03 / 0.09
Limonene	ND	ND	0.013 / 0.039
Eucalyptol	<loq< td=""><td><loq< td=""><td>0.021 / 0.063</td></loq<></td></loq<>	<loq< td=""><td>0.021 / 0.063</td></loq<>	0.021 / 0.063
Ocimene	ND	ND	0.028 / 0.085
2 Terpinene	ND	ND	0.03 / 0.09
Sabinene Hydrate	ND	ND	0.018 / 0.054
Fenchone	ND	ND	0.03 / 0.092
Terpinolene	ND	ND	0.022 / 0.067
Linalool	ND	ND	0.019 / 0.058
Fenchol	<loq< td=""><td><loq< td=""><td>0.023 / 0.069</td></loq<></td></loq<>	<loq< td=""><td>0.023 / 0.069</td></loq<>	0.023 / 0.069
(-)-Isopulegol	ND	ND	0.013 / 0.04
Camphor	ND	ND	0.054 / 0.163
Isoborneol	ND	ND	0.033 / 0.101
Borneol	ND	ND	0.048 / 0.146
Menthol	ND	ND	0.022 / 0.067
Terpineol	ND	ND	0.022 / 0.068
Nerol	ND	ND	0.023 / 0.068
R-(+)-Pulegone	ND	ND	0.022 / 0.068
Geraniol	ND	ND	0.017 / 0.05
Geranyl Acetate	ND	ND	0.016 / 0.048
2 Cedrene	ND	ND	0.017 / 0.051
2 Caryophyllene	0.339	0.0339	0.018 / 0.054
2 Humulene	0.098	0.0098	0.013 / 0.038
Valencene	0.029	0.0029	0.008 / 0.023
Nerolidol	ND	ND	0.035 / 0.106
Caryophyllene Oxide	<loq< td=""><td><loq< td=""><td>0.028 / 0.084</td></loq<></td></loq<>	<loq< td=""><td>0.028 / 0.084</td></loq<>	0.028 / 0.084
Guaiol	<loq< td=""><td><loq< td=""><td>0.022 / 0.066</td></loq<></td></loq<>	<loq< td=""><td>0.022 / 0.066</td></loq<>	0.022 / 0.066
Cedrol	ND	ND	0.029 / 0.086
2 Bisabolol	0.189	0.0189	0.017 / 0.051

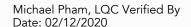
**Total Terpene Concentration:** 0.0655 0.655

## Sample Certification

California Code of Regulations Title 16 Effect Date January 16, 2019
Authority: Section 26013, Business and Professions Code.
Reference: Sections 26100, 26104 and 26110, Business and Professions Code.



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Josh Wurzer, President Date: 02/12/2020

SC Laboratories, LLC 100 Pioneer Street, Suite E Santa Cruz, CA 95060 (866) 435-0709 | sclabs.com

Sample Name: 200mg CBD Roll On - 19322

LIMS Sample ID: 200130S017

Batch #:

Source METRC UID:

Sample Type: Other

Batch Count: Sample Count:

Unit Volume: 10 Milliliters per Unit

Serving Mass:

0.9322 g/mL Density:

Date Collected: 01/30/2020 Date Received: 01/30/2020 Tested for: Can Be Done

License #:

Address: CA

Produced by:

License #:

Address:

## **Pesticide Test Results - Pass**

02/05/2020

LOD / LOQ µg/g

Action Limit µg/g

Pesticide and plant growth regulator analysis utilizing HPLC-Mass

Spectrometry and GC-Mass Spectrometry Results (µg/g)

				Results (µg/g)	Action Limit µg/g	LOD / LOG pg/g
	oamectin	- 1	Pass	ND	0.3	0.030 / 0.091
Αc	cephate	- 1	Pass	ND	5.0	0.013 / 0.039
	cequinocyl		Pass	ND	4.0	0.010 / 0.031
	cetamiprid		Pass	ND	5.0	0.013 / 0.038
	zoxystrobin		Pass	ND	40.0	0.015 / 0.047
	fenazate		Pass	ND	5.0	0.012 / 0.035
	fenthrin		Pass	ND	0.5	0.013 / 0.038
	oscalid		Pass	ND	10.0	0.008 / 0.023
			Pass	ND	5.0	0.099 / 0.300
_	aptan			ND	0.5	0.044 / 0.043
	arbaryl		Pass			
	hlorantraniliprole		Pass	ND	40.0	0.020 / 0.061
	ofentezine		Pass	ND	0.5	0.009 / 0.027
	yfluthrin		Pass	ND	1.0	0.099 / 0.299
	ypermethrin		Pass	ND	1.0	0.030 / 0.091
	iazinon		Pass	ND	0.2	0.009 / 0.027
Di	imethomorph		Pass	ND	20.0	0.018 / 0.055
Et	oxazole	- 1	Pass	ND	1.5	0.007 / 0.022
Fe	enhexamid		Pass	ND	10.0	0.015 / 0.045
Fe	enpyroximate		Pass	ND	2.0	0.012 / 0.036
	onicamid		Pass	ND	2.0	0.022 / 0.066
Flo	udioxonil		Pass	ND	30.0	0.020 / 0.061
Не	exythiazox		Pass	ND	2.0	0.009 / 0.027
	nidacloprid		Pass	ND	3.0	0.017 / 0.050
	esoxim-methyl		Pass	ND	1.0	0.010 / 0.029
	alathion		Pass	ND	5.0	0.006 / 0.019
	etalaxyl		Pass	ND	15.0	0.011 / 0.033
	ethomyl		Pass	ND	0.1	0.022 / 0.067
	yclobutanil		Pass	ND	9.0	0.015 / 0.044
	aled		Pass	ND	0.5	0.010 / 0.031
_	xamyl		Pass	ND	0.2	0.014 / 0.042
	entachloronitrobenze		Pass	ND	0.2	0.020 / 0.061
	ermethrin		Pass	ND	20.0	0.020 / 0.001
	nosmet		Pass	ND	0.2	0.010 / 0.030
			rass Pass	ND	8.0	0.010 / 0.030
	peronylbutoxide allethrin			ND		
			Pass		0.4	0.011 / 0.032
	opiconazole		Pass	ND	20.0	0.004 / 0.013
	rethrins		Pass	ND	1.0	0.012 / 0.036
	ridaben .		Pass	ND	3.0	0.007 / 0.020
	oinetoram		Pass	ND	3.0	0.006 / 0.017
	oinosad		Pass	ND	3.0	0.010 / 0.031
	oiromesifen	- 1	Pass	ND	12.0	0.005 / 0.015
	oirotetramat		Pass	ND	13.0	0.014 / 0.042
Τe	ebuconazole		Pass	ND	2.0	0.006 / 0.018
	niamethoxam		Pass	ND	4.5	0.011 / 0.033
Tr	ifloxystrobin		Pass	ND	30.0	0.007 / 0.020
	-					

### **Pesticide Test Results - Pass**

02/05/2020

Pesticide and plant growth regulator analysis utilizing HPLC-Mass Spectrometry and GC-Mass Spectrometry

		Results (µg/g)	Action Limit µg/g	LOD / LOG µg/g
Aldicarb	Pass	ND	ND	0.030 / 0.091
Carbofuran	Pass	ND	ND	0.029 / 0.089
Chlordane	Pass	ND	ND	0.032 / 0.097
Chlorfenapyr	Pass	ND	ND	0.030 / 0.090
Chlorpyrifos	Pass	ND	ND	0.029 / 0.089
Coumaphos	Pass	ND	ND	0.029 / 0.089
Daminozide	Pass	ND	ND	0.030 / 0.091
DDVP (Dichlorvos)	Pass	ND	ND	0.029 / 0.089
Dimethoate	Pass	ND	ND	0.029 / 0.089
Ethoprop(hos)	Pass	ND	ND	0.029 / 0.089
Etofenprox	Pass	ND	ND	0.029 / 0.089
Fenoxycarb	Pass	ND	ND	0.029 / 0.089
Fipronil	Pass	ND	ND	0.029 / 0.089
lmazalil	Pass	ND	ND	0.029 / 0.089
Methiocarb	Pass	ND	ND	0.029 / 0.089
Methyl parathion	Pass	ND	ND	0.029 / 0.089
Mevinphos	Pass	ND	ND	0.029 / 0.089
Paclobutrazol	Pass	ND	ND	0.029 / 0.089
Propoxur	Pass	ND	ND	0.029 / 0.089
Spiroxamine	Pass	ND	ND	0.029 / 0.089
Thiacloprid	Pass	ND	ND	0.029 / 0.089

## **Mycotoxin Test Results**

Mycotoxin analysis utilizing HPLC-Mass Spectrometry

Results (µg/kg) Action Limit µg/kg

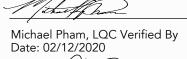
LOD / LOQ µg/kg

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Josh Wurzer, President Date: 02/12/2020



SC Laboratories, LLC 100 Pioneer Street, Suite E Santa Cruz, CA 95060 (866) 435-0709 | sclabs.com

LOD / LOQ µg/g

Sample Name: 200mg CBD Roll On - 19322

LIMS Sample ID: 200130S017

Batch #:

Source METRC UID:

Sample Type: Other

Batch Count: Sample Count:

Unit Volume: 10 Milliliters per Unit

Serving Mass:

0.9322 g/mL Density:

**Residual Solvent Test Results - Pass** 

Date Received:	01/30/2020
Tested for:	Can Be Done
License #:	
Address:	CA
Produced by:	
License #:	
Address:	

## **Water Activity Test Results**

Date Collected:

Results (Aw) **Action Limit Aw** 

01/30/2020

02/05/2020

Residual Solvent analysis utilizing Gas Chromatography - Mass

Spectrometry (GC - MS)					
	Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g		
Pass	ND	1.0	0.111 / 0.336		
Pass	ND	1.0	0.043 / 0.132		
Pass	ND	1.0	0.064 / 0.195		
Pass	ND	1.0	0.136 / 0.413		
Pass	ND	1.0	0.172 / 0.521		
Pass	ND	1.0	0.040 / 0.120		
Pass	ND	5000.0	14.703 / 44.549		
Pass	ND	410.0	2.727 / 8.262		
Pass	ND	5000.0	5.672 / 17.185		
Pass	ND	5000.0	11.775 / 35.679		
Pass	ND	5000.0	16.227 / 49.169		
Pass	ND	5000.0	11.608 / 35.172		
Pass	ND	5000.0	12.982 / 39.336		
Pass	ND	290.0	1.816 / 5.502		
Pass	ND	5000.0	15.358 / 46.536		
Pass	ND	3000.0	15.584 / 47.220		
Pass	ND	5000.0	12.355 / 37.434		
Pass	ND	5000.0	1.359 / 4.117		
Pass	ND	890.0	7.174 / 21.736		
Pass	ND	2170.0	34.438 / 104.347		
	Pass Pass Pass Pass Pass Pass Pass Pass	Results (µg/g) Pass ND	Results (μg/g)         Action Limit μg/g           Pass         ND         1.0           Pass         ND         5000.0           Pass         ND         290.0           Pass         ND         3000.0           Pass         ND         5000.0           Pass         ND         5000.0		

## **Heavy Metal Test Results**

Heavy metal analysis utilizing Inductively Coupled Plasma Mass Spectrometry (ICP-MS)

Results (µg/g) Action Limit µg/g

## Note

## **Microbiological Test Results - Pass**

02/05/2020

PCR and fluorescence detection of microbiological impurities

	_	Results	Action Limit
Shiga toxin-producing Escherichia coli	Pass	ND	ND
Salmonella spp.	Pass	ND	ND
Aspergillus fumigatus	Pass	ND	ND
Aspergillus flavus	Pass	ND	ND
Aspergillus niger	Pass	ND	ND
Aspergillus terreus	Pass	ND	ND

3M Petrifilm and plate counts for microbiological contamination Results (cfu/q)

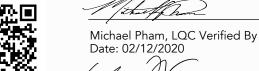
## Foreign Material Test Results

## Sample Certification

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