

## **Hemp Quality Assurance Testing**

# **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 12/14/2021** 

### SAMPLE NAME: Ache & Pain Relief

Infused, Hemp Infused

### **CULTIVATOR / MANUFACTURER**

Business Name: License Number:

Address:

### **DISTRIBUTOR / TESTED FOR**

Business Name: Santa Lucia Salve

Company

License Number:

Address:

### SAMPLE DETAIL

**Batch Number:** 

Sample ID: 211206R019

**Date Collected:** 12/06/2021 **Date Received:** 12/06/2021

Batch Size: Sample Size:

Unit Mass: 56.7 grams per Unit

Serving Size:







Scan QR code to verify authenticity of results.

### **CANNABINOID ANALYSIS - SUMMARY**

Total THC: <LOQ

Total CBD: 175.316 mg/unit

Sum of Cannabinoids: 224.816 mg/unit

Total Cannabinoids: 224.815 mg/unit

Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step: Total THC =  $\Delta$ 9THC + (THCa (0.877))

Total THC =  $\Delta$ 9THC + (THCa (0.877)) Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids =  $\Delta$ 9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa +  $\Delta$ 8THC + CBL + CBN Total Cannabinoids = ( $\Delta$ 9THC+0.877\*THCa) + (CBD+0.877\*CBDa) + (CBG+0.877\*CBGa) + (THCV+0.877\*THCVa) + (CBC+0.877\*CBCa) +

(CBDV+0.877\*CBDVa) + Δ8THC + CBL + CBN

### TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.2176%

Limonene 1.990 mg/g

Terpineol 0.153 mg/g

p-Cymene 0.033 mg/g

For quality assurance purposes. Not a Pre-Harvest Hemp Lab Test Report. 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.

Sample Certification: Action Limits used in this report are a compilation of guidance from state regulatory agencies in all states. Action limits for required tests are either state-specific, or the lower of any conflicting state regulations based upon the panel requested.

**Decision Rule:** Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT)

LQC verified by: Josh Antunovich Date: 12/14/2021 Approved by: Josh Wurzer, President Date: 12/14/2021



# **Hemp Quality Assurance Testing**

### **CERTIFICATE OF ANALYSIS**

ACHE & PAIN RELIEF | DATE ISSUED 12/14/2021



Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

Method: QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: <LOQ
Total THC (Δ9THC+0.877\*THCa)

TOTAL CBD: 175.316 mg/unit

Total CBD (CBD+0.877\*CBDa)

TOTAL CANNABINOIDS: 224.815 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) +  $\Delta$ 8THC + CBL + CBN

TOTAL CBG: 43.035 mg/unit

Total CBG (CBG+0.877\*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877\*THCVa)

TOTAL CBC: 2.041 mg/unit

Total CBC (CBC+0.877\*CBCa)

TOTAL CBDV: 4.423 mg/unit

Total CBDV (CBDV+0.877\*CBDVa)

### **CANNABINOID TEST RESULTS - 12/08/2021**

	COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Ī	CBD	0.004 / 0.011	±0.1481	3.092	0.3092
	CBG	0.002 / 0.006	±0.0472	0.759	0.0759
	CBDV	0.002 / 0.012	±0.0041	0.078	0.0078
Ī	СВС	0.003 / 0.010	±0.0015	0.036	0.0036
Ī	Δ9ΤΗС	0.002/0.014	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
	Δ8ΤΗС	0.01 / 0.02	N/A	ND	ND
Ī	THCa	0.001 / 0.005	N/A	ND	ND
Ī	THCV	0.002 / 0.012	N/A	ND	ND
	THCVa	0.002/0.019	N/A	ND	ND
	CBDa	0.001 / 0.026	N/A	ND	ND
	CBDVa	0.001 / 0.018	N/A	ND	ND
	CBGa	0.002 / 0.007	N/A	ND	ND
	CBL	0.003 / 0.010	N/A	ND	ND
	CBN	0.001 / 0.007	N/A	ND	ND
	CBCa	0.001 / 0.015	N/A	ND	ND
•	SUM OF CANNA	BINOIDS		3.965 mg/g	0.3965%

### Unit Mass: 56.7 grams per Unit

4	Δ9THC per Unit	TIM	<loq< th=""></loq<>
	Total THC per Unit		<loq< td=""></loq<>
	CBD per Unit		175.316 mg/unit
	Total CBD per Unit		175.316 mg/unit
	Sum of Cannabinoids per Unit		224.816 mg/unit
	Total Cannabinoids per Unit		224.815 mg/unit



# **Terpenoid Analysis**

Terpene analysis utilizing gas chromatographyflame ionization detection (GC-FID).

Method: QSP 1192 - Analysis of Terpenoids by GC-FID

### TERPENOID TEST RESULTS - 12/08/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Limonene	0.005/0.016	±0.0285	1.990	0.1990
Terpineol	0.016 / 0.055	±0.0094	0.153	0.0153
p-Cymene	0.005/0.016	±0.0009	0.033	0.0033
α Pinene	0.005 / 0.017	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Myrcene	0.008 / 0.025	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Nerol	0.003/0.011	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
$\alpha$ Cedrene	0.005 / 0.016	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
β Caryophyllene	0.004 / 0.012	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Nerolidol	0.009 / 0.028	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Camphene	0.005 / 0.015	N/A	ND	ND
Sabinene	0.004/0.014	N/A	ND	ND



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# Terpenoid Analysis Continued

Terpene analysis utilizing gas chromatographyflame ionization detection (GC-FID).

Method: QSP 1192 - Analysis of Terpenoids by GC-FID



#### Limonene

A monoterpene with a fragrance that can be described as orangey, citrusy, sweet and tart. It is most commonly found in nature as D-Limonene and is a primary contributor to the distinct scent of orange peels, from which it is commonly derived. Found in numerous pines, red maple, silver maple, aspens, cottonwoods, hemlocks, sumac, cedar, junipers...etc.



### **Terpineol**

A monoterpenoid alcohol with a fragrance that can be described as fresh, floral, piney, woody with a hint of lime. The most common isomer is  $\alpha$ -Terpineol. Found in melaleuca, pine, bitter orange, skullcap, tea plant…etc.



### p-Cymene

A monoterpene with a fragrance that can be described as woody and citrusy. Found in Ajowan, allspice, angelica, basil, bay leaf, bergamot, blackberry, cinnamon, clove oil, dill leaf...etc.

### TERPENOID TEST RESULTS - 12/08/2021 continued

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β Pinene	0.004 / 0.014	N/A	ND	ND
α Phellandrene	0.006 / 0.020	N/A	ND	ND
3 Carene	0.005 / 0.018	N/A	ND	ND
α Terpinene	0.005 / 0.017	N/A	ND	ND
Eucalyptol	0.006 / 0.018	N/A	ND	ND
Ocimene	0.011/0.038	N/A	ND	ND
γTerpinene	0.006 / 0.018	N/A	ND	ND
Sabinene Hydrate	0.006 / 0.022	N/A	ND	ND
Fenchone	0.009 / 0.028	N/A	ND	ND
Terpinolene	0.008 / 0.026	N/A	ND	ND
Linalool	0.009/0.032	N/A	ND	ND
Fenchol	0.010 / 0.034	N/A	ND	ND
(-)-Isopulegol	0.005 / 0.016	N/A	ND	ND
Camphor	0.006 / 0.019	N/A	ND	ND
Isoborneol	0.004 / 0.012	N/A	ND	ND
Borneol	0.005 / 0.016	N/A	ND	ND
Menthol	0.008 / 0.025	N/A	ND	ND
Citronellol	0.003 / 0.010	N/A	ND	ND
R-(+)-Pulegone	0.003 / 0.011	N/A	ND	ND
Geraniol	0.002 / 0.007	N/A	ND	ND
Geranyl Acetate	0.004 / 0.014	N/A	ND	ND
trans-β-Farnesene	0.008 / 0.025	N/A	ND	ND
α Humulene	0.009 / 0.029	N/A	ND	ND
Valencene	0.009 / 0.030	N/A	ND	ND
Caryophyllene Oxide	0.010 / 0.033	N/A	ND	ND
Guaiol	0.009 / 0.030	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
α Bisabolol	0.008 / 0.026	N/A	ND	ND
TOTAL TERPENOIDS			2.176 mg/g	0.2176%

#### NOTES

COA amended, update to order detail information.

