



CERTIFICATE OF ANALYSIS

Report Status: **RELEASED**
Report Date: **06/05/2020**

Sante Sample ID: **20A443**

Page 1 of 2

Company Name: Lama Herbal Solutions Phone Number: 513-557-8355	Contact Name: Laura McCarthy Contact Email: Lamaherbalsolutions@gmail.com Purchase Order Number: NA
Sample Name: 1500 mg FS Sample Lot Number: PB2002F122 Sample Received: 06/01/2020	Sample/Product Description: CBD Oil In Amber Glass Container Sample/Product Type: CBD Full Spectrum Sample Matrix: Food/Edible, Oil

ANALYSIS	TEST METHOD	LOQ	SPECIFICATIONS	RESULTS	PASS/NO PASS
Cannabinoids Screen					
CBD	UHPLC-DAD	0.002 w/w%	w/w%: Report Only	5.2857 w/w%	Results Reported
			mg/g: Report Only	52.857 mg/g	Results Reported
			% Label Claim: 90 – 110%	105.85%	PASS
			Label Claim: 1,350 – 1,650 mg/Unit	1585.7 mg/g	PASS
CBDa		0.002 w/w%	w/w%: Report Only mg/g: Report Only	ND ND	N/A
Δ9-THC		0.002 w/w%	w/w%: NMT 0.3 mg/g: NMT 3	0.0693 w/w% 0.693 mg/g	PASS PASS
THCa		0.002 w/w%	w/w%: Report Only mg/g: Report Only	ND ND	N/A
CBGa		0.002 w/w%	w/w%: Report Only mg/g: Report Only	0.0282 w/w% 0.282 mg/g	Results Reported
CBG	0.002 w/w%	w/w%: Report Only mg/g: Report Only	0.0407 w/w% 0.407 mg/g	Results Reported	
CBN	0.002 w/w%	w/w%: Report Only mg/g: Report Only	0.0088 w/w% 0.088 mg/g	Results Reported	

Product Pictures



For any questions related to this Certificate of Analysis please contact Customer Service at 512-800-9117 Released and Prepared by Sante Laboratories, LLC. Reported results refer exclusively to items tested.

THIS CERTIFICATED MAY NOT BE REPRODUCED PARTIALLY WITHOUT WRITTEN PERMISSION BY SANTE LABORATORIES, LLC.

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TESTING FACILITY INFORMATION	SAMPLE INFORMATION
Sante Laboratories, LLC. Hemp Testing Laboratory 8201 East Riverside Drive, Suite 650 Austin, Texas 78744 USA	Sante Sample ID: 20A443 Receipt Date: 06/01/2020 / 12:30 PM / S ORTEGA Receipt Condition: Good Start Date: 06/02/2020

QUALITY ASSURANCE	
Signature: <u>Brian R Sloat</u> <small>DocuSigned by: 51277B7C6FDA460...</small>	Date: <u>5 June 2020</u>
Name: <u>Brian R. Sloat, Ph.D.</u>	Title: <u>Quality Manager</u>

ADDITIONAL REPORT NOTES

Test method have been validated to meet regulatory standards. Total Potential THC = (THCa x 0.877) + (Δ 9THC) + (Δ 8THC). Total Potential CBD = (CBDa x 0.877) + (CBD). Total Cannabinoids is summation of all tested and detectable cannabinoids. Samples are gravimetrically prepared using qualified balances that are calibrated annually by Mettler-Toledo using NIST-traceable weights. Verification of calibration is performed routinely (e.g. weekly) using NIST-traceable to ensure safe and accurate weighting processes between manufacture performed calibration. Individual balances have been assigned minimum weights taking into consideration the balance and environmental conditions to ensure weighting complies with acceptable tolerances. Cannabinoids for hemp flower and trim is analyzed and reported as received unless requested otherwise. Unless otherwise specified, all QC samples performed within specifications established using validated test methods. Reported results refer exclusive to items tested and have been tested by Sante Laboratories, unless specified otherwise. Test analysis was performed by an ISO/IEC 17025:2017 accredited laboratory. **Note, a density of 0.93 grams/mL was used to calculate mg of CBD per Unit.**

VERSION HISTORY

Version	Effective Date	Summary of Changes
00	06/05/2020	Initial Release

LEGE ID KEY

N/A: Not Applicable	LNCR: Laboratory Non-Conformance Report
ND: Not Detected	RP-UHPLC-DAD: Reverse Phase Ultra High-Performance Liquid Chromatography with Diode Array Detector
NMT: No More Than	MS/MS: Mass Spectroscopy (Quadrupole)
NLT: No Less Than	PPM: Parts Per Million
LOD: Limit of Detection	PPB: Parts Per Billion
LOQ: Limit of Quantitation	DLS: Dynamic Light Scattering
LFIR: Laboratory Failure Investigation Report	MG: Milligrams
RT: Retention Time	G: Grams
RRT: Relative Retention Time	MCG: Micrograms
USP: United States Pharmacopeia	NM: Nanometers
ID: Identification	PDI: Polydispersity Index
CV: Coefficient of Variation	ML: Milliliters
CFU: Colony Forming Units	ISO: International Organization for Standardization
LR: Lot Release	

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Certificate of Analysis

Final Product: Tincture - Hemp Oil Distillate **Lot Number:** PB2002F-122

Flavor: Peppermint **Strength:** 1500mg

Date of Manufacture: March 2020

Test	Methodology	Specification	Test Results (Average)*	Pass/Fail
Visual	Color and Appearance TM-004 (Visual)	Clear or yellow to orange/red clear, flowing, liquid free of particulates	Conforms	Pass
Organoleptic	Aroma/Odor TM-004 (Organoleptic)	Prominent labeled aroma	Conforms	Pass
Cannabidiol Identification	ID by Retention Time TM-003 (DAD Retention Time)	Retention time of the primary peak in sample chromatogram matches that in the analytical reference standard.	Conforms	Pass

	ID by UV	TM-003 (DAD UV Spectrum)	UV Spectrum of the primary peak in sample chromatogram matches that in the analytical reference standard.	Conforms	Pass
CBD Content	Assay (percent of label claim)(%)	TM-003 (HPLC-DAD)	90.0 - 110.0 %	100.5	Pass
	Assay(%w/w)	TM-003 (HPLC-DAD)	Report	5.200	NA
THC Content	THC(%w/w)	TM-003 (HPLC-DAD)	Report	0.088	NA
	THCA(%w/w)	TM-003 (HPLC-DAD)	Report	ND	NA
	Total THC(%w/w)	TM-003 (HPLC-DAD)	≤0.3 %w/w	0.088	Pass
Related Cannabinoid Content	CBN(%w/w)	TM-003 (HPLC-DAD)	Report	0.011	NA
	cis-THC(%w/w)	TM-003 (HPLC-DAD)	Report	0.049	NA
	delta 8-THC(%w/w)	TM-003 (HPLC-DAD)	Report	ND	NA
	THCV(%w/w)	TM-003 (HPLC-DAD)	Report	0.005	NA
	THCVA(%w/w)	TM-003 (HPLC-DAD)	Report	ND	NA
	CBC(%w/w)	TM-003 (HPLC-DAD)	Report	0.239	NA
	CBDA(%w/w)	TM-003 (HPLC-DAD)	Report	ND	NA
	CBDVA(%w/w)	TM-003 (HPLC-DAD)	Report	ND	NA
	CBDV(%w/w)	TM-003 (HPLC-DAD)	Report	0.029	NA
	CBE(%w/w)	TM-003 (HPLC-DAD)	Report	0.051	NA
	CBGA(%w/w)	TM-003 (HPLC-DAD)	Report	ND	NA
	CBG(%w/w)	TM-003 (HPLC-DAD)	Report	0.042	NA
	CBL(%w/w)	TM-003 (HPLC-DAD)	Report	0.020	NA
	CBT(%w/w)	TM-003 (HPLC-DAD)	Report	0.053	NA
	Total (RC)(%w/w)	TM-003 (HPLC-DAD)	Report	0.587	NA
Total Cannabinoids	(CBD plus total RCs)(% w/w)	TM-003 (HPLC-DAD)	Report	5.787	NA

*Number of replicates: 3

¹Full list of individual pesticide residues on file, Eurofins LOQ of 0.1 ppm for individual residues.

²Contract Testing performed by Eurofins BioDiagnostics.

Data Reviewed and Approved by: Beth Grant
3/12/2020 12:34:42 PM