



CERTIFICATE OF ANALYSIS

PREPARED FOR:



RELIV INTERNATIONAL, INC.

136 CHESTERFIELD INDUSTRIAL BLVD.
CHESTERFIELD, MO 63005

THIS REPORT IS FOR A FULL BATCH TESTING
LABORATORY BATCH ID: **RLV-FS500.SLEEP.013**

Including Fill Lot ID:

19LL235A11



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RLV 500 mg FULL SPECTRUM SLEEP EXTRACT

Batch ID: RLV-FS500.SLEEP.19LL235A11
Received: 11-Dec-2019
Matrix: Concentrates/Extracts

Certificate ID: 121919SR004
Test Type: Potency
Method: Tested in accordance of the requirements of ISO/IEC 17025:2005/2017



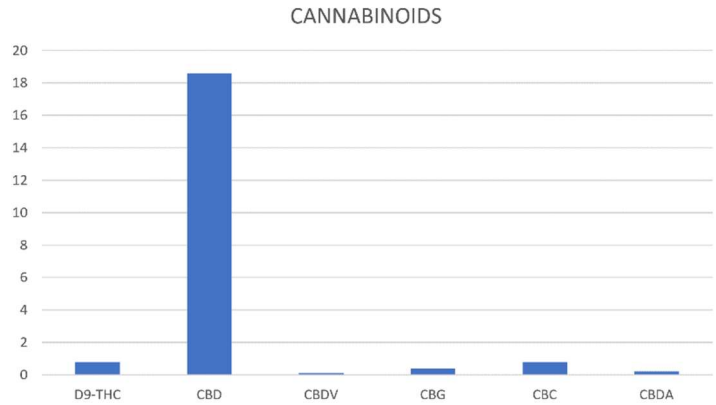
The data presented in this report has been reviewed in an accredited laboratory. I attest that the information herein has been checked for accuracy and against quality control requirements for each test method used. These results pertain only to the test materials listed in this report. This report may not be reproduced except in its complete entirety.

Dan Krist
Dan Krist
 Lab Manager
 SS BioMed, Inc.

T1: CANNABINOID PROFILE & POTENCY

The tested sample was analyzed (by Liquid Chromatography, LC) for plant-based cannabinoids. All collected data was compared to laboratory certified reference standards at known concentrations.

ID	Weight %	Conc. mg/mL
D9-THC	0.028	0.279
THCV	ND	ND
CBD	1.867	18.670
CBDV	0.004	0.036
CBG	0.017	0.170
CBC	0.073	0.734
CBN	ND	ND
THCA	ND	ND
CBDA	0.008	0.082
CBGA	ND	ND
D8-THC	ND	ND
exo-THC	ND	ND
TOTAL:	1.997	19.971 mg/mL
Max THC:	0.028	0.279 mg/mL
Max CBD:	1.867	18.670 mg/mL



Max THC and Max CBD are calculated values for total cannabinoids assuming complete decarboxylation of the acid to the neutral form. Calculation is based on the weight loss of the acid group during decarboxylation. **THC Minimum Detectable Limit** = 0.001 ng/mL
ND = None detected above the limits of detection (LLD)
trace = <0.015 mg/mL



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T2: TERPENE PROFILE

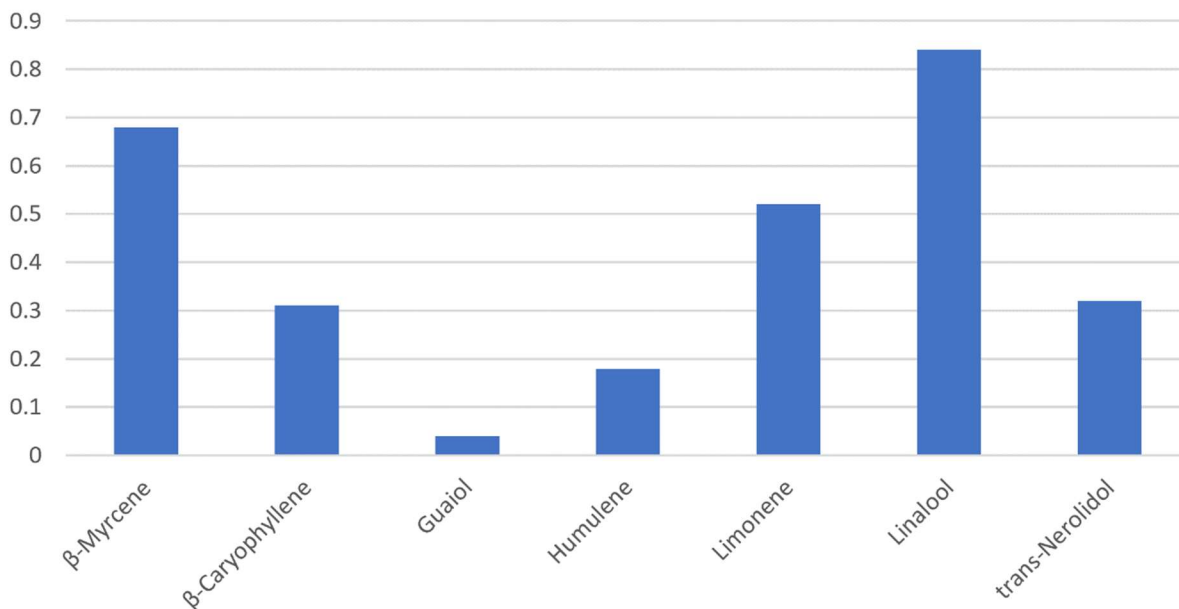
The tested sample was analyzed (by Head Space Gas Chromatography, HS-GC) for plant-based terpenoids. All collected data was compared to laboratory certified reference standards at known concentrations.

ID	Weight %	Conc. mg/mL	ID	Weight %	Conc. mg/mL
β-Myrcene	0.068	0.68	Limonene	0.052	0.52
β-Caryophyllene	0.031	0.31	Linalool	0.084	0.84
Guaiol	0.004	0.04	trans-Nerolidol	0.032	0.32
Humulene	0.018	0.18	TOTAL WT %:	0.289%	

Tested for but not present:

3-Carene, α-Terpinene, Terpinolene, Isopulegol, p-Cymene, Geraniol, cis-Nerolidol, Caryophyllene-trans, α-Bisabolol, α-Pinene, β-Pinene, Eucalyptol, γ-Terpinene

TERPENES



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	Limits	Result	Status
T3: Microbiological Contaminants¹			
Total Aerobic Bacterial Count	10,000 CFU/g	Conforms	PASS
Total Coliform Bacterial Count	100 CFU/g	Conforms	PASS
Total Yeast & Mold	1,000 CFU/g	Conforms	PASS
T4: Pathogenic Bacterial Contaminants¹			
E. Coli (O157)	NA	Negative	PASS
Salmonella	NA	Negative	PASS
T5: Heavy Metal Analysis using Inductively Coupled Plasma Mass Spectrometry (ICP-MS)			
Arsenic	<2 ppm	Conforms	PASS
Cadmium	<2 ppm	Conforms	PASS
Lead	<1 ppm	Conforms	PASS
Mercury	<1 ppm	Conforms	PASS
T6: Pesticide Analysis using Liquid Chromatography with Mass Spectrometry (LC/MS)			
Abamectin	300 ppb	None Detected	PASS
Abamectin B1b	300 ppb	None Detected	PASS
Azoxystrobin	40,000 ppb	None Detected	PASS
Bifenazate	5,000 ppb	None Detected	PASS
Bifenthrin	500 ppb	None Detected	PASS
Cyfluthrin	1,000 ppb	None Detected	PASS
Daminozide	10 ppb	None Detected	PASS
Etoxazole	1,500 ppb	None Detected	PASS
Fenoxycarb	10 ppb	None Detected	PASS
Imazalil	10 ppb	None Detected	PASS
Imidacloprid	3,000 ppb	None Detected	PASS
Myclobutanil	9,000 ppb	None Detected	PASS
Paclobutrazol	10 ppb	None Detected	PASS
Piperonyl butoxide	8,000 ppb	None Detected	PASS
Pyrethrin	1,000 ppb	None Detected	PASS
Spinosad	3,000 ppb	None Detected	PASS
Spiromesifen	12,000 ppb	None Detected	PASS
Spirotetramat	13,000 ppb	None Detected	PASS
Trifloxystrobin	30,000 ppb	None Detected	PASS

	Potency	Results per 30mL	Status
T7: Active Diols using Liquid Chromatography (LC)			
CBD	18.670 mg/serving	560.10 mg	PASS
D-9 THC	0.276 mg/serving	8.28 mg	PASS
CBDV	0.036 mg/serving	1.08 mg	PASS
CBC	0.734 mg/serving	22.02 mg	PASS
CBG	0.170 mg/serving	5.10 mg	PASS
CBDA	0.082 mg/serving	2.46 mg	PASS

¹ Contaminant detection testing in accordance with AOAC – OMA #2014.05, USP 2021, and USP 2022

-END OF REPORT-



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