

# Certificate of Analysis

Product Name: RLV Protect- Lunasin	Product No.: RLV-6-010-2-30
	Country of Origin: USA
Lot No.: 21001K11	Serving Size: 1 mL
	Report Date: 03/12/2021
Product Packaging: Bottle	

Analyte	Test Method	Acceptable Limit	Test Results
<b>Physical</b>			
Appearance	Visual	Cloudy oily liquid	Conforms
Odor	Organoleptic	Peppermint	Conforms
<b>Potency</b>			
CBD- Cannabidiol	MSP-7.5.1.4	NLT 16.7 mg/mL	20.7 mg/mL
Total THC (delta 9 THC and THC-A)	MSP-7.5.1.4	0.1% w/w	None detected
<b>Impurities</b>			
Pesticides	MSP-7.5.1.8	Below action level limits	Conforms
Solvents	MSP-7.5.1.8	Below action level limits	Conforms
<b>Microbiological Pathogens</b>			
Ochratoxin A	MSP-7.5.1.10	0 ppb	None detected
Aflatoxins	MSP-7.5.1.10	0 ppb	None detected
Escherichia coli	MSP-7.5.1.10	Absent/10 mL	None detected
Salmonella	MSP-7.5.1.10	Absent /10 mL	None detected
Yeasts & Molds	MSP-7.5.1.10	NMT 10 <sup>2</sup> cfu/mL	Conforms
<b>Heavy Metals</b>			
Arsenic	MSP-7.5.1.4	NMT 1.5 ppm	Conforms
Cadmium	MSP-7.5.1.4	NMT 0.3 ppm	Conforms
Lead	MSP-7.5.1.4	NMT 1.0 ppm	Conforms
Mercury	MSP-7.5.1.4	NMT 0.5 ppm	Conforms

Quality Control: 

Date: 03/12/2021

Quality Assurance: 

Date: 03/12/2021

certificate ID  
**1CH19**

# RLV Lunasin 500mg

# 7USC1639 Certificate of Analysis

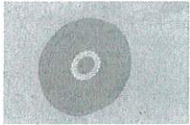
Lot# 21001K11 prod. date 2/19/2021  
rec'd 3/9/2021 12:32:35 PM order 10044

LaCore Nutraceuticals



This Product Has Been Tested and Complies with 7USC1639(1)

Stillwater Laboratories



total cannabinoids per mL  
**20.7mg**  
THC± ND  
CBD± ND

Potency per mL	MSP-7.5.1.4	LOD	LOQ	error (95%CI k=2)
<b>total cannabinoids</b>	<b>20.7mg</b>	<b>0.30</b>	<b>0.89</b>	<b>±1.24mg</b>
<b>total THC±</b>	<b>ND</b>	<b>0.30</b>	<b>0.89</b>	<b>±0.89mg</b>
<b>total THC (THC+THCa)</b>	<b>ND</b>	<b>0.30</b>	<b>0.89</b>	<b>±0.89mg</b>
total CBD±	19.4mg	0.30	0.89	±1.22mg
total CBD (CBD+CBDA)	19.4mg	0.30	0.89	±1.22mg
tetrahydrocannabinolic acid (THCa)	ND	0.30	0.91	±0.91mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND	0.28	0.85	±0.85mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.38	1.14	±1.14mg
tetrahydrocannabivarin (THCv)	ND	0.32	0.95	±0.95mg
cannabidiolic acid (CBDA)	ND	0.26	0.79	±0.79mg
cannabidiol (CBD)	19.4mg	0.30	0.90	±1.22mg
cannabidivarin (CBDv)	ND	0.30	0.90	±0.90mg
cannabigerolic acid (CBGA)	ND	0.27	0.80	±0.80mg
cannabigerol (CBG)	0.6mg	0.08	0.25	±0.26mg

Terpenes	MSP-7.5.1.6
<b>total terpenes</b>	<b>0.158%</b>
caryophyllene	linalool 0.025%
humulene	β-myrcene 0.045%
terpinolene	D-limonene ND
ocimene	α-pinene 0.029%
beta pinene	β-pinene 0.016%
alpha pinene	ocimene <LOQ
limonene	terpinolene ND
myrcene	α-humulene ND
linalool	β-caryophyllene ND
	α-bisabolol <LOQ
	camphene ND
	Δ3-carene ND
	caryophyllene oxide ND
	para-cymene ND
	eucalyptol 0.035%
	geraniol ND
	guaiaol ND

Microbial	MSP-7.5.1.10	limit	LOD	LOQ	error	result
E.coli	ND	0CFU	0.1	0.4	±0.4CFU	PASS
Salmonella sp.	ND	0CFU	0.1	0.4	±0.4CFU	PASS
molds	ND	10000CFU	5.8	17.5	±17.5CFU	PASS
Ochratoxin A	ND	20 ppb	11.2	33.5	±33.5 ppb	PASS
Aflatoxin B1B2G1G2	ND	20 ppb	11.4	34.3	±34.3 ppb	PASS

Solvents	MSP-7.5.1.7	limit	LOD	LOQ	error	result
Acetone	17 ppm	5000 ppm	0.7	2.0	±2.4 ppm	PASS
Acetonitrile	ND	410 ppm	0.6	1.8	±1.8 ppm	PASS
Benzene	ND	0 ppm	0.0	0.1	±0.1 ppm	PASS
Butane	ND	5000 ppm	1.4	4.1	±4.1 ppm	PASS
Chloroform	ND	0 ppm	0.1	0.2	±0.2 ppm	PASS
Cyclohexane	ND	0 ppm	0.5	1.6	±1.6 ppm	PASS
Ethanol	20 ppm	10000 ppm	0.7	2.1	±2.6 ppm	PASS
Heptane	ND	5000 ppm	0.4	1.2	±1.2 ppm	PASS
Hexane	ND	290 ppm	0.5	1.5	±1.5 ppm	PASS
Isopropyl alcohol	ND	5000 ppm	0.6	1.9	±1.9 ppm	PASS
Methanol	ND	3000 ppm	0.5	1.6	±1.6 ppm	PASS
Pentane	5 ppm	5000 ppm	0.2	0.6	±0.7 ppm	PASS
Propane	ND	5000 ppm	0.5	1.6	±1.6 ppm	PASS
Toluene	ND	890 ppm	0.3	0.9	±0.9 ppm	PASS
Xylenes	ND	2170 ppm	0.3	1.0	±1.0 ppm	PASS

Metals	MSP-7.5.1.11	limit	LOD	LOQ	error	result
Arsenic	ND	1500 ppb	7.6	22.7	±22.7 ppb	PASS
Cadmium	ND	500 ppb	8.1	24.4	±24.4 ppb	PASS
Lead	ND	500 ppb	12.7	38.1	±38.1 ppb	PASS
Mercury	ND	300 ppb	6.4	19.2	±19.2 ppb	PASS

Pesticides	MSP-7.5.1.8	limit	LOD	LOQ	error	result
Pyrethrin	ND	1.00 ppm	0.069	0.206	±0.206 ppm	PASS
Pyridaben	ND	3.00 ppm	0.024	0.071	±0.071 ppm	PASS
Spinetoram	ND	3.00 ppm	0.091	0.272	±0.272 ppm	PASS
Spinosad	ND	3.00 ppm	0.176	0.527	±0.527 ppm	PASS
Spiromesifen	ND	12.00 ppm	0.081	0.244	±0.244 ppm	PASS
Spirotetramat	ND	13.00 ppm	0.063	0.188	±0.188 ppm	PASS
Spiroxamine	ND	0.00 ppm	0.022	0.067	±0.067 ppm	PASS
Tebuconazole	ND	2.00 ppm	0.135	0.405	±0.405 ppm	PASS
Thiacloprid	ND	0.10 ppm	0.028	0.084	±0.084 ppm	PASS
Thiamethoxam	ND	4.50 ppm	0.078	0.234	±0.234 ppm	PASS
Trifloxystrobin	ND	30.00 ppm	0.060	0.180	±0.180 ppm	PASS

Pesticides	MSP-7.5.1.8	limit	LOD	LOQ	error	result
Abamectin	ND	0.30 ppm	0.190	0.571	±0.571 ppm	PASS
Acephate	ND	5.00 ppm	0.199	0.598	±0.598 ppm	PASS
Acequinocyl	ND	4.00 ppm	0.169	0.508	±0.508 ppm	PASS
Acetamiprid	ND	5.00 ppm	0.136	0.407	±0.407 ppm	PASS
Aldicarb	ND	0.00 ppm	0.054	0.161	±0.161 ppm	PASS
Azoxystrobin	<LOQ	40.00 ppm	0.053	0.160	±0.164 ppm	PASS
Bifenazate	ND	5.00 ppm	0.042	0.127	±0.127 ppm	PASS
Bifenthrin	ND	0.50 ppm	0.022	0.067	±0.067 ppm	PASS
Boscalid	ND	10.00 ppm	0.549	1.648	±1.648 ppm	PASS
Carbaryl	ND	0.50 ppm	0.218	0.653	±0.653 ppm	PASS
Carbofuran	ND	0.00 ppm	0.044	0.132	±0.132 ppm	PASS
Chloanthraniliprole	ND	40.00 ppm	0.522	1.566	±1.566 ppm	PASS
Chlorfenapyr	ND	0.00 ppm	0.139	0.417	±0.417 ppm	PASS
Chlorpyrifos	ND	0.00 ppm	1.089	3.268	±3.268 ppm	PASS
Clofentazine	ND	0.50 ppm	0.200	0.599	±0.599 ppm	PASS
Coumaphos	ND	0.00 ppm	0.139	0.417	±0.417 ppm	PASS
Cyfluthrin	ND	1.00 ppm	0.197	0.592	±0.592 ppm	PASS
Cypermethrin	ND	1.00 ppm	0.139	0.417	±0.417 ppm	PASS
Daminozide	ND	0.00 ppm	0.743	2.230	±2.230 ppm	PASS
Dichlorvos	ND	0.00 ppm	0.381	1.143	±1.143 ppm	PASS
Diazinon	ND	0.20 ppm	0.031	0.092	±0.092 ppm	PASS
Dimethoate	ND	0.00 ppm	0.056	0.167	±0.167 ppm	PASS
Etoxazole	ND	1.50 ppm	0.100	0.301	±0.301 ppm	PASS
Fenoxycarb	ND	0.00 ppm	0.095	0.285	±0.285 ppm	PASS
Fenpyroximate	ND	2.00 ppm	0.030	0.091	±0.091 ppm	PASS
Fipronil	ND	0.00 ppm	0.200	0.600	±0.600 ppm	PASS
Fonicamid	ND	2.00 ppm	2.637	7.912	±7.912 ppm	PASS
Fludioxonil	ND	30.00 ppm	0.175	0.525	±0.525 ppm	PASS
Hexythiazox	ND	2.00 ppm	0.025	0.076	±0.076 ppm	PASS
Imazalil	ND	0.00 ppm	0.174	0.522	±0.522 ppm	PASS
Imidacloprid	ND	3.00 ppm	0.031	0.094	±0.094 ppm	PASS
Malathion	ND	5.00 ppm	0.137	0.410	±0.410 ppm	PASS
Metalaxyl	ND	15.00 ppm	0.202	0.607	±0.607 ppm	PASS
Methiocarb	ND	0.00 ppm	0.097	0.292	±0.292 ppm	PASS
Methomyl	ND	0.10 ppm	0.016	0.048	±0.048 ppm	PASS
Methyl parathion	ND	0.00 ppm	0.028	0.083	±0.083 ppm	PASS
Mevinphos	ND	0.00 ppm	0.139	0.417	±0.417 ppm	PASS
Myclobutanil	ND	9.00 ppm	0.023	0.068	±0.068 ppm	PASS
Naled	ND	0.50 ppm	0.139	0.417	±0.417 ppm	PASS
Oxamyl	ND	0.20 ppm	0.060	0.179	±0.179 ppm	PASS
Paclobutrazol	ND	0.00 ppm	0.074	0.222	±0.222 ppm	PASS
Permethrin	ND	20.00 ppm	0.266	0.799	±0.799 ppm	PASS
Phosmet	ND	0.20 ppm	0.079	0.236	±0.236 ppm	PASS
Piperonylbutoxide	ND	8.00 ppm	0.273	0.819	±0.819 ppm	PASS
Prallethrin	ND	0.40 ppm	0.099	0.298	±0.298 ppm	PASS
Propiconazole	ND	20.00 ppm	0.100	0.299	±0.299 ppm	PASS
Propoxur	ND	0.00 ppm	0.151	0.454	±0.454 ppm	PASS

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Certified by:

Kyle Larson, MSC  
Deputy Director

Jacob Harris  
QA Manager



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MT License L0001, L00007  
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406-881-2019

INSTRUMENTS: Potency by HPLC (LC2030C-UV), solvents and terpenes by GCMS (QP2020/HS20), pesticides and mycotoxins by LCMSMS (LC8060), microbial by qPCR (AriaMx) and plating (Hardy Diagnostics), metals by ICPMS (ICPMS-2030)

All testing was completed onsite at 6073 US93N, Olney MT. Potency (cannabinoid concentration) is calculated as: [cannabinoid]<sub>HPLC</sub> x volume<sub>dilution</sub>/m<sub>dry</sub>. ... Decarboxylated cannabinoid concentration is calculated XXX<sub>total</sub> = 0.877 x XXX<sub>a</sub> + XXX. Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection (3.3s), LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the formula s<sub>e</sub><sup>2</sup> = Σ (∂f/∂i)<sup>2</sup>s<sub>i</sub><sup>2</sup> where i is the contributor to error. The 95% confidence range is calculated from: (concentration) ± t<sub>LC90</sub> × s<sub>e</sub>. Sampling error is not considered in error calculations. ND = not detected (< LOD), NT = not tested, NL = no limit, NA = not applicable. ‡ = decarbed

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