

Certificate of Analysis

| | |
|--|------------------------------------|
| Product Name: RLV Protect- Lunasin 500 mg | Product No.: RLV-6-010-2-30 |
| Lot No.: 21C0000101 | Country of Origin: USA |
| Product Packaging: Bottle | Serving Size: 1 mL |
| | Report Date: 05/07/2021 |

| Analyte | Test Method | Acceptable Limit | Test Results |
|-----------------------------------|--------------|----------------------------|---------------|
| Physical | | | |
| Appearance | Visual | Cloudy oily liquid | Conforms |
| Odor | Organoleptic | Peppermint | Conforms |
| Potency | | | |
| CBD- Cannabidiol | MSP-7.5.1.4 | NLT 16.7 mg/mL | 18.5 mg/mL |
| Total THC (delta 9 THC and THC-A) | MSP-7.5.1.4 | 0.1% w/w | None detected |
| Impurities | | | |
| Pesticides | MSP-7.5.1.8 | Below action level limits | Conforms |
| Solvents | MSP-7.5.1.8 | Below action level limits | Conforms |
| Microbiological Pathogens | | | |
| 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 ² cfu/mL | Conforms |
| Heavy Metals | | | |
| 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: 05/07/2021

Quality Assurance: 

Date: 5/7/21

certificate ID

1EC31

RLV Protect Hemp Lunasin 500mg

21C0000101

rec'd 5/4/2021 4:06:29 PM

order 10652

total cannabinoids

18.5mg

per

mL

THC‡ ND

CBD‡ 17.0mg

7USC1639 Certificate of Analysis

LaCore Nutraceuticals

This Product Has Been Tested and Complies with 7USC1639o(1)

Stillwater Laboratories



| Potency per mL | MSP-7.5.1.4 | LOD | LOQ | error (95%CI k=2) | result |
|------------------------------------|---------------|-------------|-------------|-------------------|-----------|
| total cannabinoids | 18.5mg | 0.08 | 0.23 | ±0.55mg | ND |
| total THC‡ | ND | 0.08 | 0.23 | ±0.23mg | ND |
| total THC (THC+THCa) | ND | 0.08 | 0.23 | ±0.23mg | ND |
| total CBD‡ | 17.0mg | 0.08 | 0.23 | ±0.52mg | ND |
| total CBD (CBD+CBDA) | 17.0mg | 0.08 | 0.23 | ±0.52mg | ND |
| tetrahydrocannabinolic acid (THCa) | ND | 0.08 | 0.24 | ±0.24mg | ND |
| Δ9-tetrahydrocannabinol (Δ9 THC) | ND | 0.07 | 0.22 | ±0.22mg | ND |
| Δ8-tetrahydrocannabinol (Δ8 THC) | ND | 0.10 | 0.30 | ±0.30mg | ND |
| tetrahydrocannabivarin (THCv) | ND | 0.08 | 0.25 | ±0.25mg | ND |
| cannabidiolic acid (CBDA) | ND | 0.07 | 0.20 | ±0.20mg | ND |
| cannabidiol (CBD) | 17.0mg | 0.08 | 0.23 | ±0.52mg | ND |
| cannabidivarin (CBDv) | ND | 0.08 | 0.23 | ±0.23mg | ND |
| cannabigerolic acid (CBGa) | ND | 0.07 | 0.21 | ±0.21mg | ND |
| cannabigerol (CBG) | 0.5mg | 0.02 | 0.07 | ±0.07mg | ND |
| cannabinol (CBN) | 0.5mg | 0.04 | 0.13 | ±0.14mg | ND |
| cannabichromene (CBC) | 0.5mg | 0.08 | 0.23 | ±0.24mg | ND |

Terpenes

| Terpene | total terpenes | 0.064% |
|---------------|---------------------|--------|
| caryophyllene | linalool | 0.009% |
| humulene | β-myrcene | 0.014% |
| terpinolene | D-limonene | 0.008% |
| ocimene | α-pinene | 0.010% |
| beta pinene | β-pinene | 0.006% |
| alpha pinene | ocimene | 0.018% |
| limonene | terpinolene | ND |
| myrcene | α-humulene | ND |
| linalool | β-caryophyllene | 0.006% |
| | α-bisabolol | ND |
| | camphene | ND |
| | Δ3-carene | ND |
| | caryophyllene oxide | ND |
| | para-cymene | ND |
| | eucalyptol | 0.010% |
| | geraniol | ND |
| | guaiol | ND |

| Microbial | MSP-7.5.1.10 | limit | LOD | LOQ | error | result |
|--------------------|--------------|----------|-----|-----|-------|--------|
| E.coli | ND | 0CFU | 0.0 | 1.0 | ±1.0 | PASS |
| Salmonella sp. | ND | 0CFU | 0.0 | 1.0 | ±1.0 | PASS |
| molds | ND | 10000CFU | 1.7 | 5.1 | ±5.1 | PASS |
| Ochratoxin A | ND | 20 ppb | 0.3 | 0.9 | ±0.9 | PASS |
| Aflatoxin B1B2G1G2 | ND | 20 ppb | 0.3 | 0.9 | ±0.9 | PASS |

| Pesticides | MSP-7.5.1.8 | limit | LOD | LOQ | error | result |
|-------------------|-------------|-----------|--------|-------|--------|--------|
| Abamectin | ND | 0.30 ppm | 0.005 | 0.015 | ±0.015 | PASS |
| Acephate | ND | 5.00 ppm | 0.005 | 0.015 | ±0.015 | PASS |
| Acequinocyl | ND | 4.00 ppm | 0.004 | 0.013 | ±0.013 | PASS |
| Acetamiprid | ND | 5.00 ppm | 0.003 | 0.010 | ±0.010 | PASS |
| Aldicarb | ND | 0.00 ppm | 0.001 | 0.004 | ±0.004 | PASS |
| Azoxystrobin | ND | 40.00 ppm | 0.001 | 0.004 | ±0.004 | PASS |
| Bifenazate | ND | 5.00 ppm | 0.001 | 0.003 | ±0.003 | PASS |
| Bifenthrin | ND | 0.50 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Boscalid | ND | 10.00 ppm | 0.014 | 0.042 | ±0.042 | PASS |
| Carbofuran | ND | 0.00 ppm | 0.001 | 0.003 | ±0.003 | PASS |
| Carbaryl | ND | 0.50 ppm | 0.006 | 0.017 | ±0.017 | PASS |
| Chloraniliprole | ND | 40.00 ppm | 0.013 | 0.040 | ±0.040 | PASS |
| Chlorfenapyr | ND | 0.00 ppm | 0.004 | 0.011 | ±0.011 | PASS |
| Chlorpyrifos | ND | 0.00 ppm | 0.028 | 0.084 | ±0.084 | PASS |
| Clofenthiol | ND | 0.50 ppm | 0.005 | 0.015 | ±0.015 | PASS |
| Coumaphos | ND | 0.00 ppm | 0.004 | 0.011 | ±0.011 | PASS |
| Cyfluthrin | ND | 1.00 ppm | 0.005 | 0.015 | ±0.015 | PASS |
| Cypermethrin | ND | 1.00 ppm | 0.004 | 0.011 | ±0.011 | PASS |
| Daminozide | ND | 0.00 ppm | 0.019 | 0.057 | ±0.057 | PASS |
| Dichlorvos | ND | 0.00 ppm | 0.010 | 0.029 | ±0.029 | PASS |
| Diazinon | ND | 0.20 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Dimethoate | ND | 0.00 ppm | 0.001 | 0.004 | ±0.004 | PASS |
| Etoxazole | ND | 1.50 ppm | 0.003 | 0.008 | ±0.008 | PASS |
| Fenoxycarb | ND | 0.00 ppm | 0.002 | 0.007 | ±0.007 | PASS |
| Fenpyroximate | ND | 2.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Fipronil | ND | 0.00 ppm | 0.005 | 0.015 | ±0.015 | PASS |
| Fonicamid | ND | 2.00 ppm | 0.068 | 0.204 | ±0.204 | PASS |
| Fludioxonil | ND | 30.00 ppm | 0.005 | 0.014 | ±0.014 | PASS |
| Hexythiazox | ND | 2.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Imazalil | ND | 0.00 ppm | 0.004 | 0.013 | ±0.013 | PASS |
| Imidacloprid | ND | 3.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Malathion | ND | 5.00 ppm | 0.004 | 0.011 | ±0.011 | PASS |
| Metalaxyl | ND | 15.00 ppm | 0.005 | 0.016 | ±0.016 | PASS |
| Methiocarb | ND | 0.00 ppm | 0.003 | 0.008 | ±0.008 | PASS |
| Methomyl | ND | 0.10 ppm | <0.001 | 0.001 | ±0.001 | PASS |
| Methyl parathion | ND | 0.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Mevinphos | ND | 0.00 ppm | 0.004 | 0.011 | ±0.011 | PASS |
| Myclobutanil | ND | 9.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Naled | ND | 0.50 ppm | 0.004 | 0.011 | ±0.011 | PASS |
| Oxamyl | ND | 0.20 ppm | 0.002 | 0.005 | ±0.005 | PASS |
| Paclobutrazol | ND | 0.00 ppm | 0.002 | 0.006 | ±0.006 | PASS |
| Permethrin | ND | 20.00 ppm | 0.007 | 0.021 | ±0.021 | PASS |
| Phosmet | ND | 0.20 ppm | 0.002 | 0.006 | ±0.006 | PASS |
| Piperonylbutoxide | ND | 8.00 ppm | 0.007 | 0.021 | ±0.021 | PASS |
| Prallethrin | ND | 0.40 ppm | 0.003 | 0.008 | ±0.008 | PASS |
| Propiconazole | ND | 20.00 ppm | 0.003 | 0.008 | ±0.008 | PASS |
| Propoxur | ND | 0.00 ppm | 0.004 | 0.012 | ±0.012 | PASS |

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

| Solvents | MSP-7.5.1.7 | limit | LOD | LOQ | error | result |
|-------------------|-------------|-----------|-----|-----|-------|--------|
| Acetone | 9 ppm | 5000 ppm | 0.7 | 2.0 | ±2.2 | PASS |
| Acetonitrile | ND | 410 ppm | 0.6 | 1.8 | ±1.8 | PASS |
| Benzene | ND | 0 ppm | 0.0 | 1.0 | ±1.0 | PASS |
| Butane | ND | 5000 ppm | 1.4 | 4.1 | ±4.1 | PASS |
| Chloroform | ND | 0 ppm | 0.1 | 1.0 | ±1.0 | PASS |
| Cyclohexane | ND | 0 ppm | 0.5 | 1.6 | ±1.6 | PASS |
| Ethanol | 15 ppm | 10000 ppm | 0.7 | 2.1 | ±2.5 | PASS |
| Heptane | ND | 5000 ppm | 0.4 | 1.2 | ±1.2 | PASS |
| Hexane | ND | 290 ppm | 0.5 | 1.5 | ±1.5 | PASS |
| Isopropyl alcohol | ND | 5000 ppm | 0.6 | 1.9 | ±1.9 | PASS |
| Methanol | ND | 3000 ppm | 0.5 | 1.6 | ±1.6 | PASS |
| Pentane | ND | 5000 ppm | 0.2 | 0.6 | ±0.6 | PASS |
| Propane | ND | 5000 ppm | 0.5 | 1.6 | ±1.6 | PASS |
| Toluene | ND | 890 ppm | 0.3 | 0.9 | ±0.9 | PASS |
| Xylenes | ND | 2170 ppm | 0.3 | 1.0 | ±1.0 | PASS |

| Metals | MSP-7.5.1.11 | limit | LOD | LOQ | error | result |
|---------|--------------|----------|------|------|-------|--------|
| Arsenic | ND | 1500 ppb | 7.5 | 22.5 | ±22.5 | PASS |
| Cadmium | ND | 500 ppb | 8.1 | 24.2 | ±24.2 | PASS |
| Lead | ND | 500 ppb | 12.6 | 37.7 | ±37.7 | PASS |
| Mercury | ND | 300 ppb | 6.3 | 18.9 | ±18.9 | PASS |

| Pesticides | MSP-7.5.1.8 | limit | LOD | LOQ | error | result |
|-----------------|-------------|-----------|-------|-------|--------|--------|
| Pyrethrin | ND | 1.00 ppm | 0.002 | 0.005 | ±0.005 | PASS |
| Pyridaben | ND | 3.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Spinetoram | ND | 3.00 ppm | 0.002 | 0.007 | ±0.007 | PASS |
| Spinosad | ND | 3.00 ppm | 0.005 | 0.014 | ±0.014 | PASS |
| Spiromesifen | ND | 12.00 ppm | 0.002 | 0.006 | ±0.006 | PASS |
| Spirotetramat | ND | 13.00 ppm | 0.002 | 0.005 | ±0.005 | PASS |
| Spiroxamine | ND | 0.00 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Tebuconazole | ND | 2.00 ppm | 0.003 | 0.010 | ±0.010 | PASS |
| Thiacloprid | ND | 0.10 ppm | 0.001 | 0.002 | ±0.002 | PASS |
| Thiamethoxam | ND | 4.50 ppm | 0.002 | 0.006 | ±0.006 | PASS |
| Trifloxystrobin | ND | 30.00 ppm | 0.002 | 0.005 | ±0.005 | PASS |

Certified by:

Kyle Larson, MSC
Deputy Director



https://customer.a2la.org/index.cfm?event=directory_detail&labPID=42363582-5128-4C6F-871A-419DCF43B0D7

Stillwater Laboratories Inc.
MT License L0001, L00007
6073 US93N Suite 5, Olney MT 59927
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]_{HPLC} x volume_{injection}/M_{dry} ... Decarboxyted cannabinoid concentration is calculated XXX_{total} = 0.877 x XXX_A + 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_e² = Σ(∂f/∂i)²s_i² where i is the contributor to error. The 95% confidence range is calculated from: (concentration) ± t_{CL,SD} x s_p. 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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