

Order #: 39566 Order Name: Koi Naturals Lemon Lime 500 mg
Batch#: 9305NLL500 Received: 11/06/2019 Completed: 11/11/2019



Koi CBD LLC 14631 Best Ave Norwalk California, 90650 (877) 774-4779 morgan@koicbd.com



#### Sample



N/D D9-THC 1.838% Total CBD

521.1 mg Cannabinoids per unit

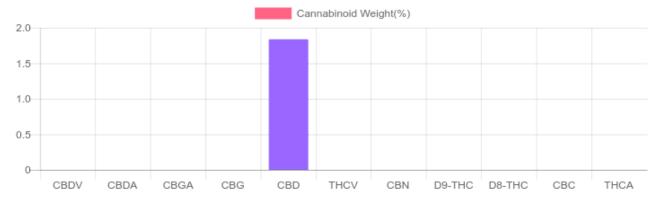
521.1 mg CBD per unit

1 unit = 30 ml per unit x density (0.945) x Cannabinoid concentration

#### Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA

| GSL SOP 400        | PREPARED: 11 | /08/2019 16:57:47 | UPLOADED: 11 | /09/2019 09:03:10 |
|--------------------|--------------|-------------------|--------------|-------------------|
| Cannabinoids       | LOQ          | weight(%)         | mg/g         | mg/unit           |
| D9-THC             | 10 PPM       | N/D               | N/D          | N/D               |
| THCA               | 10 PPM       | N/D               | N/D          | N/D               |
| CBD                | 10 PPM       | 1.838%            | 18.380       | 521.1             |
| CBDA               | 20 PPM       | N/D               | N/D          | N/D               |
| CBDV               | 20 PPM       | N/D               | N/D          | N/D               |
| CBC                | 10 PPM       | N/D               | N/D          | N/D               |
| CBN                | 10 PPM       | N/D               | N/D          | N/D               |
| CBG                | 10 PPM       | N/D               | N/D          | N/D               |
| CBGA               | 20 PPM       | N/D               | N/D          | N/D               |
| D8-THC             | 10 PPM       | N/D               | N/D          | N/D               |
| THCV               | 10 PPM       | N/D               | N/D          | N/D               |
| TOTAL D9-THC       |              | N/D               | N/D          | N/D               |
| TOTAL CBD*         |              | 1.838%            | 18.380       | 521.1             |
| TOTAL CANNABINOIDS |              | 1.838%            | 18.380       | 521.1             |



Reporting Limit 10 ppm \*Total CBD = CBD + CBDA x 0.877 N/D - Not Detected, B/LOQ - Below Limit of Quantification

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

**Green Scientific Labs** in fo@green scientific labs.com1-833 TEST CBD









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GSL SOP 404

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**TERPENES: TOTAL (0.574%)** 

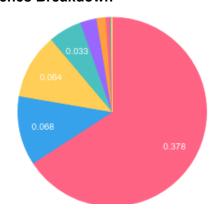
Headspace GCMS - Shimadzu GCMS QP2020 with HS20

| Terpene            | Results (%) | LOQ (%) | LOD (%) |
|--------------------|-------------|---------|---------|
| ALPHA-PINENE       | 0.016%      | 0.0067% | 0.0063% |
| BETA-PINENE        | 0.064%      | 0.0067% | 0.0063% |
| CAMPHENE           | B/LOQ       | 0.0067% | 0.0063% |
| EUCALYPTOL         | B/LOQ       | 0.0067% | 0.0063% |
| GAMMATERPINENE     | 0.068%      | 0.0067% | 0.0016% |
| LIMONENE           | 0.378%      | 0.0067% | 0.0063% |
| P-CYMENE           | 0.009%      | 0.0067% | 0.0063% |
| TERPINOLENE        | 0.033%      | 0.0067% | 0.0063% |
| TRANS-BETA-OCIMENE | B/LOQ       | 0.0067% | 0.0031% |

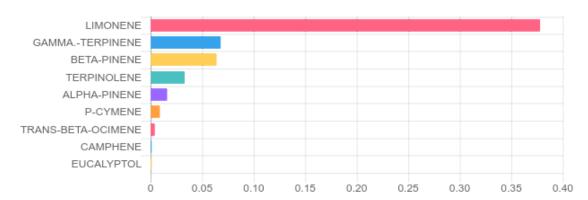
### **Terpenes Breakdown**

Prepared: 11/07/2019 12:49:32

Uploaded: 11/08/2019 08:29:54



### **Top Terpenes Results:**



#### Tested for but not present:

BETA-MYRCENE, 3-CARENE, ALPHA-TERPINENE, CIS-BETA-OCIMENE, LINALOOL, ISOPULEGOL, GERANIOL, CARYOPHYLLENE, HUMULENE, CIS-NEROLIDOL, TRANS-NEROLIDOL, GUAIOL, CARYOPHYLLENE OXIDE, ALPHA-BISABOLOL

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### **PESTICIDE ANALYSIS:**

GSL SOP 401 PREPARED: 11/07/2019 13:01:03 UPLOADED: 11/08/2019 13:52:57

GCMS-MS - Shimadzu GCMS-TQ8040

| Pesticide    | Action Level (ppm) | Results (ppm) | LOQ<br>(ppm) | LOD<br>(ppm) |
|--------------|--------------------|---------------|--------------|--------------|
| CAPTAN       | 0.700              | N/D           | 0.003        | 0.001        |
| CHLORDANE    | 0.100              | N/D           | 0.003        | 0.001        |
| CHLORFENAPYR | 0.100              | N/D           | 0.003        | 0.001        |
| COUMAPHOS    | 0.100              | N/D           | 0.003        | 0.001        |
| CYFLUTHRIN   | 2.000              | N/D           | 0.003        | 0.001        |

| Pesticide              | Action Level | Results | LOQ   | LOD   |
|------------------------|--------------|---------|-------|-------|
| resticide              | (ppm)        | (ppm)   | (ppm) | (ppm) |
| CYPERMETHRIN           | 1.000        | N/D     | 0.003 | 0.001 |
| FIPRONIL               | 0.100        | N/D     | 0.003 | 0.001 |
| FLUDIOXONIL            | 0.100        | N/D     | 0.003 | 0.001 |
| PARATHION-METHYL       | 0.100        | N/D     | 0.003 | 0.001 |
| PENTACHLORONITROBENZEN | E 0.100      | N/D     | 0.003 | 0.001 |

LCMS-MS - Shimadzu LCMS-8060

| Pesticide           | Action Level (ppm) | Results (ppm) | LOQ<br>(ppm) | LOD<br>(ppm) | Pesticide       | Action Level (ppm) | Results (ppm)   | LOQ<br>(ppm) | LOD<br>(ppm) |
|---------------------|--------------------|---------------|--------------|--------------|-----------------|--------------------|-----------------|--------------|--------------|
| ABAMECTIN B1A       | 0.100              | N/D           | 0.005        | 0.001        | IMIDACLOPRID    | 5.000              | N/D             | 0.005        | 0.001        |
| ACEPHATE            | 0.100              | N/D           | 0.001        | 0.001        | KRESOXIM-METHYL | 0.100              | N/D             | 0.010        | 0.005        |
| ACEQUINOCYL         | 0.100              | N/D           | 0.001        | 0.001        | MALATHION       | 0.500              | N/D             | 0.005        | 0.001        |
| ACETAMIPRID         | 0.100              | N/D           | 0.005        | 0.001        | METALAXYL       | 2.000              | N/D             | 0.001        | 0.001        |
| ALDICARB            | 0.100              | N/D           | 0.005        | 0.001        | METHIOCARB      | 0.100              | N/D             | 0.005        | 0.001        |
| AZOXYSTROBIN        | 0.100              | N/D           | 0.001        | 0.001        | METHOMYL        | 1.000              | N/D             | 0.001        | 0.001        |
| BIFENAZATE          | 0.100              | N/D           | 0.005        | 0.001        | MEVINPHOS       | 0.100              | N/D             | 0.001        | 0.001        |
| BIFENTHRIN          | 3.000              | N/D           | 0.005        | 0.001        | MYCLOBUTANIL    | 0.100              | N/D             | 0.005        | 0.001        |
| BOSCALID            | 0.100              | N/D           | 0.005        | 0.001        | NALED           | 0.100              | N/D             | 0.005        | 0.001        |
| CARBARYL            | 0.500              | N/D           | 0.003        | 0.001        | OXAMYL          | 0.500              | N/D             | 0.001        | 0.001        |
| CARBOFURAN          | 0.100              | N/D           | 0.001        | 0.001        | PACLOBUTRAZOL   | 0.100              | N/D             | 0.005        | 0.001        |
| CHLORANTRANILIPROLE | 10.000             | N/D           | 0.005        | 0.005        | PERMETHRINS     | 0.500              | N/D             | 0.005        | 0.001        |
| CHLORPYRIFOS        | 0.100              | N/D           | 0.001        | 0.001        | PHOSMET         | 0.100              | N/D             | 0.005        | 0.001        |
| CLOFENTEZINE        | 0.100              | N/D           | 0.001        | 0.001        | PIPERONYL       | 3.000              | N/D             | 0.001        | 0.001        |
| DAMINOZIDE          | 0.100              | N/D           | 0.005        | 0.001        | BUTOXIDE        | 3.000              | IN/D            | 0.001        | 0.001        |
| DIAZANON            | 0.100              | N/D           | 0.001        | 0.001        | PRALLETHRIN     | 0.100              | N/D             | 0.005        | 0.005        |
| DICHLORVOS          | 0.100              | N/D           | 0.005        | 0.001        | PROPICONAZOLE   | 0.100              | N/D             | 0.010        | 0.005        |
| DIMETHOATE          | 0.100              | N/D           | 0.001        | 0.001        | PROPOXUR        | 0.100              | N/D             | 0.001        | 0.001        |
| DIMETHOMORPH        | 2.000              | N/D           | 0.005        | 0.001        | PYRETHRINS      | 0.500              | 0.500 N/D 0.005 | 0.005        |              |
| ETHOPROPHOS         | 0.100              | N/D           | 0.001        | 0.001        | (PYRETHRIN I)   | 0.500              | IN/D            | 0.005        | 0.005        |
| ETOFENPROX          | 0.100              | N/D           | 0.001        | 0.001        | PYRIDABEN       | 0.100              | N/D             | 0.005        | 0.001        |
| ETOXAZOLE           | 0.100              | N/D           | 0.010        | 0.005        | SPINETORAM      | 0.100              | N/D             | 0.001        | 0.001        |
| FENHEXAMID          | 0.100              | N/D           | 0.005        | 0.001        | SPINOSAD        | 0.100              | N/D             | 0.001        | 0.001        |
| FENOXYCARB          | 0.100              | N/D           | 0.005        | 0.001        | SPIROMESIFEN    | 0.100              | N/D             | 0.005        | 0.001        |
| FENPYROXIMATE       | 0.100              | N/D           | 0.001        | 0.001        | SPIROTETRAMAT   | 0.100              | N/D             | 0.001        | 0.001        |
| FLONICAMID          | 0.100              | N/D           | 0.025        | 0.010        | SPIROXAMINE     | 0.100              | N/D             | 0.001        | 0.001        |
| HEXYTHIAZOX         | 0.100              | N/D           | 0.005        | 0.001        | TEBUCONAZOLE    | 0.100              | N/D             | 0.005        | 0.001        |
| IMAZALIL            | 0.100              | N/D           | 0.005        | 0.001        | THIACLOPRID     | 0.100              | N/D             | 0.001        | 0.001        |
|                     |                    |               |              |              | THIAMETHOXAM    | 5.000              | N/D             | 0.001        | 0.001        |
|                     |                    |               |              |              |                 |                    |                 |              |              |

 ${\sf N/D} = {\sf Not\ Detected},\ {\sf A/LOQ} = {\sf Above\ LOQ\ Level},\ {\sf B/LOQ} = {\sf Below\ LOQ\ Level},\ {\sf B/LOD} = {\sf Below\ LOD\ Level}$ 

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0.100

TRIFLOXYSTROBIN



N/D



0.001



0.001



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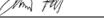
### **RESIDUAL SOLVENTS:**

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405

**Prepared:** 11/07/2019 12:54:19 **Uploaded:** 11/08/2019 08:04:26

| Residual Solvent | Action Level (ppm) | Results (ppm) | LOQ (ppm) | LOD (ppm) |
|------------------|--------------------|---------------|-----------|-----------|
| ACETONE          | 5,000              | N/D           | 140       | 20        |
| ACETONITRILE     | 410                | N/D           | 25        | 1         |
| BENZENE          | 1                  | N/D           | 1         | 0.5       |
| BUTANE           | 5,000              | N/D           | 50        | 10        |
| CHLOROFORM       | 1                  | N/D           | 1         | 0.5       |
| DICHLOROETHANE   | 1                  | N/D           | 1         | 0.5       |
| DICHLOROMETHANE  | 1                  | N/D           | 1         | 0.5       |
| ETHANOL          | 5,000              | N/D           | 140       | 20        |
| ETHYL ACETATE    | 5,000              | N/D           | 140       | 20        |
| ETHYL ETHER      | 5,000              | N/D           | 140       | 20        |
| SOPROPYL ALCOHOL | 5,000              | N/D           | 140       | 20        |
| METHANOL         | 3,000              | N/D           | 100       | 20        |
| N-HEPTANE        | 5,000              | N/D           | 140       | 20        |
| N-HEXANE         | 290                | N/D           | 18        | 10        |
| PENTANE          | 5,000              | N/D           | 140       | 20        |
| PROPANE          | 5,000              | N/D           | 20        | 1         |
| TOLUENE          | 890                | N/D           | 53        | 1         |
| TRICHLOROETHENE  | 1                  | N/D           | 0         | 0         |
| XYLENES          | 2,170              | N/D           | 130       | 20        |



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### **Microbial Analysis:**

Microbial Analysis GSL SOP 406

Uploaded: 11/09/2019 15:39:06

| PCR - Agilent AriaMX <b>Test</b> | Test Method<br>Used | Device Used | LOD               | Allowable Criteria | Actual<br>Result   | Pass/Fail |
|----------------------------------|---------------------|-------------|-------------------|--------------------|--------------------|-----------|
| STEC E.COLI*                     | USP 61/62†          | ARIAMX PCR  | 2 COPIES OF DNA   | PRESENCE / ABSENT  | BELOW LOD          | PASS      |
| SALMONELLA*                      | USP 61/62†          | ARIAMX PCR  | 5 COPIES OF DNA   | PRESENCE / ABSENT  | BELOW LOD          | PASS      |
| ASPERGILLUS                      | USP 61/62†          | ARIAMX PCR  | ASP_LOD***        | PRESENCE / ABSENT  | BELOW LOD          | PASS      |
| YEAST AND MOLD                   | USP 61/62†          | ARIAMX PCR  | 363.05518 CFU/G** | 1,000              | BELOW<br>THRESHOLD | PASS      |
| TOTAL AEROBIC BACTERIA           | USP 61/62†          | ARIAMX PCR  | 0.25316 CFU/G**   | 10,000             | BELOW<br>THRESHOLD | PASS      |
| COLIFORM                         | USP 61/62†          | ARIAMX PCR  | 3.41539 CFU/G**   | 100                | BELOW<br>THRESHOLD | PASS      |
| ENTEROBACTERIACEAE               | USP 61/62†          | ARIAMX PCR  | 0.32951 CFU/G**   | 100                | BELOW<br>THRESHOLD | PASS      |

<sup>†</sup> USP 61 (enumeration of bacteria TAC, TYM, and ENT/Coliform), USP 62 (identifying specific species E.coli Aspergillus etc) \* STEC and Salmonella run as Multiplex

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<sup>\*\*</sup> CFU/g Calculation based on Select Category Type Gummy MIP/Extract Flower matrix

<sup>\*\*\*</sup> Flavus = 2 Copies of DNA / Furnigatis = 2 Copies of DNA Niger = 20 Copies of DNA / Terrus = 10 copies of DNA



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### **Mycotoxin Analysis:**

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

Uploaded: 11/08/2019 13:52:57

| Analyte                      | Action LvI (ppb) | Results (ppb) |
|------------------------------|------------------|---------------|
| AFLATOXIN B1                 | 20               | N/D           |
| AFLATOXIN B2                 | 20               | N/D           |
| AFLATOXIN G1                 | 20               | N/D           |
| AFLATOXIN G2                 | 20               | N/D           |
| OCHRATOXIN A                 | 20               | N/D           |
| AFLATOXIN G1<br>AFLATOXIN G2 | 20<br>20         | N/D<br>N/D    |

LOQ is 4ppb, LOD is 1ppb

### **Heavy Metals Analysis:**

ICP-MS - Shimadzu ICPMS-2030

GSL SOP 403

Uploaded: 11/11/2019 21:59:02

| Metal        | Action Level (ppb) | Result (ppb) |
|--------------|--------------------|--------------|
| ARSENIC (AS) | 200                | B/LOQ        |
| CADMIUM (CD) | 200                | B/LOQ        |
| MERCURY (HG) | 100                | B/LOQ        |
| LEAD (PB)    | 500                | B/LOQ        |

Lower Limit of Quantitation (LOQ) is 75 ppb

### Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 11/07/2019 15:40:25

Water

0.56

### Filth and Foreign Materials Analysis:

Microscope - Amscope Simul-Focal Trinocular Stereo Zoom Microscope - GSL SOP 409

Uploaded: 11/07/2019 15:28:08

Pass: No Foreign Materials Detected

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