## CERTIFICATE OF ANALYSIS

＊FOR QUALITY ASSURANCE PURPOSES．NOT A MICHIGAN COMPLIANCE CERTIFICATE．

## PRODUCED：APR 02， 2020

SAMPLE：CBD RELIEF STICK／1000MG（ARNICA \＆EUCALYPTUS）（TOPICAL）／／CLIENT：LUME／ATTITUDE WELLNESS／／BATCH：PASS


MATRIX：TOPICAL
CATEGORY：OTHER
SAMPLEID：CAM－200330－008
COLLECTED ON：MAR 30， 2020
RECEIVED ON：MAR 30， 2020
BATCH SIZE： 60 MILLILITERS
SAMPLE SIZE： 60 MILLILITERS

## CANNABINOID OVERVIEW

CBD：
1.37 \％

TOTAL CANNABINOIDS：

BATCH RESULT：PASS

| POTENCY | PASS |
| :--- | :--- |
| FOREIGN | PASS |
| METALS | PASS |
| MICROBIAL | PASS |
| PESTICIDES | PASS |
| SOLVENTS | PASS |

## POT－01：CANNABINOID POTENCY ANALYSIS BY HPLC－DAD／／APR 02， 2020

| analyte | Amount | LOD／LOQ（ $\mu \mathrm{g} / \mathrm{g}$ ） | PASS／FAIL | analyte | AMOUNT | LOD／LOQ（ $\mu \mathrm{g} / \mathrm{g}$ ） | PASS／FAIL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CBC | ND | $0.002598 / 0.0086683$ | N／A | $\Delta^{8}$－THC | ND | $0.0029045 / 0.0096985$ | N／A |
| CBD | 1.372 \％ | $0.0054724 / 0.0182362$ | N／A | $\Delta^{9}$－THC | ND | $0.0051307 / 0.0170955$ | N／A |
| CBDA | ND | $0.0071508 / 0.0238342$ | N／A | THCA | ND | $0.0044372 / 0.014794$ | N／A |
| CBDV | ND | $0.0033819 / 0.0112764$ | N／A | THCV | ＜LOQ | $35.126 / 117.085$ | PASS |
| CBG | ND | $0.0028945 / 0.0096533$ | N／A | THCVA | ND |  | N／A |
| CBGA | ND | $0.0016482 / 0.0054925$ | N／A | TOTALTHC＊＊ | ND |  | N／A |
| CBN | ND | $0.0042613 / 0.014206$ | N／A | TOTALCBD＊＊ | 1.372 \％ |  | N／A |
| ＊＊TOTAL THC $=($ THCA $\times 0.877)+$ THC |  |  |  |  |  |  |  |
| ＊＊TOTAL CBD $=(\mathrm{CBDA} \times 0.877)+\mathrm{CBD}$ |  |  |  |  |  |  |  |
| 回酎院回 RESULTS CERTIFIED BY：XIN YAN |  |  |  |  |  | RESULTS CERTIFIED BY：DOUGLAS SMITH |  |
| 20，${ }^{2}$ | LABORATORY DIRECTOR，CAMBIUM ANALYTICA |  |  |  |  |  |  |
| ＋ |  | APR 02， 2020 |  |  |  | APR 02， 2020 |  |
|  |  |  | Lin yan |  |  |  | $\mathrm{NH}$ |

PLC-02: CHEMICAL RESIDUE ANALYSIS BY LC-MS/MS // MAR 31, 2020

| AnAlyte | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL | ANALYte | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ABAMECTIN | $0.5 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.068 / 0.228$ | PASS | HEXYTHIAZOX | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.028 / 0.093$ | PASS |
| ACEPHATE | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.016 / 0.054$ | PASS | IMAZALIL | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.015 / 0.051$ | PASS |
| ACEQUINOCYL | $2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.028 / 0.093$ | PASS | IMIDACLOPRID | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.034 / 0.112$ | PASS |
| ACETAMIPRID | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.014 / 0.048$ | PASS | KRESOXIM- | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS |
| ALDICARB | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.042 / 0.14$ | PASS | METHYL | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS |
| AZOXYSTROBIN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.01 / 0.034$ | PASS | MALATHION | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.015 / 0.051$ | PASS |
| BIFENAZATE | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.025 / 0.083$ | PASS | METALAXYL | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.017 / 0.058$ | PASS |
| BIFENTHRIN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.014 / 0.048$ | PASS | METHIOCARB | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.014 / 0.046$ | PASS |
| BOSCALID | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS | METHOMYL | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.009 / 0.031$ | PASS |
| CARBARYL | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.012 / 0.04$ | PASS | M GK-264 | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.019 / 0.063$ | PASS |
| CARBOFURAN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.011 / 0.035$ | PASS | MYCLOBUTANIL | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.019 / 0.065$ | PASS |
| CHLORANTRANIL- | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.024 / 0.081$ | PASS | NALED | $0.5 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.023 / 0.076$ | PASS |
| IPROLE | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.024 / 0.081$ | PASS | OXAMYL | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | 0.035/0.116 | PASS |
| CHLORFENAPYR | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | 0.006/0.02 | PASS | PACLOBUTRAZOL | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.036 / 0.119$ | PASS |
| CHLORPYRIFOS | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.024 / 0.081$ | PASS | PERMETHRIN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.037 / 0.125$ | PASS |
| CLOFENTEZINE | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.02 / 0.066$ | PASS | PHOSMET | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.024 / 0.079$ | PASS |
| CYFLUTHRIN | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.038 / 0.128$ | PASS | PRALLETHRIN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.037 / 0.123$ | PASS |
| CYPERMETHRIN | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.027 / 0.091$ | PASS | PROPICONAZOLE | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.04 / 0.133$ | PASS |
| DAMINOZIDE | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.024 / 0.079$ | PASS | PROPOXUR | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.011 / 0.038$ | PASS |
| DIAZINON | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.018 / 0.061$ | PASS | PYRETHRINS | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS |
| DICHLORVOS | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.012 / 0.041$ | PASS | PYRIDABEN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | 0.026/0.086 | PASS |
| DIMETHOATE | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.012 / 0.04$ | PASS | SPINOSAD | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.006 / 0.019$ | PASS |
| ETHOPROPHOS | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.019 / 0.063$ | PASS | SPIROMESIFEN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.014 / 0.048$ | PASS |
| ETOFENPROX | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.014 / 0.047$ | PASS | SPIROTETRAMAT | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.035 / 0.117$ | PASS |
| ETOXAZOLE | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.013 / 0.045$ | PASS | SPIROXAMINE | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.012 / 0.04$ | PASS |
| FENOXYCARB | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.02 / 0.066$ | PASS | TEBUCONAZOLE | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.037 / 0.124$ | PASS |
| FENPYROXIMATE | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.043 / 0.145$ | PASS | THIACLOPRID | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.015 / 0.051$ | PASS |
| FIPRONIL | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.045 / 0.149$ | PASS | THIAMETHOXAM | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.014 / 0.045$ | PASS |
| FLONICAMID | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.022 / 0.073$ | PASS | TRIFLOXYSTROB- | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | 0.019/0.062 | PASS |
| FLUDIOXONIL | $0.4 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.011 / 0.036$ | PASS | IN | $0.2 \mu \mathrm{~g} / \mathrm{g}$ |  |  |  |

PGC-03: CHEMICAL RESIDUE ANALYSIS BY GC-MS/MS // MAR 31, 2020

| ANALYTE | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL | ANALYTE | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHLORFENAPYR | $1 \mu \mathrm{~g} / \mathrm{g}$ | ND | 0.006/0.02 | PASS | METHYL PARATHION | $0.2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.003 / 0.01$ | PASS |


| ANALYTE | LIMIT | AMOUNT (CFU/g) | PASS/FAIL | ANALYTE | LIMIT | AMOUNT (CFU/g) | PASS/FAIL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASPERGILLUS SPP. | Any amount in 1 gram | ND | PASS | SALMONELLA SPP. | Any amount in 1 gram | ND | PASS |
| COLIFORMS | $100 \mathrm{CFU} / \mathrm{g}$ | ND | PASS | YEAST \& MOLD | $10000 \mathrm{CFU} / \mathrm{g}$ | ND | PASS |
| ESCHERICHIA COLI | Any amount in 1 gram | ND | PASS |  |  |  |  |

MET-05: HEAVY METALS ANALYSIS BY ICP-MS // MAR 31, 2020

| ANALYTE | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL | ANALYTE | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ARSENIC | $1.5 \mu \mathrm{~g} / \mathrm{g}$ | ND | 10.001 | PASS | LEAD | $0.5 \mu \mathrm{~g} / \mathrm{g}$ | 0.094 | 10.001 | PASS |
| CADMIUM | $0.5 \mu \mathrm{~g} / \mathrm{g}$ | 0.003 | 10.001 | PASS | MERCURY | $3 \mu \mathrm{~g} / \mathrm{g}$ | 0.017 |  | PASS |
| CHROMIUM | $2 \mu \mathrm{~g} / \mathrm{g}$ | 0.078 | 10.001 | PASS | NICKEL |  | 0.034 | 10.001 | N/A |
| COPPER |  | ND | 10.001 | N/A |  |  |  |  |  |
| FOR-07: FOREIGN MATTER ANALYSIS // APR 01, 2020 |  |  |  |  |  |  |  |  |  |
| ANALYte |  | LIMIT | AMOUNT (\%) | PASS/FAIL | ANALYte | LIMIT |  | AMOUNT (\%) | PASS/FAIL |
| INORGANIC | TER | Any amount | ND | PASS | STEMS |  |  | ND | N/A |
| ORGANIC M |  | 2 \% | ND | PASS |  |  |  |  |  |

SOL-04: RESIDUAL SOLVENT ANALYSIS BY GC-MS // APR 01, 2020

| ANALYte | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL | ANALYte | LIMIT | AMOUNT ( $\mu \mathrm{g} / \mathrm{g}$ ) | LOD/LOQ ( $\mu \mathrm{g} / \mathrm{g}$ ) | PASS/FAIL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,2- | $5 \mu \mathrm{~g} / \mathrm{g}$ | ND | 0.4/1.34 | PASS | HEPTANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.31 / 4.37$ | PASS |
| DICHLOROETHANE | $5 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.4 / 1.34$ | PASS | HEXANE | $290 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.42 / 4.74$ | PASS |
| 2,2- | 290 Hg/g | ND | $0.98 / 3.27$ | PASS | HEXANES ALL ISOMERS | $290 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS |
| DIMETHYLBUTANE | 290 Hg/g | ND | 0.9813 .27 | PASS | ISOBUTANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.6/5.34 | PASS |
| 2,3- | $290 \mu \mathrm{~g} / \mathrm{g}$ | ND | $2.19 / 7.32$ | PASS | ISOPROPYL ALCOHOL | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 4.9/16.33 | PASS |
| DIMETHYLBUTANE | $290 \mu \mathrm{~g} / \mathrm{g}$ |  |  |  | METHANOL | $3000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 7.89/26.35 | PASS |
| 2 - | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.54/5.14 | PASS | METHYLENE CHLORIDE | $600 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.36 / 4.53$ | PASS |
| METHYLBUTANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.54/5.14 | PASS | NEOPENTANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.49/4.97 | PASS |
| 3 - | 290 /g/g | ND | 0.73/2.44 | PASS | PENTANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.46 / 4.87$ | PASS |
| METHYLPENTANE | $290 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.73 / 2.44$ | PASS | PENTANES ALL ISOMERS | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS |
| ACETONE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.57 / 5.23$ | PASS | PROPANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.95/6.51 | PASS |
| ACETONITRILE | $410 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.85/6.17 | PASS | TOLUENE | $890 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.88 / 6.26$ | PASS |
| BENZENE | $2 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.18 / 0.59$ | PASS | TRICHLOROETHY- |  |  |  |  |
| BUTANE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.68 / 5.59$ | PASS | LENE | $0 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.29 / 0.96$ | PASS |
| BUTANES ALL ISOMERS | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND |  | PASS | TOTAL XYLENES | $2170 \mu \mathrm{~g} / \mathrm{g}$ | ND | $2.02 / 6.72$ | PASS |
| CHLOROFORM | $60 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.78 / 2.59$ | PASS |  |  |  |  |  |
| ETHANOL | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | $6.02 / 20.05$ | PASS |  |  |  |  |  |
| ETHYL ACETATE | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | 1.95/6.49 | PASS |  |  |  |  |  |
| ETHYLENE OXIDE | $50 \mu \mathrm{~g} / \mathrm{g}$ | ND | $0.15 / 0.49$ | PASS |  |  |  |  |  |
| ETHYL ETHER | $5000 \mu \mathrm{~g} / \mathrm{g}$ | ND | $1.37 / 4.55$ | PASS |  |  |  |  |  |

