



**Populum Zen Pets Hemp Oil 100mg
Batch 21137029**

Kapu Maku, LLC dba Populum

Test Result UID: ANL0046754

Lot Inventory ID:

Lab Inventory ID:

Date Tested: 07/28/2021

Serving Size: 1 Bottle (30 ml) = 27.648 g



Summary

| | | | | | |
|--|--------------------------|---------------------------------|----------------------------------|---------------------------|-----------------------------|
| 104.08 mg/s Total Cannabinoids | Pass Microbial | Not Tested Mycotoxins | Pass Residual Solvents | Pass Pesticides | Pass Heavy Metals |
|--|--------------------------|---------------------------------|----------------------------------|---------------------------|-----------------------------|

Cannabinoids

Testing method: HPLC-SOP 0011

| Analyte | LOD | LOQ | Mass | Mass |
|----------|------------|------------|------------|-------------|
| Δ9-THC-A | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| Δ9-THC | 0.000 mg/g | 0.001 mg/g | 0.175 mg/g | 4.828 mg/s |
| Δ9-THCV | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| Δ8-THC | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| CBN | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| CBD-A | 0.000 mg/g | 0.001 mg/g | 0.026 mg/g | 0.713 mg/s |
| CBD | 0.000 mg/g | 0.001 mg/g | 3.461 mg/g | 95.692 mg/s |
| CBDV-A | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| CBDV | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| CBG-A | 0.000 mg/g | 0.001 mg/g | ND mg/g | ND mg/s |
| CBG | 0.000 mg/g | 0.001 mg/g | 0.015 mg/g | 0.410 mg/s |
| CBC | 0.000 mg/g | 0.001 mg/g | 0.088 mg/g | 2.436 mg/s |

Terpenes

Testing method: HSGCFID-SOP 0030

| Analyte | LOD | LOQ | Mass | Mass |
|---------------|-----------|-----------|---------|---------|
| α-Pinene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| β-Pinene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| Myrcene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| Ocimene | 0.00 mg/g | 0.01 mg/g | NT | NT |
| Limonene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| Terpinolene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| Linalool | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| Caryophyllene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |
| Humulene | 0.00 mg/g | 0.01 mg/g | ND mg/g | ND mg/s |

4.83 mg/s
Total THC

96.32 mg/s
Total CBD

ND mg/s
Total Terpenes

Total THC = Δ9-THC-A * 0.877 + Δ9-THC
Total CBD = CBD-A * 0.877 + CBD
LOQ = Limit of Quantification; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected

The values reported pertain only to the product tested.

| | | |
|---|---|---|
| Not Tested Moisture SOP-0009 | Not Tested Water Activity SOP-0053 | Not Tested Foreign Matter SOP-0010 |
|---|---|---|



Analytical 360, LLC certifies that the results presented are true and correct to the best of our knowledge. These results relate only to the sample provided by the client to Analytical 360, LLC.

Reference Lab
Analytical 360, LLC subcontracts the following assays:

Pesticides and Heavy Metals performed by Medicine Creek Analytics (WSLCB Lab #0018)

Approved By

Paul D. Matthews, Ph.D.

Paul Matthews, Ph.D.
Executive Lab Director / Chief Science Officer



Populum Zen Pets Hemp Oil 100mg

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Test Result UID: ANL0046754

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Date Tested: 07/28/2021

Microbial Testing method: PLATE-SOP 0007

| Analyte | LOD | LOQ | Action Level | Mass | Status |
|------------------------|-----------|-----------|---------------------|----------|--------|
| Enterobacteria | 20 CFU/g | 85 CFU/g | 1000 CFU/g | NT | NT |
| Salmonella spp. | - | - | Any Detected in 1 g | | NT |
| Escherichia coli | - | - | Any Detected in 1 g | | NT |
| Total Aerobic Bacteria | 170 CFU/g | 850 CFU/g | No Limit | ND CFU/g | |
| Total Yeast and Mold | 170 CFU/g | 850 CFU/g | No Limit | ND CFU/g | |
| Total Coliforms | 20 CFU/g | 85 CFU/g | No Limit | ND CFU/g | |

Mycotoxins Testing method: ELISA-SOP 0054

| Analyte | LOD | LOQ | Action Level | Mass | Status |
|---------------------------|---------|---------|--------------|------|--------|
| Aflatoxins B1, B2, G1, G2 | 0.1 ppb | 1.0 ppb | 20 ppb | NT | NT |
| Ochratoxin A | 0.1 ppb | 1.0 ppb | 20 ppb | NT | NT |

Heavy Metals Testing method: ICPMS-SOP 0055

| Analyte | LOD | LOQ | Action Level | Mass | Status |
|---------|------------|------------|--------------|----------|--------|
| Arsenic | 0.02 ug/5g | 0.06 ug/5g | 10 ug/5g | ND ug/5g | Pass |
| Cadmium | 0.01 ug/5g | 0.04 ug/5g | 4.1 ug/5g | ND ug/5g | Pass |
| Lead | 0.01 ug/5g | 0.02 ug/5g | 6 ug/5g | ND ug/5g | Pass |
| Mercury | 0.02 ug/5g | 0.07 ug/5g | 2 ug/5g | ND ug/5g | Pass |

Washington State I-502 Recreational Marijuana Microbial / Mycotoxins Action Levels

Counts not to exceed:

- 1,000 CFU/g Enterobacteria for solvent extracts and edibles
- 10,000 CFU/g Enterobacteria for flower, hash and kief
- *E coli* and *Salmonella* **not detected** in one gram for all products
- 20 ppb for Aflatoxins B1, B2, G1, G2, and Ochratoxin A for all products

LOQ = Limit of Quantification; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected
CFU/g = Colony Forming Units Per Gram; ppm = Parts per Million; ppb = Parts per Billion
TNTC = Too Numerous To Count

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Pass
Microbial

Not Tested
Mycotoxins

Pass
Heavy Metals



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Lot Inventory ID:

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Date Tested: 07/28/2021

Residual Solvents Testing method: HSGCFID-SOP 0020

| Analyte | LOD | LOQ | Action Level | Mass |
|-----------------|-------|--------|--------------|--------|
| Propane | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Isobutane | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Butane | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Ethanol | 1 ppm | 20 ppm | No Limit | NT |
| Acetone | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Toluene | 1 ppm | 20 ppm | 890 ppm | ND ppm |
| Pentane | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Isopropanol | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Hexane | 1 ppm | 20 ppm | 290 ppm | ND ppm |
| Heptane | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Isopentane | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Tetrahydrofuran | 1 ppm | 20 ppm | 720 ppm | ND ppm |
| Methanol | 1 ppm | 20 ppm | 3000 ppm | ND ppm |
| Acetonitrile | 1 ppm | 20 ppm | 410 ppm | ND ppm |
| Dichloromethane | 1 ppm | 20 ppm | 600 ppm | ND ppm |
| Ethyl Acetate | 1 ppm | 20 ppm | 5000 ppm | ND ppm |
| Chloroform | 1 ppm | 2 ppm | 2 ppm | ND ppm |
| Cyclohexane | 1 ppm | 20 ppm | 3900 ppm | ND ppm |
| Benzene | 1 ppm | 2 ppm | 2 ppm | ND ppm |
| Ethyl Benzene | 1 ppm | 20 ppm | 2200 ppm | ND ppm |
| m + p Xylenes | 1 ppm | 20 ppm | 2200 ppm | ND ppm |
| o Xylene | 1 ppm | 20 ppm | 2200 ppm | ND ppm |
| Total Xylenes | 1 ppm | 20 ppm | 2200 ppm | ND ppm |

LOQ = Limit of Quantification; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected
ppm = Parts Per Million

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ND ppm
Total Solvents



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Lab Inventory ID:

Date Tested: 07/28/2021

Pesticides Testing method: LCMS-SOP 0055

| Analyte | LOD | LOQ | Mass | Action Level | Analyte | LOD | LOQ | Mass | Action Level |
|-------------------------|-------|-------|--------|--------------|---------------------|-------|-------|------------|--------------|
| | ppm | ppm | | ppm | | ppm | ppm | | ppm |
| Methamidophos | 0.033 | 0.1 | ND ppm | 0.1 | Daminozide | | | Not Tested | 1 |
| Acephate | 0.1 | 0.3 | ND ppm | 0.4 | Omethoate | 0.05 | 0.2 | ND ppm | 0.1 |
| Pymetrozine | 0.05 | 0.2 | ND ppm | 0.1 | Propamocarb | 0.04 | 0.125 | ND ppm | 0.1 |
| Flonicamid | | | ND ppm | 1 | Aldicarb Sulfone | 0.05 | 0.2 | ND ppm | 0.4 |
| Aminocarb | 0.033 | 0.1 | ND ppm | 0.1 | Nitenpyram | 0.05 | 0.2 | ND ppm | 0.1 |
| Oxamyl | 0.033 | 0.1 | ND ppm | 1 | Fenuron | 0.033 | 0.1 | ND ppm | 0.1 |
| Thiamethoxam | 0.05 | 0.2 | ND ppm | 0.2 | 3-Hydroxycarbofuran | 0.075 | 0.25 | ND ppm | 0.2 |
| Mexacarbate | 0.033 | 0.1 | ND ppm | 0.1 | Dimethoate | 0.05 | 0.2 | ND ppm | 0.2 |
| Clothianidin | 0.05 | 0.15 | ND ppm | 0.1 | Imidacloprid | 0.05 | 0.2 | ND ppm | 0.4 |
| Dicofthos | 0.05 | 0.15 | ND ppm | 0.1 | Yamidothion | 0.033 | 0.1 | ND ppm | 0.1 |
| Acetamiprid | 0.033 | 0.1 | ND ppm | 0.2 | Fuberidazole | 0.033 | 0.1 | ND ppm | 0.1 |
| Pyracarbolid | 0.04 | 0.125 | ND ppm | 0.1 | Propoxur | 0.04 | 0.125 | ND ppm | 0.2 |
| Carbetamide | 0.05 | 0.15 | ND ppm | 0.1 | Thiophanate-Methyl | 0.05 | 0.15 | ND ppm | 0.1 |
| Carbofuran | 0.05 | 0.15 | ND ppm | 0.2 | Tricyclazole | 0.05 | 0.15 | ND ppm | 0.1 |
| Oxadixyl | 0.05 | 0.2 | ND ppm | 0.1 | Ethiofencarb | 0.075 | 0.25 | ND ppm | 0.1 |
| Thiacloprid | 0.05 | 0.15 | ND ppm | 0.2 | Carboxin | 0.05 | 0.15 | ND ppm | 0.1 |
| Isoprocarb | 0.05 | 0.2 | ND ppm | 0.1 | Carbaryl | 0.05 | 0.2 | ND ppm | 0.2 |
| Tebuthiuron | 0.04 | 0.125 | ND ppm | 0.1 | Pyrimicarb | 0.05 | 0.15 | ND ppm | 0.1 |
| Chlorotoluron | 0.05 | 0.2 | ND ppm | 0.1 | Cyfluron | 0.05 | 0.15 | ND ppm | 0.1 |
| Isoproturon | 0.05 | 0.15 | ND ppm | 0.1 | Fluometuron | 0.05 | 0.2 | ND ppm | 0.1 |
| Diuron | 0.1 | 0.3 | ND ppm | 0.1 | Chlorantraniliprole | 0.075 | 0.25 | ND ppm | 0.2 |
| Fenamidone | 0.05 | 0.15 | ND ppm | 0.1 | Methabenzthiazuron | 0.05 | 0.15 | ND ppm | 0.1 |
| Prometon | 0.05 | 0.15 | ND ppm | 0.1 | Diethofencarb | 0.05 | 0.15 | ND ppm | 0.1 |
| Methiocarb | | | ND ppm | 0.2 | Metalaxyl | 0.05 | 0.15 | ND ppm | 0.2 |
| Pacllobutrazol | 0.05 | 0.2 | ND ppm | 0.4 | Furalaxyl | 0.05 | 0.15 | ND ppm | 0.1 |
| Methoprotryne | 0.05 | 0.2 | ND ppm | 0.1 | Azoxystrobin | 0.05 | 0.2 | ND ppm | 0.2 |
| Mepronil | | | ND ppm | 0.1 | Chloroxuron | 0.05 | 0.15 | ND ppm | 0.1 |
| Flutolanil | 0.05 | 0.2 | ND ppm | 0.1 | Iprovalicarb | 0.05 | 0.2 | ND ppm | 0.1 |
| Myclobutanil | 0.075 | 0.25 | ND ppm | 0.2 | Mandipropamid | 0.05 | 0.2 | ND ppm | 0.1 |
| Mefenacet | 0.05 | 0.15 | ND ppm | 0.1 | Imazail | 0.1 | 0.4 | ND ppm | 0.2 |
| Bifenazate | 0.05 | 0.2 | ND ppm | 0.2 | Fenoxycarb | 0.05 | 0.2 | ND ppm | 0.2 |
| Dimethomorph | 0.05 | 0.2 | ND ppm | 0.1 | Kresoxym-methyl | 0.05 | 0.15 | ND ppm | 0.4 |
| Methoxyfenozide | 0.05 | 0.15 | ND ppm | 0.1 | Spiromesifen | 0.04 | 0.125 | ND ppm | 0.2 |
| Epoxiconazole | 0.075 | 0.25 | ND ppm | 0.1 | Dimoxystrobin | 0.05 | 0.15 | ND ppm | 0.1 |
| Spirotetramat | 0.05 | 0.2 | ND ppm | 0.2 | Tebufenozide | 0.05 | 0.15 | ND ppm | 0.1 |
| Tebuconazole | 0.05 | 0.2 | ND ppm | 0.4 | Clofentazine | | | ND ppm | 0.2 |
| Rotenone | 0.05 | 0.2 | ND ppm | 0.1 | Zoxamide | 0.05 | 0.2 | ND ppm | 0.1 |
| Flufenacet | 0.05 | 0.2 | ND ppm | 0.1 | Picoxystrobin | 0.05 | 0.2 | ND ppm | 0.1 |
| Carfentrazone-ethyl NH4 | 0.05 | 0.2 | ND ppm | 0.1 | Butafenacil | 0.05 | 0.15 | ND ppm | 0.1 |
| Benalaxyl | 0.05 | 0.15 | ND ppm | 0.1 | Thiobencarb | 0.05 | 0.2 | ND ppm | 0.1 |
| Cyazofamid | 0.05 | 0.15 | ND ppm | 0.1 | Pyraclostrobin | 0.05 | 0.15 | ND ppm | 0.1 |
| Furathiocarb | 0.05 | 0.2 | ND ppm | 0.1 | Trifloxystrobin | 0.04 | 0.125 | ND ppm | 0.2 |
| Pyriproxyfen | 0.05 | 0.15 | ND ppm | 0.1 | Hexythiazox | 0.05 | 0.2 | ND ppm | 1 |
| Piperonyl Butoxide | 0.05 | 0.15 | ND ppm | 2 | Triflumizole | 0.05 | 0.15 | ND ppm | 0.1 |
| Propargite | 0.04 | 0.125 | ND ppm | 0.1 | Quinoxifen | 0.033 | 0.1 | ND ppm | 0.1 |
| Etoxazole | 0.05 | 0.2 | ND ppm | 0.2 | Indoxacarb | 0.05 | 0.2 | ND ppm | 0.1 |
| Pyrethrin II | | | ND ppm | 1 | Pyridaben | 0.05 | 0.2 | ND ppm | 0.2 |
| Pyrethrin I | | | ND ppm | 1 | Fenazaquin | 0.05 | 0.2 | ND ppm | 0.1 |
| Fenpyroximate | 0.04 | 0.125 | ND ppm | 0.4 | Spinosad A | 0.05 | 0.2 | ND ppm | 0.2 |
| Spinosad D | 0.05 | 0.2 | ND ppm | 0.2 | Abamectin B1a | 0.15 | 0.45 | ND ppm | 0.5 |
| Permethrin NH4 | 0.05 | 0.2 | ND ppm | 0.2 | Fludioxonil | | | ND ppm | 0.4 |
| Fipronil | 0.1 | 0.3 | ND ppm | 0.4 | Fluazinam | 0.075 | 0.25 | ND ppm | 0.1 |
| Ethoprophos | 0.1 | 0.4 | ND ppm | 0.2 | Chlorpyrifos | 0.075 | 0.25 | ND ppm | 0.2 |
| Aldicarb | 0.075 | 0.25 | ND ppm | 0.1 | Bifenthrin | 0.05 | 0.2 | ND ppm | 0.2 |
| Boscalid | | | ND ppm | 0.1 | Diazinon | 0.05 | 0.2 | ND ppm | 0.1 |
| Etofenprox | 0.04 | 0.125 | ND ppm | 0.1 | Malathion | 0.05 | 0.2 | ND ppm | 0.1 |
| Methomyl | 0.05 | 0.2 | ND ppm | 0.1 | Monocrotophos | | | ND ppm | 0.1 |
| Phosmet | 0.05 | 0.2 | ND ppm | 0.1 | Spiroxamine | 0.05 | 0.15 | ND ppm | 0.1 |
| Uniconazole | 0.075 | 0.25 | ND ppm | 0.1 | | | | | |

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**Pass
Pesticides**



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