EXCELBIS LABS

# Regulatory Compliance Testing
Certificate of Analysis

# MM-Mambas-Sour_Apple-10_pack

**Overall Batch Result** PASS


| Total THC | Total CBD | Total Cannabinoids |
|---|---|---|
| 10.026 mg per serving | 0.023 mg per serving | 10.765 mg per serving |
| 100.257 mg per package | 0.227 mg per package | 107.649 mg per package |

## Batch
Lot / Batch: **MM-Mambas-SA-120622**
Source UID: **1A406030002A29F000000865**
Package UID: **1A4060300007083000051570**

## Distributor
**Green Spectrum Trading**
**14835 Bessemer St**
**Van Nuys CA 91411**
**C11-0000760-LIC**

## Producer
**Green Acre Management (Muha Meds)**
**515 W 17th St**
**Long Beach CA 90813**
**CDPH-10004540**

## Sample
Account: **Green Spectrum Trading**
Sample ID: **1923953**
Sample Matrix: **Gummy**
Batch Size: **2000 units**
Sample Size: **8 units**
Package Size: **50 g**
Serving Size: **5 g**
Collected Date: **12/08/22**
Received Date: **12/09/22**
Completed Date: **12/16/22**

| | |
|---|---|
| Cannabinoids | TESTED |
| Residual Solvents | PASS |
| Heavy Metals | PASS |
| Microbials | PASS |
| Mycotoxins | PASS |
| Chemical Residues | PASS |
| Foreign Materials | PASS |
| Water Activity | PASS |

Quality Review
Dr. Jerry White PhD
Jerry White, PhD
Chief Scientific Officer
12/16/22

Data Review
Bryan Zahakaylo
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Analyst
12/16/22



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## Cannabinoids Analysis TESTED

Analytical Technique: **HPLC UV VIS**
Instrumentation: **2030C**
Method: **SOP-001**
Analysis Performed: **12/12/22**
Panel Completed: **12/13/22**

THC per serving: **10.009 mg**
THC per package: **100.088 mg**
Total THC: **0.2005%, 2.005 mg/g**

CBD per serving: **0.023 mg**
CBD per package: **0.227 mg**
Total CBD: **0.0005%, 0.005 mg/g**

Sum Cannabinoids: **0.2154%, 2.154 mg/g**
Total Cannabinoids: **0.2153%, 2.153 mg/g**

| Analyte | LOD (mg/g) | LOQ (mg/g) | Results (mg/g) | Results (%) |
|---|---|---|---|---|
| Cannabidivarin (CBDV) | 0.0000 | 0.0000 | 0.004 | 0.0004 |
| Cannabidiolic Acid (CBDA) | 0.0000 | 0.0000 | <1 | <0.100 |
| Cannabigerolic Acid (CBGA) | 0.0000 | 0.0000 | 0.002 | 0.0002 |
| Cannabigerol (CBG) | 0.0000 | 0.0000 | 0.082 | 0.0082 |
| Cannabidiol (CBD) | 0.0000 | 0.0000 | 0.005 | 0.0005 |
| Tetrahydrocannabivarin (THCV) | 0.0000 | 0.0000 | 0.008 | 0.0008 |
| Cannabinol (CBN) | 0.0000 | 0.0000 | 0.017 | 0.0017 |
| Δ9-Tetrahydrocannabinol (Δ9-THC) | 0.0000 | 0.0000 | 2.002 | 0.2002 |
| Δ8-Tetrahydrocannabinol (Δ8-THC) | 0.0000 | 0.0000 | 0.012 | 0.0012 |
| Cannabichromene (CBC) | 0.0000 | 0.0000 | 0.019 | 0.0019 |
| Δ9-Tetrahydrocannabinolic Acid (Δ9-THCA) | 0.0000 | 0.0000 | 0.004 | 0.0004 |

Sum Cannabinoids = Acidic Cannabinoids + Neutral Cannabinoids | Total Cannabinoids = (Acidic Cannabinoids x 0.877) + Neutral Cannabinoids | Total THC = (THCA x 0.877) + Δ9-THC | Total CBD = (CBDA x 0.877) + CBD

## Residual Solvents Analysis PASS

Analytical Technique: **GC-MS**
Instrumentation: **2020**
Method: **SOP-004**
Analysis Performed: **12/13/22**
Panel Completed: **12/13/22**

| Analyte | LOD (µg/g) | LOQ (µg/g) | Action Limit (µg/g) | Results (µg/g) | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.1547 | 0.4688 | 1.00 | ND | PASS |
| Acetone | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Acetonitrile | 15.4688 | 46.875 | 410.00 | ND | PASS |
| Benzene | 0.1547 | 0.4688 | 1.00 | ND | PASS |
| Butane | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Chloroform | 0.1547 | 0.4688 | 1.00 | ND | PASS |
| Ethanol | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Ethyl acetate | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Ethyl ether | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Ethylene oxide | 0.1547 | 0.4688 | 1.00 | ND | PASS |
| Heptane | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Hexane | 15.4688 | 46.875 | 290.00 | ND | PASS |
| Isopropyl alcohol | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Methanol | 15.4688 | 46.875 | 3000.00 | ND | PASS |
| Methylene chloride | 0.1547 | 0.4688 | 1.00 | ND | PASS |
| Pentane | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Propane | 15.4688 | 46.875 | 5000.00 | ND | PASS |
| Toluene | 15.4688 | 46.875 | 890.00 | ND | PASS |
| Trichloroethylene | 0.1547 | 0.4688 | 1.00 | ND | PASS |
| Total xylenes | - | - | 2170.00 | ND | PASS |
| (meta, para-xylene) | 46.4063 | 140.625 | - | ND | |
| (ortho-xylene) | 46.4063 | 140.625 | - | ND | |

## Heavy Metals Analysis PASS

Analytical Technique: **ICP-MS**
Instrumentation: **NexION**
Method: **SOP-005**
Analysis Performed: **12/13/22**
Panel Completed: **12/13/22**

| Analyte | LOD (µg/g) | LOQ (µg/g) | Action Limit (µg/g) | Results (µg/g) | |
|---|---|---|---|---|---|
| Arsenic 75 | 0.0165 | 0.0500 | 0.200 | ND | PASS |
| Cadmium 111 | 0.0165 | 0.0500 | 0.200 | ND | PASS |
| Lead 208 | 0.0413 | 0.1250 | 0.500 | ND | PASS |
| Mercury 202 | 0.0033 | 0.0100 | 0.100 | ND | PASS |

## Microbials Analysis PASS

Analytical Technique: **Colorimetric Microarray**
Instrumentation: **SensoSpot**
Method: **SOP-006**
Analysis Performed: **12/12/22**
Panel Completed: **12/12/22**

| Analyte | Action Limit | Results | |
|---|---|---|---|
| Aspergillus flavus | Detected in 1 gram | ND | PASS |
| Aspergillus fumigatus | Detected in 1 gram | ND | PASS |
| Aspergillus niger | Detected in 1 gram | ND | PASS |
| Aspergillus terreus | Detected in 1 gram | ND | PASS |
| Salmonella spp. | Detected in 1 gram | ND | PASS |
| Escherichia coli (STEC) | Detected in 1 gram | ND | PASS |

## Mycotoxins Analysis PASS

Analytical Technique: **HPLC-MS/MS**
Instrumentation: **5500**
Method: **SOP-003**
Analysis Performed: **12/09/22**
Panel Completed: **12/12/22**

| Analyte | LOD (µg/kg) | LOQ (µg/kg) | Action Limit (µg/kg) | Results (µg/kg) | |
|---|---|---|---|---|---|
| Ochratoxin A | 6.6000 | 20.0000 | 20 | ND | PASS |
| Total Aflatoxins | - | - | 20 | ND | PASS |
| (Aflatoxin B1) | 1.7000 | 5.0000 | - | ND | |
| (Aflatoxin B2) | 1.7000 | 5.0000 | - | ND | |
| (Aflatoxin G1) | 1.7000 | 5.0000 | - | ND | |
| (Aflatoxin G2) | 1.7000 | 5.0000 | - | ND | |



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## Chemical Residues Analysis PASS

Analytical Technique: **HPLC-MS/MS**
Instrumentation: **5500**
Method: **SOP-003**
Analysis Performed: **12/09/22**
Panel Completed: **12/12/22**

| Analyte | LOD (µg/g) | LOQ(µg/g) | Action Limit (µg/g) | Results (µg/g) | |
|---|---|---|---|---|---|
| Abamectin | 0.0333 | 0.1000 | 0.30 | ND | PASS |
| Acephate | 0.0333 | 0.1000 | 5.00 | ND | PASS |
| Acequinocyl | 0.0333 | 0.1000 | 4.00 | ND | PASS |
| Acetamiprid | 0.0333 | 0.1000 | 5.00 | ND | PASS |
| Aldicarb | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Azoxystrobin | 0.0333 | 0.1000 | 40.00 | ND | PASS |
| Bifenazate | 0.0333 | 0.1000 | 5.00 | ND | PASS |
| Bifenthrin | 0.0333 | 0.1000 | 0.50 | ND | PASS |
| Boscalid | 0.0333 | 0.1000 | 10.00 | ND | PASS |
| Carbaryl | 0.0333 | 0.1000 | 0.50 | ND | PASS |
| Carbofuran | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Chlorantraniliprole | 0.0333 | 0.1000 | 40.00 | ND | PASS |
| Chlorpyrifos | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Clofentezine | 0.0333 | 0.1000 | 0.50 | ND | PASS |
| Coumaphos | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Daminozide | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Diazinon | 0.1000 | 0.1000 | 0.20 | ND | PASS |
| Dichlorvos | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Dimethoate | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Dimethomorph | 0.0333 | 0.1000 | 20.00 | ND | PASS |
| Ethoprophos | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Etofenprox | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Etoxazole | 0.0333 | 0.1000 | 1.50 | ND | PASS |
| Fenhexamid | 0.0333 | 0.1000 | 10.00 | ND | PASS |
| Fenoxycarb | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Fenpyroximate | 0.0333 | 0.1000 | 2.00 | ND | PASS |
| Fipronil | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Flonicamid | 0.0333 | 0.1000 | 2.00 | ND | PASS |
| Fludioxonil | 0.0333 | 0.1000 | 30.00 | ND | PASS |
| Hexythiazox | 0.0333 | 0.1000 | 2.00 | ND | PASS |
| Imazalil | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Imidacloprid | 0.0333 | 0.1000 | 3.00 | ND | PASS |
| Kresoxim-Methyl | 0.0333 | 0.1000 | 1.00 | ND | PASS |
| Malathion | 0.0333 | 0.1000 | 5.00 | ND | PASS |
| Metalaxyl | 0.0333 | 0.1000 | 15.00 | ND | PASS |
| Methiocarb | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Methomyl | 0.0333 | 0.1000 | 0.10 | ND | PASS |
| Mevinphos | 0.0333 | 0.1000 | >LOD | ND | PASS |
| Myclobutanil | 0.0333 | 0.1000 | 9.00 | ND | PASS |
| Naled | 0.0333 | 0.1000 | 0.50 | ND | PASS |
| Oxamyl | 0.0333 | 0.1000 | 0.20 | ND | PASS |
| Paclobutrazol | 0.0333 | 0.1000 | 0.00 | ND | PASS |
| Permethrin | 0.0333 | 0.1000 | 20.00 | ND | PASS |
| Phosmet | 0.0333 | 0.1000 | 0.20 | ND | PASS |
| Piperonyl Butoxide | 0.0333 | 0.1000 | 8.00 | ND | PASS |
| Prallethrin | 0.0333 | 0.1000 | 0.40 | ND | PASS |
| Propiconazole | 0.0333 | 0.1000 | 20.00 | ND | PASS |
| Propoxur | 0.0333 | 0.1000 | 0.00 | ND | PASS |
| Pyrethrins | 0.0333 | 0.1000 | 1.00 | ND | PASS |
| Pyridaben | 0.0333 | 0.1000 | 3.00 | ND | PASS |
| Spinetoram | 0.0333 | 0.1000 | 3.00 | ND | PASS |
| Spinosad | 0.0333 | 0.1000 | 3.00 | ND | PASS |
| Spiromesifen | 0.0333 | 0.1000 | 12.00 | ND | PASS |
| Spirotetramat | 0.0333 | 0.1000 | 13.00 | ND | PASS |
| Spiroxamine | 0.0333 | 0.1000 | 0.00 | ND | PASS |
| Tebuconazole | 0.0333 | 0.1000 | 2.00 | ND | PASS |
| Thiacloprid | 0.0333 | 0.1000 | 0.00 | ND | PASS |
| Thiamethoxam | 0.0333 | 0.1000 | 4.50 | ND | PASS |
| Trifloxystrobin | 0.0333 | 0.1000 | 30.00 | ND | PASS |

Analytical Technique: **GC-MS/MS**
Instrumentation: **8050**
Method: **SOP-003**
Analysis Performed: **12/09/22**
Panel Completed: **12/12/22**

| Analyte | LOD (µg/g) | LOQ(µg/g) | Action Limit (µg/g) | Results (µg/g) | |
|---|---|---|---|---|---|
| Captan | 0.2310 | 0.7000 | 5.00 | ND | PASS |
| Chlordane | 0.0116 | 0.0350 | >LOD | ND | PASS |
| Chlorfenapyr | 0.0058 | 0.0175 | >LOD | ND | PASS |
| Cyfluthrin | 0.0231 | 0.0700 | 1.00 | ND | PASS |
| Cypermethrin | 0.0231 | 0.0700 | 1.00 | ND | PASS |
| Methyl Parathion | 0.0058 | 0.0175 | >LOD | ND | PASS |
| Pentachloronitrobenzene | 0.0231 | 0.0700 | 0.20 | ND | PASS |



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## Foreign Material Analysis PASS

Analytical Technique: **Digital Microscopy**
Instrumentation: **HM16**
Method: **SOP-010**
Analysis Performed: **12/09/22**
Panel Completed: **12/09/22**

| Analyte | Action Limit | Results | |
|---|---|---|---|
| **Sand, Soil, Cinders, or Dirt** | > 1/4 total sample area | ND | **PASS** |
| **Mold** | > 1/4 total sample area | ND | **PASS** |
| **Insect Fragments, Hairs, or Mammalian Excreta** | > 1 count per 3.0 grams | ND | **PASS** |
| **Imbedded Foreign Material** | > 1/4 total sample area | ND | **PASS** |

## Water Activity Analysis PASS

Analytical Technique: **Vapor Pressure Ratio**
Instrumentation: **HC2**
Method: **SOP-007**
Analysis Performed: **12/09/22**
Panel Completed: **12/09/22**

| Analyte | Detection Range ($a_w$) | Action Limit ($a_w$) | Results ($a_w$) | |
|---|---|---|---|---|
| **Water Activity** | 0.25 - 1.0 | 0.85 | 0.4485 | **PASS** |



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