

# CERTIFICATE OF ANALYSIS

SAMPLE NAME: GREEN HORN (0315-01-001)

SAMPLE CODE: DTS-240528-022

CLIENT: HAPPY HIPPO

BATCH RESULT: PASS

  
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MATRIX NAME: Botanical Powder - Plant  
SAMPLE TYPE: Quality Assurance  
RECEIVED DATE: Thu, May 30, 2024  
PUBLISHED DATE: Mon, Jun 3, 2024  
BATCH CODE: NB-0424  
BATCH SIZE: N/A  
SAMPLE SIZE: 1 U

|                       |         |
|-----------------------|---------|
| TOTAL MAJOR ALKALOIDS | 1.371%  |
| TOTAL MINOR ALKALOIDS | 0.0054% |
| MITRAGYNINE           | 0.862%  |



ALKU ✓  
Kratom Alkaloids  
High Level

ALKL ✓  
Kratom Alkaloids  
Low Level

ECOLI ✓  
Total E. Coli & Coliforms  
Plate

TAMC ✓  
Total Aerobic Bacteria  
Plate

SS ✓  
Salmonella & STEC  
qPCR

TYMGD ✓  
Total Yeast & Mold  
Plate

HPMET ✓  
Heavy Metals  
7



RESULTS REVIEWED BY: Leslie Varela  
Laboratory Director  
Cambium Analytica  
Monday, Jun 3, 2024



RESULTS CERTIFIED BY: Douglas Smith  
VP - Scientific Operations  
Cambium Analytica  
Monday, Jun 3, 2024

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LAB-TM-052 - DETERMINATION OF KRATOM ALKALOID CONTENT BY UPLC-DAD

ALKU-DTS-240528-022-01 - TUE, MAY 28, 2024

| ANALYTE               | VALUE   | ACTION LIMIT | LOD      | LOQ      | STATUS |
|-----------------------|---------|--------------|----------|----------|--------|
| Total Major Alkaloids | 1.371 % | N/A          |          |          | N/A    |
| Mitragynine           | 0.862 % | N/A          | 0.3 ug/g | 0.5 ug/g | N/A    |
| Speciociliatine       | 0.217 % | N/A          | 0.3 ug/g | 0.5 ug/g | N/A    |
| Paynantheine          | 0.185 % | N/A          | 0.3 ug/g | 0.5 ug/g | N/A    |
| Speciogynine          | 0.107 % | N/A          | 0.3 ug/g | 0.5 ug/g | N/A    |

LAB-TM-047 - DETERMINATION OF KRATOM ALKALOID CONTENT BY LC-TQ

ALKL-DTS-240528-022-01 - TUE, MAY 28, 2024



| ANALYTE               | VALUE    | ACTION LIMIT | LOD        | LOQ       | STATUS |
|-----------------------|----------|--------------|------------|-----------|--------|
| 7-Hydroxymitragynine  | 0.0054 % | N/A          | 0.01 ug/kg | 0.1 ug/kg | N/A    |
| Total Minor Alkaloids | 0.0054 % | N/A          | 0.01 ug/kg | 0.1 ug/kg | N/A    |
| Mitraphylline         | ND       | N/A          | 0.01 ug/kg | 0.1 ug/kg | N/A    |

LAB-TM-059 - ENUMERATION OF ESCHERICHIA COLI AND TOTAL COLIFORM IN FOODS AND DIETARY SUPPLEMENTS

ECOLI-DTS-240528-022-01 - TUE, MAY 28, 2024



| ANALYTE         | VALUE | ACTION LIMIT | LOD      | LOQ      | STATUS |
|-----------------|-------|--------------|----------|----------|--------|
| E. coli         | ND    | Detection    | 10 CFU/g | 10 CFU/g | PASS   |
| Total Coliforms | ND    | 10000 CFU/g  | 10 CFU/g | 10 CFU/g | PASS   |

LAB-TM-060 - ENUMERATION OF TOTAL AEROBIC COUNT IN FOODS AND DIETARY SUPPLEMENTS

TAMC-DTS-240528-022-01 - TUE, MAY 28, 2024



| ANALYTE             | VALUE      | ACTION LIMIT   | LOD        | LOQ        | STATUS |
|---------------------|------------|----------------|------------|------------|--------|
| Total Aerobic Count | 1000 CFU/g | 10000000 CFU/g | 1000 CFU/g | 1000 CFU/g | PASS   |

LAB-TM-006 - MICROBIAL ANALYSIS BY QPCR

SS-DTS-240528-022-01 - TUE, MAY 28, 2024



| ANALYTE                       | VALUE | ACTION LIMIT | LOD | LOQ | STATUS |
|-------------------------------|-------|--------------|-----|-----|--------|
| Salmonella Spp                | ND    | Detection    |     |     | PASS   |
| Shiga Toxin Producing E. coli | ND    | Detection    |     |     | PASS   |

LAB-TM-061 - ENUMERATION OF YEAST AND MOLD IN FOODS AND DIETARY SUPPLEMENTS

TYMFD-DTS-240528-022-01 - TUE, MAY 28, 2024

| ANALYTE              | VALUE | ACTION LIMIT | LOD      | LOQ      | STATUS |
|----------------------|-------|--------------|----------|----------|--------|
| Total Yeast and Mold | ND    | 100000 CFU/g | 10 CFU/g | 10 CFU/g | PASS   |



LAB-TM-044 - DETERMINATION OF HEAVY METALS BY ICP-MS  
HPMET-DTS-240528-022-01 - TUE, MAY 28, 2024



| ANALYTE  | VALUE       | ACTION LIMIT | LOD         | LOQ         | STATUS |
|----------|-------------|--------------|-------------|-------------|--------|
| Arsenic  | 0.189 ug/g  | 1.5 ug/g     | 0.198 ug/kg | 0.662 ug/kg | PASS   |
| Cadmium  | 0.026 ug/g  | 0.3 ug/g     | 0.082 ug/kg | 0.272 ug/kg | PASS   |
| Chromium | 2.242 ug/g  | N/A          | 0.627 ug/kg | 2.091 ug/kg | N/A    |
| Copper   | 19.000 ug/g | N/A          | 0.155 ug/kg | 0.515 ug/kg | N/A    |
| Lead     | 0.641 ug/g  | 1 ug/g       | 0.282 ug/kg | 0.282 ug/kg | PASS   |
| Mercury  | 0.018 ug/g  | 0.5 ug/g     | 0.017 ug/kg | 0.057 ug/kg | PASS   |
| Nickel   | 3.157 ug/g  | 200 ug/g     | 0.321 ug/kg | 1.071 ug/kg | PASS   |

