



CERTIFICATE OF ANALYSIS

STATUS: **RELEASED** REVISION: 00

DATE: 08/16/2020

Analysis ID No. 20A922
 TDA License No. 2020002
 ISO/IEC No. 1055838
 Customer No. 20201246
 Page No. Page 1 of 2

| CUSTOMER INFORMATION | SAMPLE INFORMATION |
|--|--|
| Company Name: Grass Roots Harvest | Submitted Sample Name: White Maeng Da |
| Address: 321 W. Ben White Blvd; Austin, TX 78704 USA | Submitted Sample Lot: 07-2020 WMD11 |
| Phone Number: 830-660-9770 | Submitted Sample Description: Kratom Powder Inside Zip Loc Bag; Arrived/Stored at RT |
| Contact Name / Email: Crystal Harral / crystal@grassrootsharvest.com | Submitted Sample Product Type / Matrix: Kratom / Leaf Powder |

| ALKALOIDS ASSAY | | | | | |
|------------------|-------------|-----------|---|----------------------------|------------------|
| Analysis | Test Method | LOQ | Specifications | Test Results | Pass / Fail |
| Mitaphylline | UHPLC-DAD | 0.01 w/w% | w/w%: Report Only mg/g: Report Only | 0.0072 w/w% 0.072 mg/g | Results Reported |
| 7-OH-Mitragynine | UHPLC-DAD | 0.01 w/w% | w/w%: Report Only mg/g: Report Only % Total Alkaloids: NMT 2% | ND | PASS |
| Paynantheine | UHPLC-DAD | 0.01 w/w% | w/w%: Report Only mg/g: Report Only | 0.2691 w/w% 2.691 mg/g | Results Reported |
| Speciogynine | UHPLC-DAD | 0.01 w/w% | w/w%: Report Only mg/g: Report Only | 0.2408 w/w% 2.408 mg/g | Results Reported |
| Mitragynine | UHPLC-DAD | 0.01 w/w% | w/w%: Report Only mg/g: Report Only | 1.5425 w/w% 15.425 mg/g | Results Reported |
| Total Alkaloids | UHPLC-DAD | 0.01 w/w% | w/w%: Report Only mg/g: Report Only | 2.2181 w/w% 22.181 mg/g | Results Reported |

| HEAVY METALS | | | | | |
|--------------|-------------|--------|-----------------|---------------|-------------|
| Analysis | Test Method | LOQ | Specifications | Test Results | Pass / Fail |
| Lead | ICP-MS | 30 ppb | NMT 1,000 ppb | 809.22 ppb | PASS |
| Mercury | ICP-MS | 5 ppb | NMT 500 ppb | 24.56 ppb | PASS |
| Arsenic | ICP-MS | 20 ppb | NMT 1,500 ppb | 350.45 ppb | PASS |
| Cadmium | ICP-MS | 10 ppb | NMT 300 ppb | 19.38 ppb | PASS |
| Nickel | ICP-MS | 90 ppb | NMT 200,000 ppb | 10,172.56 ppb | PASS |



CERTIFICATE OF ANALYSIS

STATUS: **RELEASED** REVISION: 00

DATE: 08/16/2020

Analysis ID No. 20A922
 TDA License No. 2020002
 ISO/IEC No. 1055838
 Customer No. 20201246
 Page No. Page 2 of 2

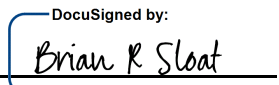
| MICROBIOLOGICAL (AHPA for Powdered Botanicals) | | | | | |
|--|----------------|-------------|-----------------------|---------------|-------------|
| Analysis | Test Method | LOQ | Specifications | Test Results | Pass / Fail |
| Total Aerobic Plate Count | Isolation Agar | 20 CFU/gm | NMT 10,000,000 CFU/gm | 28,000 CFU/gm | PASS |
| Total Yeast & Mold | Isolation Agar | 20 CFU/gm | NMT 100,000 CFU/gm | 150 CFU/gm | PASS |
| Enterobacteriaceae | Isolation Agar | 20 CFU/gm | NMT 10,000 CFU/gm | 1,570 CFU/gm | PASS |
| Coliforms | Isolation Agar | 20 CFU/gm | NMT 10,000 CFU/gm | 800 CFU/gmf | PASS |
| Salmonella | Isolation Agar | 1 CFU/25 gm | Absent | Absent | PASS |
| Escherichia coli (E.coli) | Isolation Agar | 1 CFU/25 gm | Absent | Absent | PASS |
| Listeria | Isolation Agar | 1 CFU/1 gm | Absent | Absent | PASS |

| TESTING FACILITY INFORMATION | SAMPLE INFORMATION |
|--|---|
| Santé Laboratories 8201 East Riverside Drive, STE 650 Austin, Texas 78744 USA | Santé Sample ID: 20A922 Receipt Date: 08/06/2020 / 01:00 PM CST / S. ORTEGA Receipt Condition: Good Analysis Start Date: 08/06/2020 |

| ADDITIONAL REPORT NOTES |
|--|
| The reported results presented in this document is only applicable to samples submitted to Santé Laboratories for testing and may not represent the entire lot and/or batch produced by the manufacturer. Microbiological specifications follow AHPA guidelines for powdered botanicals. ©2020 Santé Laboratories, LLC – All Rights Reserved |

| VERSION HISTORY | | |
|-----------------|----------------|--------------------|
| Version | Effective Date | Summary of Changes |
| 00 | 08/16/2020 | Initial Release |

| PRODUCT SAMPLE / IMAGE | |
|---|--|
|  |  |

| REVIEWED AND APPROVED BY | | |
|---|-------------------|----------|
| DocuSigned by:  Brian Sloat, Ph.D. Chief Scientific Officer / Quality Manager Santé Laboratories <small>51277B7C6FDA460...</small> | 8/16/2020 Date | DD-MM-YY |