

HIGH NORTH ID:
00232389
Date: 2022-09-02
Certificate: 1662149128



High North Inc.
241 Hanlan Rd, Unit 7
Woodbridge, ON, L4L 3R7
1-416-864-6119
LIC-P4PNJMAC20-2022

| | | | |
|---------|--|-------------|-----------------|
| Client: | Noble Growth Corp 5630 56St, Drayton Valley, AB, T7A 0B2 | Strain: | Blueberry Fuego |
| Name: | Charlotte Cuff 1-888-842-8785 qc@noblegrowthcorp.com | Lot: | 146-2206B |
| | | Matrix: | Flower |
| | | Sub-matrix: | Dried Flower |
| | | Sampled: | 2022-08-29 |
| | | Received: | 2022-08-30 |

Certificate of Analysis

| Cannabinoid Analysis | LOD (%) | LOQ (%) | wt% | mg/g |
|--|---------|---------|--------|---------|
| Total THC [(THCA x 0.877) + D9-THC] | | | 24.042 | 240.424 |
| Total CBD [(CBDA x 0.877) + CBD] | | | 0.073 | 0.73 |
| THCA-A | 0.0090 | 0.03 | 26.675 | 266.748 |
| CBGA | 0.0041 | 0.03 | 0.936 | 9.364 |
| D9-THC | 0.0093 | 0.03 | 0.649 | 6.486 |
| CBG | 0.0094 | 0.03 | 0.192 | 1.92 |
| CBDA | 0.0100 | 0.03 | 0.083 | 0.832 |
| CBC | 0.0060 | 0.03 | ND | ND |
| D8-THC | 0.0137 | 0.03 | ND | ND |
| THCV | 0.0093 | 0.03 | ND | ND |
| CBN | 0.0067 | 0.03 | ND | ND |
| CBD | 0.0069 | 0.03 | ND | ND |
| CBDV | 0.0090 | 0.03 | ND | ND |
| Total of all quantified cannabinoids: | | | 28.535 | 285.350 |

| Terpene Analysis | LOD (%) | LOQ (%) | wt% |
|-------------------------|---------|---------|-------|
| Trans-Caryophyllene | 0.0002 | 0.005 | 0.535 |
| Beta-Myrcene | 0.0003 | 0.005 | 0.515 |
| (R)-(+)-Limonene | 0.0001 | 0.005 | 0.353 |
| Farnesene* | 0.0009 | 0.005 | 0.207 |
| Alpha-Humulene | 0.0010 | 0.005 | 0.147 |
| Ocimene* | 0.0004 | 0.005 | 0.139 |
| Linalool | 0.0003 | 0.005 | 0.098 |
| Terpineol* | 0.0001 | 0.005 | 0.052 |
| Beta-Pinene | 0.0002 | 0.005 | 0.046 |
| (R)-Endo-(+)-Fenchyl | 0.0003 | 0.005 | 0.032 |
| Alpha-Pinene | 0.0003 | 0.005 | 0.031 |

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

| Terpene Analysis | LOD (%) | LOQ (%) | wt% |
|--|---------|---------|--------------|
| Caryophyllene oxide | 0.0008 | 0.005 | 0.021 |
| trans-Nerolidol | 0.0004 | 0.005 | 0.021 |
| Camphene | 0.0002 | 0.005 | 0.009 |
| Fenchone* | 0.0003 | 0.005 | 0.006 |
| Gamma-Terpinene | 0.0003 | 0.005 | 0.005 |
| Terpinolene | 0.0003 | 0.005 | BLQ |
| Phytol* | 0.0013 | 0.010 | ND |
| (+)-Cedrol | 0.0010 | 0.005 | ND |
| alpha-Bisabolol | 0.0003 | 0.005 | ND |
| Guaiol | 0.0003 | 0.005 | ND |
| cis-Nerolidol | 0.0003 | 0.005 | ND |
| Valencene | 0.0002 | 0.005 | ND |
| Eugenol | 0.0004 | 0.010 | ND |
| Alpha-Cedrene | 0.0002 | 0.005 | ND |
| Pulegone | 0.0002 | 0.005 | ND |
| Geranyl acetate | 0.0002 | 0.005 | ND |
| Nerol | 0.0002 | 0.005 | ND |
| Geraniol | 0.0007 | 0.005 | ND |
| Citronellol | 0.0003 | 0.005 | ND |
| Camphor + Borneol* | 0.0003 | 0.010 | ND |
| Isopulegol | 0.0004 | 0.005 | ND |
| Hexahydrothymol | 0.0005 | 0.005 | ND |
| Isoborneol | 0.0002 | 0.005 | ND |
| Sabinene Hydrate | 0.0001 | 0.005 | ND |
| p-Cymene | 0.0003 | 0.005 | ND |
| Eucalyptol | 0.0007 | 0.005 | ND |
| Alpha-Phellandrene | 0.0002 | 0.005 | ND |
| Alpha-Terpinene | 0.0003 | 0.005 | ND |
| (1S)-3-Carene | 0.0007 | 0.005 | ND |
| Sabinene | 0.0013 | 0.005 | ND |
| Total of all quantified terpenes: | | | 2.217 |

Moisture Analysis 13.65%

Foreign Matter Analysis None Detected

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

| Mycotoxin Analysis | LOD (ppb) | LOQ (ppb) | RL (ppb) | Result (ppb) | |
|---------------------------|-----------|-----------|----------|--------------|------|
| Aflatoxin-B1 | 1.0 | 2 | 2 | ND | PASS |
| Aflatoxin-B2 | 0.9 | 2 | | ND | PASS |
| Aflatoxin-G1 | 0.7 | 2 | | ND | PASS |
| Aflatoxin-G2 | 1.0 | 2 | | ND | PASS |
| Sum of Aflatoxins: | | | 4 | 0 | PASS |
| Ochratoxin-A | 8.7 | 20 | 20 | ND | PASS |

| Microbial Analysis | LOD (CFU/g) | RL (CFU/g) | Result (CFU/g) | Status |
|-----------------------------|-------------|------------|----------------|--------|
| Total Aerobic Count | 12 | 500,000 | ND | PASS |
| Total Yeast and Mold Count | 1.8 | 50,000 | 648 | PASS |
| Bile-Tolerant Gram-Negative | 5 | 10,000 | ND | PASS |
| Salmonella | | | Absent in 25g | PASS |
| E.coli | | | Absent in 1g | PASS |

| Heavy Metals Analysis | LOD (ppm) | LOQ (ppm) | RL (ppm) | Result (ppm) | Status |
|------------------------------|-----------|-----------|----------|--------------|--------|
| Arsenic | 0.05 | 0.2 | 0.2 | ND | PASS |
| Cadmium | 0.01 | 0.05 | 0.3 | ND | PASS |
| Lead | 0.02 | 0.5 | 0.5 | ND | PASS |
| Mercury | 0.01 | 0.05 | 0.1 | ND | PASS |

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

| Pesticides Analysis | LOD (ppm) | LOQ (ppm) | RL (ppm) | Result (ppm) | Status |
|----------------------------|-----------|-----------|----------|--------------|--------|
| Abamectin | 0.0057 | 0.1 | 0.1 | ND | PASS |
| Acephate | 0.0100 | 0.02 | 0.02 | ND | PASS |
| Acequinocyl | 0.0115 | 0.03 | 0.03 | ND | PASS |
| Acetamiprid | 0.0017 | 0.1 | 0.1 | ND | PASS |
| Aldicarb | 0.0442 | 1 | 1 | ND | PASS |
| Allethrin | 0.0314 | 0.2 | 0.2 | ND | PASS |
| Azadirachtin | 0.0729 | 1 | 1 | ND | PASS |
| Azoxystrobin | 0.0029 | 0.02 | 0.02 | ND | PASS |
| Benzovindiflupyr | 0.0038 | 0.02 | 0.02 | ND | PASS |
| Bifenazate | 0.0022 | 0.02 | 0.02 | ND | PASS |
| Bifenthrin | 0.0660 | 1 | 1 | ND | PASS |
| Boscalid | 0.0035 | 0.02 | 0.02 | ND | PASS |
| Buprofezin | 0.0014 | 0.02 | 0.02 | ND | PASS |
| Carbaryl | 0.0134 | 0.05 | 0.05 | ND | PASS |
| Carbofuran | 0.0018 | 0.02 | 0.02 | ND | PASS |
| Chlorantraniliprole | 0.0039 | 0.02 | 0.02 | ND | PASS |
| Chlorfenapyr | 0.0263 | 0.05 | 0.05 | ND | PASS |
| Chlorpyrifos | 0.0033 | 0.04 | 0.04 | ND | PASS |
| Clofentezine | 0.0022 | 0.02 | 0.02 | ND | PASS |
| Clothianidin | 0.0220 | 0.05 | 0.05 | ND | PASS |
| Coumaphos | 0.0038 | 0.02 | 0.02 | ND | PASS |
| Cyantraniliprole | 0.0032 | 0.02 | 0.02 | ND | PASS |
| Cyfluthrin | 0.0653 | 0.2 | 0.2 | ND | PASS |
| Cypermethrin | 0.1550 | 0.3 | 0.3 | ND | PASS |
| Cyprodinil | 0.0139 | 0.25 | 0.25 | ND | PASS |
| Daminozide | 0.0138 | 0.1 | 0.1 | ND | PASS |
| Deltamethrin | 0.0060 | 0.5 | 0.5 | ND | PASS |
| Diazinon | 0.0016 | 0.02 | 0.02 | ND | PASS |
| Dichlorvos | 0.0072 | 0.1 | 0.1 | ND | PASS |
| Dimethoate | 0.0053 | 0.02 | 0.02 | ND | PASS |
| Dimethomorph | 0.0023 | 0.05 | 0.05 | ND | PASS |
| Dinotefuran | 0.0076 | 0.1 | 0.1 | ND | PASS |
| Dodemorph | 0.0026 | 0.05 | 0.05 | ND | PASS |
| Endosulfan-alpha | 0.0357 | 0.2 | 0.2 | ND | PASS |
| Endosulfan-beta | 0.0173 | 0.05 | 0.05 | ND | PASS |
| Endosulfan sulfate | 0.0029 | 0.05 | 0.05 | ND | PASS |
| Ethoprophos | 0.0060 | 0.02 | 0.02 | ND | PASS |
| Etofenprox | 0.0059 | 0.05 | 0.05 | ND | PASS |
| Etoxazole | 0.0007 | 0.02 | 0.02 | ND | PASS |
| Etridiazol | 0.0036 | 0.03 | 0.03 | ND | PASS |
| Fenoxycarb | 0.0031 | 0.02 | 0.02 | ND | PASS |
| Fenpyroximate | 0.0008 | 0.02 | 0.02 | ND | PASS |
| Fensulfothion | 0.0046 | 0.02 | 0.02 | ND | PASS |

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

| Pesticides Analysis | LOD (ppm) | LOQ (ppm) | RL (ppm) | Result (ppm) | Status |
|----------------------------|-----------|-----------|----------|--------------|--------|
| Fenthion | 0.0085 | 0.02 | 0.02 | ND | PASS |
| Fenvalerate | 0.0767 | 0.1 | 0.1 | ND | PASS |
| Fipronil | 0.0013 | 0.06 | 0.06 | ND | PASS |
| Flonicamid | 0.0041 | 0.05 | 0.05 | ND | PASS |
| Fludioxonil | 0.0043 | 0.02 | 0.02 | ND | PASS |
| Fluopyram | 0.0014 | 0.02 | 0.02 | ND | PASS |
| Hexythiazox | 0.0016 | 0.01 | 0.01 | ND | PASS |
| Imazalil | 0.0060 | 0.05 | 0.05 | ND | PASS |
| Imidacloprid | 0.0018 | 0.02 | 0.02 | ND | PASS |
| Iprodione | 0.1217 | 1 | 1 | ND | PASS |
| Kinoprene | 0.1142 | 0.5 | 0.5 | ND | PASS |
| Kresoxim-methyl | 0.0069 | 0.02 | 0.02 | ND | PASS |
| Malathion | 0.0041 | 0.02 | 0.02 | ND | PASS |
| Metalaxyl | 0.0016 | 0.02 | 0.02 | ND | PASS |
| Methiocarb | 0.0027 | 0.02 | 0.02 | ND | PASS |
| Methomyl | 0.0093 | 0.05 | 0.05 | ND | PASS |
| Methoprene | 0.4544 | 2 | 2 | ND | PASS |
| Mevinphos | 0.0044 | 0.05 | 0.05 | ND | PASS |
| MGK-264 | 0.0035 | 0.05 | 0.05 | ND | PASS |
| Myclobutanil | 0.0062 | 0.02 | 0.02 | ND | PASS |
| Naled | 0.0218 | 0.1 | 0.1 | ND | PASS |
| Novaluron | 0.0019 | 0.05 | 0.05 | ND | PASS |
| Oxamyl | 0.0123 | 3 | 3 | ND | PASS |
| Paclobutrazol | 0.0187 | 0.02 | 0.02 | ND | PASS |
| Parathion-methyl | 0.0312 | 0.05 | 0.05 | ND | PASS |
| Permethrin | 0.0609 | 0.5 | 0.5 | ND | PASS |
| Phenothrin | 0.0294 | 0.05 | 0.05 | ND | PASS |
| Phosmet | 0.0046 | 0.02 | 0.02 | ND | PASS |
| Piperonyl butoxide | 0.0010 | 0.2 | 0.2 | ND | PASS |
| Pirimicarb | 0.0020 | 0.02 | 0.02 | ND | PASS |
| Prallethrin | 0.0097 | 0.05 | 0.05 | ND | PASS |
| Propiconazole | 0.0687 | 0.1 | 0.1 | ND | PASS |
| Propoxur | 0.0035 | 0.02 | 0.02 | ND | PASS |
| Pyraclostrobin | 0.0020 | 0.02 | 0.02 | ND | PASS |
| Pyrethrins | 0.0135 | 0.05 | 0.05 | ND | PASS |
| Pyridaben | 0.0010 | 0.05 | 0.05 | ND | PASS |
| Quintozene | 0.0074 | 0.02 | 0.02 | ND | PASS |
| Resmethrin | 0.0090 | 0.1 | 0.1 | ND | PASS |
| Spinetoram | 0.0012 | 0.02 | 0.02 | ND | PASS |
| Spinosad | 0.0020 | 0.1 | 0.1 | ND | PASS |
| Spirodiclofen | 0.0140 | 0.25 | 0.25 | ND | PASS |
| Spiromesifen | 0.0025 | 3 | 3 | ND | PASS |
| Spirotetramat | 0.0027 | 0.02 | 0.02 | ND | PASS |

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

| Pesticides Analysis | LOD (ppm) | LOQ (ppm) | RL (ppm) | Result (ppm) | Status |
|----------------------------|-----------|-----------|----------|--------------|--------|
| Spiroxamine | 0.0013 | 0.1 | 0.1 | ND | PASS |
| Tebuconazole | 0.0020 | 0.05 | 0.05 | ND | PASS |
| Tebufenozide | 0.0021 | 0.02 | 0.02 | ND | PASS |
| Teflubenzuron | 0.0015 | 0.05 | 0.05 | ND | PASS |
| Tetrachlorvinphos | 0.0026 | 0.02 | 0.02 | ND | PASS |
| Tetramethrin | 0.0239 | 0.1 | 0.1 | ND | PASS |
| Thiacloprid | 0.0014 | 0.02 | 0.02 | ND | PASS |
| Thiamethoxam | 0.0076 | 0.02 | 0.02 | ND | PASS |
| Thiophanate-methyl | 0.0174 | 0.05 | 0.05 | ND | PASS |
| Trifloxystrobin | 0.0018 | 0.02 | 0.02 | ND | PASS |

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

Details of Testing

Cannabinoid Analysis

Analysis of 11 Cannabinoids by HPLC & UHPLC

Method LAB-MTD-020: Flower (LOQ 0.06%), Oil (LOQ 0.03%), Concentrates (LOQ 0.6%)

Method LAB-MTD-021: Isolates (LOQ 0.06%)

Method LAB-MTD-023: Tablets & Granules (LOQ 0.025%)

Method LAB-MTD-030: Topicals (LOQ 0.005%)

Method LAB-MTD-039: Determination of 5 Cannabinoids in Cannabis Edibles; Liquid Edibles (LOQ 0.0002%) and Solid Edibles (LOQ 0.005%)

Terpene Analysis

Profile of 42 terpenes by GC/MS

Method LAB-MTD-035: Cannabis Flower, Oil

Pesticide Analysis

Determination of 96 Pesticide Residues by LC/MS/MS and GC/MS/MS

Method LAB-MTD-010: Cannabis Flower, Oil

Method LAB-MTD-040: Determination of EP Pesticide Residue in Cannabis Oil by GCMSMS

Method LAB-MTD-041: Determination of EP Pesticide Residues in Cannabis Flower and Related Products by GCMSMS

Mycotoxin Analysis

Determination of Aflatoxins B1, B2, G1, G2 and Ochratoxin-A by LC/MS/MS

Method LAB-MTD-010: Cannabis Flower, Oil

Method LAB-MTD-029: Tablets

Method LAB-MTD-037: Topicals

Heavy Metal Analysis

Determination of Heavy Metal contamination (Arsenic, Cadmium, Lead & Mercury) by ICP/MS

Method LAB-MTD-027: Cannabis Flower, Oil, Topicals, Tablets

Residual Solvents Analysis

Determination of 24 Residual Solvents by GC/MS

Method LAB-MTD-036: Cannabis Oil

Method LAB-MTD-028: Tablets

Determination of Butane and Propane Residual Solvents in Cannabis Oil

Method LAB-MTD-034 (GC/MS): Cannabis Oil

Information is accurate unless otherwise stated. The results of this report are reflective only to material and product analyzed as received. This report shall not be reproduced, without written approval from High North Laboratories. Test Results are confidential unless explicitly waived otherwise.

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist

Details of Testing

Microbial Analysis, Powdery Mildew & Gender Determination

Molecular detection and quantitation by PCR & qPCR

Cannabis Flower, Oil, Cannabis-Infused Products

Method MIC-MTD-001 (TAMC, TYMC, BTGN, E.coli, Salmonella, Staph/Pseudomonas)

Method MIC-MTD-005: (Powdery Mildew & Gender Determination)

Method MIC-MTD-006: Determination of Viruses in Cannabis via qPCR and ELISA

Moisture Analysis

Water Activity & Moisture Content (Loss on Drying)

Method LAB-MTD-017 (Loss on Drying; Dry flower only)

Method LAB-MTD-031 (Water activity, a_w)

Foreign Matter Analysis

Visual/Magnified Inspection for Foreign Matter

Method LAB-MTD-022

Total Ash Analysis

Method LAB-MTD-043: Total Ash by Muffle Furnace in Cannabis Products

Information is accurate unless otherwise stated. The results of this report are reflective only to material and product analyzed as received. This report shall not be reproduced, without written approval from High North Laboratories. Test Results are confidential unless explicitly waived otherwise.

Abbreviations: wt% = percentage of weight, CFU = colony forming units, ppm = Parts per million, ppb = Parts per billion, ND = None Detected, BLQ = Below Limit of Quantification, LOQ = Limit of Quantification, LOD = Limit of Detection, RL = Reporting Limit, * = Mixture of Isomers

Authorized by:


Ebai Achare
QA Specialist