

HIGH NORTH ID:
00106399
Date: 2021-11-18
Certificate: 1637267941



High North Inc.
241 Hanlan Rd, Unit 7
Woodbridge, ON, L4L 3R7
1-416-864-6119
LIC-P4PNJMAC20-2019


Client: Grow Cup
241 Hanlan Rd, Unit 7&8,
Woodbridge, ON, L4L 3R7
Name: Grow Cup
416-864-6119
rick+growcup@highnorth.com
Strain: Bubba Kush
Lot: Yifan Zhang
Matrix: Flower
Sub-matrix: Dried Flower
Sampled: 2021-11-12
Received: 2021-11-12

Certificate of Analysis

Cannabinoid Analysis	LOD (%)	LOQ (%)	wt%	mg/g
Total THC [(THCA x 0.877) + D9-THC]			21.566	215.664
Total CBD [(CBDA x 0.877) + CBD]			0.066	0.66
THCA-A	0.0090	0.03	23.539	235.388
D9-THC	0.0093	0.03	0.923	9.229
CBGA	0.0041	0.03	0.601	6.012
CBG	0.0094	0.03	0.115	1.153
CBDA	0.0100	0.03	0.075	0.753
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:			25.254	252.535

Terpene Analysis	LOD (%)	LOQ (%)	wt%
Farnesene*	0.0009	0.005	0.606
(R)-(+)-Limonene	0.0001	0.005	0.577
Trans-Caryophyllene	0.0002	0.005	0.473
Linalool	0.0003	0.005	0.261
Beta-Myrcene	0.0003	0.005	0.236
Ocimene*	0.0004	0.005	0.132
Alpha-Pinene	0.0003	0.005	0.115
Beta-Pinene	0.0002	0.005	0.105
Terpineol*	0.0001	0.005	0.098
Terpinolene	0.0003	0.005	0.098
Alpha-Humulene	0.0010	0.005	0.093

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: 

Amrita Naidu
QA Specialist

Terpene Analysis	LOD (%)	LOQ (%)	wt%
alpha-Bisabolol	0.0003	0.005	0.092
(R)-Endo-(+)-Fenchyl	0.0003	0.005	0.083
trans-Nerolidol	0.0004	0.005	0.041
Alpha-Phellandrene	0.0002	0.005	0.031
Camphene	0.0002	0.005	0.016
Caryophyllene oxide	0.0008	0.005	0.007
Geraniol	0.0007	0.005	0.006
Citronellol	0.0003	0.005	0.006
Alpha-Terpinene	0.0003	0.005	0.006
(1S)-3-Carene	0.0007	0.005	0.006
Nerol	0.0002	0.005	BLQ
Sabinene Hydrate	0.0001	0.005	BLQ
Gamma-Terpinene	0.0003	0.005	BLQ
Fenchone*	0.0003	0.005	BLQ
Sabinene	0.0013	0.005	BLQ
Phytol*	0.0013	0.010	ND
(+)-Cedrol	0.0010	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
Geranyl acetate	0.0002	0.005	ND
Alpha-Cedrene	0.0002	0.005	ND
Pulegone	0.0002	0.005	ND
Isoborneol	0.0002	0.005	ND
Camphor + Borneol*	0.0003	0.010	ND
Hexahydrothymol	0.0005	0.005	ND
Isopulegol	0.0004	0.005	ND
Eucalyptol	0.0007	0.005	ND
p-Cymene	0.0003	0.005	BLQ
Total of all quantified terpenes:			3.088

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Authorized by: *Amrita Naidu*

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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%), Extracts (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%)

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

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

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)

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

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