HIGH NORTH ID:
00106253
Date: 2021-11-18
Certificate: 1637265854

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	Strain:	Pink Lemonade
		Lot:	Sean Roosenberg
		Matrix:	Flower
Name:	Grow Cup 416-864-6119 rick+growcup@highnorth.com	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]			23.716	237.156
Total CBD [(CBDA x 0.877) + CBD]			0.091	0.914
THCA-A	0.0090	0.03	25.929	259.291
D9-THC	0.0093	0.03	0.976	9.758
CBGA	0.0041	0.03	0.499	4.986
CBDA	0.0100	0.03	0.104	1.042
CBG	0.0094	0.03	0.098	0.975
D8-THC	0.0137	0.03	ND	ND
CBC	0.0060	0.03	ND	ND
CBN	0.0067	0.03	ND	ND
CBD	0.0069	0.03	ND	ND
THCV	0.0093	0.03	ND	ND
CBDV	0.0090	0.03	ND	ND
Total of all quantified cannabinoids:			27.605	276.052

Terpene Analysis	LOD (%)	LOQ (%)	wt%
Trans-Caryophyllene	0.0002	0.005	0.554
Farnesene*	0.0009	0.005	0.279
Terpinolene	0.0003	0.005	0.275
(R)-(+)-Limonene	0.0001	0.005	0.202
Alpha-Humulene	0.0010	0.005	0.136
Linalool	0.0003	0.005	0.127
Ocimene*	0.0004	0.005	0.104
Beta-Pinene	0.0002	0.005	0.093
Alpha-Phellandrene	0.0002	0.005	0.088
Beta-Myrcene	0.0003	0.005	0.084
Terpineol*	0.0001	0.005	0.078

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

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Amrita Naidu
QA Specialist

Terpene Analysis	LOD (%)	LOQ (%)	wt%
Alpha-Pinene	0.0003	0.005	0.076
(R)-Endo-(+)-Fenchyl	0.0003	0.005	0.055
alpha-Bisabolol	0.0003	0.005	0.052
trans-Nerolidol	0.0004	0.005	0.024
(1S)-3-Carene	0.0007	0.005	0.023
Alpha-Terpinene	0.0003	0.005	0.019
Caryophyllene oxide	0.0008	0.005	0.01
Gamma-Terpinene	0.0003	0.005	0.01
Camphene	0.0002	0.005	0.01
Sabinene Hydrate	0.0001	0.005	0.006
Eucalyptol	0.0007	0.005	0.006
Sabinene	0.0013	0.005	0.006
Geraniol	0.0007	0.005	BLQ
Citronellol	0.0003	0.005	BLQ
Fenchone*	0.0003	0.005	BLQ
p-Cymene	0.0003	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
Nerol	0.0002	0.005	ND
Camphor + Borneol*	0.0003	0.010	ND
Isoborneol	0.0002	0.005	ND
Isopulegol	0.0004	0.005	ND
Hexahydrothymol	0.0005	0.005	ND
Total of all quantified terpenes:			2.317

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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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