HIGH NORTH ID:
00304490
Date: 2023-02-22
Certificate: 1677090182

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

Client:	Nuances Mj inc. 75 boulevard Poliquin, Sorel-Tracy, QC, J3P7Z5	Strain:	Gelato 33 and Hash
		Lot:	L452L453L454L455-FD1
		Matrix:	Flower
Name:	Alexandra Paquin 4509542400 apaquin@nuancesmj.com	Sub-matrix:	Milled Flower
		Sampled:	2023-02-16
		Received:	2023-02-21

Certificate of Analysis

Cannabinoid Analysis	LOD (%)	LOQ (%)	wt%	mg/g
Total THC [(THCA x 0.877) + D9-THC]			25.771	257.707
Total CBD [(CBDA x 0.877) + CBD]			0.082	0.82
THCA-A	0.0090	0.06	28.08	280.797
D9-THC	0.0093	0.06	1.145	11.448
CBGA	0.0041	0.06	0.603	6.026
CBG	0.0094	0.06	0.163	1.634
CBDA	0.0100	0.06	0.094	0.935
CBC	0.0060	0.06	ND	ND
D8-THC	0.0137	0.06	ND	ND
CBN	0.0067	0.06	ND	ND
THCV	0.0093	0.06	ND	ND
CBD	0.0069	0.06	ND	ND
CBDV	0.0090	0.06	ND	ND
Total of all quantified cannabinoids:			30.084	300.840

Terpene Analysis	LOD (%)	LOQ (%)	wt%
(R)-(+)-Limonene	0.0001	0.005	0.539
Linalool	0.0003	0.005	0.335
Trans-Caryophyllene	0.0002	0.005	0.319
Farnesene*	0.0009	0.005	0.3
Beta-Myrcene	0.0003	0.005	0.213
Terpineol*	0.0001	0.005	0.118
Guaiol	0.0003	0.005	0.101
(R)-Endo-(+)-Fenchyl Alcohol	0.0003	0.005	0.09
Alpha-Humulene	0.0010	0.005	0.087
Beta-Pinene	0.0002	0.005	0.083
Alpha-Pinene	0.0003	0.005	0.074

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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Terpene Analysis	LOD (%)	LOQ (%)	wt%
alpha-Bisabolol	0.0003	0.005	0.032
trans-Nerolidol	0.0004	0.005	0.023
Camphene	0.0002	0.005	0.015
Ocimene*	0.0004	0.005	0.012
Caryophyllene oxide	0.0008	0.005	0.007
Geraniol	0.0007	0.005	0.006
Terpinolene	0.0003	0.005	0.006
Citronellol	0.0003	0.005	0.005
Sabinene Hydrate	0.0001	0.005	BLQ
Fenchone*	0.0003	0.005	BLQ
Phytol*	0.0013	0.010	ND
(+)-Cedrol	0.0010	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
Geranyl acetate	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
Hexahydrothymol	0.0005	0.005	ND
Isopulegol	0.0004	0.005	ND
Gamma-Terpinene	0.0003	0.005	ND
Eucalyptol	0.0007	0.005	ND
p-Cymene	0.0003	0.005	ND
Alpha-Terpinene	0.0003	0.005	ND
Alpha-Phellandrene	0.0002	0.005	ND
(1S)-3-Carene	0.0007	0.005	ND
Sabinene	0.0013	0.005	ND
Total of all quantified terpenes:			2.365

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Authorized by:

Ryan Lee
Quality Assurance

Details of Testing

Cannabinoid Analysis

LAB-MTD-020: Determination of 11 Cannabinoids in Cannabis Flower (LOQ 0.06%), Fresh Flower (LOQ 0.015%), Oil (LOQ 0.03%) and Concentrates (LOQ 0.6%) by HPLC and UHPLC
LAB-MTD-021: Determination of Cannabinoids of Individually Isolated Sample by HPLC/UHPLC
LAB-MTD-023: Determination of 11 Cannabinoids in Cannabis Tablets and Granules (LOQ 0.025%) by HPLC/UHPLC
LAB-MTD-030: Determination of 11 Cannabinoids in Cannabis Topicals (LOQ 0.005%) by HPLC/UHPLC
LAB-MTD-039: Determination of 5 Cannabinoids in Cannabis Edibles; Liquid Edibles (LOQ 0.0002%) and Solid Edibles (LOQ 0.005%) by UHPLC

Terpene Analysis

LAB-MTD-035: Determination of Terpenes in Cannabis Flower and Oil by GC-MS

Pesticide Analysis

LAB-MTD-010: Determination of Pesticide and Mycotoxins in Cannabis by LC-MS/MS and GC-MS/MS
LAB-MTD-040: Determination of EP Pesticide Residues in Cannabis Oil and Related Products by GC-MS/MS
LAB-MTD-041: Determination of EP Pesticide Residues in Cannabis Flower and Related Products by GC-MS/MS
LAB-MTD-046: Determination of Health Canada Pesticide Residues and Toxins in Cannabis Oil and Related Products by LC-MS/MS

Mycotoxin Analysis

LAB-MTD-010: Determination of Pesticide and Mycotoxins in Cannabis by LC-MS/MS and GC-MS/MS
LAB-MTD-029: Determination of Toxins in Tablet Samples by LC-MS/MS
LAB-MTD-037: Determination of Mycotoxins in Topical/Cream Samples by LC-MS/MS

Heavy Metal Analysis

LAB-MTD-050: Multi-Element Analysis of Cannabis Dried Flower, Fresh Flower, Extracts, Rolling Papers, and Related Products by ICP-MS

Residual Solvents Analysis

LAB-MTD-036: Determination of Residual Solvents in Cannabis Oil by GC-MS
LAB-MTD-028: Determination of Residual Solvents in Tablet Samples by GC-MS
LAB-MTD-034: Determination of Propane and Butane in Cannabis Oil by GC-MS
LAB-MTD-038: Determination of Toluene in Cannabis Isolate by GC-MS

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Details of Testing

Microbial Analysis

MIC-MTD-001: Microbial Analysis of Cannabis Flower and Oil by qPCR
MIC-MTD-006: Determination of Viruses in Cannabis via qPCR and ELISA
MIC-MTD-007: Microbial Analysis of Cannabis by Culture Techniques
MIC-MTD-009: Cannabis Gender Determination by qPCR

Moisture Analysis

LAB-MTD-017: Determination of Moisture Content in Cannabis Flower
LAB-MTD-031: Water Activity Meter Setup and Operation

Sample Appearance and Foreign Matter

LAB-MTD-022: Sample Appearance and Detection of Foreign Matter Content in Cannabis Samples

Total Ash Analysis

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

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