

HIGH NORTH ID:  
00471339  
Date: 2024-04-30  
Certificate: 1714502945



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

Client: HASHTEK

Product: 240F NO LID  
Lot: GG240423NL  
Matrix: Oil  
Sub-matrix: Hash Rosin  
Sampled: 2024-04-23  
Received: 2024-04-25

## Certificate of Analysis

<b>Cannabinoid Analysis</b>	LOD (%)	LOQ (%)	wt%	mg/g
Total THC [(THCA x 0.877) + D9-THC]			69.9708	699.7087
Total CBD [(CBDA x 0.877) + CBD]			0.3752	3.7515
D9-THC	0.1	0.2	56.9531	569.5314
CBGA	0.1	0.2	4.5596	45.5960
CBG	0.1	0.2	2.3955	23.9549
THCA-A	0.1	0.2	14.8435	148.4348
CBC	0.1	0.2	0.9158	9.1581
CBCA	0.1	0.2	0.8575	8.5748
CBDA	0.1	0.2	0.4278	4.2777
THCV	0.1	0.2	0.3539	3.5388
THCVA	0.1	0.2	0.2314	2.3138
CBN	0.1	0.2	BLQ	BLQ
D8-THC	0.1	0.2	ND	ND
CBCVA	0.1	0.2	ND	ND
CBCV	0.1	0.2	ND	ND
CBD	0.1	0.2	ND	ND
CBDV	0.1	0.2	ND	ND
CBDVA	0.1	0.2	ND	ND
<b>Total of all quantified cannabinoids:</b>			81.5381	815.3803

<b>Terpene Analysis</b>	LOD (%)	LOQ (%)	wt%
Trans-Caryophyllene	0.0008	0.025	1.9374
Farnesene*	0.0055	0.050	1.2531
Alpha-Humulene	0.0005	0.025	0.5194
Linalool	0.0007	0.025	0.4029
(R)-(+)-Limonene	0.0007	0.025	0.3670
Alpha-Bisabolol	0.0008	0.025	0.1572
Beta-Myrcene	0.0005	0.025	0.1203
Alpha-Terpeneol	0.0008	0.025	0.0772
(R)-Endo-(+)-Fenchyl Alcohol	0.0010	0.025	0.0652
trans-Nerolidol	0.0006	0.025	0.0626

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-Pinene	0.0007	0.025	0.0451
Caryophyllene oxide	0.0007	0.025	0.0352
Beta-Pinene	0.0008	0.025	BLQ
Terpinolene	0.0008	0.025	BLQ
Borneol	0.0007	0.025	BLQ
Eucalyptol	0.0006	0.025	BLQ
Camphene	0.0017	0.025	BLQ
Gamma-Terpinene	0.0007	0.025	BLQ
Fenchone	0.0008	0.025	BLQ
Squalene	0.0029	0.050	ND
Phytol*	0.0018	0.050	ND
Nootkatone	0.0018	0.025	ND
Farnesol*	0.0016	0.050	ND
Phytane	0.0009	0.025	ND
(+)-Cedrol	0.0006	0.025	ND
Guaiol	0.0005	0.025	ND
cis-Nerolidol	0.0015	0.025	ND
Valencene	0.0005	0.025	ND
Eugenol	0.0023	0.025	ND
Alpha-Cedrene	0.0006	0.025	ND
Geranyl acetate	0.0009	0.025	ND
Carvacrol	0.0009	0.025	ND
Thymol	0.0012	0.025	ND
d-Valerolactam (2-piperidone)	0.0012	0.025	ND
(-)-Piperitone	0.0017	0.025	ND
Isobornyl Acetate	0.0018	0.025	ND
Carvone	0.0007	0.025	ND
Pulegone	0.0007	0.025	ND
Verbenone	0.0007	0.025	ND
Citral*	0.0021	0.025	ND
Geraniol	0.0007	0.025	ND
Safranal	0.0004	0.025	ND
Nerol	0.0010	0.025	ND
Citronellol	0.0008	0.025	ND
Octyl Acetate	0.0009	0.025	ND
Terpinen-4-ol	0.0010	0.025	ND
Camphor	0.0008	0.025	ND
Isoborneol	0.0006	0.025	ND
Menthol (Hexahydrothymol)	0.0010	0.025	ND
Menthone*	0.0007	0.025	ND
Isopulegol	0.0007	0.025	ND
Alpha-Thujone	0.0005	0.025	ND
Sabinene Hydrate	0.0010	0.025	ND
Cymene*	0.0006	0.025	ND

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<b>Terpene Analysis</b>	LOD (%)	LOQ (%)	wt%
Ocimene	0.0005	0.025	ND
Alpha-Terpinene	0.0004	0.025	ND
Alpha-Phellandrene	0.0010	0.025	ND
(1S)-3-Carene	0.0009	0.025	ND
Sabinene	0.0009	0.025	ND
<b>Total of all quantified terpenes:</b>			5.043

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## Details of Testing

### **Cannabinoid Analysis**

LAB-MTD-020: Determination of 16 Cannabinoids in Cannabis Flowers, Extracts, Topicals, Tablets and Isolates by HPLC

LAB-MTD-039: Determination of 11 Cannabinoids in Cannabis Edibles by HPLC

LAB-MTD-051: Assay of Cannabinoids in Cannabis Flower as per DAB by HPLC

LAB-MTD-052: Identification of CBD and THCA as per DAB by Thin-Layer Chromatography

LAB-MTD-059: Determination of 6 Cannabinoids in Cannabis Flower, Extract and Edibles by HPLC

### **Terpene Analysis**

LAB-MTD-044: Determination of Terpene Content in Cannabis Dried Flower, Fresh Flower and Extracts by GC-MS

### **Pesticide Analysis**

LAB-MTD-010: Determination of Health Canada Pesticide Residues and Toxins in Dried Cannabis Flower by LC-MS/MS and GC-MS/MS

LAB-MTD-040: Determination of EP 2.8.13 Pesticide Residues in Cannabis Extracts by GC-MS/MS

LAB-MTD-041: Determination of EP 2.8.13/USP 561 Pesticide Residues in Cannabis Flower by GC-MS/MS and LC-MS/MS

LAB-MTD-046: Determination of Health Canada Pesticides and Toxins in Cannabis Extracts by LC-MS/MS

LAB-MTD-048: Determination of Health Canada Pesticide Residues and Toxins in Fresh Cannabis Flower by LC-MS/MS and GC-MS/MS

LAB-MTD-055: Determination of Israel Pesticide Residues in Dried/Fresh Cannabis by LC-MS/MS and GC-MS/MS

### **Mycotoxin Analysis**

LAB-MTD-010: Determination of Health Canada Pesticide Residues and Toxins in Dried Cannabis Flower 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

LAB-MTD-046: Determination of Health Canada Pesticides and Toxins in Cannabis Extracts by LC-MS/MS

LAB-MTD-048: Determination of Health Canada Pesticide Residues and Toxins in Fresh Cannabis Flower by LC-MS/MS and GC-MS/MS

### **Flavonoid Analysis**

LAB-MTD-045: Determination of Flavonoids in Cannabis Dried Flower, Fresh Flower, and Extracts by LC-MS/MS

### **Peroxide Value, p-Anisidine and Acidity (FFA) Analysis**

LAB-MTD-049: Determination of Peroxide Value, p-Anisidine, and Acidity (FFA)

### **pH Analysis**

MIC-MTD-013: Determination of pH using pH Meter

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Kintesh Sutaria  
Quality Control and Release

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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  
MIC-MTD-010: Identification A and Identification B of Cannabis by DAB Monograph  
MIC-MTD-011: Analysis of Shigella Species in Cannabis and Cannabis Infused Products  
MIC-MTD-008: Analysis of Listeria Monocytogenes in Cannabis and Cannabis Infused Products  
MIC-MTD-012: Microbial Analysis of Cannabis and Cannabis Infused Products by TEMPO

### **Moisture Analysis**

LAB-MTD-017: Determination of Moisture Content in Cannabis Flower  
LAB-MTD-031: Water Activity Meter Setup and Operation  
LAB-MTD-053: Determination of Moisture Content by Loss on Drying Technique using Vacuum Oven  
LAB-MTD-056: Determination of Moisture Content by Karl Fischer Titration

### **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

### **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  
LAB-MTD-054: Determination of Acetic Acid in Flavour, Cannabis Vape Mix Oil and Cannabis Infused Flower by GC-MS

### **Heavy Metal Analysis**

LAB-MTD-027: Determination of Heavy Metals in Cannabis Samples (Cream/Topicals, Tablets and Edibles) by ICP-MS  
LAB-MTD-050: Multi-Element Analysis of Cannabis Dried Flower, Fresh Flower, Extracts, and Rolling Papers by ICP-MS  
LAB-MTD-058: Determination of Palladium (Pd) in Cannabis Dried Flower, Fresh Flower and Extracts by ICP-MS

### **Average Weight and Disintegration Testing**

USP <701> Disintegration  
USP <2040> Disintegration and Dissolution of Dietary Supplements  
LAB-SOP-037: Balance Usage and Daily Check

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