

HIGH NORTH ID:  
00402219  
Date: 2023-11-09  
Certificate: 1699543783



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

Client:	Rosebud Productions Inc. #115 - 23000 FRASERWOOD WAY, RICHMOND, BC, V6V 3C7	Product:	Blueberry Frost
Name:	Madeleine Gwynne 17782291621 madeleine@herbaldispatch.com	Lot:	230177
		Matrix:	Flower
		Sub-matrix:	Dried Flower
		Sampled:	2023-11-03
		Received:	2023-11-06

## Certificate of Analysis

Cannabinoid Analysis	LOD (%)	LOQ (%)	wt%	mg/g
Total THC [(THCA x 0.877) + D9-THC]			24.0004	240.0040
Total CBD [(CBDA x 0.877) + CBD]			0.0823	0.8228
THCA-A	0.015	0.06	26.4845	264.8455
CBGA	0.015	0.06	1.2738	12.7383
D9-THC	0.015	0.06	0.7735	7.7345
CBDA	0.015	0.06	0.0938	0.9382
CBG	0.015	0.06	0.0810	0.8098
CBC	0.015	0.06	ND	ND
D8-THC	0.015	0.06	ND	ND
CBN	0.015	0.06	ND	ND
THCV	0.015	0.06	ND	ND
CBD	0.015	0.06	ND	ND
CBDV	0.015	0.06	ND	ND
Total of all quantified cannabinoids:			28.7066	287.0663

Terpene Analysis	LOD (%)	LOQ (%)	wt%
(R)-(+)-Limonene	0.0006	0.005	0.5206
Trans-Caryophyllene	0.0011	0.005	0.4642
Beta-Myrcene	0.0004	0.005	0.2769
Linalool	0.0006	0.005	0.1599
Alpha-Humulene	0.0002	0.005	0.1364
Ocimene	0.0017	0.005	0.1291
Alpha-Pinene	0.0002	0.005	0.1091
Alpha-Terpineol	0.0007	0.005	0.0700
Beta-Pinene	0.0004	0.005	0.0675
(R)-Endo-(+)-Fenchyl Alcohol	0.0005	0.005	0.0448

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:

  
Krishna Patel  
Quality Assurance

Terpene Analysis	LOD (%)	LOQ (%)	wt%
Farnesene*	0.0029	0.010	0.0168
Camphene	0.0009	0.005	0.0127
Caryophyllene oxide	0.0009	0.005	0.0118
Borneol	0.0005	0.005	0.0063
Terpinolene	0.0005	0.005	0.0060
Fenchone	0.0003	0.005	0.0058
Squalene	0.0015	0.005	ND
Phytol*	0.0030	0.010	ND
Nootkatone	0.0009	0.005	ND
Farnesol*	0.0032	0.010	ND
Alpha-Bisabolol	0.0011	0.005	ND
Phytane	0.0006	0.005	ND
(+)-Cedrol	0.0004	0.005	ND
Guaiol	0.0013	0.005	ND
trans-Nerolidol	0.0005	0.005	ND
cis-Nerolidol	0.0012	0.005	ND
Valencene	0.0006	0.005	ND
Eugenol	0.0010	0.005	ND
Alpha-Cedrene	0.0004	0.005	ND
Geranyl acetate	0.0007	0.005	ND
Carvacrol	0.0005	0.005	ND
Thymol	0.0006	0.005	ND
d-Valerolactam (2-piperidone)	0.0015	0.005	ND
(-)-Piperitone	0.0012	0.005	ND
Isobornyl Acetate	0.0005	0.005	ND
Carvone	0.0006	0.005	ND
Pulegone	0.0006	0.005	ND
Verbenone	0.0006	0.005	ND
Citral*	0.0015	0.005	ND
Geraniol	0.0005	0.005	ND
Safranal	0.0004	0.005	ND
Nerol	0.0007	0.005	ND
Citronellol	0.0008	0.005	ND
Octyl Acetate	0.0005	0.005	ND
Terpinen-4-ol	0.0017	0.005	ND
Camphor	0.0005	0.005	ND
Isoborneol	0.0005	0.005	ND
Menthol (Hexahydrothymol)	0.0013	0.005	ND
Menthone*	0.0015	0.005	ND
Isopulegol	0.0010	0.005	ND
Alpha-Thujone	0.0010	0.005	ND
Sabinene Hydrate	0.0006	0.005	ND
Gamma-Terpinene	0.0002	0.005	ND

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:

  
Krishna Patel  
Quality Assurance

<b>Terpene Analysis</b>	LOD (%)	LOQ (%)	wt%
Eucalyptol	0.0011	0.005	ND
Cymene*	0.0004	0.005	ND
Alpha-Terpinene	0.0004	0.005	ND
Alpha-Phellandrene	0.0010	0.005	ND
(1S)-3-Carene	0.0009	0.005	ND
Sabinene	0.0003	0.005	ND
<b>Total of all quantified terpenes:</b>			2.038

<b>Moisture Analysis</b>	Result
Loss on Drying (Moisture Analyzer)	11.25%

<b>Visual Inspection/Olfactory</b>	Result
Foreign Matter	None Detected

<b>Mycotoxin Analysis</b>	LOD (ppb)	LOQ (ppb)	RL (ppb)	Result (ppb)	Status
Aflatoxin-B1	0.5000	2	2	ND	PASS
Aflatoxin-B2	0.5000	2		ND	
Aflatoxin-G1	0.3000	2		ND	
Aflatoxin-G2	0.6000	2		ND	
<b>Sum of Aflatoxins:</b>			4	0	PASS
Ochratoxin-A	5.6000	20	20	ND	PASS

<b>Microbial Analysis</b>	LOD (CFU/g)	RL (CFU/g)	Result (CFU/g)	Status
Total Aerobic Count	12	500,000	< 12	PASS
Total Yeast and Mold Count	2	50,000	< 2	PASS
Salmonella			Absent in 25g	PASS
E.coli			Absent in 1g	PASS
Bile-Tolerant Gram-Negative	5	10,000	< 5	PASS

<b>Heavy Metals Analysis</b>	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Arsenic	0.034	0.2	0.2	ND	PASS
Cadmium	0.016	0.06	0.3	ND	PASS
Lead	0.014	0.49	0.5	ND	PASS
Mercury	0.009	0.06	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:

  
Krishna Patel  
Quality Assurance

<b>Pesticides Analysis</b>	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Abamectin	0.0283	0.10	0.10	ND	PASS
Acephate	0.0034	0.02	0.02	ND	PASS
Acequinocyl	0.0080	0.03	0.03	ND	PASS
Acetamiprid	0.0076	0.10	0.10	ND	PASS
Aldicarb	0.0799	1.00	1.00	ND	PASS
Allethrin	0.0410	0.20	0.20	ND	PASS
Azadirachtin	0.6407	1.00	1.00	ND	PASS
Azoxystrobin	0.0031	0.02	0.02	ND	PASS
Benzovindiflupyr	0.0053	0.02	0.02	ND	PASS
Bifenazate	0.0053	0.02	0.02	ND	PASS
Bifenthrin	0.1389	1.00	1.00	ND	PASS
Boscalid	0.0051	0.02	0.02	ND	PASS
Buprofezin	0.0037	0.02	0.02	ND	PASS
Carbaryl	0.0068	0.05	0.05	ND	PASS
Carbofuran	0.0030	0.02	0.02	ND	PASS
Chlorantraniliprole	0.0051	0.02	0.02	ND	PASS
Chlorfenapyr	0.0155	0.05	0.05	ND	PASS
Chlorpyrifos	0.0081	0.04	0.04	ND	PASS
Clofentezine	0.0066	0.02	0.02	ND	PASS
Clothianidin	0.0098	0.05	0.05	ND	PASS
Coumaphos	0.0046	0.02	0.02	ND	PASS
Cyantraniliprole	0.0060	0.02	0.02	ND	PASS
Cyfluthrin	0.0432	0.20	0.20	ND	PASS
Cypermethrin	0.0760	0.30	0.30	ND	PASS
Cyprodinil	0.0477	0.25	0.25	ND	PASS
Daminozide	0.0200	0.10	0.10	ND	PASS
Deltamethrin	0.0913	0.50	0.50	ND	PASS
Diazinon	0.0050	0.02	0.02	ND	PASS
Dichlorvos	0.0279	0.10	0.10	ND	PASS
Dimethoate	0.0048	0.02	0.02	ND	PASS
Dimethomorph	0.0143	0.05	0.05	ND	PASS
Dinotefuran	0.0098	0.10	0.10	ND	PASS
Dodemorph	0.0074	0.05	0.05	ND	PASS
Endosulfan-alpha	0.0462	0.20	0.20	ND	PASS
Endosulfan-beta	0.0147	0.05	0.05	ND	PASS
Endosulfan sulfate	0.0108	0.05	0.05	ND	PASS
Ethoprophos	0.0058	0.02	0.02	ND	PASS
Etofenprox	0.0058	0.05	0.05	ND	PASS
Etoxazole	0.0025	0.02	0.02	ND	PASS
Etridiazole	0.0064	0.03	0.03	ND	PASS
Fenoxycarb	0.0062	0.02	0.02	ND	PASS
Fenpyroximate	0.0042	0.02	0.02	ND	PASS
Fensulfothion	0.0108	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:

  
Krishna Patel  
Quality Assurance

<b>Pesticides Analysis</b>	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Fenthion	0.0059	0.02	0.02	ND	PASS
Fenvalerate	0.0414	0.10	0.10	ND	PASS
Fipronil	0.0085	0.06	0.06	ND	PASS
Flonicamid	0.0152	0.05	0.05	ND	PASS
Fludioxonil	0.0061	0.02	0.02	ND	PASS
Fluopyram	0.0067	0.02	0.02	ND	PASS
Hexythiazox	0.0026	0.01	0.01	ND	PASS
Imazalil	0.0105	0.05	0.05	ND	PASS
Imidacloprid	0.0037	0.02	0.02	ND	PASS
Iprodione	0.2626	1.00	1.00	ND	PASS
Kinoprene	0.0717	0.50	0.50	ND	PASS
Kresoxim-methyl	0.0066	0.02	0.02	ND	PASS
Malathion	0.0053	0.02	0.02	ND	PASS
Metalaxyl	0.0041	0.02	0.02	ND	PASS
Methiocarb	0.0050	0.02	0.02	ND	PASS
Methomyl	0.0059	0.05	0.05	ND	PASS
Methoprene	0.3858	2.00	2.00	ND	PASS
Mevinphos	0.0092	0.05	0.05	ND	PASS
MGK-264	0.0130	0.05	0.05	ND	PASS
Myclobutanil	0.0055	0.02	0.02	ND	PASS
Naled	0.0166	0.10	0.10	ND	PASS
Novaluron	0.0134	0.05	0.05	ND	PASS
Oxamyl	0.0675	3.00	3.00	ND	PASS
Paclobutrazol	0.0054	0.02	0.02	ND	PASS
Parathion-methyl	0.0180	0.05	0.05	ND	PASS
Permethrin	0.1182	0.50	0.50	ND	PASS
Phenothrin	0.0116	0.05	0.05	ND	PASS
Phosmet	0.0064	0.02	0.02	ND	PASS
Piperonyl butoxide	0.0185	0.20	0.20	ND	PASS
Pirimicarb	0.0047	0.02	0.02	ND	PASS
Prallethrin	0.0126	0.05	0.05	ND	PASS
Propiconazole	0.0324	0.10	0.10	ND	PASS
Propoxur	0.0058	0.02	0.02	ND	PASS
Pyraclostrobin	0.0034	0.02	0.02	ND	PASS
Pyrethrins	0.0237	0.05	0.05	ND	PASS
Pyridaben	0.0069	0.05	0.05	ND	PASS
Quintozene	0.0062	0.02	0.02	ND	PASS
Resmethrin	0.0149	0.10	0.10	ND	PASS
Spinetoram	0.0043	0.02	0.02	ND	PASS
Spinosad	0.0237	0.10	0.10	ND	PASS
Spirodiclofen	0.0326	0.25	0.25	ND	PASS
Spiromesifen	0.1899	3.00	3.00	ND	PASS
Spirotetramat	0.0040	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:

  
Krishna Patel  
Quality Assurance

<b>Pesticides Analysis</b>	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Spiroxamine	0.0135	0.10	0.10	ND	PASS
Tebuconazole	0.0158	0.05	0.05	ND	PASS
Tebufenozide	0.0040	0.02	0.02	ND	PASS
Teflubenzuron	0.0153	0.05	0.05	ND	PASS
Tetrachlorvinphos	0.0060	0.02	0.02	ND	PASS
Tetramethrin	0.0164	0.10	0.10	ND	PASS
Thiacloprid	0.0031	0.02	0.02	ND	PASS
Thiamethoxam	0.0035	0.02	0.02	ND	PASS
Thiophanate-methyl	0.0102	0.05	0.05	ND	PASS
Trifloxystrobin	0.0055	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:

  
Krishna Patel  
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 11 Cannabinoids in Cannabis Edibles; Liquid Edibles (LOQ 0.0005%) and Solid Edibles (LOQ 0.005%) 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

### **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 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 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

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:

  
Krishna Patel  
Quality Assurance

---

## 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

### **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

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

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

### **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

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:

  
Krishna Patel  
Quality Assurance