

Certificate of Analysis

Cannabinoid Analysis	LOD (%)	LOQ (%)	wt%	mg/g
Total THC [(THCA x 0.877) + D9-THC]			21.324	213.244
Total CBD [(CBDA x 0.877) + CBD]			0.068	0.684
THCA-A	0.0090	0.03	22.647	226.469
D9-THC	0.0093	0.03	1.463	14.631
CBGA	0.0041	0.03	0.599	5.992
CBG	0.0094	0.03	0.156	1.56
CBDA	0.0100	0.03	0.078	0.78
D8-THC	0.0137	0.03	ND	ND
CBC	0.0060	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:			24.943	249.432

Terpene Analysis	LOD (%)	LOQ (%)	wt%
beta-Myrcene	0.0001	0.01	0.632
(R)-(+)-Limonene	0.0001	0.01	0.498
Trans-Caryophyllene	0.0001	0.01	0.346
Farnesene-2	0.0001	0.01	0.291
Linalool	0.0001	0.01	0.104
Terpineol (mix of isomers)	0.0001	0.01	0.088
alpha-Humulene	0.0001	0.01	0.079
beta-Pinene	0.0001	0.01	0.067
(R)-Endo-(+)-Fenchyl	0.0001	0.01	0.057
alpha-Bisabolol	0.0001	0.01	0.055
alpha-Pinene	0.0001	0.01	0.05

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

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Terpene Analysis	LOD (%)	LOQ (%)	wt%
Valencene	0.0001	0.01	0.026
Caryophyllene oxide	0.0001	0.01	0.015
Camphene	0.0001	0.01	0.014
Geraniol	0.0001	0.01	BLQ
Phytol	0.0001	0.06	BLQ
Terpinolene	0.0001	0.01	BLQ
trans-beta-Ocimene	0.0001	0.01	BLQ
Fenchone (mix of isomers)	0.0001	0.01	BLQ
(+)-Cedrol	0.0001	0.01	ND
Guaiol	0.0001	0.01	ND
trans-Nerolidol	0.0001	0.01	ND
cis-Nerolidol	0.0001	0.01	ND
Eugenol	0.0001	0.01	ND
Geraniol acetate	0.0001	0.01	ND
alpha-Cedrene	0.0001	0.01	ND
Pulegone	0.0001	0.01	ND
gamma-Terpineol	0.0001	0.01	ND
Citronellol	0.0001	0.01	ND
Nerol	0.0001	0.01	ND
Isoborneol	0.0001	0.01	ND
Camphor (mix of isomers)	0.0001	0.01	ND
Isopulegol	0.0001	0.01	ND
Hexahydrothymol	0.0001	0.01	ND
gamma-Terpinene	0.0001	0.01	ND
Sabinene Hydrate	0.0001	0.01	ND
p-Isopropyltoluene (p-	0.0001	0.01	ND
Eucalyptol	0.0001	0.01	ND
Ocimene (mixture of	0.0001	0.01	ND
(1S)-3-Carene	0.0001	0.01	ND
alpha-Phellandrene	0.0001	0.01	ND
alpha-Terpinene	0.0001	0.01	ND
Sabinene	0.0001	0.01	ND
Total of all quantified terpenes:			2.322

Moisture Analysis 9.25%

Foreign Matter Analysis None Detected

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Mycotoxin Analysis	LOD (ppb)	LOQ (ppb)	RL (ppb)	Result (ppb)	
Aflatoxin-B1	1.0	2	2	ND	PASS
Aflatoxin-B2	0.9	2		ND	PASS
Aflatoxin-G1	0.7	2		ND	PASS
Aflatoxin-G2	1.0	2		ND	PASS
Sum of Aflatoxins:			4	0	PASS
Ochratoxin-A	8.7	20	20	ND	PASS

Microbial Analysis		RL (CFU/g)	Result (CFU/g)	Status
Total Aerobic Count		100,000	ND	PASS
Total Yeast and Mold Count		1,000	ND	PASS
Bile-Tolerant Gram-Negative E.coli/Salmonella		1,000	ND Absent	PASS PASS

Heavy Metals Analysis	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Arsenic	0.05	0.2	0.2	ND	PASS
Cadmium	0.01	0.05	0.3	ND	PASS
Lead	0.02	0.5	0.5	ND	PASS
Mercury	0.01	0.05	0.1	ND	PASS

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Pesticides Analysis	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Abamectin	0.0057	0.1	0.1	ND	PASS
Acephate	0.0100	0.02	0.02	ND	PASS
Acequinocyl	0.0115	0.03	0.03	ND	PASS
Acetamiprid	0.0017	0.1	0.1	ND	PASS
Aldicarb	0.0442	1	1	ND	PASS
Allethrin	0.0314	0.2	0.2	ND	PASS
Azadirachtin	0.0729	1	1	ND	PASS
Azoxystrobin	0.0029	0.02	0.02	ND	PASS
Benzovindiflupyr	0.0038	0.02	0.02	ND	PASS
Bifenazate	0.0022	0.02	0.02	ND	PASS
Bifenthrin	0.0660	1	1	ND	PASS
Boscalid	0.0035	0.02	0.02	ND	PASS
Buprofezin	0.0014	0.02	0.02	ND	PASS
Carbaryl	0.0134	0.05	0.05	ND	PASS
Carbofuran	0.0018	0.02	0.02	ND	PASS
Chlorantraniliprole	0.0039	0.02	0.02	ND	PASS
Chlorfenapyr	0.0263	0.05	0.05	ND	PASS
Chlorpyrifos	0.0033	0.04	0.04	ND	PASS
Clofentezine	0.0022	0.02	0.02	ND	PASS
Clothianidin	0.0220	0.05	0.05	ND	PASS
Coumaphos	0.0038	0.02	0.02	ND	PASS
Cyantraniliprole	0.02	0.02	0.02	ND	PASS
Cyfluthrin	0.0653	0.2	0.2	ND	PASS
Cypermethrin	0.1550	0.3	0.3	ND	PASS
Cyprodinil	0.0139	0.25	0.25	ND	PASS
Daminozide	0.0138	0.1	0.1	ND	PASS
Deltamethrin	0.0060	0.5	0.5	ND	PASS
Diazinon	0.0016	0.02	0.02	ND	PASS
Dichlorvos	0.0072	0.1	0.1	ND	PASS
Dimethoate	0.0053	0.02	0.02	ND	PASS
Dimethomorph	0.0023	0.05	0.05	ND	PASS
Dinotefuran	0.0076	0.1	0.1	ND	PASS
Dodemorph	0.0026	0.05	0.05	ND	PASS
Endosulfan-alpha	0.0357	0.2	0.2	ND	PASS
Endosulfan-beta	0.0173	0.05	0.05	ND	PASS
Endosulfan sulfate	0.0029	0.05	0.05	ND	PASS
Ethoprophos	0.0060	0.02	0.02	ND	PASS
Etofenprox	0.0059	0.05	0.05	ND	PASS
Etoxazole	0.0007	0.02	0.02	ND	PASS
Etridiazol	0.0036	0.03	0.03	ND	PASS
Fenoxycarb	0.0031	0.02	0.02	ND	PASS
Fenpyroximate	0.0008	0.02	0.02	ND	PASS
Fensulfothion	0.0046	0.02	0.02	ND	PASS

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Pesticides Analysis	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Fenthion	0.0085	0.02	0.02	ND	PASS
Fenvalerate	0.0767	0.1	0.1	ND	PASS
Fipronil	0.0013	0.06	0.06	ND	PASS
Flonicamid	0.0041	0.05	0.05	ND	PASS
Fludioxonil	0.0043	0.02	0.02	ND	PASS
Fluopyram	0.0014	0.02	0.02	ND	PASS
Hexythiazox	0.0016	0.01	0.01	ND	PASS
Imazalil	0.0060	0.05	0.05	ND	PASS
Imidacloprid	0.0018	0.02	0.02	ND	PASS
Iprodione	0.1217	1	1	ND	PASS
Kinoprene	0.1142	0.5	0.5	ND	PASS
Kresoxim-methyl	0.0069	0.02	0.02	ND	PASS
Malathion	0.0041	0.02	0.02	ND	PASS
Metalaxyl	0.0016	0.02	0.02	ND	PASS
Methiocarb	0.0027	0.02	0.02	ND	PASS
Methomyl	0.0093	0.05	0.05	ND	PASS
Methoprene	0.4544	2	2	ND	PASS
Mevinphos	0.0044	0.05	0.05	ND	PASS
MGK-264	0.0035	0.05	0.05	ND	PASS
Myclobutanil	0.0062	0.02	0.02	ND	PASS
Naled	0.0218	0.1	0.1	ND	PASS
Novaluron	0.0019	0.05	0.05	ND	PASS
Oxamyl	0.0123	3	3	ND	PASS
Paclobutrazol	0.0187	0.02	0.02	ND	PASS
Parathion-methyl	0.0312	0.05	0.05	ND	PASS
Permethrin	0.0609	0.5	0.5	ND	PASS
Phenothrin	0.0294	0.05	0.05	ND	PASS
Phosmet	0.0046	0.02	0.02	ND	PASS
Piperonyl butoxide	0.0010	0.2	0.2	ND	PASS
Pirimicarb	0.0020	0.02	0.02	ND	PASS
Prallethrin	0.0097	0.05	0.05	ND	PASS
Propiconazole	0.0687	0.1	0.1	ND	PASS
Propoxur	0.0035	0.02	0.02	ND	PASS
Pyraclostrobin	0.0020	0.02	0.02	ND	PASS
Pyrethrins	0.0135	0.05	0.05	ND	PASS
Pyridaben	0.0010	0.05	0.05	ND	PASS
Quintozene	0.0074	0.02	0.02	ND	PASS
Resmethrin	0.0090	0.1	0.1	ND	PASS
Spinetoram	0.0012	0.02	0.02	ND	PASS
Spinosad	0.0020	0.1	0.1	ND	PASS
Spirodiclofen	0.0140	0.25	0.25	ND	PASS
Spiromesifen	0.0025	3	3	ND	PASS
Spirotetramat	0.0027	0.02	0.02	ND	PASS

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Pesticides Analysis	LOD (ppm)	LOQ (ppm)	RL (ppm)	Result (ppm)	Status
Spiroxamine	0.0013	0.1	0.1	ND	PASS
Tebuconazole	0.0020	0.05	0.05	ND	PASS
Tebufenozide	0.0021	0.02	0.02	ND	PASS
Teflubenzuron	0.0015	0.05	0.05	ND	PASS
Tetrachlorvinphos	0.0026	0.02	0.02	ND	PASS
Tetramethrin	0.0239	0.1	0.1	ND	PASS
Thiacloprid	0.0014	0.02	0.02	ND	PASS
Thiamethoxam	0.0076	0.02	0.02	ND	PASS
Thiophanate-methyl	0.0174	0.05	0.05	ND	PASS
Trifloxystrobin	0.0018	0.02	0.02	ND	PASS

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Details of Testing

Cannabinoid Analysis

Analysis of 11 Cannabinoids by HPLC & UHPLC

LOQ of 0.3% for Resins/Distillates/Isolates; 0.025% for Tablets; 0.03% for Flower/Oil Samples

HIGH NORTH Laboratories Methods: LAB-MTD-020, LAB-MTD-021, LAB-MTD-023 & LAB-MTD-030

Terpene Analysis

Profile of 42 Terpenes by GC-MS/MS

Cannabis Flower, Oil

HIGH NORTH Laboratories Method: LAB-MTD-018

Moisture Analysis

Water Activity & Moisture Content (Loss on Drying)

HIGH NORTH Laboratories Method: LAB-MTD-031 & LAB-MTD-017

Microbial Analysis, Powdery Mildew & Gender Determination

Molecular detection and quantitation by PCR & qPCR

Cannabis Flower, Cannabis-Infused Products

HIGH NORTH Laboratories Method: MIC-MTD-001 & MIC-MTD-005

Mycotoxin Analysis

Determination of Aflatoxins B1, B2, G1, G2 and Ochratoxin-A by LC-MS/MS

Cannabis Flower, Oil, Tablets

HIGH NORTH Laboratories Method: LAB-MTD-010, LAB-MTD-029

Heavy Metal Analysis

Determination of Heavy Metal contamination (Arsenic, Cadmium, Lead & Mercury) by ICP-MS

Cannabis Flower, Oil, Topicals, Tablets

HIGH NORTH Laboratories Method: LAB-MTD-027

Residual Solvents Analysis

Determination of 25 Residual Solvents by GC-MS/MS

Cannabis Oil, Tablets

HIGH NORTH Laboratories Method: LAB-MTD-005 & LAB-MTD-028

Pesticide Analysis

Determination of 96 Pesticide Residues by LC-MS/MS and GC-MS/MS

Cannabis Flower, Oil

HIGH NORTH Laboratories Method: LAB-MTD-010

Determination of Butane and Propane Residual Solvents in Cannabis Oil

HIGH NORTH Laboratories Method: LAB-MTD-034

Foreign Matter Analysis

Visual/Magnified Inspection for Foreign Matter

HIGH NORTH Laboratories Method: LAB-MTD-022

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