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CERTIFICATE OF ANALYSIS

Prepared for:

NULEAF NATURALS

1550 LARIMER ST. #964
DENVER, CO USA 80202

R30-BBD

Batch ID or Lot Number:	Test:	Reported:	USDA License:
D223S	**Potency**	**13Jun2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Solution	T000210288	13Jun2022	N/A
	Method(s):	Received:	Status:
	TM14 (HPLC-DAD)	13Jun2022	N/A

Cannabinoids

	LOD (mg/mL)	**LOQ** (mg/mL)	**Result** (mg/mL)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.181	0.590	3.000	3.30	Density = 0.92g/mL
Cannabichromenic Acid (CBCA)	0.166	0.540	ND	ND	
Cannabidiol (CBD)	0.512	1.528	30.230	32.90	
Cannabidiolic Acid (CBDA)	0.525	1.567	ND	ND	
Cannabidivarin (CBDV)	0.121	0.361	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.219	0.654	ND	ND	
Cannabigerol (CBG)	0.103	0.335	2.460	2.70	
Cannabigerolic Acid (CBGA)	0.431	1.400	ND	ND	
Cannabinol (CBN)	0.134	0.437	1.910	2.10	
Cannabinolic Acid (CBNA)	0.294	0.955	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.513	1.668	1.470	1.60	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.466	1.515	1.140	1.20	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.413	1.342	ND	ND	
Tetrahydrocannabivarin (THCV)	0.094	0.305	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.364	1.184	ND	ND	
Total Cannabinoids			**40.210**	**43.71**	
Total Potential THC			1.140	1.24	
Total Potential CBD			30.230	32.86	

Final Approval

Sam Smith
13Jun2022
03:48:00 PM MDT
PREPARED BY / DATE

Ryan Weems
13Jun2022
03:49:00 PM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/c59e4f2d-a51c-4e9e-90e7-bff39620ba58

Definitions
% = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method).
Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDa *(0.877)).

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1550 LARIMER ST. #964
DENVER, CO USA 80202

R30-BBD

Batch ID or Lot Number:	Test:	Reported:	USDA License:
D223S	**Microbial Contaminants**	**16Jun2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Finished Product	T000210291	13Jun2022	NA
	Method(s): TM25 (PCR) TM24, TM26, TM27 (Culture Plating)	Received: 13Jun2022	Status: NA

Microbial Contaminants

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10^0 CFU/g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10^0 CFU/g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10^2 CFU/g	$1.0x10^3$ - $1.5x10^5$	None Detected	
Total Coliforms*	TM27: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	

Final Approval

Brianne Maillot
16Jun2022
10:20:00 AM MDT
PREPARED BY / DATE

Eden Thompson-Wright
16Jun2022
11:07:00 AM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/66fbb2c8-aad2-442d-920e-878a3db84d74

Definitions
* Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form. Examples: 10^2 = 100 CFU, 10^3 = 1,000 CFU, 10^4 = 10,000 CFU, 10^5 = 100,000 CFU
CFU/g = Colony Forming Units per Gram, LOD = Limit of Detection
ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation
STEC = Shiga Toxin-Producing E. coli

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DENVER, CO USA 80202

R30-BBD

Batch ID or Lot Number:	Test:	Reported:	USDA License:
D223S	**Pesticides**	**16Jun2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000210290	14Jun2022	NA
	Method(s):	Received:	Status:
	TM17 (LC-QQ LC MS/MS)	13Jun2022	NA

Pesticides

	Dynamic Range (ppb)	**Result** (ppb)
Abamectin	365 - 2660	ND
Acephate	45 - 2774	ND
Acetamiprid	43 - 2778	ND
Azoxystrobin	40 - 2739	ND
Bifenazate	42 - 2765	ND
Boscalid	15 - 2744	ND
Carbaryl	40 - 2776	ND
Carbofuran	43 - 2761	ND
Chlorantraniliprole	46 - 2731	ND
Chlorpyrifos	47 - 2776	ND
Clofentezine	306 - 2776	ND
Diazinon	298 - 2777	ND
Dichlorvos	311 - 2758	ND
Dimethoate	45 - 2766	ND
E-Fenpyroximate	296 - 2737	ND
Etofenprox	42 - 2726	ND
Etoxazole	299 - 2708	ND
Fenoxycarb	45 - 2737	ND
Fipronil	39 - 2733	ND
Flonicamid	4 - 2732	ND
Fludioxonil	260 - 2633	ND
Hexythiazox	49 - 2737	ND
Imazalil	286 - 2760	ND
Imidacloprid	51 - 2800	ND
Kresoxim-methyl	53 - 2822	ND

	Dynamic Range (ppb)	**Result** (ppb)
Malathion	304 - 2758	ND
Metalaxyl	51 - 2788	ND
Methiocarb	39 - 2735	ND
Methomyl	42 - 2747	ND
MGK 264 1	187 - 1618	ND
MGK 264 2	129 - 1129	ND
Myclobutanil	37 - 2661	ND
Naled	28 - 2666	ND
Oxamyl	3 - 2768	ND
Paclobutrazol	41 - 2732	ND
Permethrin	340 - 2681	ND
Phosmet	41 - 2752	ND
Prophos	290 - 2708	ND
Propoxur	39 - 2744	ND
Pyridaben	302 - 2767	ND
Spinosad A	36 - 2242	ND
Spinosad D	55 - 497	ND
Spiromesifen	306 - 2722	ND
Spirotetramat	292 - 2784	ND
Spiroxamine 1	17 - 1160	ND
Spiroxamine 2	21 - 1502	ND
Tebuconazole	259 - 2755	ND
Thiacloprid	41 - 2763	ND
Thiamethoxam	45 - 2752	ND
Trifloxystrobin	41 - 2736	ND

Final Approval

Karen Winternheimer
16Jun2022
04:48:00 PM MDT
PREPARED BY / DATE

Daniel Weidensaul
16Jun2022
05:01:00 PM MDT
APPROVED BY / DATE

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Definitions
ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range
ppb = Parts Per Billion

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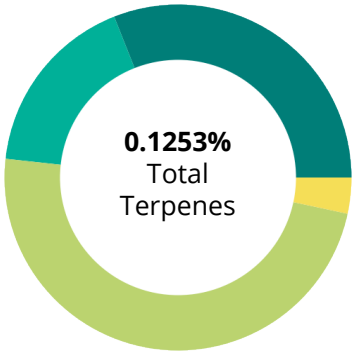
1550 LARIMER ST. #964
DENVER, CO USA 80202

R30-BBD

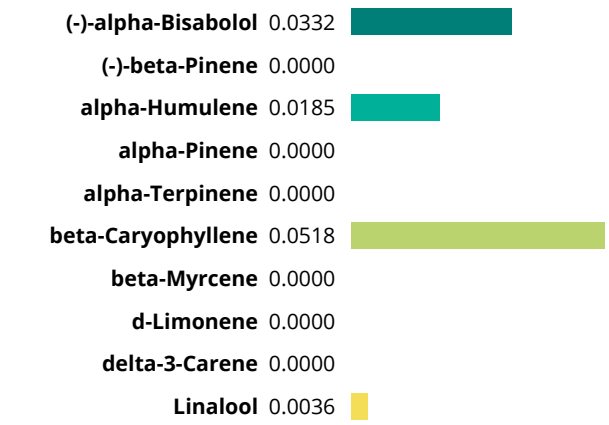
Batch ID or Lot Number:	Test:	Reported:	USDA License:
D223S	**Terpenes**	**14Jun2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000210289	13Jun2022	NA
	Method(s):	Received:	Status:
	TM22 (GC-MS)	13Jun2022	NA

Terpenes

Terpenes	%(w/w)	(mg/g)
(-)-alpha-Bisabolol	0.0332	0.332
(-)-beta-Pinene	0.0000	0.0000
(-)-Caryophyllene Oxide	0.0143	0.143
(-)-Isopulegol	0.0000	0.0000
alpha-Humulene	0.0185	0.185
alpha-Pinene	0.0000	0.0000
alpha-Terpinene	0.0000	0.0000
beta-Caryophyllene	0.0518	0.518
beta-Myrcene	0.0000	0.0000
beta-Ocimene	0.0000	0.0000
Camphene	0.0000	0.0000
cis-Nerolidol	0.0000	0.0000
d-Limonene	0.0000	0.0000
delta-3-Carene	0.0000	0.0000
Eucalyptol	0.0000	0.0000
gamma-Terpinene	0.0000	0.0000
Geraniol	0.0000	0.0000
Linalool	0.0036	0.036
Ocimene	0.0000	0.0000
p-Cymene	0.0000	0.0000
Terpinolene	0.0000	0.0000
trans-Nerolidol	0.0039	0.039
	0.1253	**1.2530**



PREDOMINANT TERPENES



Notes

Final Approval

Daniel Weidensaul
14Jun2022
01:30:00 PM MDT

PREPARED BY / DATE

Jacob Miller
14Jun2022
01:32:00 PM MDT

APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/6ae4d5f8-43c0-4270-865c-e87ddfa40cb1

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1550 LARIMER ST. #964
DENVER, CO USA 80202

R30-BBD

Batch ID or Lot Number:	Test:	Reported:	USDA License:
D223S	**Residual Solvents**	**15Jun2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000210293	14Jun2022	N/A
	Method(s):	Received:	Status:
	TM04 (GC-MS): Residual Solvents	13Jun2022	Active

Residual Solvents

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Propane	83 - 1670	ND	
Butanes (Isobutane, n-Butane)	127 - 2542	ND	
Methanol	52 - 1035	ND	
Pentane	75 - 1495	ND	
Ethanol	75 - 1499	ND	
Acetone	80 - 1603	ND	
Isopropyl Alcohol	85 - 1691	ND	
Hexane	5 - 104	ND	
Ethyl Acetate	84 - 1675	ND	
Benzene	0.2 - 3.4	ND	
Heptanes	82 - 1631	ND	
Toluene	15 - 304	ND	
Xylenes (m,p,o-Xylenes)	111 - 2221	ND	

Final Approval

Jacob Miller
15Jun2022
10:55:00 AM MDT
PREPARED BY / DATE

Ryan Weems
15Jun2022
10:56:00 AM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/0f7c5b7e-773c-4bbf-bcd5-7166782b64e3

Definitions
ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

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