

Menthol Pain Relief Roll On

 Sample ID: SA-230216-17102
 Batch: 1231902
 Type: Finished Products
 Matrix: Topical - Other
 Unit Mass (g): 85.0486

 Received: 02/21/2023
 Completed: 03/08/2023

Client
 Herbal Healers LLC
 6073 Pidcock Creek Rd
 New Hope, PA 18938
 USA
 Lic. #: 42-001142


Summary

Test	Date Tested	Status
Cannabinoids	02/27/2023	Tested
Foreign Matter	02/27/2023	Tested
Heavy Metals	03/02/2023	Tested
Microbials	03/02/2023	Tested
Mycotoxins	03/07/2023	Tested
Pesticides	03/07/2023	Tested
Residual Solvents	03/08/2023	Tested
Terpenes	03/01/2023	Tested

ND Total Δ9-THC	3.97 % CBD	4.30 % Total Cannabinoids	Not Tested Moisture Content	Not Detected Foreign Matter	Yes Internal Standard Normalization
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Cannabinoids by HPLC-PDA, LC-MS/MS, and/or GC-MS/MS

Analyte	LOD (%)	LOQ (%)	Result (%)	Result (mg/unit)
CBC	0.00095	0.00284	ND	ND
CBCA	0.00181	0.00543	ND	ND
CBCV	0.0006	0.0018	ND	ND
CBD	0.00081	0.00242	3.97	3370
CBDA	0.00043	0.0013	ND	ND
CBDV	0.00061	0.00182	0.0192	16.3
CBDVA	0.00021	0.00063	ND	ND
CBG	0.00057	0.00172	0.312	266
CBGA	0.00049	0.00147	ND	ND
CBL	0.00112	0.00335	ND	ND
CBLA	0.00124	0.00371	ND	ND
CBN	0.00056	0.00169	ND	ND
CBNA	0.0006	0.00181	ND	ND
CBT	0.0018	0.0054	0.00564	4.80
Δ8-THC	0.00104	0.00312	ND	ND
Δ9-THC	0.00076	0.00227	ND	ND
Δ9-THCA	0.00084	0.00251	ND	ND
Δ9-THCV	0.00069	0.00206	ND	ND
Δ9-THCVA	0.00062	0.00186	ND	ND
Total Δ9-THC			ND	ND
Total CBD			3.97	3370
Total			4.30	3660

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; RL = Reporting Limit; Δ = Delta; Total Δ9-THC = Δ9-THCA * 0.877 + Δ9-THC; Total CBD = CBDA * 0.877 + CBD;



 Generated By: Ryan Bellone
 CCO
 Date: 03/08/2023



 Tested By: Nicholas Howard
 Scientist
 Date: 02/27/2023

 ISO/IEC 17025:2017 Accredited
 Accreditation #108651


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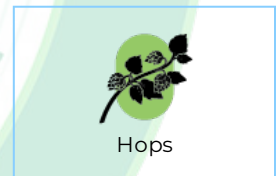
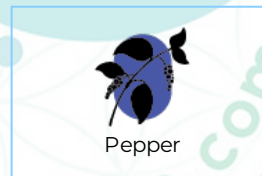
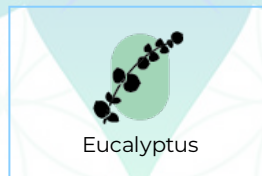
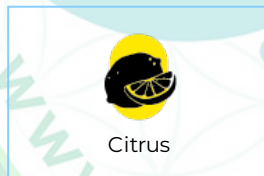
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Terpenes by GC-MS

Analyte	LOD (%)	LOQ (%)	Result (%)	Analyte	LOD (%)	LOQ (%)	Result (%)
α -Bisabolol	0.001	0.005	ND	Limonene	0.001	0.005	0.34285
(+)-Borneol	0.001	0.005	ND	Linalool	0.001	0.005	0.01378
Camphene	0.001	0.005	ND	β -myrcene	0.001	0.005	0.01017
Camphor	0.002	0.01	ND	Nerol	0.001	0.005	ND
3-Carene	0.001	0.005	ND	cis-Nerolidol	0.001	0.005	ND
β -Caryophyllene	0.001	0.005	0.03874	trans-Nerolidol	0.001	0.005	ND
Caryophyllene Oxide	0.001	0.005	ND	Ocimene	0.001	0.005	ND
α -Cedrene	0.001	0.005	ND	α -Phellandrene	0.001	0.005	0.00932
Cedrol	0.001	0.005	ND	α -Pinene	0.001	0.005	0.01192
Eucalyptol	0.001	0.005	0.08194	β -Pinene	0.001	0.005	0.02072
Fenchone	0.002	0.01	ND	Pulegone	0.001	0.005	ND
Fenchyl Alcohol	0.001	0.005	ND	Sabinene	0.001	0.005	ND
Geraniol	0.001	0.005	ND	Sabinene Hydrate	0.001	0.005	ND
Geranyl Acetate	0.001	0.005	ND	α -Terpinene	0.001	0.005	ND
Guaiol	0.001	0.005	ND	γ -Terpinene	0.001	0.005	0.0051
Hexahydrothymol	0.001	0.005	4.9716	α -Terpineol	0.0005	0.0025	ND
α -Humulene	0.001	0.005	<LOQ	γ -Terpineol	0.0005	0.0025	ND
Isoborneol	0.001	0.005	ND	Terpinolene	0.001	0.005	ND
Isopulegol	0.001	0.005	0.00526	Valencene	0.001	0.005	ND
				Total Terpenes (%)			5.51

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 Date: 03/08/2023



 Tested By: Jasper van Heemst
 Principal Scientist
 Date: 03/01/2023


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Heavy Metals by ICP-MS

Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)
Arsenic	2	20	ND
Cadmium	1	20	ND
Lead	2	20	ND
Mercury	12	50	ND

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 Date: 03/08/2023



Tested By: Chris Farman
 Scientist
 Date: 03/02/2023



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Pesticides by LC-MS/MS

Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)
Acephate	30	100	ND	Hexythiazox	30	100	ND
Acetamidiprid	30	100	ND	Imazalil	30	100	ND
Aldicarb	30	100	ND	Imidacloprid	30	100	ND
Azoxystrobin	30	100	ND	Kresoxim methyl	30	100	ND
Bifenazate	30	100	ND	Malathion	30	100	ND
Bifenthrin	30	100	ND	Metaxyl	30	100	ND
Boscalid	30	100	ND	Methiocarb	30	100	ND
Carbaryl	30	100	ND	Methomyl	30	100	ND
Carbofuran	30	100	ND	Mevinphos	30	100	ND
Chloranthraniliprole	30	100	ND	Myclobutanil	30	100	ND
Chlorfenapyr	30	100	ND	Naled	30	100	ND
Chlorpyrifos	30	100	ND	Oxamyl	30	100	ND
Clofentezine	30	100	ND	Paclobutrazol	30	100	ND
Coumaphos	30	100	ND	Permethrin	30	100	ND
Daminozide	30	100	ND	Phosmet	30	100	ND
Diazinon	30	100	ND	Piperonyl Butoxide	30	100	ND
Dichlorvos	30	100	ND	Propiconazole	30	100	ND
Dimethoate	30	100	ND	Propoxur	30	100	ND
Dimethomorph	30	100	ND	Pyrethrins	30	100	ND
Ethoprophos	30	100	ND	Pyridaben	30	100	ND
Etofenprox	30	100	ND	Spinetoram	30	100	ND
Etoxazole	30	100	ND	Spinosad	30	100	ND
Fenhexamid	30	100	ND	Spiromesifen	30	100	ND
Fenoxycarb	30	100	ND	Spirotetramat	30	100	ND
Fenpyroximate	30	100	ND	Spiroxamine	30	100	ND
Fipronil	30	100	ND	Tebuconazole	30	100	<LOQ
Fonicamid	30	100	ND	Thiacloprid	30	100	ND
Fludioxonil	30	100	ND	Thiamethoxam	30	100	ND
				Trifloxystrobin	30	100	ND

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 CCO
 Date: 03/08/2023



 Tested By: Jasper van Heemst
 Principal Scientist
 Date: 03/07/2023


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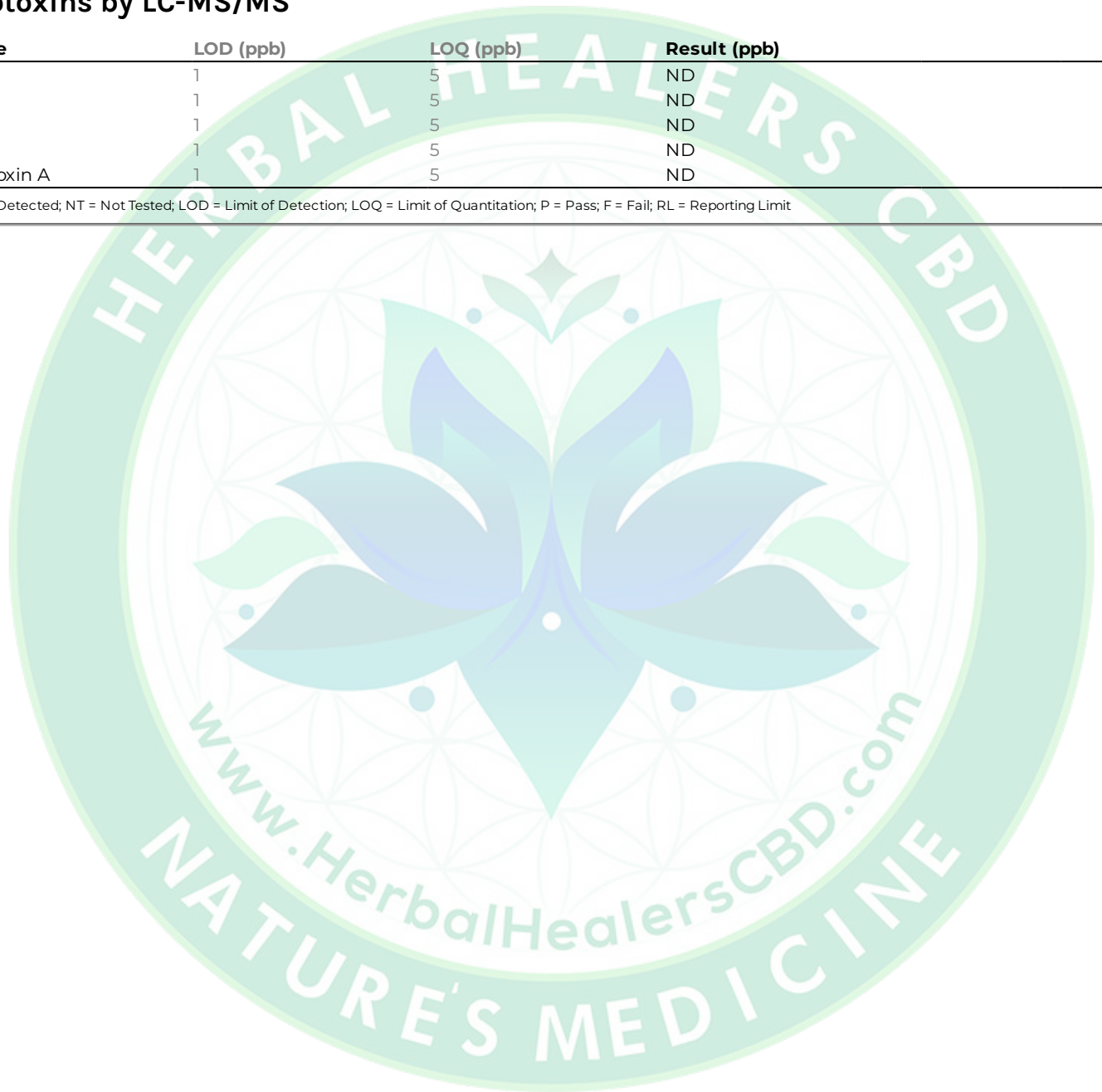
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Mycotoxins by LC-MS/MS

Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)
B1	1	5	ND
B2	1	5	ND
G1	1	5	ND
G2	1	5	ND
Ochratoxin A	1	5	ND

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit




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 CCO
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Tested By: Jasper van Heemst
 Principal Scientist
 Date: 03/07/2023



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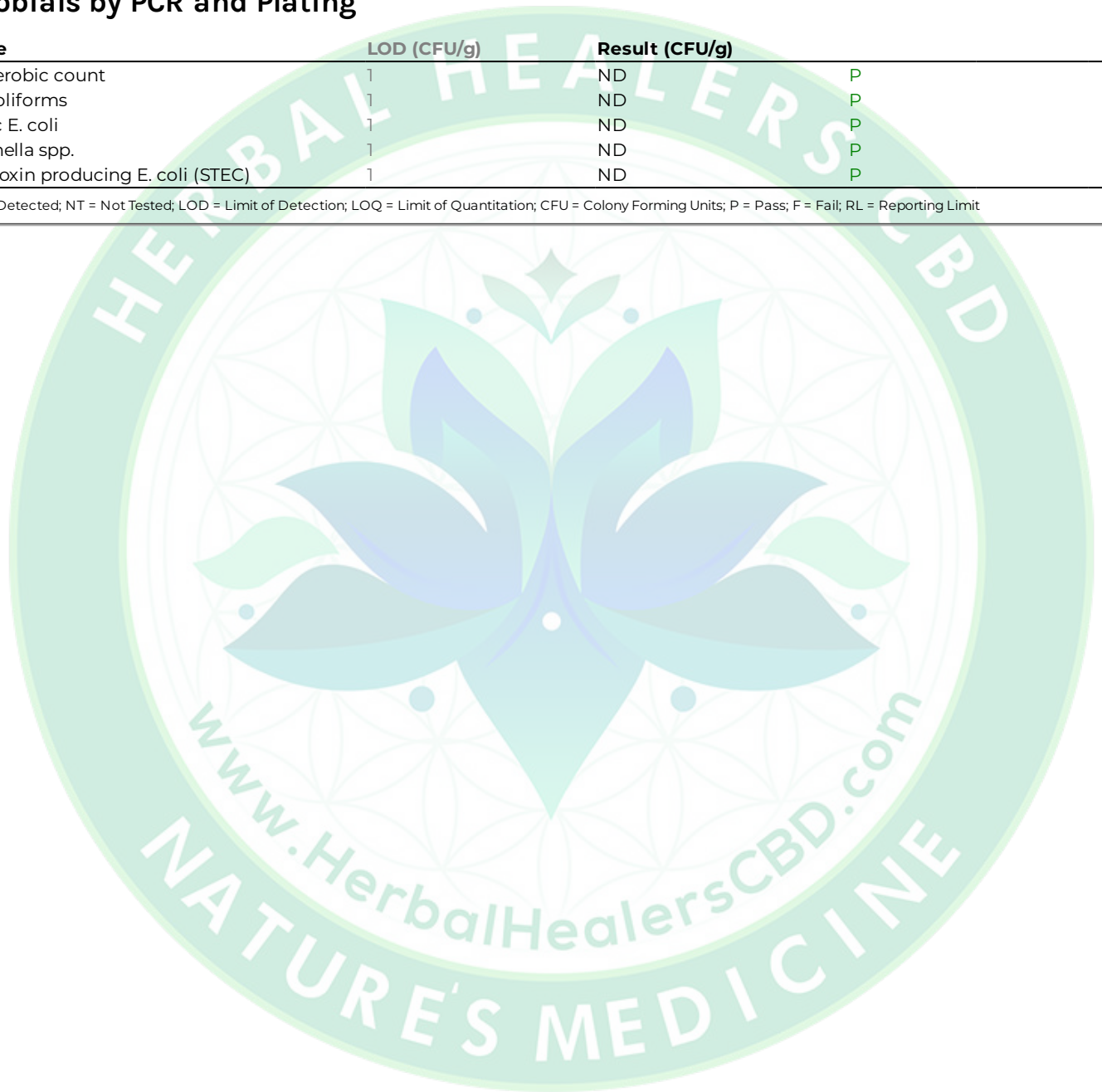
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Microbials by PCR and Plating

Analyte	LOD (CFU/g)	Result (CFU/g)	
Total aerobic count	1	ND	P
Total coliforms	1	ND	P
Generic E. coli	1	ND	P
Salmonella spp.	1	ND	P
Shiga-toxin producing E. coli (STEC)	1	ND	P

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 CCO
 Date: 03/08/2023



 Tested By: Matt Zachman
 Laboratory Technician
 Date: 03/02/2023


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Residual Solvents by HS-GC-MS

Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)	Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)
Acetone	167	500	ND	Ethylene Glycol	21	62	ND
Acetonitrile	14	41	ND	Ethylene Oxide	0.5	1	ND
Benzene	0.5	1	ND	Heptane	167	500	ND
Butane	167	500	ND	n-Hexane	10	29	ND
1-Butanol	167	500	ND	Isobutane	167	500	ND
2-Butanol	167	500	ND	Isopropyl Acetate	167	500	ND
2-Butanone	167	500	ND	Isopropyl Alcohol	167	500	ND
Chloroform	2	6	ND	Isopropylbenzene	167	500	ND
Cyclohexane	129	388	ND	Methanol	100	300	ND
1,2-Dichloroethane	0.5	1	ND	2-Methylbutane	10	29	ND
1,2-Dimethoxyethane	4	10	ND	Methylene Chloride	20	60	ND
Dimethyl Sulfoxide	167	500	ND	2-Methylpentane	10	29	ND
N,N-Dimethylacetamide	37	109	ND	3-Methylpentane	10	29	ND
2,2-Dimethylbutane	10	29	ND	n-Pentane	167	500	ND
2,3-Dimethylbutane	10	29	ND	1-Pentanol	167	500	ND
N,N-Dimethylformamide	30	88	ND	n-Propane	167	500	ND
2,2-Dimethylpropane	167	500	ND	1-Propanol	167	500	ND
1,4-Dioxane	13	38	ND	Pyridine	7	20	ND
Ethanol	167	500	ND	Tetrahydrofuran	24	72	ND
2-Ethoxyethanol	6	16	ND	Toluene	30	89	ND
Ethyl Acetate	167	500	ND	Trichloroethylene	3	8	ND
Ethyl Ether	167	500	ND	Tetramethylene Sulfone	6	16	ND
Ethylbenzene	3	7	ND	Xylenes (o-, m-, and p-)	73	217	ND

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 Generated By: Ryan Bellone
 CCO
 Date: 03/08/2023



 Tested By: Scott Caudill
 Senior Scientist
 Date: 03/08/2023
