

Prepared for:
Lupulin Brewing Company
570 Humboldt Drive, Ste. 107
Big Lake, MN USA 55309

Smazey

Batch ID or Lot Number: SMZ34-35	Test: Potency	Reported: 20Sep2023	USDA License: N/A
Matrix: Unit	Test ID: T000256487	Started: 20Sep2023	Sampler ID: N/A
	Method(s): TM14 (HPLC-DAD)	Received: 20Sep2023	Status: N/A

Cannabinoids

	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.172	0.622	ND	ND	# of Servings = 1, Sample Weight=473g
Cannabichromenic Acid (CBCA)	0.158	0.569	ND	ND	
Cannabidiol (CBD)	0.635	1.657	ND	ND	
Cannabidiolic Acid (CBDA)	0.651	1.699	ND	ND	
Cannabidivarin (CBDV)	0.150	0.392	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.271	0.709	ND	ND	
Cannabigerol (CBG)	0.098	0.353	ND	ND	
Cannabigerolic Acid (CBGA)	0.409	1.477	ND	ND	
Cannabinol (CBN)	0.128	0.461	ND	ND	
Cannabinolic Acid (CBNA)	0.279	1.008	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.487	1.760	<LOQ	<LOQ	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.443	1.598	9.730	0.00	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.392	1.416	ND	ND	
Tetrahydrocannabivarin (THCV)	0.089	0.321	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.346	1.249	ND	ND	
Total Cannabinoids			9.730	0.00	
Total Potential THC			9.730	0.00	
Total Potential CBD			ND	ND	

Final Approval



Karen Winternheimer
20Sep2023
04:39:00 PM MDT

PREPARED BY / DATE



Sam Smith
20Sep2023
04:41:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/8406531d-efe0-430b-97b2-ec98b9b1d124>

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)).

Testing results are based solely upon the sample submitted to SC Laboratories, Inc., in the condition it was received. SC Laboratories, Inc., warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited by A2LA.



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Lupulin Brewing Company
570 Humboldt Drive, Ste. 107
Big Lake, MN USA 55309

Smazey

Batch ID or Lot Number: SMZ34-35	Test, Test ID and Methods: Various	Matrix: Finished Product	Page 1 of 3
Reported: 27Sep2023	Started: 26Sep2023	Received: 25Sep2023	


Pesticides


Test ID: T000257105

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	311 - 2689	ND		Malathion	262 - 2743	ND
Acephate	47 - 2789	ND		Metalaxyl	41 - 2719	ND
Acetamiprid	40 - 2750	ND		Methiocarb	41 - 2788	ND
Azoxystrobin	44 - 2737	ND		Methomyl	40 - 2776	ND
Bifenazate	39 - 2749	ND		MGK 264 1	176 - 1672	ND
Boscalid	42 - 2758	ND		MGK 264 2	114 - 1081	ND
Carbaryl	41 - 2732	ND		Myclobutanil	142 - 2789	ND
Carbofuran	40 - 2727	ND		Naled	46 - 2768	ND
Chlorantraniliprole	45 - 2795	ND		Oxamyl	42 - 2771	ND
Chlorpyrifos	46 - 2687	ND		Paclobutrazol	44 - 2699	ND
Clofentezine	284 - 2765	ND		Permethrin	297 - 2665	ND
Diazinon	274 - 2760	ND		Phosmet	39 - 2761	ND
Dichlorvos	305 - 2781	ND		Prophos	321 - 2786	ND
Dimethoate	42 - 2753	ND		Propoxur	41 - 2711	ND
E-Fenpyroximate	289 - 2723	ND		Pyridaben	285 - 2699	ND
Etofenprox	39 - 2673	ND		Spinosad A	31 - 2104	ND
Etoxazole	294 - 2706	ND		Spinosad D	63 - 661	ND
Fenoxycarb	38 - 2765	ND		Spiromesifen	276 - 2696	ND
Fipronil	77 - 2752	ND		Spirotetramat	268 - 2774	ND
Flonicamid	40 - 2834	ND		Spiroxamine 1	19 - 1220	ND
Fludioxonil	281 - 2808	ND		Spiroxamine 2	21 - 1563	ND
Hexythiazox	38 - 2721	ND		Tebuconazole	286 - 2743	ND
Imazalil	252 - 2790	ND		Thiacloprid	41 - 2736	ND
Imidacloprid	42 - 2788	ND		Thiamethoxam	42 - 2772	ND
Kresoxim-methyl	42 - 2769	ND		Trifloxystrobin	44 - 2709	ND

Final Approval


Karen Winternheimer
27Sep2023
01:00:00 PM MDT
PREPARED BY / DATE


Sam Smith
27Sep2023
01:03:00 PM MDT
APPROVED BY / DATE

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Heavy Metals


Test ID: T000257107
Methods: TM19 (ICP-MS): Heavy Metals

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.05 - 4.53	ND	
Cadmium	0.05 - 4.68	ND	
Mercury	0.05 - 4.59	ND	
Lead	0.05 - 4.73	ND	

Final Approval


Samantha Smith
27Sep2023
02:50:00 PM MDT

PREPARED BY / DATE


Karen Winternheimer
27Sep2023
02:55:00 PM MDT

APPROVED BY / DATE

Microbial Contaminants


Test ID: T000257106
Methods: TM25 (PCR) TM24, TM26, TM27 (Culture Plating)

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 ⁰ CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10 ⁰ CFU/25g	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	5.4x10 ⁴ CFU/g	
Total Coliforms*	TM27: Culture Plating	10 ¹ CFU/g	1.0x10 ² - 1.5x10 ⁴	None Detected	

Final Approval


Brianne Maillot
28Sep2023
11:58:00 AM MDT

PREPARED BY / DATE


Eden Thompson-Wright
28Sep2023
12:52:00 PM MDT

APPROVED BY / DATE

Prepared for:
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<https://results.botanacor.com/api/v1/coas/uuid/de502a9f-816c-4abb-9eba-0ef933265009>

Definitions
LOD = Limit of Detection, ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation, PPB = Parts per Billion, % = % (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)). Fail equates to a concentration level of Delta 9-THC, on a dry weight basis, higher than 0.3 percent + or - the measurement uncertainty. Total Potential THC is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step. Total THC = THC + (THCa * (0.877)). ALOQ = Above Limit Of Quantitation (defined by dynamic range of the method), CFU/g = Colony Forming Units per Gram. Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form. Examples: 10² = 100 CFU, 10³ = 1,000 CFU, 10⁴ = 10,000 CFU, 10⁵ = 100,000 CFU.

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