

Prepared for:

Surly Brewing Co

4811 Dusharme Dr
Brooklyn Center, MN USA 55429

Smazey Prickly Pear Key Lime

Batch ID or Lot Number: SMZ48 01/15/24	Test, Test ID and Methods: Various	Matrix: Unit	Page 1 of 5
Reported: 16Jan2024	Started: 16Jan2024	Received: 16Jan2024	


Cannabinoids


Test ID: T000267805

Methods: TM14 (HPLC-DAD)

	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.243	0.670	ND	ND	# of Servings = 2, Sample Weight=473g
Cannabichromenic Acid (CBCA)	0.222	0.613	ND	ND	
Cannabidiol (CBD)	0.624	1.723	ND	ND	
Cannabidiolic Acid (CBDA)	0.640	1.767	ND	ND	
Cannabidivarin (CBDV)	0.148	0.407	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.267	0.737	ND	ND	
Cannabigerol (CBG)	0.138	0.380	<LOQ	<LOQ	
Cannabigerolic Acid (CBGA)	0.577	1.590	ND	ND	
Cannabinol (CBN)	0.180	0.496	ND	ND	
Cannabinolic Acid (CBNA)	0.393	1.085	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.687	1.894	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.624	1.720	9.420	0.00	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.553	1.524	ND	ND	
Tetrahydrocannabivarin (THCV)	0.125	0.346	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.488	1.344	ND	ND	
Total Cannabinoids			9.420	0.00	
Total Potential THC			9.420	0.00	
Total Potential CBD			ND	ND	

Final Approval


 Karen Winternheimer
 16Jan2024
 03:20:00 PM MST
 PREPARED BY / DATE


 Sam Smith
 16Jan2024
 03:22:00 PM MST
 APPROVED BY / DATE

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Pesticides


Test ID: T000267806

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	311 - 2831	ND		Malathion	276 - 2695	ND
Acephate	40 - 2758	ND		Metalaxyl	44 - 2712	ND
Acetamiprid	43 - 2718	ND		Methiocarb	38 - 2787	ND
Azoxystrobin	43 - 2716	ND		Methomyl	43 - 2772	ND
Bifenazate	44 - 2695	ND		MGK 264 1	158 - 1629	ND
Boscalid	42 - 2734	ND		MGK 264 2	113 - 1090	ND
Carbaryl	41 - 2697	ND		Myclobutanil	70 - 2723	ND
Carbofuran	44 - 2706	ND		Naled	46 - 2668	ND
Chlorantraniliprole	42 - 2772	ND		Oxamyl	42 - 2768	ND
Chlorpyrifos	42 - 2771	ND		Paclobutrazol	46 - 2692	ND
Clofentezine	282 - 2719	ND		Permethrin	289 - 2802	ND
Diazinon	271 - 2723	ND		Phosmet	40 - 2590	ND
Dichlorvos	271 - 2767	ND		Prophos	275 - 2751	ND
Dimethoate	43 - 2709	ND		Propoxur	43 - 2702	ND
E-Fenpyroximate	264 - 2851	ND		Pyridaben	290 - 2755	ND
Etofenprox	42 - 2778	ND		Spinosad A	34 - 2084	ND
Etoxazole	281 - 2696	ND		Spinosad D	66 - 682	ND
Fenoxycarb	43 - 2739	ND		Spiromesifen	263 - 2781	ND
Fipronil	54 - 2790	ND		Spirotetramat	282 - 2798	ND
Flonicamid	50 - 2792	ND		Spiroxamine 1	15 - 1055	ND
Fludioxonil	283 - 2738	ND		Spiroxamine 2	23 - 1629	ND
Hexythiazox	40 - 2806	ND		Tebuconazole	274 - 2726	ND
Imazalil	264 - 2746	ND		Thiacloprid	45 - 2728	ND
Imidacloprid	38 - 2799	ND		Thiamethoxam	42 - 2767	ND
Kresoxim-methyl	43 - 2739	ND		Trifloxystrobin	44 - 2718	ND

Final Approval


Karen Winternheimer
17Jan2024
08:38:00 AM MST
PREPARED BY / DATE


Sam Smith
17Jan2024
08:39:00 AM MST
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Heavy Metals

Test ID: T000267808


Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.05 - 4.51	ND	
Cadmium	0.05 - 4.59	ND	
Mercury	0.05 - 4.59	ND	
Lead	0.05 - 4.65	ND	

Final Approval


Samantha Smith
18Jan2024
02:49:00 PM MST

PREPARED BY / DATE


Karen Winternheimer
18Jan2024
03:01:00 PM MST

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Mycotoxins


Test ID: T000267810

Methods: TM18 (UHPLC-QQQ


LCMS/MS): Mycotoxins

LCMS/MS): Mycotoxins	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	1.84 - 122.00	ND	N/A
Aflatoxin B1	0.92 - 31.33	ND	
Aflatoxin B2	0.89 - 30.98	ND	
Aflatoxin G1	0.98 - 31.07	ND	
Aflatoxin G2	1.01 - 31.30	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval


Karen Winternheimer
19Jan2024
12:32:00 PM MST

PREPARED BY / DATE


Samantha Smith
19Jan2024
12:33:00 PM MST

APPROVED BY / DATE

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Microbial Contaminants

Test ID: T000267807

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
<i>Salmonella</i>	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	None Detected	
Total Coliforms*	TM27: Culture Plating	10 ¹ CFU/g	1.0x10 ² - 1.5x10 ⁴	None Detected	

Final Approval


Eden Thompson-Wright
19Jan2024
01:14:00 PM MST
PREPARED BY / DATE


Brianne Maillot
19Jan2024
01:33:00 PM MST
APPROVED BY / DATE

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Residual Solvents


Test ID: T000267809

Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	71 - 1412	ND	
Butanes (Isobutane, n-Butane)	157 - 3132	ND	
Methanol	58 - 1161	ND	
Pentane	80 - 1598	ND	
Ethanol	87 - 1737	623	
Acetone	93 - 1851	ND	
Isopropyl Alcohol	90 - 1806	ND	
Hexane	6 - 119	ND	
Ethyl Acetate	99 - 1972	ND	
Benzene	0.2 - 3.9	ND	
Heptanes	93 - 1863	ND	
Toluene	18 - 359	ND	
Xylenes (m,p,o-Xylenes)	126 - 2525	ND	

Final Approval


Karen Winterheimer
19Jan2024
02:24:00 PM MST
PREPARED BY / DATE


Sam Smith
19Jan2024
02:26:00 PM MST
APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/eafc5bcc-85fc-45f4-a0a8-a4349044c189>

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.

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 A2LA Cert #: 4329.02 Chemical; 4329.03 Biological. Some tests listed on this COA may not be within our scope of A2LA accreditation. Please visit [A2LA for more details](#).



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