Certificate of Analysis

ANALYZED BY:

Anresco Laboratories
1375 Van Dyke Avenue,
San Francisco, CA 94124
C8-0000052-LIC

CUSTOMER:

Surly Brewing Company
4811 Dusharme Dr
Brooklyn Center, MN 55429

SAMPLE INFORMATION

Sample No.: 1202513
Product Name: Mary Jones Green Apple
Matrix: Edible (Carbonated Beverage)
Lot #: MT0017

Date Collected: 03/20/2024
Date Received: 03/20/2024
Date Reported: 03/21/2024

TEST SUMMARY

Cannabinoid Profile: Pass
Pesticide Residue Screen: Pass
Heavy Metal Screen: Pass
Mycotoxin Screen: Pass
Microbiological Screen: Pass
Residual Solvent Screen: Pass
Foreign Material: Pass

Cannabinoid Profile Pass

03/21/2024

Method: MF-CHEM-15

Instrument: Liquid Chromatography Diode Array Detector (LC-DAD)

Cannabinoid	mg/g	%	mg/ml	mg/serving	mg/package	Labeled mg/serving	% Difference (mg/serving)	Status
Δ8-THC	ND	ND	ND	ND	ND	-	-	-
Δ9-THC	0.0292	0.00292	0.0304	5.38	10.77	5	7.66	Pass
Δ9-THCA	ND	ND	ND	ND	ND	-	-	-
THCV	ND	ND	ND	ND	ND	-	-	-
THCVA	ND	ND	ND	ND	ND	-	-	-
CBD	0.0057	0.00057	0.0059	1.05	2.10	-	-	-
CBDA	ND	ND	ND	ND	ND	-	-	-
CBC	ND	ND	ND	ND	ND	-	-	-
CBCA	ND	ND	ND	ND	ND	-	-	-
CBDV	ND	ND	ND	ND	ND	-	-	-
CBG	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	-	-	-
CBGA	ND	ND	ND	ND	ND	-	-	-
CBN	ND	ND	ND	ND	ND	-	-	-
Total THC	0.0292	0.00292	0.0304	5.38	10.77	-	-	-
Total CBD	0.0057	0.00057	0.0059	1.05	2.10	-	-	-
Total Cannabinoids	0.0349	0.00349	0.0363	6.43	12.87	-	-	-
Sum of Cannabinoids	0.0349	0.00349	0.0363	6.43	12.87	-	-	-
Serving Weight (g)	184.3455							
Package Weight (g)	368.691							
g/ml Conversion Factor	1.0415							

Total THC = Δ9-THC + (0.877 * Δ9-THCA)
Total CBD = CBD + (0.877 * CBDA)
Total Cannabinoids = Σ (neutral cannabinoids) + [0.877 * Σ (acidic cannabinoids)]

Microbiological Screen Pass

03/21/2024

Analyte	Method	Findings	Status
Salmonella	AOAC 2016.01	Negative/25g	Pass
STEC	3M MDS STEC	Negative/25g	Pass

Pesticide Residue Screen Pass

03/21/2024

Method: MF-CHEM-13

Instrument: Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) & Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS)

Analyte	LOD/LOQ (µg/g)	Findings (µg/g)	Limit (µg/g)	Status
Abamectin	0.04/0.10	ND	0.3	Pass
Acephate	0.02/0.06	ND	5.0	Pass
Acequinocyl	0.04/0.10	ND	4.0	Pass
Acetamiprid	0.017/0.05	ND	5.0	Pass
Aldicarb	0.02/0.06	ND	0.02	Pass
Azoxystrobin	0.02/0.06	ND	40.0	Pass

Analyte	LOD/LOQ (µg/g)	Findings (µg/g)	Limit (µg/g)	Status
Bifenazate	0.02/0.06	ND	5.0	Pass
Bifenthrin	0.04/0.10	ND	0.5	Pass
Boscalid	0.02/0.06	ND	10.0	Pass
Captan	0.2/0.6	ND	5.0	Pass
Carbaryl	0.02/0.06	ND	0.5	Pass
Carbofuran	0.017/0.05	ND	0.02	Pass
Chlorantraniliprole	0.02/0.06	ND	40.0	Pass
Chlordane	0.02/0.06	ND	0.02	Pass
Chlorfenapyr	0.02/0.06	ND	0.02	Pass
Chlorpyrifos	0.02/0.06	ND	0.02	Pass
Clofentezine	0.02/0.06	ND	0.5	Pass
Coumaphos	0.02/0.06	ND	0.02	Pass
Cyfluthrin	0.10/0.30	ND	1.0	Pass
Cypermethrin	0.10/0.30	ND	1.0	Pass
Daminozide	0.017/0.05	ND	0.02	Pass
DDVP (Dichlorvos)	0.013/0.04	ND	0.02	Pass
Diazinon	0.017/0.05	ND	0.2	Pass
Dimethoate	0.017/0.05	ND	0.02	Pass
Dimethomorph	0.017/0.05	ND	20.0	Pass
Ethoprop(hos)	0.02/0.06	ND	0.02	Pass
Etofenprox	0.02/0.06	ND	0.02	Pass
Etoxazole	0.02/0.06	ND	1.5	Pass
Fenhexamid	0.017/0.05	ND	10.0	Pass
Fenoxycarb	0.02/0.06	ND	0.02	Pass
Fenpyroximate	0.02/0.06	ND	2.0	Pass
Fipronil	0.02/0.06	ND	0.02	Pass
Flonicamid	0.02/0.06	ND	2.0	Pass
Fludioxonil	0.02/0.06	ND	30.0	Pass
Hexythiazox	0.02/0.06	ND	2.0	Pass
Imazalil	0.02/0.06	ND	0.02	Pass
Imidacloprid	0.02/0.06	ND	3.0	Pass
Kresoxim Methyl	0.02/0.06	ND	1.0	Pass
Malathion	0.017/0.05	ND	5.0	Pass
Metalaxyl	0.017/0.05	ND	15.0	Pass
Methiocarb	0.02/0.06	ND	0.02	Pass
Methomyl	0.013/0.04	ND	0.1	Pass
Methyl parathion	0.02/0.06	ND	0.02	Pass
Mevinphos	0.02/0.06	ND	0.02	Pass
Myclobutanil	0.02/0.06	ND	9.0	Pass
Naled	0.017/0.05	ND	0.5	Pass
Oxamyl	0.013/0.04	ND	0.2	Pass
Paclobutrazol	0.02/0.06	ND	0.02	Pass
Pentachloronitrobenzene	0.017/0.05	ND	0.2	Pass
Permethrins	0.10/0.30	ND	20.0	Pass
Phosmet	0.02/0.06	ND	0.2	Pass
Piperonyl Butoxide	0.02/0.06	ND	8.0	Pass
Prallethrin	0.04/0.10	ND	0.4	Pass
Propiconazole	0.02/0.06	ND	20.0	Pass
Propoxur	0.013/0.04	ND	0.02	Pass
Pyrethrins	0.15/0.50	ND	1.0	Pass
Pyridaben	0.017/0.05	ND	3.0	Pass
Spinetoram	0.02/0.06	ND	3.0	Pass
Spinosad	0.02/0.06	ND	3.0	Pass
Spiromesifen	0.04/0.10	ND	12.0	Pass
Spirotetramat	0.02/0.06	ND	13.0	Pass
Spiroxamine	0.017/0.05	ND	0.02	Pass
Tebuconazole	0.02/0.06	ND	2.0	Pass
Thiacloprid	0.013/0.04	ND	0.02	Pass
Thiamethoxam	0.02/0.06	ND	4.5	Pass
Trifloxystrobin	0.02/0.06	ND	30.0	Pass

Residual Solvent Screen ✔ Pass

03/21/2024

Method: MF-CHEM-32

Instrument: Gas Chromatography Mass Spectrometry (GC/MS)

Analyte	LOD/LOQ (ppm)	Findings (ppm)	Limit (ppm)	Status
1,2-Dichloroethane	0.2/0.5	ND	1	Pass
Acetone	67/200	ND	5000	Pass
Acetonitrile	67/200	ND	410	Pass
Benzene	0.2/0.5	ND	1	Pass
n-Butane	67/200	ND	5000	Pass
Chloroform	0.2/0.5	ND	1	Pass
Ethanol	67/200	<LOQ	5000	Pass
Ethyl acetate	67/200	ND	5000	Pass
Ethyl ether	67/200	ND	5000	Pass
Ethylene oxide	0.2/0.5	ND	1	Pass
n-Heptane	67/200	ND	5000	Pass
n-Hexane	67/200	ND	290	Pass
Isopropyl alcohol	67/200	ND	5000	Pass
Methanol	67/200	ND	3000	Pass
Methylene chloride	0.2/0.5	ND	1	Pass
n-Pentane	67/200	ND	5000	Pass
Propane	67/200	ND	5000	Pass
Toluene	67/200	ND	890	Pass
Total xylenes (ortho-, meta-, para-)	67/200	ND	2170	Pass
Trichloroethylene	0.2/0.5	ND	1	Pass

Heavy Metal Screen ✔ Pass

03/21/2024

Method: MF-CHEM-16

Instrument: Inductively Coupled Plasma Mass Spectrometry (ICP-MS)

Analyte	LOD/LOQ (µg/g)	Findings (µg/g)	Limit (µg/g)	Status
Arsenic	0.02/0.05	ND	1.5	Pass
Cadmium	0.02/0.05	ND	0.5	Pass
Mercury	0.02/0.05	ND	3	Pass
Lead	0.02/0.125	ND	0.5	Pass

Foreign Material ✔ Pass

03/21/2024

Method: MF-MACRO-5

Analyte	Findings	Limit	Status
Sand, Soils, Cinders, and Dirt	ND	25%	Pass
Mold	ND	25%	Pass
Imbedded Foreign Material	ND	25%	Pass
Insect Fragment	ND	1 per 3g	Pass
Hair	ND	1 per 3g	Pass
Mammalian Excreta	ND	1 per 3g	Pass

Mycotoxin Screen ✔ Pass

03/21/2024

Method: MF-CHEM-13

Instrument: Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) & Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS)

Analyte	LOD/LOQ (µg/kg)	Findings (µg/kg)	Limit (µg/kg)	Status
Aflatoxin B1	2/5	ND	-	-
Aflatoxin B2	2/5	ND	-	-
Aflatoxin G1	2/5	ND	-	-
Aflatoxin G2	2/5	ND	-	-
Total Aflatoxins	8/20	ND	20	Pass
Ochratoxin A	6/18	ND	20	Pass

ND = None Detected
LOD = Limit of Detection
LOD = Limit of Quantitation

Reported by

Vu Lam
Lab Co Director

Scan to verify