

# **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.: Product Name: Matrix: Lot #:	· ·		Date Collected: 07/17/2024 Date Received: 07/17/2024 Date Reported: 07/19/2024	
TEST SUMN		🖉 Pass	Microbiological Screen:	✓ Pass
Pesticide Res		✓ Pass	Residual Solvent Screen:	✓ Pass
Heavy Metal S	Screen:	🕑 Pass	Foreign Material:	🕑 Pass
Mycotoxin Scr	een:	🕑 Pass	-	

Cannabinoid Profile **O** Pass

Method:	MF-CHEM-15
Instrument:	Liquid Chromatography Diode Array Detector (LC-DAD)
Limit of Detection	0.0008 mg/g
Limit of Quantitation	0.0025 mg/g

Cannabinoid	mg/g	%	mg/ml	mg/package	Labeled mg/package	% Difference (mg/ package)	Status
Δ8-THC	ND	ND	ND	ND	-	-	-
Δ9-THC	0.0150	0.0015	0.0154	5.45	5	9.03	Pass
Δ9-THCA	ND	ND	ND	ND	-	-	-
THCV	ND	ND	ND	ND	-	-	-
THCVA	ND	ND	ND	ND	-	-	-
CBD	0.0137	0.00137	0.0140	4.98	5	0.41	-
CBDA	ND	ND	ND	ND	-	-	-
CBC	ND	ND	ND	ND	-	-	-
CBCA	ND	ND	ND	ND	-	-	-
CBDV	ND	ND	ND	ND	-	-	-
CBG	ND	ND	ND	ND	-	-	-
CBGA	ND	ND	ND	ND	-	-	-
CBN	ND	ND	ND	ND	-	-	-
Total THC	0.015	0.0015	0.0154	5.45	-	-	-
Total CBD	0.0137	0.00137	0.0140	4.98	-	-	-
Total Cannabinoids	0.0287	0.00287	0.0294	10.43	-	-	-
Sum of Cannabinoids	0.0287	0.00287	0.0294	10.43	-	-	-
Package Weight (g)	363.4490						
g/ml Conversion							

g/ml Conversion Factor

Total THC =  $\Delta$ 8-THC +  $\Delta$ 9-THC + (0.877 \* THCA) Total CBD = CBD + (0.877 \* CBDA) Total Cannabinoids =  $\Sigma$  (neutral cannabinoids) + [0.877 \*  $\Sigma$  (acidic cannabinoids)]

### Microbiological Screen 🔮 Pass

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Analyte	Method	Findings	Status
Salmonella	MF-MICRO-11	Not Detected in 25g	Pass
STEC	MF-MICRO-18	Not Detected in 25g	Pass

### Pesticide Residue Screen 📀 Pass

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

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1375 Van Dyke Ave, San Francisco, CA 94124	Lot #: WSSBL-101 Best By: 07/16/25	Report ID: S-3

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Analyte	LOD/LOQ (µg/g)	Findings (µg/g)	Limit (µg/g)	Status
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
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	0.017	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		ND	0.5	
	0.02/0.06			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	0.017	Pass
DDVP (Dichlorvos)	0.013/0.04	ND	0.013	Pass
Diazinon	0.017/0.05	ND	0.2	Pass
Dimethoate	0.017/0.05	ND	0.017	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
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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	0.013	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
•	0.02/0.06	ND	13.0	Pass
Spirotetramat				
Spiroxamine	0.017/0.05	ND	0.017	Pass
Tebuconazole	0.02/0.06	ND	2.0	Pass
Thiacloprid	0.013/0.04	ND	0.013	Pass
Thiamethoxam	0.02/0.06	ND	4.5	Pass
Trifloxystrobin	0.02/0.06	ND	30.0	Pass

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## **Residual Solvent Screen O** Pass

Method: MF-CHEM-32

Instrument: Gas Chromatography Mass Spectrometry (GC/MS)

Analyte	LOD/LOQ (ppm)	Findings (ppm)	Limit (ppm)	Status
1,2-Dichloroethane	0.5/0.5	ND	1	Pass
Acetone	57/200	ND	5000	Pass
Acetonitrile	56/200	ND	410	Pass
Benzene	0.5/0.5	ND	1	Pass
n-Butane	45/200	ND	5000	Pass
Chloroform	0.5/0.5	ND	1	Pass
Ethanol	37/200	<loq< td=""><td>5000</td><td>Pass</td></loq<>	5000	Pass
Ethylacetate	38/200	ND	5000	Pass
Ethylether	37/200	ND	5000	Pass
Ethylene oxide	0.1/0.5	ND	1	Pass
n-Heptane	135/200	ND	5000	Pass
n-Hexane	49/200	ND	290	Pass
Isopropyl alcohol	57/200	ND	5000	Pass
Methanol	37/200	ND	3000	Pass
Methylene chloride	0.1/0.5	ND	1	Pass
n-Pentane	37/200	ND	5000	Pass
Propane	72/200	ND	5000	Pass
Toluene	49/200	ND	890	Pass
Total xylenes (ortho-, meta-, para-)	58/200	ND	2170	Pass
Trichloroethylene	0.5/0.5	ND	1	Pass

### Heavy Metal Screen **O** Pass

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

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 SPass

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

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# **Certificate of Analysis**

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

Scan to verify

Reported by

Vu Lam

Lab Co Director

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