

SAMPLE DETAILS

SAMPLE NAME: Birdie Grapefruit Twist

Beverage, Liquid Edible

CULTIVATOR / MANUFACTURER

Business Name:

License Number:

Address:

DISTRIBUTOR / TESTED FOR

Business Name: Wild State Cider

License Number:

Address:

SAMPLE DETAIL

Batch Number: 845

Sample ID: 250422L042

Date Collected: 04/22/2025

Date Received: 04/22/2025

Batch Size:

Sample Size: 1.0 units

Unit Mass: 355 milliliters per Unit

Serving Size: 177 milliliters per Serving

Scan QR code to verify
authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: 10.1175 mg/unit

Total CBD: Not Detected

Sum of Cannabinoids: 10.4725 mg/unit

Total Cannabinoids: 10.4725 mg/unit

Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step:

Total THC = Δ^9 -THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids = Δ^9 -THC + THCa + CBD + CBDa + CBG + CBGa +THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ^8 -THC + CBL + CBNTotal Cannabinoids = (Δ^9 -THC + 0.877*THCa) + (CBD + 0.877*CBDa) +

(CBG + 0.877*CBGa) + (THCV + 0.877*THCVa) + (CBC + 0.877*CBCa) +

(CBDV + 0.877*CBDVa) + Δ^8 -THC + CBL + CBN

Density: 1.0304 g/mL

SAFETY ANALYSIS - SUMMARY

 Δ^9 -THC per Unit: ✔PASSPesticides: ✔PASSMycotoxins: ✔PASSResidual Solvents: ✔PASSHeavy Metals: ✔PASSMicrobiology (PCR): ✔PASS

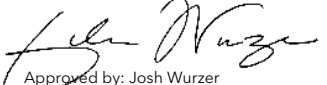
Microbiology (Plating): DETECTED

For quality assurance purposes. Not a Regulatory Hemp Lab Test Report. These results relate only to the sample included on this report. This report shall not be reproduced, except in full, without written approval of the laboratory.

Sample Certification: California Code of Regulations Title 4 Division 19, Department of Cannabis Control Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT), $\mu\text{g/g}$ = ppm, $\mu\text{g/kg}$ = ppb, too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)



Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 05/06/2025

Amendment to Certificate of Analysis 250422L042-003



Cannabinoid Analysis

Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

Method: QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: 10.1175 mg/unit

Total THC (Δ^9 -THC+0.877*THCa)

TOTAL CBD: Not Detected

Total CBD (CBD+0.877*CBDA)

TOTAL CANNABINOIDS: 10.4725 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ^8 -THC + CBL + CBN

TOTAL CBG: 0.3550 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: ND

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: ND

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 04/23/2025

COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
Δ^9 -THC	0.0001 / 0.0005	±0.00156	0.0285	0.00277
CBG	0.0001 / 0.0002	±0.00005	0.0010	0.00010
Δ^8 -THC	0.0003 / 0.0008	N/A	ND	ND
THCa	0.0001 / 0.0002	N/A	ND	ND
THCV	0.0001 / 0.0005	N/A	ND	ND
THCVa	0.0001 / 0.0007	N/A	ND	ND
CBD	0.0001 / 0.0004	N/A	ND	ND
CBDA	0.0001 / 0.0010	N/A	ND	ND
CBDV	0.0001 / 0.0005	N/A	ND	ND
CBDVa	0.0001 / 0.0007	N/A	ND	ND
CBGa	0.0001 / 0.0003	N/A	ND	ND
CBL	0.0001 / 0.0004	N/A	ND	ND
CBN	0.0001 / 0.0003	N/A	ND	ND
CBC	0.0001 / 0.0004	N/A	ND	ND
CBCa	0.0001 / 0.0006	N/A	ND	ND
SUM OF CANNABINOIDS			0.0295 mg/mL	0.00286%

Unit Mass: 355 milliliters per Unit / Serving Size: 177 milliliters per Serving

Δ^9 -THC per Unit	110 per-package limit	10.1175 mg/unit	PASS
Δ^9 -THC per Serving		5.0445 mg/serving	
Total THC per Unit		10.1175 mg/unit	
Total THC per Serving		5.0445 mg/serving	
CBD per Unit		ND	
CBD per Serving		ND	
Total CBD per Unit		ND	
Total CBD per Serving		ND	
Sum of Cannabinoids per Unit		10.4725 mg/unit	
Sum of Cannabinoids per Serving		5.2215 mg/serving	
Total Cannabinoids per Unit		10.4725 mg/unit	
Total Cannabinoids per Serving		5.2215 mg/serving	

DENSITY TEST RESULT

1.0304 g/mL
Tested 04/23/2025
Method: QSP 7870 - Sample Preparation



Pesticide Analysis

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). ‡Analytes part of our California Select Panel.

*GC-MS utilized where indicated.

Method: QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS or QSP 1213 - Analysis of Pesticides by GC-MS

PESTICIDE TEST RESULTS - 04/28/2025 **PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Abamectin	0.032 / 0.097	0.3	N/A	ND	PASS
Acephate	0.006 / 0.018	5	N/A	ND	PASS
Acequinocyl	0.009 / 0.027	4	N/A	ND	PASS
Acetamiprid	0.016 / 0.049	5	N/A	ND	PASS
Aldicarb	0.030 / 0.090	≥ LOD	N/A	ND	PASS
Allethrin	0.030 / 0.092		N/A	ND	
Atrazine	0.006 / 0.019		N/A	ND	
Azadirachtin	0.082 / 0.248		N/A	ND	
Azoxystrobin	0.003 / 0.009	40	N/A	ND	PASS
Benzovindiflupyr	0.003 / 0.009		N/A	ND	
Bifenazate	0.003 / 0.009	5	N/A	ND	PASS
Bifenthrin	0.021 / 0.064	0.5	N/A	ND	PASS
Boscalid	0.003 / 0.009	10	N/A	ND	PASS
Buprofezin‡	0.006 / 0.019		N/A	ND	
Captan	0.045 / 0.135	5	N/A	ND	PASS
Carbaryl	0.007 / 0.020	0.5	N/A	ND	PASS
Carbofuran	0.003 / 0.008	≥ LOD	N/A	ND	PASS
Chlorantraniliprole	0.006 / 0.018	40	N/A	ND	PASS
Chlordane*	0.010 / 0.032	≥ LOD	N/A	ND	PASS
Chlorfenapyr*	0.005 / 0.015	≥ LOD	N/A	ND	PASS
Chlormequat chloride	0.022 / 0.066		N/A	ND	
Chlorpyrifos	0.013 / 0.039	≥ LOD	N/A	ND	PASS
Clofentezine	0.003 / 0.009	0.5	N/A	ND	PASS
Clothianidin	0.008 / 0.025		N/A	ND	
Coumaphos	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Cyantraniliprole	0.003 / 0.010		N/A	ND	
Cyfluthrin	0.052 / 0.159	1	N/A	ND	PASS
Cypermethrin	0.051 / 0.153	1	N/A	ND	PASS
Cyprodinil‡	0.003 / 0.008		N/A	ND	
Daminozide	0.026 / 0.077	≥ LOD	N/A	ND	PASS
Deltamethrin	0.059 / 0.180		N/A	ND	
Diazinon	0.006 / 0.017	0.2	N/A	ND	PASS
Dichlorvos (DDVP)	0.012 / 0.038	≥ LOD	N/A	ND	PASS
Dimethoate	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Dimethomorph	0.016 / 0.050	20	N/A	ND	PASS
Dinotefuran	0.010 / 0.030		N/A	ND	
Diuron	0.013 / 0.040		N/A	ND	
Dodemorph	0.012 / 0.035		N/A	ND	
Endosulfan sulfate	0.016 / 0.048		N/A	ND	
Endosulfan-α*	0.004 / 0.014		N/A	ND	
Endosulfan-β*	0.006 / 0.019		N/A	ND	

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Pesticide Analysis *Continued*

PESTICIDE TEST RESULTS - 04/28/2025 *continued* ✔ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Ethoprophos	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Etofenprox	0.014 / 0.042	≥ LOD	N/A	ND	PASS
Etoxazole	0.007 / 0.020	1.5	N/A	ND	PASS
Etridiazole*	0.002 / 0.005		N/A	ND	
Fenhexamid	0.003 / 0.008	10	N/A	ND	PASS
Fenoxycarb	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Fenpyroximate	0.007 / 0.020	2	N/A	ND	PASS
Fensulfothion	0.003 / 0.010		N/A	ND	
Fenthion	0.003 / 0.010		N/A	ND	
Fenvalerate†	0.033 / 0.099		N/A	ND	
Fipronil	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Flonicamid	0.007 / 0.022	2	N/A	ND	PASS
Fludioxonil	0.003 / 0.010	30	N/A	ND	PASS
Fluopyram†	0.003 / 0.009		N/A	ND	
Hexythiazox	0.003 / 0.010	2	N/A	ND	PASS
Imazalil	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Imidacloprid	0.003 / 0.010	3	N/A	ND	PASS
Iprodione	0.077 / 0.233		N/A	ND	
Kinoprene	0.077 / 0.233		N/A	ND	
Kresoxim-methyl	0.006 / 0.019	1	N/A	ND	PASS
λ-Cyhalothrin	0.068 / 0.206		N/A	ND	
Malathion	0.003 / 0.009	5	N/A	ND	PASS
Metaxyl	0.003 / 0.010	15	N/A	ND	PASS
Methiocarb	0.003 / 0.008	≥ LOD	N/A	ND	PASS
Methomyl	0.008 / 0.025	0.1	N/A	ND	PASS
Methoprene†	0.172 / 0.521		N/A	ND	
Mevinphos	0.008 / 0.024	≥ LOD	N/A	ND	PASS
MGK-264	0.015 / 0.047		N/A	ND	
Myclobutanil	0.003 / 0.009	9	N/A	ND	PASS
Naled	0.021 / 0.064	0.5	N/A	ND	PASS
Novaluron	0.002 / 0.005		N/A	ND	
Oxamyl	0.017 / 0.051	0.2	N/A	ND	PASS
Paclobutrazol	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Parathion-methyl	0.016 / 0.050	≥ LOD	N/A	ND	PASS
Pentachloronitro- benzene (Quintozene)*	0.004 / 0.012	0.2	N/A	ND	PASS
Permethrin	0.056 / 0.168	20	N/A	ND	PASS
Phenothrin	0.016 / 0.047		N/A	ND	
Phosmet	0.007 / 0.020	0.2	N/A	ND	PASS
Piperonyl Butoxide	0.010 / 0.029	8	N/A	ND	PASS
Pirimicarb	0.003 / 0.009		N/A	ND	
Prallethrin	0.015 / 0.046	0.4	N/A	ND	PASS

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Pesticide Analysis *Continued*

PESTICIDE TEST RESULTS - 04/28/2025 *continued* **PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Propiconazole	0.027 / 0.080	20	N/A	ND	PASS
Propoxur	0.003 / 0.008	≥ LOD	N/A	ND	PASS
Pyraclostrobin	0.003 / 0.010		N/A	ND	
Pyrethrins	0.016 / 0.049	1	N/A	ND	PASS
Pyridaben	0.005 / 0.017	3	N/A	ND	PASS
Pyriproxyfen	0.003 / 0.009		N/A	ND	
Resmethrin	0.013 / 0.039		N/A	ND	
Spinetoram	0.003 / 0.010	3	N/A	ND	PASS
Spinosad	0.003 / 0.010	3	N/A	ND	PASS
Spirodiclofen	0.031 / 0.093		N/A	ND	
Spiromesifen	0.016 / 0.050	12	N/A	ND	PASS
Spirotetramat	0.003 / 0.010	13	N/A	ND	PASS
Spiroxamine	0.020 / 0.062	≥ LOD	N/A	ND	PASS
Tebuconazole	0.003 / 0.010	2	N/A	ND	PASS
Tebufenozide	0.003 / 0.008		N/A	ND	
Teflubenzuron	0.007 / 0.022		N/A	ND	
Tetrachlorvinphos	0.003 / 0.008		N/A	ND	
Tetramethrin	0.021 / 0.063		N/A	ND	
Thiabendazole	0.006 / 0.020		N/A	ND	
Thiacloprid	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Thiamethoxam	0.003 / 0.010	4.5	N/A	ND	PASS
Thiophanate-methyl	0.013 / 0.040		N/A	ND	
Trifloxystrobin	0.003 / 0.009	30	N/A	ND	PASS


Mycotoxin Analysis

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS).

Method: QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS

MYCOTOXIN TEST RESULTS - 04/28/2025 **PASS**

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)	RESULT
Aflatoxin B1	1.6 / 5.0		N/A	ND	
Aflatoxin B2	1.4 / 4.1		N/A	ND	
Aflatoxin G1	1.6 / 4.9		N/A	ND	
Aflatoxin G2	1.6 / 5.0		N/A	ND	
Ochratoxin A	1.6 / 5.0	20	N/A	ND	PASS
Total Aflatoxin		20		ND	PASS



Residual Solvents Analysis

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP 1204 - Analysis of Residual Solvents by GC-MS

Total Butanes = n-Butane + 2-Methylpropane (Isobutane)

Total Pentanes = n-Pentane + 2-Methylbutane (Isopentane) +

2,2-Dimethylpropane (Neopentane)

Total Hexanes = n-Hexane + 2,2-Dimethylbutane (Neohexane) +

2,3-Dimethylbutane / 2-Methylpentane (Isohexane) +

3-Methylpentane

Total Heptanes = 2,2-Dimethylpentane (Neohexane) +

2,3-Dimethylpentane + 2,4-Dimethylpentane + 3,3-Dimethylpentane +

2,2,3-Trimethylbutane (Triptane) + 2-Methylhexane (Isoheptane) +

3-Methylhexane + 3-Ethylpentane + n-Heptane

Total Xylenes = 1,2-Dimethylbenzene (o-Xylene) +

1,3-Dimethylbenzene (m-Xylene) / 1,4-Dimethylbenzene (p-Xylene) +

Ethylbenzene

RESIDUAL SOLVENTS TEST RESULTS - 04/27/2025 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Propane	0.234 / 0.781	5000	N/A	ND	PASS
2-Methylpropane (Isobutane)	0.052 / 0.173		N/A	ND	
n-Butane	0.019 / 0.063	5000	N/A	ND	PASS
Total Butanes				ND	
2-Methylbutane (Isopentane)	0.310 / 1.035		N/A	ND	
2,2-Dimethylpropane (Neopentane)	0.035 / 0.117		N/A	ND	
n-Pentane	0.310 / 1.033	5000	N/A	ND	PASS
Total Pentanes				ND	
2,2-Dimethylbutane (Neohexane)	9.831 / 32.77		N/A	ND	
2,3-Dimethylbutane / 2-Methylpentane (Isohexane)	0.381 / 1.271		N/A	ND	
3-Methylpentane	0.109 / 0.365		N/A	ND	
n-Hexane	0.110 / 0.366	290	N/A	ND	PASS
Total Hexanes				ND	
Cyclohexane	0.357 / 1.190		N/A	ND	
2,2-Dimethylpentane (Neohexane)	0.493 / 1.642		N/A	ND	
2,3-Dimethylpentane	1.009 / 3.365		N/A	ND	
2,4-Dimethylpentane	0.737 / 2.458		N/A	ND	
3,3-Dimethylpentane	0.198 / 0.660		N/A	ND	
2,2,3-Trimethylbutane (Triptane)	0.521 / 1.738		N/A	ND	
2-Methylhexane (Isoheptane)	0.610 / 2.034		N/A	ND	
3-Methylhexane	0.235 / 0.785		N/A	ND	
3-Ethylpentane	0.304 / 1.012		N/A	ND	
n-Heptane	13.12 / 43.72	5000	N/A	ND	PASS
Total Heptanes				ND	
Cycloheptane	0.597 / 1.989		N/A	ND	
Benzene	0.089 / 0.295	1	N/A	ND	PASS
Toluene	0.115 / 0.382	890	N/A	ND	PASS
Cumene	0.180 / 0.600		N/A	ND	
1,3-Dimethylbenzene (m-Xylene) / 1,4-Dimethylbenzene (p-Xylene)	0.451 / 1.502		N/A	ND	
1,2-Dimethylbenzene (o-Xylene)	0.387 / 1.289		N/A	ND	
Ethylbenzene	0.370 / 1.233		N/A	ND	
Total Xylenes		2170		ND	PASS
Methanol	53.92 / 163.4	3000	N/A	ND	PASS
Ethanol	8.984 / 27.23	5000	±0.625	40.07	PASS
1-Propanol	1.540 / 5.133		N/A	ND	
2-Propanol (Isopropyl Alcohol)	8.421 / 25.52	5000	N/A	ND	PASS

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 Residual Solvents Analysis
Continued

RESIDUAL SOLVENTS TEST RESULTS - 04/27/2025 *continued* **PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
1-Butanol	0.475 / 1.582		N/A	ND	
2-Butanol	7.248 / 24.16		N/A	ND	
1-Pentanol	1.461 / 4.869		N/A	ND	
Acetone	10.59 / 32.08	5000	N/A	<LOQ	PASS
2-Butanone	0.169 / 0.564		N/A	ND	
Tetrahydrofuran	0.622 / 2.075		N/A	ND	
Ethyl Ether	0.197 / 0.658	5000	N/A	ND	PASS
Ethylene Glycol	3.803 / 12.68		N/A	ND	
2-Ethoxyethanol	1.235 / 4.118		N/A	ND	
1,2-Dimethoxyethane	2.116 / 7.052		N/A	ND	
1,4-Dioxane	0.468 / 1.558		N/A	ND	
Ethylene Oxide	0.253 / 0.844	1	N/A	ND	PASS
Ethyl Acetate	1.123 / 3.745	5000	N/A	ND	PASS
Isopropyl Acetate	0.347 / 1.158		N/A	ND	
Chloroform	0.251 / 0.838	1	N/A	ND	PASS
Dichloromethane (Methylene Chloride)	2.651 / 8.838	1	N/A	ND	PASS
Trichloroethylene	0.299 / 0.996	1	N/A	ND	PASS
1,2-Dichloroethane	0.162 / 0.541	1	N/A	ND	PASS
1,1-Dichloroethene	0.185 / 0.616		N/A	ND	
1,2-Dichloroethene	0.428 / 1.427		N/A	ND	
Sulfolane	47.66 / 158.9		N/A	ND	
Dimethyl Sulfoxide	6.168 / 20.56		N/A	ND	
Acetonitrile	1.595 / 4.833	410	N/A	ND	PASS
Pyridine	0.407 / 1.355		N/A	ND	
N,N-Dimethylacetamide	0.127 / 0.422		N/A	ND	
N,N-Dimethylformamide	0.946 / 3.153		N/A	ND	

 Heavy Metals Analysis

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

Method: QSP 1160 - Analysis of Heavy Metals by ICP-MS

HEAVY METALS TEST RESULTS - 04/25/2025 **PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	3	N/A	ND	PASS



Microbiology Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants.

Method: QSP 1221 - Analysis of Microbiological Contaminants

MICROBIOLOGY TEST RESULTS (PCR) - 04/28/2025 ✓ PASS

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)	RESULT
<i>Aspergillus flavus</i>	Not Detected in 1g	ND	PASS
<i>Aspergillus fumigatus</i>	Not Detected in 1g	ND	PASS
<i>Aspergillus niger</i>	Not Detected in 1g	ND	PASS
<i>Aspergillus terreus</i>	Not Detected in 1g	ND	PASS
Bile-Tolerant Gram-Negative Bacteria		ND	
<i>Listeria monocytogenes</i>		ND	
<i>Salmonella</i> spp.	Not Detected in 10g	ND	PASS
Shiga toxin-producing <i>Escherichia coli</i>	Not Detected in 10g	ND	PASS

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbiological contaminants.

Method: QSP 6794 - Plating with 3M™ Petrifilm™

MICROBIOLOGY TEST RESULTS (PLATING) - 04/28/2025 DETECTED

COMPOUND	RESULT (cfu/g)
<i>Escherichia coli</i>	ND
Total Aerobic Bacteria	ND
Total Yeast and Mold	10.0

NOTES

Sample serving mass provided by client. Sample unit mass provided by client.