MCR LABS

Analytical Test Report

Client:	Final Report	MCR-S1711188 Rev.01.00	Laboratory:
PJ Smith Enterprises	Report Date:	19 DECEMBER 2017	MCR Labs 85 Speen St. Lower Level Framingham, MA 01701 508-872-6666

Sample ID #	Sample Name	Batch	Matrix	Date Received	Date Tested	Sample Weight
MCR-S17-11188	GL-100	NA	Concentrate	13 December 2017	14-18 December 2017	N/A

The test results presented in this report are accurate, complete, and compliant with the MCR Labs quality control criteria.

Authorization

Scott Churchill
Director, Methodology and Compliance

Requested Testing:

Test	Code	Procedure	Analytes Tested
Cannabinoid Profile	CN	MCR-TM-0003	Δ9-THC, CBD, CBN, THCA, CBDA, CBGA, THCV, CBDV, CBC, Δ8-THC
Microbiological Screen	MB	MCR-TM-0006	Bacterial (Total Aerobic, Total Coliform, Bile-Tolerant Gram Negative), Yeast and Mold, Pathogenic (E. coli, Salmonella)
Heavy Metals Screen	HM	MCR-TM-0008	Arsenic (As), Cadmium (Cd), Lead (Pb), Mercury (Hg)
Volatile Organics Screen	VC	MCR-TM-0007	Ethanol, Propane, N-butane, Isobutane, Hexane

Cannabinoid Profile [MCR-TM-0003] *Analyst: LC* *Test Date: 14 Dec 17*

The sample was analyzed for cannabinoids via High Performance Liquid Chromatography (HPLC-UV). The collected data was compared to data collected from certified analytical reference standards at known concentrations.

Table 1. S17-11188 NA-GL-100 Concentrate Cannabinoid Testing

Analyte	Cannabinoid	Conc. (weight %)	Conc. (mg/g)	LOQ (weight %)	LOD (weight %)
CBDV	Cannabidivarin	ND	ND	0.56%	0.18%
CBD	Cannabidiol	66.1%	661	0.47%	0.16%
CBDA	Cannabidiolic acid	0.4%	4	0.5%	0.16%
THCV	Tetrahydrocannabivarin	ND	ND	0.47%	0.16%
CBGA	Cannabigerolic acid	ND	ND	0.51%	0.17%
CBN	Cannabinol	ND	ND	0.51%	0.17%
Δ9-THC	Δ9-Tetrahydrocannabinol	2.6%	26	0.55%	0.18%
Δ8-THC	Δ8-Tetrahydrocannabinol	ND	ND	0.54%	0.18%
CBC	Cannabichromene	3.7%	37	0.51%	0.17%
THCA	Tetrahydrocannabinolic acid	ND	ND	0.54%	0.18%

Note: There are no limits established by the Massachusetts Department of Public Health for cannabinoid concentrations. ND = Not Detected. LOQ = limit of quantitation. LOD = limit of detection.

Microbiological Screen [MCR-TM-0006] *Analyst: SG* *Test Date: 14-17 Dec 17*

The sample was analyzed for microbiological contaminants via an automated Most Probable Number (MPN) methodology with cultured enrichments.

Table 2. S17-11188 NA-GL-100 Concentrate Microbiological Testing

Test ID	Test Analysis	Results	Unit	Limits	Disposition
17-11188-AC	Total Viable Aerobic Bacteria	<100	CFU/g	10^4CFU/g	Pass
17-11188-YM	Total Yeast and Mold	<100	CFU/g	10^3CFU/g	Pass
17-11188-CC	Total Coliforms	<100	CFU/g	10^2CFU/g	Pass
17-11188-EB	Total Bile-Tolerant Gram Negative Bacteria	<100	CFU/g	10^2CFU/g	Pass

Note: CFU = colony forming unit. Testing limits established by the Massachusetts Department of Public Health, Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for Massachusetts Registered Medical Marijuana Dispensaries, Exhibit 6.

Pathogenic Bacterial Screen [MCR-TM-0006] *Analyst: SG* *Test Date: 15 Dec 17*

The sample was analyzed for pathogenic bacterial contamination via an automated Enzyme Linked Fluorescent Assay (ELFA).

Table 3. S17-11188 NA-GL-100 Concentrate Pathogen Testing

Test ID	Test Analysis	Result	Units	Limits	Disposition
17-11188-ECPT	*E. coli (O157)*	Negative	N/A	Not Detected in 1 g	Pass
17-11188-SPT	*Salmonella*	Negative	N/A	Not Detected in 1 g	Pass

Note: Testing limits established by the Massachusetts Department of Public Health, Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for Massachusetts Registered Medical Marijuana Dispensaries, Exhibit 6. NT = Not tested.

Heavy Metals Screen [MCR-TM-0008] *Analyst: WS* *Test Date: 15 Dec 17*

The sample was analyzed via Inductively Coupled Plasma Mass Spectrometry. The collected data was compared to data collected from certified analytical reference standards at known concentrations.

Table 4. S17-11188 NA-GL-100 Concentrate Heavy Metals Testing

Test ID	Test Analysis	Result, ppb	LOD ppb	LOQ ppb	Limits ppb	Disposition
17-11188-HM	Arsenic	ND	15.5	46.7	200	Pass
17-11188-HM	Cadmium	BQL	15.6	47.3	200	Pass
17-11188-HM	Mercury	ND	45.8	138.9	100	Pass
17-11188-HM	Lead	140.8	17.7	53.4	500	Pass

Note: ND = Not Detected; LOD = Limit of Detection; LOQ = Limit of Quantitation; BQL = Below Quantitation Limit; ppb = part per billion. Testing limits established by the Massachusetts Department of Public Health, Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for Massachusetts Registered Medical Marijuana Dispensaries, Exhibit 4.

VC Screen [MCR-TM-0007] *Analyst: RC* *Test Date: 18 Dec 17*

The sample was analyzed via Gas Chromatography – Flame Ionization Detection with Headspace Autosampler. The collected data was compared to data collected from certified analytical reference standards at known concentrations.

Table 5. S17-11188 NA-GL-100 Concentrate Volatile Organic Screen

Test ID	Analyte	Result, ppm	LOD	LOQ	Limits, ppm	Disposition
17-11188-VC	Propane	ND	2.3	7.6	12	Pass
17-11188-VC	Isobutane	ND	2.1	7	12	Pass
17-11188-VC	n-Butane	ND	2.2	7.4	12	Pass
17-11188-VC	Ethanol	4950	850	2832	5000	Pass
17-11188-VC	Hexane	ND	2.0	6.7	290	Pass

Note: ND = Not Detected; LOD = Limit of Detection; LOQ = Limit of Quantitation; BQL = Below Quantitation Limit; ppm = part per million. Testing limits established by the Massachusetts Department of Public Health, Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for Massachusetts Registered Medical Marijuana Dispensaries, Exhibit 7.

END OF REPORT