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GAMA Report ID: HIPC-07187
Report Submitted: 10/8/2024

Client Info

Highmark Provisions, LLC
201 Summer Street Holliston, MA 01746
License: MC283492
Metrc Manifest: 2505601
Date Received: 10/3/2024

Sample Identification

METRC Batch ID: BTR-09092024-F1-AB
METRC Sample ID: 1A40A030000B221000007187
METRC Source ID: 1A40A030000B221000007157
ME Batch ID: N/A
QBench Order ID: HIPC9078

Sample Properties

Sample Weight (g): 6.5

Product Characterization

Production Stage: Raw Plant Material
Product Class: Buds
Retail Name: Buttered Toast

Results for Requested Analyses

Y = Tested "-" = Not Tested P = Pass F = Fail

Cannabinoid
Profile

Y

Terpene
Profile

Y

Heavy
Metals

P

Residual
Solvents

-

Pesticides

P

Total Yeast and
Mold

P

Mycotoxins

P

Pathogenic
Bacteria

P

Total
Coliforms

P

Total Aerobic
Bacteria

P

Entero-
bacteriaceae

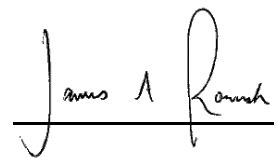
P

Vitamin E
Acetate

-

Authorization

Green Analytics Massachusetts is an Independent Testing Laboratory accredited to ISO/IEC 17025:2017 and licensed by the Massachusetts Cannabis Control Commission (CCC, # IL281277). Analytical methods and best-practices used are in compliance with the CCC's Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for MA Registered Medical Marijuana Dispensaries. The net/gross weight of the sample received was verified and all analyses were conducted at the GAMA laboratory. Quality control checks were prepared at known concentrations and run alongside batched client samples. Results presented here pertain to the sample received and relate only to items tested per sub-sampling SOP-071-GA. This Analytical Report shall not be reproduced except in full without GAMA approval. Where statements of conformity are reported ('pass' vs. 'fail'), the simple acceptance decision rule is applied, however the measurement uncertainty associated with the test method applied (not displayed in this simplified report) may impact the certainty with which a statement of conformity is made. This simplified report may not display all test methods' limits of detection (LODs), however this data is also available upon request.



James Roush
Laboratory Director

Cannabinoid Profile

Metric ID Tag: 1A40A030000B221000007187

Test ID: #845171

Analysis Date: 10/05/2024

Cannabinoids were analyzed using a High Performance Liquid Chromatograph equipped with a Photodiode Array Detector (HPLC-PDA) following GAMA SOP-002-GA; SOP-025-GA; SOP-073-GA.

Cannabinoid	LOQ (%)	Result (%)	Result (mg/g)
Tetrahydrocannabinolic acid (THCA)	0.040	18.251	182.51
Δ9-Tetrahydrocannabinol (Δ9-THC)	0.040	0.203	2.03
Cannabidiolic acid (CBDA)	0.040	ND	ND
Cannabidiol (CBD)	0.040	ND	ND
Cannabinol (CBN)	0.040	ND	ND
Cannabichromene (CBC)	0.040	ND	ND
Cannabigerolic acid (CBGA)	0.040	0.436	4.36
Cannabigerol (CBG)	0.040	0.274	2.74
Cannabidivarin (CBDV)	0.040	ND	ND
Tetrahydrocannabivarin (THCV)	0.040	ND	ND
Δ8-Tetrahydrocannabinol (Δ8-THC)	0.040	ND	ND
Total Cannabinoids		19.164	191.64

Note "NT": Not Tested; "ND": Not Detected; "LOQ": Limit of Quantitation; "BLQ": Below LOQ.

Heavy Metals Analysis

Metric ID Tag: 1A40A030000B221000007187

Test ID: #840945

Analysis Date: 10/07/2024

Heavy Metals were analyzed using an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) following GAMA SOP-021-GA; SOP-061-GA; SOP-072-GA. - **Limit units: ppb**

Analyte	LOQ (ppb)	Result (ppb)	Limit	Pass/Fail
Total Arsenic	132.9	ND	200	PASS
Cadmium	131.7	BLQ	200	PASS
Total Mercury	88.0	ND	100	PASS
Lead	175.8	BLQ	500	PASS

Note "NT": Not Tested; "ND": Not Detected; "LOQ": Limit of Quantitation; "BLQ": Below LOQ.

Microbial Contaminants Analysis

Metric ID Tag: 1A40A030000B221000007187

Test IDs: 840953, 840952, 840951, 840948

Microbial Contaminants were measured using a quantitative PCR (qPCR) technique from which the resulting Cq values were converted to colony forming units per gram (CFU/g) following GAMA SOP-701-GA; SOP-702-GA; SOP-703-GA; SOP-704-GA. - **Limit units: CFU/g**

Analyte	Result (CFU/g)	Analysis Date	Limit (CFU/g)	Finding
Total Yeast and Mold (TYM)	ND	10/07/2024	10000	PASS
Total Viable Aerobic Bacteria (TAC)	393	10/06/2024	100000	PASS
Total Coliforms (TC)	ND	10/06/2024	1000	PASS
Enterobacteriaceae (EB)	ND	10/06/2024	1000	PASS

Note "NT": Not Tested; "ND": Not Detected.

Pathogenic Bacteria Results

Metric ID Tag: 1A40A030000B221000007187

Test IDs: 840949, 840950

The presence or absence of STEC E. coli and Salmonella spp in the sample was determined using a PCR technique. Samples were incubated for a minimum of 18 hours prior to DNA extraction following GAMA SOP-701-GA; SOP-702-GA; SOP-703-GA; SOP-704-GA. - **Limit units: CFU/g**

Analyte	Result	Analysis Date	Limit	Finding
STEC E. Coli	Not Detected in 1g	10/07/2024	Detection in 1.0 g	PASS
Salmonella spp.	Not Detected in 1g	10/07/2024	Detection in 1.0 g	PASS

Note "NT": Not Tested; "ND": Not Detected.

Mycotoxins Results

Metric ID Tag: 1A40A030000B221000007187

Test ID: #840947

Analysis Date: 10/07/2024

Mycotoxins were analyzed using a High Performance Liquid Chromatograph equipped with a tandem Mass Spectrometer (LC/MS/MS) following GAMA SOP-002-GA; SOP-062-GA; SOP-070-GA. - **Limit units: µg/kg**

Analyte	LOQ (ppb)	Result (ppb)	Limit (ppb)	Finding
Aflatoxin B1	10.0	ND	20	PASS
Aflatoxin B2	10.0	ND	20	PASS
Aflatoxin G1	10.0	ND	20	PASS
Aflatoxin G2	10.0	ND	20	PASS
Ochratoxin A	10.0	ND	20	PASS

Note "NT": Not Tested; "ND": Not Detected; "LOQ": Limit of Quantitation; "BLQ": Below LOQ.

Pesticides Results

Metric ID Tag: 1A40A030000B221000007187

Test ID: #840946

Analysis Date: 10/07/2024

Pesticides were analyzed using a High Performance Liquid Chromatograph equipped with a tandem Mass Spectrometer (LC/MS/MS) following GAMA SOP-002-GA; SOP-062-GA; SOP-070-GA. - **Limit units: ppb**

Analyte	LOQ (ppb)	Result (ppb)	Limit (ppb)	Finding
Bifenazate	5.0	ND	10	PASS
Bifenthrin	5.0	ND	10	PASS
Cyfluthrin	5.0	ND	10	PASS
Etoxazole	5.0	ND	10	PASS
Imazalil	5.0	ND	10	PASS
Imidacloprid	5.0	ND	10	PASS
Myclobutanil	5.0	ND	10	PASS
Spiromesifen	5.0	ND	10	PASS
Trifloxystrobin	5.0	ND	10	PASS

Note "NT": Not Tested; "ND": Not Detected; "LOQ": Limit of Quantitation; "BLQ": Below LOQ.

Terpenes Profile

Metric ID Tag: 1A40A030000B221000007187

Test ID: #845604

Analysis Date: 10/08/2024

Terpenes were analyzed using a Liquid Injection Autosampler coupled to a Gas Chromatograph equipped with a tandem Mass Spectrometer (GC/MS/MS) following GAMA SOP-002-MA; SOP-063-MA; SOP-069-MA.

Analyte	LOQ (%)	Result (%)	Result (mg/g)
α-Pinene	0.01	0.013	0.13
β-Pinene	0.01	0.020	0.2
β-Myrcene	0.01	0.412	4.12
Limonene	0.01	0.169	1.69
Terpinolene	0.01	ND	ND
Linalool	0.01	0.204	2.04
Caryophyllene	0.01	0.209	2.09
α-Humulene	0.01	0.058	0.58
Caryophyllene Oxide	0.01	0.016	0.16
α-Bisabolol	0.01	0.019	0.19
Total Terpenes		1.120	11.2

Note "NT": Not Tested; "ND": Not Detected; "LOQ": Limit of Quantitation; "BLQ": Below LOQ.