



[A] 40 Speen St., Suite 301  
Framingham, MA 01701  
Lab: 508-465-3470 email: lab@ma.steepphill.com

SHMA Report ID: ARLC-24436  
Report Submitted: 7/28/2022

[B] Client Info	
<b>ARL Healthcare</b>	
177 John Vertente Blvd.	
New Bedford, MA 02745	
License:	RMD1085-C
Metrc Manifest:	1158725
Date Received:	7/19/2022

[C] Sample Identification	
METRC Batch ID:	Lemon Afghani H6.21.22 F9 B1 T1
METRC Sample ID:	1A40A0100001AF5000024436
METRC Source ID:	1A40A0100001AF5000024425
ME Batch ID:	NA

[D] Sample Properties	
Sample Weight (g):	6.5g
Serving Size (g):	NA

[E] Product Characterization	
Production Stage:	Finished Plant Material
Product Class:	Flower
Ingestion Only:	---
Extraction Solvent:	---
Retail Name:	Lemon Afghani Bulk Flower

[F] 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	Enterobacteriaceae	P	Vitamin E Acetate	-

[G] Authorization	
<p>Steep Hill 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. Where statements of conformity are reported ('pass' vs. 'fail'), the simple acceptance decision rule is applied.</p> <p>The net/gross weight of the sample received was verified and all analyses were conducted at the SHMA laboratory. Results presented here pertain to the sample received and relate only to items tested. This Analytical Report shall not be reproduced except in full without SHMA approval.</p>	
<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>CERT #s 4356.04 ; 4356.05</p> <div style="text-align: right;">   James J. Kocis  Laboratory Director </div>	

**[H] Cannabinoid Profile**

Metrc ID Tag: 1A40A0100001AF5000024436

Analysis Date: 07/22/22

Datafile: ARLC-24436\_1A40A0100001AF5000024436\_POTENCY\_C\_20220722\_GL\_01\_7232022\_028.lcd

Analyst(s): AS

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

<u>Cannabinoid</u>	<u>LOQ (%)</u>	<u>Result (%)</u>	<u>Result (mg/g)</u>	<u>Result (mg/serv)</u>
Tetrahydrocannabinolic acid (THCA)	0.0967	17.0755	170.755	N/A
Δ9-Tetrahydrocannabinol (Δ9-THC)	0.1206	0.7722	7.722	N/A
Cannabidiolic acid (CBDA)	0.1263	ND	ND	N/A
Cannabidiol (CBD)	0.1198	ND	ND	N/A
Cannabinol (CBN)	0.1101	ND	ND	N/A
Cannabichromene (CBC)	0.1096	ND	ND	N/A
Cannabigerolic acid (CBGA)	0.1135	0.4325	4.325	N/A
Cannabigerol (CBG)	0.1089	0.2033	2.033	N/A
Cannabidivarin (CBDV)	0.1097	ND	ND	N/A
Tetrahydrocannabivarin (THCV)	0.1098	ND	ND	N/A
Δ8-Tetrahydrocannabinol (Δ8-THC)	0.1096	ND	ND	N/A
<b>Total Available Cannabinoids</b>	-	<b>18.4835</b>	<b>184.835</b>	-

Note "NT": Not Tested; "ND": Not Detected; "BLQ": Below limit of Quantification.

Percentage dry-weight-basis.

**[I] Heavy Metals Analysis**

Metrc ID Tag: 1A40A0100001AF5000024436

Analysis Date: 07/22/22

Datafile: HM\_A\_20220721\_TH\_SD DIG-20220720\_ZS ARLC-24436

Analyst(s): TH

Heavy Metals were measured using an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) following SHMA SOP-021-GA; SOP-061-GA; SOP-072-GA.

<u>Analyte</u>	<u>LOQ (ppb)</u>	<u>Result (ppb)</u>	<u>All Uses</u>		<u>Ingestion Only</u>	
			<u>Limit (ppb)</u>	<u>Finding</u>	<u>Limit (ppb)</u>	<u>Finding</u>
Total Arsenic	151.4	ND	200.0	Pass	1500.0	NA
Cadmium	151.4	BLQ	200.0	Pass	500.0	NA
Total Mercury	75.7	ND	100.0	Pass	1500.0	NA
Lead	151.4	ND	500.0	Pass	1000.0	NA

Note "NT": Not Tested; "ND": Not Detected; "BLQ": Below limit of Quantification.

**[J] Microbial Contaminants Analysis**

Metrc ID Tag: 1A40A0100001AF5000024436

Analyst(s): GC

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 SHMA SOP-701-GA; SOP-702-GA; SOP-703-GA; SOP-704-GA.

<u>Analyte</u>	<u>Result (CFU/g)</u>	<u>Datafile</u>	<u>Analysis Date</u>	<u>Limit (CFU/g)</u>	<u>Finding</u>
Total Coliforms (CC)	ND	PCR-20220721_COL	07/25/22	1.00E+03	Pass
Total Yeast and Mold (YM)	ND	PCR-20220721_TYM	07/25/22	1.00E+04	Pass
Total Viable Aerobic Bacteria (TAC)	ND	PCR-20220721_TACrr	07/25/22	1.00E+05	Pass
Bile-Tolerant Gram-Neg. Bacteria (BTGN)	ND	PCR-20220721_BTGN	07/25/22	1.00E+03	Pass

Note: "NT": Not Tested; "ND" Not Detected. Enterobacteriaceae is the family of bacteria also known as Bile-Tolerant Gram-Negative bacteria.

**[K] Pathogenic Bacteria Results**

Metrc ID Tag: 1A40A0100001AF5000024436 Analysis Date: 07/25/22

Datafile: PCR-20220721\_D2

Analyst(s): GC

The presence or absence of STEC E. coli and Salmonella spp. was determined by plating samples on selective chromogenic medium. Samples were incubated for a minimum of 18 hours prior to plating and analyzed following SHMA SOP-700-MA.

<u>Analyte</u>	<u>Result</u>	<u>Analysis Date</u>	<u>Limit</u>	<u>Finding</u>
STEC E. coli	Not Detected	07/25/22	Detection in 1.0 g	Pass
Salmonella spp.	Not Detected	07/25/22	Detection in 1.0 g	Pass

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

**[L] Mycotoxins Results**

Metrc ID Tag: 1A40A0100001AF5000024436 Analysis Date: 07/23/22

Datafile: D:\Analyst Data\Projects\SHMA\PGMY\Data\DataPGMY\_A\_20220721\_RB\_02.wiff (sample 11)

Analyst(s): JK

Mycotoxins were measured using a High Performance Liquid Chromatograph equipped with a tandem Mass Spectrometer (HPLC-MS/MS) following SHMA SOP-002-GA; SOP-062-GA; SOP-070-GA.

<u>Analyte</u>	<u>LOQ (ppb)</u>	<u>Result (ppb)</u>	<u>Limit (ppb)</u>	<u>Finding</u>
Aflatoxin B1	10.0	ND	-	Tested
Aflatoxin B2	10.0	ND	-	Tested
Aflatoxin G1	10.0	ND	-	Tested
Aflatoxin G2	10.0	ND	-	Tested
Ochratoxin A	10.0	ND	-	Tested
Total Mycotoxins	-	0.0	20.0	Pass

Note "NT": Not Tested; "ND": Not Detected; "BLQ": Below limit of Quantification.

**[M] Residual Solvent Results**

Metrc ID Tag: NT

Analysis Date: NT

Datafile: NT

Analyst(s): NT

Residual Solvents were measured using a Headspace Sampler coupled to a Gas Chromatograph equipped with a tandem Mass Spectrometer (HS-GC-MS/MS) following SHMA SOP-011-GA; SOP-067-GA; SOP-010-GA.

<u>Analyte</u>	<u>LOQ (ppm)</u>	<u>Result (ppm)</u>	<u>Limit (ppm)</u>	<u>Finding</u>
Ethanol	NT	NT	NT	NT
Propane	NT	NT	NT	NT
iso-Butane	NT	NT	NT	NT
n-Butane	NT	NT	NT	NT
n-Pentane	NT	NT	NT	NT
Acetone	NT	NT	NT	NT

Note "NT": Not Tested; "ND": Not Detected; "BLQ": Below limit of Quantification.

**Steep Hill Massachusetts**

METRC Sample ID: 1A40A0100001AF5000024436

Item Name: Lemon Afghani Bulk Flower

**[N] Pesticides Results**

Metrc ID Tag: 1A40A0100001AF5000024436 Analysis Date: 07/23/22

Datafile: D:\Analyst Data\Projects\SHMA\PGMY\Data\DataPGMY\_A\_20220721\_RB\_02.wiff (sample 11)

Analyst(s): JK

Pesticides were measured using a High Performance Liquid Chromatograph equipped with a tandem Mass Spectrometer (HPLC MS/MS) following SHMA SOP-002-GA; SOP-062-GA; SOP-070-GA.

Analyte	LOQ (ppb)	Result (ppb)	Limit (ppb)	Finding
Bifenazate	5.0	ND	10.0	Pass
Bifenthrin	5.0	ND	10.0	Pass
Cyfluthrin	5.0	ND	10.0	Pass
Etoazole	5.0	ND	10.0	Pass
Imazalil	5.0	ND	10.0	Pass
Imidacloprid	5.0	ND	10.0	Pass
Myclobutanil	5.0	ND	10.0	Pass
Spiromesifen	5.0	ND	10.0	Pass
Trifloxystrobin	5.0	ND	10.0	Pass

Note "NT": Not Tested; "BLQ": Below Limit of Quantification; "ND": Not Detected

**[O] Vitamin E Acetate Results**

Metrc ID Tag:

NT

Analysis Date:

NT

Datafile: NT

Analyst(s): NT

Pesticides were measured using a High Performance Liquid Chromatograph equipped with a tandem Mass Spectrometer (HPLC MS/MS) following SHMA SOP-002-GA; SOP-062-GA; SOP-070-GA.

Analyte	LOD (ppb)	Result (ppb)	Limit (ppb)	Finding
Vitamin E Acetate	-	NT	-	NT

Note "NT": Not Tested; "LOD": Limit of Detection

**[P] Terpenes Profile**

Metrc ID Tag: 1A40A0100001AF5000024436

Analysis Date: 7/26/2022

Datafile: ARLC-24436\_1A40A0100001AF5000024436\_717-20220720\_ZS\_7212022\_100.qgd

Analyst(s): BK

Terpenes were measured using a Headspace Sampler coupled to a Gas Chromatograph equipped with a tandem Mass Spectrometer (HS-GC-MS/MS) following SHMA SOP-011-GA; SOP-067-GA; SOP-010-GA.

Terpenes	LOD (%)	Result (%)	Result (mg/g)
alpha-Pinene	0.0006	0.3515	3.515
beta-Pinene	0.0004	0.1089	1.089
beta-Myrcene	0.0006	2.7386	27.386
Limonene	0.0005	0.0278	0.278
Linalool	0.0003	0.0656	0.656
Caryophyllene	0.0008	0.1476	1.476
alpha-Humulene	0.0003	0.0432	0.432
alpha-Bisabolol	0.0009	0.0855	0.855
Total Terpenes	-	3.5687	35.687

Note NT: Not Tested.



## QA/QC Section

## [Q] Cannabinoid QC

Analysis Date: 07/22/22

Datafile: LCS\_POTENCY\_C\_20220722\_GL\_01\_7232022\_015.lcd

Analyst(s): AS

QC Notes: Quality control checks were prepared at known concentrations and run alongside batch samples.

<u>Cannabinoid</u>	<u>Measured Conc. (mg/mL)</u>	<u>Expected Conc. (mg/mL)</u>	<u>% Recovery</u>
Tetrahydrocannabinolic acid (THCA)	0.043	0.046	94%
$\Delta$ 9-Tetrahydrocannabinol ( $\Delta$ 9-THC)	0.041	0.046	90%
Cannabidiolic acid (CBDA)	0.045	0.046	97%
Cannabidiol (CBD)	0.047	0.045	104%
Cannabinol (CBN)	0.043	0.045	94%
Cannabichromene (CBC)	0.042	0.045	94%
Cannabigerolic acid (CBGA)	0.047	0.046	102%
Cannabigerol (CBG)	0.043	0.045	95%
Cannabidivarin (CBDV)	0.043	0.045	96%
Tetrahydrocannabivarin (THCV)	0.043	0.046	94%
$\Delta$ 8-Tetrahydrocannabinol ( $\Delta$ 8-THC)	0.041	0.045	92%

## [R] Heavy Metals QC

Analysis Date: 07/22/22

Datafile: HM\_A\_20220721\_TH\_SD DIG-20220720\_ZS LCS

Analyst(s): TH

QC Notes: Quality control checks were prepared at known concentrations and run alongside batch samples.

<u>Analyte</u>	<u>Measured Conc.</u> <u>(ppb)</u>	<u>Expected Conc.</u> <u>(ppb)</u>	<u>% Recovery</u>
Total Arsenic	3.1	4.0	78%
Cadmium	3.1	4.0	77%
Total Mercury	3.4	4.0	86%
Lead	3.1	4.0	78%

## [S] Microbial Contaminants QC

Analysis Date: 7/25/2022

Analyst(s): GC

QC Notes: Quality control checks are included with each run to assess the success of instrument run and polymerase chain reaction.

<u>Target</u>	<u>Datafile</u>	<u>Positive Control Cq</u>	<u>Negative Control Cq</u>	<u>Finding</u>
Total Coliforms (CC)	PCR-20220721_COL	12.88	N/A	Pass
Total Yeast and Mold (YM)	PCR-20220721_TYM	12.5	N/A	Pass
Total Viable Aerobic Bacteria (TAC)	PCR-20220721_TACrr	18.13	N/A	Pass
Bile-Tolerant Gram-Neg. Bacteria (BTGN)	PCR-20220721_BTGN	16.57	N/A	Pass
<u>Expected Value</u>		<u>Cq <math>\leq</math> 35</u>	<u>&gt;35/&gt;30 (TAC) or N/A</u>	

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

**[T] Pathogenic Bacteria QC**

Analysis Date: 7/25/2022

Analyst(s): GC

QC Notes: Quality control checks are included with each run to assess the success of sample plating.

<u>Target</u>	<u>Datafile</u>	<u>Positive Control Cq</u>	<u>Negative Control Cq</u>	<u>Finding</u>
<i>STEC E. coli</i>	PCR-20220721_D2	12.55	N/A	Pass
<i>Salmonella spp.</i>	PCR-20220721_D2	17.92	N/A	Pass
<b>Expected Value</b>		<b><math>Cq \leq 35</math></b>	<b><math>Cq &gt; 35</math> or N/A</b>	

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

**[U] Mycotoxins QC**

Analysis Date: 07/23/22

Datafile: D:\Analyst Data\Projects\SHMA\PGMY\Data\DataPGMY\_A\_20220721\_RB\_02.wiff (sample 4)

Analyst(s): JK

QC Notes: Quality control checks were prepared at known concentrations and run alongside batch samples.

<u>Analyte</u>	<u>Measured Conc. (ppb)</u>	<u>Expected Conc. (ppb)</u>	<u>% Recovery</u>
Aflatoxin B1	1.9	1.6	116%
Aflatoxin B2	1.8	1.7	108%
Aflatoxin G1	1.7	1.7	104%
Aflatoxin G2	2.0	1.6	121%
Ochratoxin A	1.7	1.7	100%

**[V] Residual Solvent QC**

Analysis Date: NT

Datafile: NT

Analyst(s): NT

QC Notes: Quality control checks were prepared at known concentrations and run alongside batch samples.

<u>Analyte</u>	<u>Measured Conc. (ppb)</u>	<u>Expected Conc. (ppb)</u>	<u>% Recovery</u>
Ethanol	NT	NT	NT
iso-Butane	NT	NT	NT
Propane	NT	NT	NT
n-Butane	NT	NT	NT
n-Pentane	NT	NT	NT
Acetone	NT	NT	NT

**[W] Pesticides QC**

Analysis Date: 07/23/22

Datafile: D:\Analyst Data\Projects\SHMA\PGMY\Data\DataPGMY\_A\_20220721\_RB\_02.wiff (sample 11)

Analyst(s): JK

QC Notes: Quality control checks were prepared at known concentrations and run alongside batch samples.

<u>Analyte</u>	<u>Measured Conc (ppb)</u>	<u>Expected Conc (ppb)</u>	<u>% Recovery</u>	<u>Finding</u>
Bifenazate	0.9	0.8	111%	Pass
Bifenthrin	1.0	0.8	117%	Pass
Cyfluthrin	0.9	0.8	109%	Pass
Etoazole	1.0	0.8	119%	Pass
Imazalil	0.9	0.8	110%	Pass
Imidacloprid	0.9	0.8	107%	Pass
Myclobutanil	1.0	0.8	125%	Pass
Spiromesifen	0.9	0.8	112%	Pass
Trifloxystrobin	0.9	0.8	113%	Pass



[X] Vitamin E Acetate QC

Analysis Date: NT

Datafile: NT

Analyst(s): NT

QC Notes: Quality control checks were prepared at known concentrations and run alongside batch samples.

<u>Analyte</u>	<u>Observed Result</u>	<u>Expected Result</u>	<u>Finding</u>
Vitamin E Acetate	NT	NT	NT

- End of Analytical Report -