Steep Hill Massachusetts

Analytical Report

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

SHMA Report ID: SIR5-34992
Report Submitted: 2/12/2024

[B] Client Info

Sira Naturals
13 Commercial Way
Milford, MA 01757

License:	MP281613
Metrc Manifest:	2063127
Date Received:	2/6/2024

[C] Sample Identification

METRC Batch ID:	013024LBDRWP27
METRC Sample ID:	1A40A030000C419000034992
METRC Source ID:	1A40A030000C419000034990
ME Batch ID:	NA

[D] Sample Properties

Sample Weight (g):	5.0
Serving Size (g):	NA

[E] Product Characterization

Production Stage:	Cannabis Resin & Concentrates
Product Class:	Concentrate
Ingestion Only:	---
Extraction Solvent:	Propane, Butane
Retail Name:	Live Badder - WAP #27

[F] Results for Requested Analyses

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

Cannabinoid Profile	Y	Terpene Profile	Y	Heavy Metals	P	Residual Solvents	P	Pesticides	-	Total Yeast and Mold	P
Mycotoxins	P	Pathogenic Bacteria	P	Total Coliforms	P	Total Aerobic Bacteria	P	Entero-bacteriaceae	P	Vitamin E Acetate	-

[G] Authorization

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.

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.

ilac-MRA A2LA ACCREDITED CERT #s 4356.04 ; 4356.05

Kimberly Ross, PhD
Laboratory Director

Steep Hill Massachusetts

METRC Sample ID: 1A40A030000C419000034992

Item Name: Live Badder - WAP #27

[H] Cannabinoid Profile

Metrc ID Tag: 1A40A030000C419000034992 Analysis Date: 02/08/24

Datafile: SIR5-34992_1A40A030000C419000034992_528648_POTENCY_C_20240207_AP_01_282024_26_026.l Analyst(s): NG

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.

Cannabinoid	LOQ (%)	Result (%)	Result (mg/g)	Result (mg/serv)
Tetrahydrocannabinolic acid (THCA)	0.2014	77.2567	772.567	N/A
Δ9-Tetrahydrocannabinol (Δ9-THC)	0.2010	6.1462	61.462	N/A
Cannabidiolic acid (CBDA)	0.2105	ND	ND	N/A
Cannabidiol (CBD)	0.1996	ND	ND	N/A
Cannabinol (CBN)	0.1835	ND	ND	N/A
Cannabichromene (CBC)	0.1827	ND	ND	N/A
Cannabigerolic acid (CBGA)	0.1892	3.8379	38.379	N/A
Cannabigerol (CBG)	0.1816	0.5331	5.331	N/A
Cannabidivarin (CBDV)	0.1829	ND	ND	N/A
Tetrahydrocannabivarin (THCV)	0.1830	ND	ND	N/A
Δ8-Tetrahydrocannabinol (Δ8-THC)	0.1827	ND	ND	N/A
Total Available Cannabinoids	-	87.7739	877.739	-

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

[I] Heavy Metals Analysis

Metrc ID Tag: 1A40A030000C419000034992 Analysis Date: 02/08/24

Datafile: HM_A_20240207_SD_SCD DIG-20240206_KAR SIR5-34992 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.

	LOQ	Result	All Uses		Ingestion Only	
Analyte	(ppb)	(ppb)	Limit (ppb)	Finding	Limit (ppb)	Finding
Total Arsenic	124.4	BLQ	200.0	Pass	1500.0	NA
Cadmium	82.9	BLQ	200.0	Pass	500.0	NA
Total Mercury	82.9	BLQ	100.0	Pass	1500.0	NA
Lead	207.3	BLQ	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: 1A40A030000C419000034992

Analyst(s): JT

Microbial contaminants were quantified using a 3M Petrifilm method and reported as colony forming units per gram (CFU/g). Samples were extracted and analyzed following SHMA SOP-700-MA.

Analyte	Result (CFU/g)	Datafile	Analysis Date	Limit (CFU/g)	Finding
Total Coliforms (CC)	ND	PLA-20240206_KAR_01	02/10/24	1.00E+02	Pass
Total Yeast and Mold (YM)	ND	PLA-20240206_KAR_01	02/10/24	1.00E+03	Pass
Total Viable Aerobic Bacteria (TAC)	ND	PLA-20240206_KAR_01	02/10/24	1.00E+04	Pass
Enterobacteriaceae (EB)	ND	PLA-20240206_KAR_01	02/10/24	1.00E+02	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: 1A40A030000C419000034992 | Analysis Date: 02/10/24
Datafile: PCR-20240208_KAR_D2 | Analyst(s): JT

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 SHMA SOP-700-MA; SOP-701-GA; SOP-702-GA; SOP-703-GA; SOP-704-GA.

Analyte	Result	Analysis Date	Limit	Finding
STEC E. coli	Not Detected	02/10/24	Detection in 1.0 g	Pass
Salmonella spp.	Not Detected	02/10/24	Detection in 1.0 g	Pass

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

[L] Mycotoxins Results | Metrc ID Tag: 1A40A030000C419000034992 | Analysis Date: 02/10/24
Datafile: (Path: D:\Analyst Data\Projects\SHMA 2023\PGMY_VEA\Data\DataPGMY_B_20240207_SD_01.wifl | Analyst(s): SD

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.

Analyte	LOQ (ppb)	Result (ppb)	Limit (ppb)	Finding
Aflatoxin B1	20.0	ND	-	Tested
Aflatoxin B2	20.0	ND	-	Tested
Aflatoxin G1	20.0	ND	-	Tested
Aflatoxin G2	20.0	ND	-	Tested
Ochratoxin A	20.0	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: 1A40A030000C419000034992 | Analysis Date: 02/09/24
Datafile: SIR5-34992_1A40A030000C419000034992_528651--59989_RSA-20240208_AD_282024_21.qg(| Analyst(s): AD

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.

Analyte	LOQ (ppm)	Result (ppm)	Limit (ppm)	Finding
Ethanol	NT	NT	NT	NT
Propane	6.21	ND	12	Pass
iso-Butane	NT	NT	NT	NT
n-Butane	6.14	8.40	12	Pass
n-Pentane	NT	NT	NT	NT
Acetone	NT	NT	NT	NT

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

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[N] Pesticides 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	LOQ (ppb)	Result (ppb)	Limit (ppb)	Finding
Bifenazate	NT	NT	NT	NT
Bifenthrin	NT	NT	NT	NT
Cyfluthrin	NT	NT	NT	NT
Etoxazole	NT	NT	NT	NT
Imazalil	NT	NT	NT	NT
Imidacloprid	NT	NT	NT	NT
Myclobutanil	NT	NT	NT	NT
Spiromesifen	NT	NT	NT	NT
Trifloxystrobin	NT	NT	NT	NT

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

Vitamin E Acetate was measured using a High Performance Liquid Chromatograph equipped with a tandem Mass Spectrometer (HPLC MS/MS) following SHMA SOP-002-GA; SOP-062-MA; SOP-070-MA.

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:	1A40A030000C419000034992	Analysis Date:	2/7/2024
Datafile: SIR5-34992_1A40A030000C419000034992_528679_717-TP-20230206_SD_262024_32.qgd			Analyst(s):	BK

Please see last page of report for extended terpene profile

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METRC Sample ID: 1A40A030000C419000034992

Item Name: Live Badder - WAP #27

QA/QC Section

[Q] Cannabinoid QC — Analysis Date: 02/08/24
Datafile: LCS_POTENCY_C_20240207_AP_01_282024_4_004.lcd — Analyst(s): NG

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

Cannabinoid	Measured Conc. (mg/mL)	Expected Conc. (mg/mL)	% Recovery
Tetrahydrocannabinolic acid (THCA)	0.049	0.050	98%
Δ9-Tetrahydrocannabinol (Δ9-THC)	0.049	0.050	98%
Cannabidiolic acid (CBDA)	0.049	0.050	99%
Cannabidiol (CBD)	0.049	0.050	98%
Cannabinol (CBN)	0.049	0.050	98%
Cannabichromene (CBC)	0.049	0.050	97%
Cannabigerolic acid (CBGA)	0.048	0.050	95%
Cannabigerol (CBG)	0.048	0.050	96%
Cannabidivarin (CBDV)	0.050	0.050	99%
Tetrahydrocannabivarin (THCV)	0.049	0.050	99%
Δ8-Tetrahydrocannabinol (Δ8-THC)	0.048	0.050	96%

[R] Heavy Metals QC — Analysis Date: 02/08/24
Datafile: HM_A_20240207_SD_SCD DIG-20240206_KAR LCS — Analyst(s): TH

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

Analyte	Measured Conc. (ppb)	Expected Conc. (ppb)	% Recovery
Total Arsenic	3.6	4.0	91%
Cadmium	3.6	4.0	90%
Total Mercury	4.0	4.0	101%
Lead	3.7	4.0	92%

[S] Microbial Contaminants QC — Analysis Date: 2/10/2024
Analyst(s): JT

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

Target	Datafile	Positive Control Result	Negative Control Result	Finding
Total Coliforms (CC)	PLA-20240206_KAR_01	Detected	Not Detected	Pass
Total Yeast and Mold (YM)	PLA-20240206_KAR_01	Detected	Not Detected	Pass
Total Viable Aerobic Bacteria (TAC)	PLA-20240206_KAR_01	Detected	Not Detected	Pass
Enterobacteriaceae (EB)	PLA-20240206_KAR_01	Detected	Not Detected	Pass
Expected Value		*Detected*	*Not Detected*	

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

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Item Name: Live Badder - WAP #27

[T] Pathogenic Bacteria QC

Analysis Date: 2/10/2024

Analyst(s): JT

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

Target	Datafile	Positive Control Cq	Negative Control Cq	Finding
STEC E. coli	PCR-20240208_KAR_D2	12.09	N/A	Pass
Salmonella spp.	PCR-20240208_KAR_D2	21.07	N/A	Pass
Expected Value		*Cq ≤ 35*	*Cq>35 or N/A*	

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

[U] Mycotoxins QC

Analysis Date: 02/10/24

Datafile: (Path: D:\Analyst Data\Projects\SHMA 2023\PGMY_VEA\Data\DataPGMY_B_20240207_SD_01.wiff), (s

Analyst(s): SD

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

Analyte	Measured Conc. (ppb)	Expected Conc. (ppb)	% Recovery
Aflatoxin B1	0.7	1.0	67%
Aflatoxin B2	0.5	1.0	50%
Aflatoxin G1	0.6	1.0	62%
Aflatoxin G2	0.6	1.0	61%
Ochratoxin A	0.5	1.0	52%

[V] Residual Solvent QC

Analysis Date: 02/09/24

Datafile: CCV_LIQ_GAS_20240208_AD_02_N$A_282024_13.qgd

Analyst(s): AD

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

Analyte	Measured Conc. (ppb)	Expected Conc. (ppb)	% Recovery
Ethanol	NT	NT	NT
iso-Butane	NT	NT	NT
Propane	0.9	0.7	129%
n-Butane	1.4	1.7	84%
n-Pentane	NT	NT	NT
Acetone	NT	NT	NT

[W] Pesticides QC

Analysis Date: NT

Datafile: NT

Analyst(s): NT

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

Analyte	Measured Conc (ppb)	Expected Conc (ppb)	% Recovery	Finding
Bifenazate	NT	NT	NT	NT
Bifenthrin	NT	NT	NT	NT
Cyfluthrin	NT	NT	NT	NT
Etoxazole	NT	NT	NT	NT
Imazalil	NT	NT	NT	NT
Imidacloprid	NT	NT	NT	NT
Myclobutanil	NT	NT	NT	NT
Spiromesifen	NT	NT	NT	NT
Trifloxystrobin	NT	NT	NT	NT

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METRC Sample ID: 1A40A030000C419000034992

Item Name: Live Badder - WAP #27

[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.

Analyte	Observed Result	Expected Result	Finding
Vitamin E Acetate	NT	NT	NT

[Y] Extended Terpenes Profile — Metrc ID Tag: 1A40A030000C419000034992 — Analysis Date: 2/7/2024

Datafile: SIR5-34992_1A40A030000C419000034992_528679_717-TP-20230206_SD_262024_32.qgd — Analyst(s): BK

Terpenes were measured using liquid autosampler injection onto 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	0.0934	0.934
Camphene	0.0004	0.0847	0.847
beta-Pinene	0.0005	0.1309	1.309
beta-Myrcene	0.0005	0.5218	5.218
D-Limonene	0.0017	0.9296	9.296
Terpinolene	0.0001	0.0617	0.617
Fenchone	0.0006	0.0442	0.442
Linalool	0.0005	1.1447	11.447
Fenchol	0.0531	0.1742	1.742
Terpineol	0.0006	0.2504	2.504
Geraniol	0.0007	0.0819	0.819
Caryophyllene	0.0009	1.3594	13.594
alpha-Humulene	0.0006	0.3701	3.701
Valencene	0.0010	0.1524	1.524
Caryophyllene oxide	0.0007	0.1160	1.160
Guaiol	0.0007	0.2893	2.893
alpha-Bisabolol	0.0007	0.2619	2.619
Total Terpenes	-	**6.0666**	**60.666**

Note 'NT': Not Tested. '*': for R&D purposes only.

- End of Analytical Report -