



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296
info@ppbanalytical.com | https://ppbanalytical.com/

Certificate of Analysis

Client Name Retro Cannabis & Hemp Extracts
 Client Address #200 25 4th Street, Charlottetown, Prince Edward Island C1E 2B4
 Client Contact Andrew Costa (andrew@retrocannabis.ca)

PPB Analytical Sample ID 3024_0307
 Sample Receiving Date Feb. 14, 2024
 Sample Registration Date Feb. 14, 2024
 Receiving Condition Ambient
 Client Sample Code# 231211-MB-00-BK
 Sample Description# Mother of Berries, 231211-MB-00-BK
 Sample size 50 g
 Test Report Date Feb. 22, 2024

Microbial Scan				
Analyte	ATL*	RDL*	Result	Unit
Total Aerobic Microbial Count	NMT 500 000	< 5	< 5	CFU/g
Method: E.P. 2.6.12				
Analysis Date: Feb. 14, 2024 – Feb. 17, 2024				

Total Combined Yeasts and Molds	NMT 50 000	< 5	< 5	CFU/g
Method: E.P. 2.6.12				
Analysis Date: Feb. 14, 2024 – Feb. 20, 2024				

Bile Tolerant Gram Negatives	NMT 10 000	< 10	< 10	CFU/g
Method: E.P. 2.6.31				
Analysis Date: Feb. 14, 2024 – Feb. 16, 2024				

<i>Salmonella spp.</i>	Absent	Absent	Absent	in 10 g
Method: E.P. 2.6.13				
Analysis Date: Feb. 14, 2024 – Feb. 17, 2024				

<i>Escherichia coli</i>	Absent	Absent	Absent	in 1 g
Method: E.P. 2.6.13				
Analysis Date: Feb. 14, 2024 – Feb. 18, 2024				



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | https://ppbanalytical.com/

Cannabinoid Profile

Total THC	78.423	%(w/w)
Total CBD	3.077	%(w/w)

Analyte	Specification	LOD ^{##} % (w/w)	LOQ ^{##} % (w/w)	Result mg/g	Result % (w/w)
CBDVA	Report	0.002	0.005	ND	ND
CBDV	Report	0.004	0.013	4.3494	0.435
CBDA	Report	0.002	0.006	16.3755	1.638
CBGA	Report	0.002	0.005	10.5762	1.058
CBG	Report	0.004	0.011	12.2677	1.227
CBD	Report	0.004	0.012	16.4126	1.641
THCV	Report	0.004	0.012	10.6506	1.065
THCVA	Report	0.002	0.005	ND	ND
CBN	Report	0.004	0.012	4.1636	0.416
Delta-9-THC	Report	0.004	0.011	662.6394	66.264
Delta-8-THC	Report	0.004	0.012	ND	ND
CBC	Report	0.003	0.009	8.8476	0.885
Delta-9-THCA	Report	0.003	0.008	138.6431	13.864
CBCA	Report	0.002	0.006	ND	ND
Total THC**	Report	0.004	0.011	784.2294	78.423
Total CBD***	Report	0.004	0.012	30.7739	3.077

** Total THC = delta9-THC + 0.877 × THCA-A; *** Total CBD = CBD + 0.877 × CBDA

ND = Not Detected (< LOD)

Method: TM-CA-002

Analysis Date: Feb. 15, 2024 – Feb. 16, 2024

Heavy metals

Analyte	ATL (NMT)*	LOD ^{##}	LOQ ^{##}	Result	Unit
Arsenic	0.2	0.033	0.11	ND	ppm
Cadmium	0.3	0.018	0.06	< LOQ	ppm
Mercury	0.1	0.023	0.078	ND	ppm
Lead	0.5	0.051	0.17	ND	ppm

ND = Not detected (< LOD)

Method: TM-CA-008

Analysis Date: Feb. 14, 2024 – Feb. 15, 2024

Mycotoxins

Analyte	ATL (NMT)*	LOD ^{##}	LOQ ^{##}	Result	Unit
Aflatoxin B1	2	0.1	1	ND	ppb
Aflatoxin B2	Report	0.1	1	ND	ppb

Test Report #: 202402266-01

PPB Analytical Sample ID: 3024_0307

Page 2 of 8



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | <https://ppbanalytical.com/>

Aflatoxin G1	Report	0.1	1	ND	ppb
Aflatoxin G2	Report	0.1	1	ND	ppb
Total Aflatoxins(B1+B2+G1+G2)	4			ND	ppb
Ochratoxin A	20	0.1	1.3	ND	ppb
ND = Not detected (< LOD)					
Method: TM-CA-001					
Analysis Date: Feb. 15, 2024 – Feb. 16, 2024					

Pesticides – Health Canada					
Analyte	ATL (NMT)*	LOD ^{##}	LOQ ^{##}	Result	Unit
Abamectin	0.1	0.05	0.1	ND	ppm
Acephate	0.02	0.005	0.01	ND	ppm
Acequinocyl	0.03	0.005	0.01	ND	ppm
Acetamiprid	0.1	0.005	0.01	ND	ppm
Aldicarb	1	0.01	0.05	ND	ppm
Allethrin	0.2	0.05	0.1	ND	ppm
Azadirachtin	1	0.2	0.5	ND	ppm
Azoxystrobin	0.02	0.005	0.01	ND	ppm
Benzovindiflupyr	0.02	0.005	0.01	ND	ppm
Bifenazate	0.02	0.005	0.01	ND	ppm
Bifenthrin	1	0.01	0.05	ND	ppm
Boscalid	0.02	0.005	0.01	ND	ppm
Buprofezin	0.02	0.005	0.01	ND	ppm
Carbaryl	0.05	0.005	0.01	ND	ppm
Carbofuran	0.02	0.005	0.01	ND	ppm
Chlorantraniliprole	0.02	0.005	0.01	ND	ppm
Chlorphenapyr	0.05	0.01	0.05	ND	ppm
Chlorpyrifos	0.04	0.005	0.01	ND	ppm
Clofentezine	0.02	0.005	0.01	ND	ppm
Clothianidin	0.05	0.005	0.01	ND	ppm
Coumaphos	0.02	0.005	0.01	ND	ppm
Cyantraniliprole	0.02	0.005	0.01	ND	ppm
Cyfluthrin	0.2	0.05	0.2	ND	ppm
Cypermethrin	0.3	0.05	0.2	ND	ppm
Cyprodinil	0.25	0.005	0.01	ND	ppm
Daminozide	0.1	0.01	0.05	ND	ppm
Deltamethrin	0.5	0.05	0.2	ND	ppm
Diazinon	0.02	0.005	0.01	ND	ppm
Dichlorvos	0.1	0.005	0.01	ND	ppm
Dimethoate	0.02	0.005	0.01	ND	ppm

Test Report #: 202402266-01

PPB Analytical Sample ID: 3024_0307

Page 3 of 8



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | <https://ppbanalytical.com/>

Dimethomorph	0.05	0.005	0.01	ND	ppm
Dinotefuran	0.1	0.005	0.01	ND	ppm
Dodemorph	0.05	0.005	0.01	ND	ppm
Endosulfan sulfate	0.05	0.01	0.05	ND	ppm
Endosulfan-alpha	0.2	0.05	0.1	ND	ppm
Endosulfan-beta	0.05	0.01	0.05	ND	ppm
Ethoprophos	0.02	0.005	0.01	ND	ppm
Etofenprox	0.05	0.005	0.01	ND	ppm
Etoxazole	0.02	0.005	0.01	ND	ppm
Etridiazole	0.03	0.005	0.01	ND	ppm
Fenoxycarb	0.02	0.005	0.01	ND	ppm
Fenpyroximate	0.02	0.005	0.01	ND	ppm
Fensulfothion	0.02	0.005	0.01	ND	ppm
Fenthion	0.02	0.005	0.01	ND	ppm
Fenvalerate	0.1	0.01	0.05	ND	ppm
Fipronil	0.06	0.005	0.01	ND	ppm
Flonicamid	0.05	0.005	0.01	ND	ppm
Fludioxonil	0.02	0.005	0.01	ND	ppm
Fluopyram	0.02	0.005	0.01	ND	ppm
Hexythiazox	0.01	0.005	0.01	ND	ppm
Imazalil	0.05	0.005	0.01	ND	ppm
Imidacloprid	0.02	0.005	0.01	ND	ppm
Iprodione	1	0.05	0.2	ND	ppm
Kinoprene	0.5	0.01	0.05	ND	ppm
Kresoxim-methyl	0.02	0.005	0.01	ND	ppm
Malathion	0.02	0.005	0.01	ND	ppm
Metalaxyl	0.02	0.005	0.01	ND	ppm
Methiocarb	0.02	0.005	0.01	ND	ppm
Methomyl	0.05	0.005	0.01	ND	ppm
Methoprene	2	0.2	0.5	ND	ppm
Mevinphos	0.05	0.005	0.01	ND	ppm
MGK-264	0.05	0.005	0.01	ND	ppm
Myclobutanil	0.02	0.005	0.01	ND	ppm
Naled	0.1	0.05	0.1	ND	ppm
Novaluron	0.05	0.005	0.01	ND	ppm
Oxamyl	3	0.05	0.2	ND	ppm
Paclobutrazol	0.02	0.005	0.01	ND	ppm
Parathion-methyl	0.05	0.005	0.01	ND	ppm
Permethrin	0.5	0.05	0.2	ND	ppm
Phenothrin	0.05	0.005	0.01	ND	ppm

Test Report #: 202402266-01

PPB Analytical Sample ID: 3024_0307

Page 4 of 8



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | https://ppbanalytical.com/

Phosmet	0.02	0.005	0.01	ND	ppm
Piperonyl butoxide	0.2	0.005	0.01	ND	ppm
Pirimicarb	0.02	0.005	0.01	ND	ppm
Prallethrin	0.05	0.01	0.05	ND	ppm
Propiconazole	0.1	0.005	0.01	ND	ppm
Propoxur	0.02	0.005	0.01	ND	ppm
Pyraclostrobin	0.02	0.005	0.01	ND	ppm
Pyrethrins	0.05	0.005	0.01	ND	ppm
Pyridaben	0.05	0.005	0.01	ND	ppm
Quintozene	0.02	0.005	0.01	ND	ppm
Resmethrin	0.1	0.01	0.02	ND	ppm
Spinetoram	0.02	0.005	0.01	ND	ppm
Spinosad	0.1	0.005	0.01	ND	ppm
Spirodiclofen	0.25	0.05	0.2	ND	ppm
Spiromesifen	3	0.01	0.05	ND	ppm
Spirotetramat	0.02	0.005	0.01	ND	ppm
Spiroxamine	0.1	0.005	0.01	ND	ppm
Tebuconazole	0.05	0.005	0.01	ND	ppm
Tebufenozide	0.02	0.005	0.01	ND	ppm
Teflubenzuron	0.05	0.005	0.01	ND	ppm
Tetrachlorvinphos	0.02	0.005	0.01	ND	ppm
Tetramethrin	0.1	0.005	0.01	ND	ppm
Thiacloprid	0.02	0.005	0.01	ND	ppm
Thiamethoxam	0.02	0.005	0.01	ND	ppm
Thiophanate-methyl	0.05	0.005	0.01	ND	ppm
Trifloxystrobin	0.02	0.005	0.01	ND	ppm
ND = Not Detected (< LOD)					
Method: TM-CA-001					
Analysis Date: Feb. 15, 2024 – Feb. 16, 2024					

Terpene Profile

4.646 % (w/w)
Total Terpene

Analyte	Specification	LOD ^{##}	LOQ ^{##}	Result	Unit
beta-Caryophyllene	Report	0.0025	0.005	1.610	% (w/w)
alpha-Humulene	Report	0.0025	0.005	0.734	% (w/w)
trans-beta-Farnesene	Report	0.0025	0.005	0.300	% (w/w)
Terpinolene	Report	0.0025	0.005	0.295	% (w/w)
beta-Myrcene	Report	0.0025	0.005	0.228	% (w/w)



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | <https://ppbanalytical.com/>

(-)-alpha-Bisabolol	Report	0.0025	0.005	0.208	% (w/w)
Linalool	Report	0.0025	0.005	0.170	% (w/w)
d-Limonene	Report	0.0025	0.005	0.169	% (w/w)
alpha-Terpineol	Report	0.0025	0.005	0.133	% (w/w)
alpha-Pinene	Report	0.0025	0.005	0.127	% (w/w)
(-)-beta-Pinene	Report	0.0025	0.005	0.113	% (w/w)
trans-Nerolidol	Report	0.0025	0.005	0.098	% (w/w)
(1R)-endo-(+)-Fenchyl alcohol	Report	0.0025	0.005	0.096	% (w/w)
(-)-Guaiol	Report	0.0025	0.005	0.090	% (w/w)
Ocimene	Report	0.0025	0.005	0.057	% (w/w)
(-)-Caryophyllene oxide	Report	0.0025	0.005	0.048	% (w/w)
L(-)-Borneol+ (+)-Borneol	Report	0.0025	0.005	0.031	% (w/w)
Eucalyptol	Report	0.0025	0.005	0.017	% (w/w)
Terpinene-4-ol	Report	0.0025	0.005	0.016	% (w/w)
gamma-Terpinene	Report	0.0025	0.005	0.015	% (w/w)
Squalene	Report	0.0025	0.005	0.014	% (w/w)
alpha-Terpinene	Report	0.0025	0.005	0.012	% (w/w)
Fenchone	Report	0.0025	0.005	0.012	% (w/w)
(+)-Nootkatone	Report	0.0025	0.005	0.010	% (w/w)
Citronellol	Report	0.0025	0.005	0.010	% (w/w)
Sabinene Hydrate	Report	0.0025	0.005	0.009	% (w/w)
R(-)-alpha-Phellandrene	Report	0.0025	0.005	0.009	% (w/w)
(1S)-(+)-3-Carene	Report	0.0025	0.005	0.009	% (w/w)
Camphene	Report	0.0025	0.005	0.006	% (w/w)
Farnesol-2	Report	0.0025	0.005	< LOQ	% (w/w)
Sabinene	Report	0.0025	0.005	ND	% (w/w)
m-Isopropyltoluene	Report	0.0025	0.005	ND	% (w/w)
p-Isopropyltoluene (p-Cymene)	Report	0.0025	0.005	ND	% (w/w)
o-Isopropyltoluene	Report	0.0025	0.005	ND	% (w/w)
(-)-alpha-Thujone	Report	0.0025	0.005	ND	% (w/w)
(-)-Isopulegol	Report	0.0025	0.005	ND	% (w/w)
Camphor	Report	0.0025	0.005	ND	% (w/w)
Menthone	Report	0.0025	0.005	ND	% (w/w)
Isoborneol	Report	0.0025	0.005	ND	% (w/w)
Menthol	Report	0.0025	0.005	ND	% (w/w)
d-Valerolactam	Report	0.0025	0.005	ND	% (w/w)
Safranal	Report	0.0025	0.005	ND	% (w/w)
Octyl acetate	Report	0.0025	0.005	ND	% (w/w)
(-)-Verbenone	Report	0.0025	0.005	ND	% (w/w)
Nerol	Report	0.0025	0.005	ND	% (w/w)
(R)-(+)-Pulegone	Report	0.0025	0.005	ND	% (w/w)
(S)-(+)-Carvone	Report	0.0025	0.005	ND	% (w/w)

Test Report #: 202402266-01

PPB Analytical Sample ID: 3024_0307

Page 6 of 8



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | https://ppbanalytical.com/

Geraniol	Report	0.0025	0.005	ND	% (w/w)
Piperitone	Report	0.0025	0.005	ND	% (w/w)
Citral	Report	0.0025	0.005	ND	% (w/w)
Thymol	Report	0.0025	0.005	ND	% (w/w)
Isobornyl acetate	Report	0.0025	0.005	ND	% (w/w)
Carvacrol	Report	0.0025	0.005	ND	% (w/w)
Geranyl Acetate	Report	0.0025	0.005	ND	% (w/w)
(-)-a-Cedrene	Report	0.0025	0.005	ND	% (w/w)
Valencene	Report	0.0025	0.005	ND	% (w/w)
cis-Nerolidol	Report	0.0025	0.005	ND	% (w/w)
Cedrol	Report	0.0025	0.005	ND	% (w/w)
Farnesol-1	Report	0.0025	0.005	ND	% (w/w)
Phytane	Report	0.0025	0.005	ND	% (w/w)
Total Terpene	Report			4.646	% (w/w)
ND = Not Detected (< LOD)					
Method: TM-CA-005					
Analysis Date: Feb. 15, 2024 – Feb. 16, 2024					

Residual Solvent					
Analyte	ATL (NMT)*	LOD ^{##}	LOQ ^{##}	Result	Unit
Acetone	< 5000	150	500	ND	ppm
Anisole	< 5000	150	500	ND	ppm
1-Butanol	< 5000	150	500	ND	ppm
2-Butanol	< 5000	150	500	ND	ppm
Butane	< 5000	150	500	ND	ppm
Butyl acetate	< 5000	150	500	ND	ppm
Tert-Butylmethyl ether	< 5000	150	500	ND	ppm
Ethanol	< 5000	150	500	ND	ppm
Ethyl acetate	< 5000	150	500	ND	ppm
Ethyl ether	< 5000	150	500	ND	ppm
Ethyl formate	< 5000	150	500	ND	ppm
Heptane	< 5000	150	500	ND	ppm
Isobutyl acetate	< 5000	150	500	ND	ppm
Isopropyl acetate	< 5000	150	500	ND	ppm
Methyl acetate	< 5000	150	500	ND	ppm
3-Methyl-1-butanol	< 5000	150	500	ND	ppm
Methyl ethyl ketone	< 5000	150	500	ND	ppm
2-Methyl-1-propanol	< 5000	250	5000	ND	ppm
Pentane	< 5000	150	500	ND	ppm
1-Pentanol	< 5000	150	500	ND	ppm
1-Propanol	< 5000	150	500	ND	ppm
2-Propanol	< 5000	150	500	ND	ppm

Test Report #: 202402266-01

PPB Analytical Sample ID: 3024_0307

Page 7 of 8



PPB Analytical Inc.

30 Tempo Ave, Toronto, ON M2H 2N8 (647)-812-5296

info@ppbanalytical.com | https://ppbanalytical.com/

Propane	< 5000	150	500	ND	ppm
Propyl acetate	< 5000	150	500	ND	ppm
Triethylamine	< 5000	150	500	ND	ppm
ND = Not Detected (< LOD)					
Method: TM-CA-010					
Analysis Date: Feb. 21, 2024 – Feb. 22, 2024					

* RDL = Reporting Detection Limit; ATL (NMT) = Action Level (Not More Than)

LOQ = Limit of Quantification; LOD = Limit of Detection

Health Canada and/or United States and/or European Union MRLs are taken from Health Canada & Global Database (where applicable) on the preparation date of this report. Results shown in this report relate solely to the item submitted for analysis. Any opinions/interpretations expressed on this report are given independent of the laboratory's scope of accreditation. All results are reported on an "As Received" basis unless otherwise stated. PPB Analytical Inc. is responsible for all the information provided in the report, except when information is provided by the customer (marked as #). Reports shall not be reproduced except in full without written permission of PPB Analytical Inc. all work done in accordance with PPB Analytical Inc. Terms and Conditions. For further details about the performing labs, please contact customer service at PPB Analytical Inc.

Signature:

Cheuk Kuen (Isaac) Lai

Title:

Quality Assurance Manager