FOOD & ENVIRONMENT SAFETY ANALYTICAL LAB

Certificate of Analysis

Blueberry

Client: Savage Enterprises

Analysis Summary	mg/serving
Mitragynine	227.341
7-OH Mitragynine	ND
Paynantheine	38.379
Speciogynine	19.511
Speciociliatine	13.305
Corynantheidine	17.169
Mitraphylline	ND
9-O-desmethyl Mitragynine	ND
Corynoxine B	ND
Ajmalicine	ND
Isomitraphylline	ND
Mitraciliatine	ND
Mitragynine pseudoindoxyl	ND
MGM-15 (CAS No. 1158901-38-2)	5.42
Total Quantified Alkaloids	321.12

Analysis Overview

Residual Solvents & Processing Chemicals	Pass
Residual Pesticides	Pass
Heavy Metals	Pass

Sample Name:
Blueberry

Matrix:
Other

Serving Mass:
16.4 g per serving

Sample ID:
81860319-1

Date Received:
3/19/2026

Approved By:
Marie True, M.S.
Laboratory Manager

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References: limit of quantitation (LOQ), not detected (ND), not tested (NT)

Certificate of Analysis

Kratom Alkaloid Analysis

Complete

Analyte	LOD (%)	LOQ (%)	Mass (%)	Mass (mg/g)	Mass (mg/serving)
Mitragynine	**0.016**	**0.049**	**1.3862**	**13.862**	**227.34**
7-OH Mitragynine	0.019	0.058	ND	ND	ND
Paynantheine	**0.022**	**0.066**	**0.2340**	**2.340**	**38.38**
Speciogynine	**0.019**	**0.056**	**0.1190**	**1.190**	**19.51**
Speciociliatine	**0.018**	**0.054**	**0.0811**	**0.811**	**13.31**
Corynantheidine	**0.024**	**0.073**	**0.1047**	**1.047**	**17.17**
Mitraphylline	0.017	0.052	ND	ND	ND
9-O-desmethyl Mitragynine	0.017	0.050	ND	ND	ND
Corynoxine B	0.022	0.066	ND	ND	ND
Ajmalicine	0.024	0.071	ND	ND	ND
Isomitraphylline	0.019	0.057	ND	ND	ND
Mitraciliatine	0.020	0.060	ND	ND	ND
Mitragynine pseudoindoxyl	0.033	0.098	ND	ND	ND
MGM-15 (CAS No. 1158901-38-2)	**0.011**	**0.03**	**0.033**	**0.33**	**5.42**
Total Quantified Alkaloids			**1.9581**	**19.581**	**321.12**

Residual Solvents Analysis

Pass

Analyte	LOQ (µg/g)	Limit (mg/g)	Mass (mg/g)	Status
Acetone	0.490	5.000	ND	Pass
Acetonitrile	0.460	0.410	ND	Pass
Benzene	0.590	0.002	ND	Pass
Butane	0.560	N/A	ND	N/A
Chloroform	0.510	0.060	ND	Pass
1,2-Dichloroethane	0.570	0.005	ND	Pass
Ethanol	0.470	5.000	ND	Pass
Ethyl Acetate	0.520	5.000	ND	Pass
Ethyl Ether	0.480	5.000	ND	Pass
Ethylene Oxide	0.460	0.010	ND	Pass
Heptane	0.520	5.000	ND	Pass
n-Hexane	0.540	0.290	ND	Pass
Isopropanol	0.580	5.000	ND	Pass
Methanol	0.460	3.000	ND	Pass
Methylene Chloride	0.560	0.600	ND	Pass
Pentane	0.520	5.000	ND	Pass
Propane	0.510	N/A	ND	N/A
Toluene	0.480	0.890	ND	Pass
Trichloroethylene	0.520	0.080	ND	Pass
Xylenes	0.580	2.170	ND	Pass

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Pesticide Analysis

Pass

Analyte	LOQ (ppm)	Limit (ppm)	Mass (ppm)	Status
Abamectin	0.050	0.10	ND	Pass
Acephate	0.050	0.10	ND	Pass
Acequinocyl	0.050	0.10	ND	Pass
Acetamiprid	0.050	0.10	ND	Pass
Aldicarb	0.050	0.00	ND	Pass
Azoxystrobin	0.050	0.10	ND	Pass
Bifenazate	0.050	0.10	ND	Pass
Bifenthrin	0.050	3.00	ND	Pass
Boscalid	0.050	0.10	ND	Pass
Captan	0.050	0.70	ND	Pass
Carbaryl	0.050	0.50	ND	Pass
Carbofuran	0.050	0.00	ND	Pass
Chlorantraniliprole	0.050	10.00	ND	Pass
Chlordane	0.050	0.00	ND	Pass
Chlorfenapyr	0.050	0.00	ND	Pass
Chlorpyrifos	0.050	0.00	ND	Pass
Clofentezine	0.050	0.10	ND	Pass
Coumaphos	0.050	0.00	ND	Pass
Cyfluthrin	0.050	2.00	ND	Pass
Cypermethrin	0.050	1.00	ND	Pass
Daminozide	0.050	0.00	ND	Pass
DDVP	0.050	0.00	ND	Pass
Diazinon	0.050	0.10	ND	Pass
Dimethoate	0.050	0.00	ND	Pass
Dimethomorph	0.050	2.00	ND	Pass
Ethoprophos	0.050	0.00	ND	Pass
Etofenprox	0.050	0.00	ND	Pass
Etoxazole	0.050	0.10	ND	Pass
Fenhexamid	0.050	0.10	ND	Pass
Fenoxycarb	0.050	0.00	ND	Pass
Fenpyroximate	0.050	0.10	ND	Pass
Fipronil	0.050	0.00	ND	Pass
Flonicamid	0.050	0.10	ND	Pass
Fludioxonil	0.050	0.10	ND	Pass
Hexythiazox	0.050	0.10	ND	Pass
Imazalil	0.050	0.00	ND	Pass
Imidacloprid	0.050	5.00	ND	Pass
Kresoxim Methyl	0.050	0.10	ND	Pass
Malathion	0.050	0.50	ND	Pass
Metalaxyl	0.050	2.00	ND	Pass
Methiocarb	0.050	0.00	ND	Pass
Methomyl	0.050	1.00	ND	Pass
Methyl Parathion	0.050	0.00	ND	Pass
Mevinphos	0.050	0.00	ND	Pass
Myclobutanil	0.050	0.10	ND	Pass
Naled	0.050	0.10	ND	Pass
Oxamyl	0.050	0.50	ND	Pass
Paclobutrazol	0.050	0.00	ND	Pass
Pentachloronitrobenzene	0.050	0.10	ND	Pass
Permethrin	0.050	0.50	ND	Pass
Phosmet	0.050	0.10	ND	Pass
Piperonyl Butoxide	0.050	3.00	ND	Pass
Prallethrin	0.050	0.10	ND	Pass
Propiconazole	0.050	0.10	ND	Pass
Propoxur	0.050	0.00	ND	Pass

Certificate of Analysis

Pesticide Analysis

Pass

Analyte	LOQ (ppm)	Limit (ppm)	Mass (ppm)	Status
Pyrethrins	0.050	0.50	ND	Pass
Pyridaben	0.050	0.10	ND	Pass
Spinetoram	0.050	0.10	ND	Pass
Spinosad	0.050	0.10	ND	Pass
Spiromesifen	0.050	0.10	ND	Pass
Spirotetramat	0.050	0.10	ND	Pass
Spiroxamine	0.050	0.00	ND	Pass
Tebuconazole	0.050	0.10	ND	Pass
Thiacloprid	0.050	0.00	ND	Pass
Thiamethoxam	0.050	5.00	ND	Pass
Trifloxystrobin	0.050	0.10	ND	Pass

Heavy Metals Analysis

Pass

Analyte	LOQ (µg/g)	Limit (µg/g)	Mass (µg/g)	Status
Arsenic	0.050	0.200	ND	Pass
Cadmium	0.050	0.200	ND	Pass
Lead	0.125	0.500	ND	Pass
Mercury	0.025	0.100	ND	Pass

Method References:

HPLC SOP K5316L - Diode Array Detector, Liquid Chromatography.

HSGCMS02 - Headspace Gas Chromatography with Mass Spectrometric Detection for Residual Solvents Panel

Multi-Residue Pesticide Analysis - (AOAC_200701)

Official Methods of Analysis, AOAC Official Method 2007.01, Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate, AOAC INTERNATIONAL (modified).

CEN Standard Method EN 15662: Food of plant origin - Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE - QuEChERS method.

Heavy Metals Analysis - 4 elements (EPA_200.8)

Methods for the Determination of Metals in Environmental Standards - Supplement 1, EPA-600/R-94-111, May 1994.

"Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Mass Spectrometry", USEPA Method 200.8, Revision 5.1, EMMC Version (modified).