

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Dog Chews
PRODUCT STRENGTH: 2 mg / chew
FILL LOT NUMBER: 2952501 - tested under lot number 21215A
DOG TREAT LOT NUMBER: 21224A
BEST BY DATE: 06/2023

[*Click on the links to view third-party reports*](#)

Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Brown	PASS
Odor	SOP-100	Beef, grains, somewhat yeasty	PASS
Appearance	SOP-100	Squat cylindrical dog treats a plastic amber container	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and shrink bands intact.	PASS
Secondary Package Eval.	SOP-132	Labeling Compliance Checked, Cartons sturdy and clean. Sufficient cushion material exists. Box taped and secure.	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results*	Pass/Fail
Potency - Total CBD	SOP-111	*NLT 2 mg / chew	3.0 mg/chew	PASS
Potency - D9-THC	SOP-111	None Detected **LOQ: 10 †PPM (0.001%)	ND	PASS
Compliant Pesticide Panel	SOP-111	WIP-100008 : Product specification for Bulk Dog Chews, Oregon Action limits apply	ND	PASS
Microbial - Full Panel	SOP-111	Complies with USP 61/62	ND	PASS
CA Compliant Heavy Metal Panel	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	ND	PASS

* Level of Quantitation, † Parts Per Million
 **Nothing Less Than

Quality Certified by:


 Kayla Kolber
 Quality Assurance Technician

08/19/2021

Date

certificate ID

1HC97

Chew

sample ID Lot# 21215A
source ID 1Z435FV90292362677



total cannabinoids

3.3mg

per

chew

THC± ND

CBD± 3.0mg

This Product Has Been Tested and Complies with 7USC1639o(1)

Stillwater Laboratories



order 11466 rec'd 8/5/2021 1:35:46 PM

Table with columns: Potency per, error, LOD, LOQ, result. Rows include total cannabinoids, total THC, total CBD, and various cannabinoid acids and derivatives.

Table with columns: Terpenes, total terpenes, LOD, LOQ, error, result. Rows include caryophyllene, humulene, terpinolene, ocimene, beta pinene, alpha pinene, limonene, myrcene, and linalool.

Table with columns: Microbial, MSP-7.5.1.10, limit, LOD, LOQ, error, result. Rows include E.coli, Salmonella sp., molds, Ochratoxin A, and Aflatoxin B1B2G1G2.

Table with columns: Solvents, MSP-7.5.1.7, limit, LOD, LOQ, error, result. Rows include Acetone, Acetonitrile, Benzene, Butane, Chloroform, Cyclohexane, Ethanol, Heptane, Hexane, Isopropyl alcohol, Methanol, Pentane, Propane, Toluene, and Xylenes.

Table with columns: Metals, MSP-7.5.1.11, limit, LOD, LOQ, error, result. Rows include Arsenic, Cadmium, Lead, and Mercury.

Table with columns: Pesticides, MSP-7.5.1.8, limit, LOD, LOQ, error, result. Rows include Pyrethrin, Pyridaben, Spinetoram, Spinosad, Spiromesifen, Spirotetramat, Spiroxamine, Tebuconazole, Thiachloprid, Thiamethoxam, and Trifloxystrobin.

Table with columns: Pesticides, MSP-7.5.1.8, % limit, LOD, LOQ, error, result. Rows include Abamectin, Acephate, Acequinocyl, Acetamiprid, Aldicarb, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Carbaryl, Carbofuran, Chlorantraniliprole, Chlorfenapyr, Chlorpyrifos, Clofentezine, Coumaphos, Cyfluthrin, Cypermethrin, Daminozide, Dichlorvos, Diazinon, Dimethoate, Etoxazole, Fenoxycarb, Fenpyroximate, Fipronil, Flonicamid, Fludioxonil, Hexythiazox, Imazail, Imidacloprid, Malathion, Metalaxyl, Methiocarb, Methomyl, Methyl parathion, Mevinphos, Myclobutanil, Naled, Oxamyl, Pacllobutrazol, Permethrin, Phosmet, Piperonylbutoxide, Prallethrin, Propiconazole, and Propoxur.

Certified by:

Signature of the certifier.



https://customer.a2la.org/index.cfm?event=directory_detail&labPID=423635B2-5128-4C6F-871A-419DC4380D7

Stillwater Laboratories Inc. MT License L0001, L00007 6073 US93N Suite 5, Olney MT 59927 406-881-2019

INSTRUMENTS: Potency by HPLC (LC2030C-UV), solvents and terpenes by GCMS (QP2020/HS20), pesticides and mycotoxins by LCMSMS (LC8060), microbial by qPCR (AriaMx) and plating (Hardy Diagnostics), metals by ICPMS (ICPMS-2030)

All testing was completed onsite at 6073 US93N, Olney MT. Potency (cannabinoid concentration) is calculated as: [cannabinoid] = [cannabinoid]HPLC x volume_dilution / m_dry. ... Decarboxyated cannabinoid concentration is calculated XXX_tot = 0.877 x XXXa + XXX. Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection (3.3s), LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the formula s_e^2 = sum((d/di)^2 * s_i^2) where i is the contributor to error. The 95% confidence range is calculated from: (concentration) +/- t_C1.90 x s_e. Sampling error is not considered in error calculations. ND = not detected (< LOD), NT = not tested, NL = no limit, NA = not applicable. † = decarbed

Printed 8/7/2021 2:25 PM

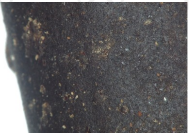
certificate ID
1HL25

CHEW-21224A

1Z435FV90338456283

7USC1639 Certificate of Analysis

Joy Organics



Stillwater
Laboratories



order 11538

rec'd 8/16/2021 1:15:25 PM

Report Version: 1
Analysis Location: L-00001

Microbial	MSP-7.5.1.10	limit	LOD	LOQ	error	result
E.coli	ND	OCFU	0.010.11	±0.1CFU		PASS
Salmonella sp.	ND	OCFU	0.010.11	±0.1CFU		PASS
molds	ND	10000CFU	1.815.51	±5.5CFU		PASS

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Certified by:



<https://customer.a2la.org/index.cfm?event=directory.detail&labPID=423635B2-5128-4C6F-871A-419DCF43B0D7>

Stillwater Laboratories Inc.
MT License L0001, L00007
6073 US93N Suite 5, Olney MT 59927
406-881-2019

INSTRUMENTS: Potency by HPLC (LC2030C-UV), solvents and terpenes by GCMS (QP2020/HS20), pesticides and mycotoxins by LCMSMS (LC8060), microbial by qPCR (AriaMx) and plating (Hardy Diagnostics), metals by ICPMS (ICPMS-2030)

• All testing was completed onsite at 6073 US93N, Olney MT • Potency (cannabinoid concentration) is calculated as: $[\text{cannabinoid}] = [\text{cannabinoid}]_{\text{HPLC}} \times \text{volume}_{\text{dilution}} / \text{M}_{\text{dry}}$ • Decarboxyated cannabinoid concentration is calculated $\text{XXX}_{\text{total}} = 0.877 \times \text{XXXa} + \text{XXX}$ • Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection (3.3s), LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the formula $s_y^2 = \sum (\partial f / \partial i)^2 s_i^2$ where i is the contributor to error. The 95% confidence range is calculated from: (concentration) $\pm t_{\text{CL},90} \times s_y$. Sampling error is not considered in error calculations. ND = not detected (\leq LOD), NT = not tested, NL = no limit, NA = not applicable. ‡ = decarbed

Printed 8/19/2021 10:26 AM