



JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics Sports Cream
PRODUCT STRENGTH: 400 mg
LOT NUMBER: 0072A
BEST BY DATE: 09/12/2021
HEMP EXTRACT LOT NUMBER*: [CONQ19-124](#)

Click on the links to view third-party reports

Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	white to off white	PASS
Odor	SOP-100	Blend of Menthol, Camphor, Eucalyptus, Lavender, Rosemary, Wintergreen & Marjoram.	PASS
Appearance	SOP-100	Creamy smooth cream consistency with medium viscosity	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Lid 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	380-500 mg CBD LOQ** : 10 PPM† (0.001%)	.5% or 480 mg	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	ND	PASS
Compliant Pesticide Panel	SOP-111	Action Limits for Oregon Pesticides used Cannabis	ND	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Mold	SOP-111	Complies with USP 61/62	Below LOD	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	Below LOQ	PASS

* Level of Quantitation, † Parts Per Million

Quality Certified by:

Darcie Moran

03.24.2020

Darcie Moran
Manager of Quality Assurance

Date



total cannabinoids 0.5%
CBD decarb total .44%
Δ9-THC ND

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



Stillwater Laboratories

https://portal.a2la.org/scopepdf/4961-01.pdf

Sample Handling

test ID sample date 3/11/20 12:49 PM
order 6783 labID 0CJ73 weight 113.6 g
source

Table with 3 columns: Method, method, equipment. Lists various testing methods like weights, potency, terpenes, pesticides, etc.



Table with 4 columns: Potency, %, estimated error, Terpenes, %, estimated error. Lists various cannabinoids and terpenes with their respective percentages and error margins.

terpenes not tested / not required

Table with 10 columns: Solvents, MT limit, 0CJ73, LOQ, Pesticides (MT), MT limit, 0CJ73, LOQ, Pesticides (other), 0CJ73, LOQ. Lists various solvents and pesticides with their limits and test results.

Table with 4 columns: Toxic Metals, MT limit, 0CJ73, LOQ. Lists arsenic, cadmium, lead, and mercury with their limits and test results.

Table with 4 columns: Microbial, MT limit, 0CJ73, LOQ. Lists E. coli, Salmonella sp., molds, Aflatoxin B1,2,G1,G2, and Ochratoxin A with their limits and test results.

Table with 4 columns: Pesticides (other), 0CJ73, LOQ. Lists various pesticides like acephate, acetamiprid, aldicarb, etc. with their limits and test results.

All testing was completed onsite at 6073 US93N, Olney MT. Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]HPLC x volume_dilution / m_dry.

Certified by:

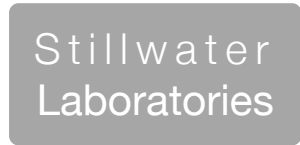
Handwritten signature of Justin M Johnston

Justin M Johnston
Deputy Director
6073 US93N, Olney MT 59927
406-881-2019 rdb@stwlabs.com



total cannabinoids **85.3%**
 CBD decarb total 84.31%
 Δ9-THC ND

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

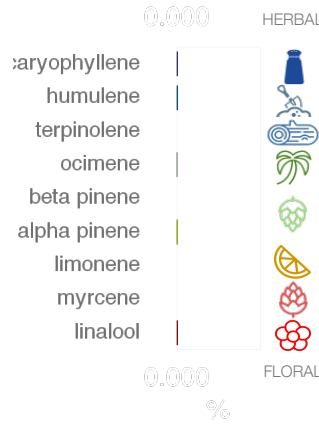


https://portal.a2la.org/scopepdf/4961-01.pdf

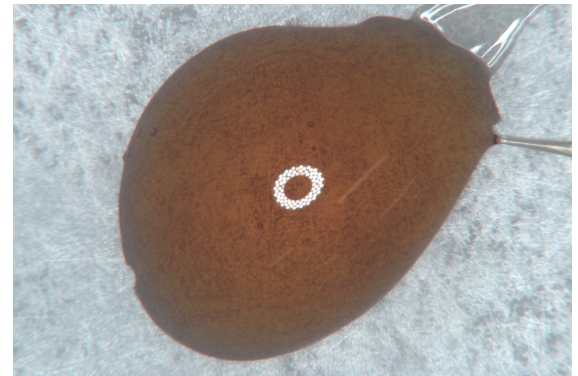
Sample Handling

test ID sample date 3/9/20 11:06 AM
 order 6767 labID 0CG24 weight
 source

Methods	method	equipment
weights	MSP-7.3.1.3	AUX120.1
potency	MSP-7.5.1.5	LC-2030
terpenes	MSP-7.5.1.7	QP2020/HS20
pesticides	MSP-7.5.1.8	LC-8060
mycotoxins	MSP-7.5.1.8	LC-8060
microbial	MSP-7.5.1.9	Hardy Diag
solvents	MSP-7.5.1.6	QP2020/HS20
metals	MSP-7.5.1.10	ICPMS2030



concentrate



Potency

	%	estimated error
tetrahydrocannabinolic acid (THCa)	ND	± 0.02 %
Δ ⁹ -tetrahydrocannabinol (Δ ⁹ THC)	ND	± 0.02 %
Δ ⁸ -tetrahydrocannabinol (Δ ⁸ THC)	ND	± 0.02 %
tetrahydrocannabivarin (THCv)	ND	± 0.02 %
cannabidiolic acid (CBDa)	ND	± 0.02 %
cannabidiol (CBD)	84.31%	± 0.75 %
cannabivarin (CBDv)	.92%	± 0.08 %
cannabigerolic acid (CBGa)	ND	± 0.02 %
cannabigerol (CBG)	.04%	± 0.02 %
cannabinol (CBN)	ND	± 0.02 %
cannabichromene (CBC)	ND	± 0.02 %

Terpenes

	%	estimated error		%	estimated error		%	estimated error
β-myrcene	0.000%	± 0.0016%	camphene	0.000%	± 0.0016%	guaiol	0.001%	± 0.0017%
β-caryophyllene	0.005%	± 0.0018%	Δ ³ -carene	0.000%	± 0.0016%	β-bisabolol	0.000%	± 0.0016%
alpha-pinene	0.002%	± 0.0017%	a-terpinene	0.000%	± 0.0016%	eucalyptol	0.003%	± 0.0017%
β-pinene	0.000%	± 0.0016%	para-cymene	0.010%	± 0.0019%			
D-limonene	0.000%	± 0.0016%	g-terpinene	0.008%	± 0.0019%			
linalool	0.006%	± 0.0018%	(-)-isopulegol	0.000%	± 0.0016%	total terpenes		
ocimene	0.000%	± 0.0033%	geraniol	0.000%	± 0.0016%			
terpinolene	0.000%	± 0.0016%	cis-nerolidol	0.000%	± 0.0016%			
alpha-humulene	0.006%	± 0.0018%	trans-nerolidol	0.000%	± 0.0016%			

0.06%

Solvents

	MT limit	0CG24	LOQ
propane	5,000	0 ppm	<10ppm
butanes	5,000	0 ppm	<10ppm
pentanes	5,000	0 ppm	<10ppm
hexanes	290	0 ppm	<10ppm
cyclohexane	3,880	0 ppm	<10ppm
heptanes	5,000	0 ppm	<10ppm
methanol	3,000	0 ppm	<10ppm
isopropanol	5,000	0 ppm	<10ppm
acetone	5,000	0 ppm	<10ppm
ethyl acetate	5,000	0 ppm	<10ppm
benzene	2	0 ppm	<0.2ppm
toluene	890	0 ppm	<10ppm
xylenes	2,170	0 ppm	<10ppm
chloroform	2	0 ppm	<0.2ppm
dichloromethane	600	0 ppm	<10ppm

Pesticides (MT)

	MT limit	0CG24	LOQ
abamectin	2.50 ppm	0.00 ppm	<10ppb
acequinocyl	10.00 ppm	0.00 ppm	<10ppb
bifenazate	1.00 ppm	0.00 ppm	<10ppb
bifenthrin	1.00 ppm	0.00 ppm	<10ppb
chlormequat cl.	5.00 ppm	0.00 ppm	<10ppb
cyfluthrin	5.00 ppm	0.00 ppm	<80ppb
diaminozide	5.00 ppm	0.00 ppm	<10ppb
etoxazole	1.00 ppm	0.00 ppm	<10ppb
fenoxycarb	1.00 ppm	0.00 ppm	<10ppb
imazalil	1.00 ppm	0.00 ppm	<10ppb
imidacloprid	2.00 ppm	0.00 ppm	<10ppb
myclobutanil	0.60 ppm	0.00 ppm	<10ppb
paclobutrazol	2.00 ppm	0.03 ppm	<10ppb
pyrethrins	5.00 ppm	0.00 ppm	<10ppb
spinosad	1.00 ppm	0.00 ppm	<10ppb
spiromesifen	1.00 ppm	0.00 ppm	<10ppb
spirotetramat	1.00 ppm	0.00 ppm	<10ppb
trifloxystrobin	1.00 ppm	0.00 ppm	<10ppb

Pesticides (other)

	0CG24	LOQ
acephate	0.00 ppm	<10ppb
acetamiprid	0.00 ppm	<10ppb
aldicarb	0.00 ppm	<10ppb
azoxystrobin	0.00 ppm	<10ppb
boscalid	0.00 ppm	<10ppb
carbaryl	0.00 ppm	<10ppb
carbofuran	0.00 ppm	<10ppb
chlorantraniliprole	0.00 ppm	<10ppb
chlorpyrifos	0.00 ppm	<10ppb
clofentezine	0.00 ppm	<10ppb
cypermethrin	0.00 ppm	<10ppb
diazinon	0.00 ppm	<10ppb
dichlorvos	0.00 ppm	<10ppb
dimethoate	0.00 ppm	<10ppb
etofenprox	0.00 ppm	<10ppb
fenpyroximate	0.00 ppm	<10ppb
fipronil	0.00 ppm	<10ppb
flonicamid	0.00 ppm	<10ppb
fludioxonil	0.00 ppm	<10ppb
hexythiazox	0.00 ppm	<10ppb
kresoxym-methyl	0.00 ppm	<10ppb
malathion	0.00 ppm	<10ppb
metalaxyl	0.01 ppm	<10ppb
methiocarb	0.00 ppm	<10ppb
methomyl	0.00 ppm	<10ppb
oxamyl	0.00 ppm	<10ppb
permethrins	0.00 ppm	<10ppb
phosmet	0.00 ppm	<10ppb
piperonyl butoxide	0.00 ppm	<10ppb
prallethrin	0.00 ppm	<10ppb
propiconazole	0.00 ppm	<10ppb
pyridaben	0.00 ppm	<10ppb
spiroxamine	0.00 ppm	<10ppb
tebuconazole	0.00 ppm	<10ppb
thiacloprid	0.00 ppm	<10ppb
thiamethoxam	0.00 ppm	<10ppb

Toxic Metals

	MT limit	0CG24	LOQ
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metals not tested / not required

Comments

	MT limit	0CG24	LOQ
<i>E. coli</i>	10 CFU	0 CFU	<10 CFU/g
Salmonella sp.	10 CFU	0 CFU	<10 CFU/g
molds	10000 CFU	0 CFU	<10k CFU/g
Aflatoxin B1,B2,G1,G2	20 ppb	0 ppb	<20 ppb
Ochratoxin A	20 ppb	0 ppb	<20 ppb

Certified by:

Kyle Larson, MSc (Biology)
 Deputy Director
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 406-881-2019 rdb@stwlabs.com

Printed 3/13/2020 10:23 AM

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]_{HPLC} x volume_{dilution} / m_{dry}. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)_{GCMS} / m_{dry}. ••• Decarboxyted cannabinoid concentration is calculated from the equation XXX_{total} = 0.877 x XXX_a + XXX •••• Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; this is combined with error from weighing and dilution using the propagation of error formula S_y² = Σ (∂f/∂i)² S_i² where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t_{CL90} X S_y. Sampling error is not