BUD & TENDER LTD
1 HARLEY STREET
MARYLEBONE
LONDON, UK W1G 9QD

Certificate of Analysis

ACS LABORATORY | CANNABIS & HEMP BEYOND COMPLIANCE

Order #: BUD200826-030012 **Order Date:** 2020-08-26 **Collection Date:** 2020-08-31 **Report Date:** 2020-09-18

Batch #: BTO40-0011
Sample #: AAAO044
Specimen Type: CBD/HEMP Derivative Products (Ingestion)
Extracted From: Industrial Hemp
Description: Broad Spectrum 40% CBD Oil

Method: SOP-3

Potency **Tested**	Terpenes **Tested**	Heavy Metals **Passed**
Mycotoxins **Passed**	Pesticides **Passed**	Residual Solvents **Passed**
Pathogenic **Passed**	Microbiology (qPCR) **Passed**	Flavonoids **Tested**

Total CBD 40.260%	**Total THC** Not Detected	**Total CBG** 1.674%
Total CBN Not Detected	**Other Cannabinoids** 2.615%	**Total Cannabinoids** 44.549%

Potency - 17 (Tested) (HPLC)

Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)
CBC	13.370	1.337	0.001	CBCA		<LOQ	0.001	CBD	402.600	40.260	0.001
CBDA		<LOQ	0.001	CBDV	11.270	1.127	0.001	CBDVA		<LOQ	0.001
CBG	16.740	1.674	0.001	CBGA		<LOQ	0.001	CBL		<LOQ	0.001
CBN		<LOQ	0.001	CBNA		<LOQ	0.001	CBT	1.512	0.151	0.001
Delta-8 THC		<LOQ	0.001	Delta-9 THC		<LOQ	0.001	THCA-A		<LOQ	0.001
THCV		<LOQ	0.001	THCVA		<LOQ	0.001	Total CBD	402.600	40.260	0.001
Total THC		<LOQ	0.001								

*Total CBD = CBD + (CBD-A * 0.877), *Total THC = THCA-A * 0.877 + Delta 9 THC, *CBG Total = (CBGA * 0.877) + CBG, *CBN Total = (CBNA * 0.877) + CBN, *Other Cannabinoids Total = CBC + CBDV + THCV + THCV-A, *Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A (mg/g) = Milligram per Gram, , LOQ = Limit of Quantitation, , LOD = Limit of Detection

Xueli Gao, Ph.D., DABT — Lab Toxicologist

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Specimen Type: CBD/HEMP Derivative Products (Ingestion)
Extracted From: Industrial Hemp
Description: Broad Spectrum 40% CBD Oil

Method: SOP-3

Terpenes - FL (Tested) (GC/GCMS)

Analyte	Result (mg/g)	(%)	LOQ (%)
(+)-Cedrol		<LOQ	0.02
Alpha-Bisabolol		<LOQ	0.02
alpha-Humulene		<LOQ	0.02
beta-Farnesene		<LOQ	0.01
Borneol		<LOQ	0.04
Caryophyllene oxide		<LOQ	0.02
Fenchyl Alcohol		<LOQ	0.02
Guaiol		<LOQ	0.02
Isopulegol		<LOQ	0.02
Ocimene		<LOQ	0.014
Sabinene Hydrate	0.070	0.007	0.02
trans-beta-Ocimene		<LOQ	0.006
(R)-(+)-Limonene	0.410	0.041	0.02
alpha-Cedrene		<LOQ	0.02
alpha-Phellandrene		<LOQ	0.02
Beta-Myrcene	5.430	0.543	0.02
Camphene		<LOQ	0.02
cis-Nerolidol		<LOQ	0.02
Farnesene		<LOQ	0.02
Gamma-Terpinene		<LOQ	0.02
Hexahydrothymol		<LOQ	0.02
Linalool	0.080	0.008	0.02
Pulegone		<LOQ	0.02
Terpineol		<LOQ	0.02
Trans-Caryophyllene	0.120	0.012	0.02
3-Carene		<LOQ	0.02
alpha-Farnesene		<LOQ	0.01
Alpha-Pinene	0.700	0.070	0.02
Alpha-Terpinene		<LOQ	0.02
Beta-Pinene		<LOQ	0.02
Camphors		<LOQ	0.04
Eucalyptol		<LOQ	0.02
Fenchone		<LOQ	0.02
Geraniol		<LOQ	0.02
Geranyl acetate		<LOQ	0.02
Isoborneol		<LOQ	0.02
Nerol		<LOQ	0.02
Sabinene		<LOQ	0.02
Terpinolene		<LOQ	0.02
trans-Nerolidol		<LOQ	0.02
Valencene		<LOQ	0.02

(mg/g) = Milligram per Gram, , LOQ = Limit of Quantitation

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Batch #: BTO40-0011
Sample #: AAAO044
Specimen Type: CBD/HEMP Derivative Products (Ingestion)
Extracted From: Industrial Hemp
Description: Broad Spectrum 40% CBD Oil

Method: SOP-3

Heavy Metals (Passed) (ICP-MS)

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Arsenic (As)	1500	<LOQ	100	**Cadmium (Cd)**	500	<LOQ	100	**Lead (Pb)**	500	<LOQ	100
Mercury (Hg)	3000	<LOQ	100								

(ppb) = Parts per Billion, (ppb) = (µg/kg), , LOQ = Limit of Quantitation

Mycotoxins (Passed) (LCMS/API/GCMS)

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Aflatoxin B1	20	<LOQ	6	**Aflatoxin B2**	20	<LOQ	6	**Aflatoxin G1**	20	<LOQ	6
Aflatoxin G2	20	<LOQ	6	**Aflatoxin Total**	20	<LOQ	6	**Ochratoxin A**	20	<LOQ	12

(ppb) = Parts per Billion, (ppb) = (µg/kg), , LOQ = Limit of Quantitation

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Sample #: AAAO044
Specimen Type: CBD/HEMP Derivative Products (Ingestion)
Extracted From: Industrial Hemp
Description: Broad Spectrum 40% CBD Oil

Method: SOP-3

Pesticides FL V4 (Non-Inhalable) (Passed) (LCMS/API/GCMS)

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Abamectin	300	<LOQ	28.23	Acephate	3000	<LOQ	30	Acequinocyl	2000	<LOQ	48
Acetamiprid	3000	<LOQ	30	Aldicarb	100	<LOQ	30	Azoxystrobin	3000	<LOQ	10
Bifenazate	3000	<LOQ	30	Bifenthrin	500	<LOQ	30	Boscalid	3000	<LOQ	10
Captan	3000	<LOQ	30	Carbaryl	500	<LOQ	10	Carbofuran	100	<LOQ	10
Chlorantraniliprole	3000	<LOQ	10	Chlordane	100	<LOQ	10	Chlorfenapyr	100	<LOQ	30
Chlormequat Chloride	3000	<LOQ	10	Chlorpyrifos	100	<LOQ	30	Clofentezine	500	<LOQ	30
				Coumaphos	100	<LOQ	48	Cyfluthrin	1000	<LOQ	30
Cypermethrin	1000	<LOQ	30	Daminozide	100	<LOQ	30	Diazinon	200	<LOQ	30
Dichlorvos	100	<LOQ	30	Dimethoate	100	<LOQ	30	Dimethomorph	3000	<LOQ	48
Ethoprophos	100	<LOQ	30	Etofenprox	100	<LOQ	30	Etoxazole	1500	<LOQ	30
Fenhexamid	3000	<LOQ	10	Fenoxycarb	100	<LOQ	30	Fenpyroximate	2000	<LOQ	30
Fipronil	100	<LOQ	30	Flonicamid	2000	<LOQ	30	Fludioxonil	3000	<LOQ	48
Hexythiazox	2000	<LOQ	30	Imazalil	100	<LOQ	30	Imidacloprid	3000	<LOQ	30
Kresoxim Methyl	1000	<LOQ	30	Malathion	2000	<LOQ	30	Metalaxyl	3000	<LOQ	10
Methiocarb	100	<LOQ	30	Methomyl	100	<LOQ	30	methyl-Parathion	100	<LOQ	10
Mevinphos	100	<LOQ	10	Myclobutanil	3000	<LOQ	30	Naled	500	<LOQ	30
Oxamyl	500	<LOQ	30	Paclobutrazol	100	<LOQ	30	Pentachloronitrobenz-ene	200	<LOQ	10
Permethrin	1000	<LOQ	30	Permethrincis	1000	<LOQ	30	Permethrintrans	1000	<LOQ	30
Phosmet	200	<LOQ	30	Piperonylbutoxide	3000	<LOQ	30	Prallethrin	400	<LOQ	30
Propiconazole	1000	<LOQ	30	Propoxur	100	<LOQ	30	Pyrethrins	1000	<LOQ	30
PyrethrinsCinerin 1	1000	<LOQ	30	PyrethrinsCinerin 2	1000	<LOQ	30	PyrethrinsJasmolin 1	1000	<LOQ	30
PyrethrinsJasmolin 2	1000	<LOQ	30	PyrethrinsPyrethrin 1	1000	<LOQ	30	PyrethrinsPyrethrin 2	1000	<LOQ	30
Pyridaben	3000	<LOQ	30	Spinetoram	3000	<LOQ	10	Spinosad	3000	<LOQ	30
Spinosyn A	3000	<LOQ	10	Spinosyn D	3000	<LOQ	10	Spiromesifen	3000	<LOQ	30
Spirotetramat	3000	<LOQ	30	Spiroxamine	100	<LOQ	30	Tebuconazole	1000	<LOQ	30
Thiacloprid	100	<LOQ	30	Thiamethoxam	1000	<LOQ	30	Trifloxystrobin	3000	<LOQ	30

(ppl ıntitation

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Extracted From: Industrial Hemp
Description: Broad Spectrum 40% CBD Oil

Method: SOP-3

Residual Solvents (CBD) (Passed) (GC/GCMS)

Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)
1,1-Dichloroethene	8	<LOQ	0.132	1,2-dichloroethane	5	<LOQ	0.032	Acetone	5000	<LOQ	12
Benzene	2	<LOQ	0.016	Butanes	2000	<LOQ	13.32	Acetonitrile	410	<LOQ	0.96
Ethanol	5000	<LOQ	16	Ethyl Acetate	5000	<LOQ	6.4	Chloroform	60	<LOQ	0.032
Ethylene Oxide	5	<LOQ	0.32	Heptane	5000	<LOQ	8	Ethyl Ether	5000	<LOQ	8
Isopropyl alcohol	500	<LOQ	8	Methanol	3000	<LOQ	4	Hexane	290	<LOQ	0.8
Naphtha		<LOQ	6.4	Pentane	5000	<LOQ	12	Methylene chloride	600	<LOQ	2
Petroleum Ether-1	400	<LOQ	6.4	Petroleum Ether-2	400	<LOQ	6.4	Petroleum Ether	400	<LOQ	6.4
Propane	2100	<LOQ	26.668	Toluene	890	<LOQ	2.4	Petroleum Ether-3	400	<LOQ	6.4
Trichloroethylene	80	<LOQ	0.4	Xylenes(o)	2170	<LOQ	7.2	Total Xylenes	2170	<LOQ	7.2
								Xylenes(p/m)	2170	<LOQ	7.2

(ppm) = Parts per Million, (ppm) = (µg/g), , LOQ = Limit of Quantitation

Pathogenic SAE (qPCR) (Passed) (qPCR)

Analyte	Result (cfu/g)	Analyte	Result (cfu/g)	Analyte	Result (cfu/g)
Aspergillus (Flavus, Fumigatus, Niger, Terreus)	Absence in 1g	Pseudomonas aeruginosa	Absence in 1g	Staphylococcus aureus	Absence in 1g

(cfu/g) = Colony Forming Unit per Gram

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Extracted From: Industrial Hemp
Description: Broad Spectrum 40% CBD Oil

Method: SOP-3

Total Yeast and Mold (Passed) (qPCR)

Analyte	Action Level (cfu/g)	Result
Total Yeast/Mold	100000	Passed

(cfu/g) = Colony Forming Unit per Gram

Flavonoids (Tested) (LCMS/MS)

Analyte	Result (ppm)	LOQ (ppm)	Analyte	Result (ppm)	LOQ (ppm)	Analyte	Result (ppm)	LOQ (ppm)
Apigenin	<LOQ	4	**Baicalin**	<LOQ	8	**Beta sitosterol**	49.610	5
Cannflavin A	<LOQ	3.91	**Cannflavin B**	<LOQ	4.84	**Cannflavin C**	<LOQ	2.36
Chrysin	<LOQ	2.5	**Fisetin**	<LOQ	5	**Kaempferol**	<LOQ	1
Luteolin	<LOQ	2.5	**Orientin**	<LOQ	5	**Quercetin**	<LOQ	2.23
Rutin	<LOQ	7.81	**Vitexin**	<LOQ	4	**Wogonin**	<LOQ	0.5

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