

CERTIFICATE OF ANALYSIS

* FOR QUALITY ASSURANCE PURPOSES. NOT A MICHIGAN COMPLIANCE CERTIFICATE.

PRODUCED: SEP 26, 2022

SAMPLE: ATC1522920 CDT (EXTRACT) // CLIENT: PURE BIOLOGIX // BATCH: PASS



MATRIX: EXTRACT
SAMPLE ID: CAM-220922-102
COLLECTED ON: SEP 22, 2022
RECEIVED ON: SEP 22, 2022
BATCH/SAMPLE SIZE: 1000 G / 5.53 G
SAMPLED BY: DANIELLE COLLINS
RECEIVED BY: MICHAEL MEINDERTSMA

CANNABINOID OVERVIEW

CBD:	0.29 %
Δ⁹-THC:	0.08 %
TOTAL CANNABINOIDS:	0.37 %

BATCH RESULT: PASS

POTENCY	PASS
METALS	PASS
PESTICIDES	PASS
SOLVENTS	PASS
TERPENES	TESTED

POT-01: CANNABINOID POTENCY ANALYSIS BY HPLC-DAD // SEP 26, 2022

ANALYTE	LIMIT	AMT	AMT	LOD/LOQ (µg/g)	PASS/FAIL	ANALYTE	LIMIT	AMT	AMT	LOD/LOQ (µg/g)	PASS/FAIL
CBC		ND	ND	0.0517/0.172	N/A	Δ ⁸ -THC	10 %	ND	ND	0.0578/0.193	PASS
CBDA	0.287 %	2.87 mg/g		0.109/0.363	N/A	Δ ⁹ -THC		0.0841 %	0.841 mg/g	0.102/0.340	N/A
CBDV	ND	ND		0.142/0.474	N/A	THCA		ND	ND	0.0883/0.294	N/A
CBG	ND	ND		0.0673/0.224	N/A	THCV		ND	ND	0.0699/0.233	N/A
CBGA	ND	ND		0.0576/0.192	N/A	TOTAL THC **		0.0841 %	0.841 mg/g		N/A
CBN	ND	ND		0.0328/0.109	N/A	TOTAL CBD **		0.287 %	2.87 mg/g		N/A
				0.0848/0.283	N/A						

** TOTAL THC = DELTA-8-THC + DELTA-9-THC + (THCA X 0.877)

** TOTAL CBD = CBD + (CBDA X 0.877)

TRP-013: TERPENE ANALYSIS BY GC-MS // SEP 26, 2022

ANALYTE	AMT (%)	LOD/LOQ (µg/g)	PASS/FAIL	ANALYTE	AMT (%)	LOD/LOQ (µg/g)	PASS/FAIL
TOTAL TERPENES *	61.954 %		N/A	EUCALYPTOL	0.463 %	0.500/1.000	N/A
TRANS-CARYOPHYLLENE	12.800 %	0.500/1.000	N/A	γ-TERPINENE	0.312 %	0.500/1.000	N/A
β-MYRCENE	10.900 %	0.500/1.000	N/A	CARYOPHYLLENE OXIDE	0.281 %	0.500/1.000	N/A
LIMONENE	8.890 %	0.500/1.000	N/A	TRANS-β-OCIMENE	0.213 %	0.500/1.000	N/A
α-HUMULENE	4.540 %	0.500/1.000	N/A	CEDROL	0.187 %	0.500/1.000	N/A
LINALOOL *	4.450 %	0.500/1.000	N/A	CIS-NEROLIDOL	0.420 %	0.500/1.000	N/A
α-PINENE	3.030 %	0.500/1.000	N/A	α-PHELLANDRENE	0.260 %	0.500/1.000	N/A
β-PINENE	3.020 %	0.500/1.000	N/A	α-TERPINENE	0.061 %	0.500/1.000	N/A
TERPINOLENE	2.380 %	0.500/1.000	N/A	(+)-FENCHONE	ND	0.500/1.000	N/A
α-BISABOLOL	1.820 %	0.500/1.000	N/A	α-CEDRENE	ND	0.500/1.000	N/A
CIS-β-OCIMENE	1.470 %	0.500/1.000	N/A	CAMPHOR	ND	0.500/1.000	N/A
(1R)-ENDO-(+)-FENCHYL ALCOHOL	1.260 %	0.500/1.000	N/A	GERANYL ACETATE	ND	0.500/1.000	N/A
TRANS-NEROLIDOL	1.160 %	0.500/1.000	N/A	ISOBORNEOL	ND	0.500/1.000	N/A
VALENCENE	1.300 %	0.500/1.000	N/A	ISOPULEGOL	ND	0.500/1.000	N/A
CAMPHERE	1.020 %	0.500/1.000	N/A	PULEGONE	ND	0.500/1.000	N/A
Δ³-CARENE	0.975 %	0.500/1.000	N/A	SABINENE	ND	0.500/1.000	N/A
GUAJOL	0.742 %	0.500/1.000	N/A	SABINENE HYDRATE	ND	0.500/1.000	N/A

* BEYOND SCOPE OF ACCREDITATION

THIS REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT APPROVAL FROM CAMBIUM ANALYTICA. THE RESULTS HEREIN RELATE ONLY TO THE SAMPLE & BATCH IDENTIFIED IN THIS REPORT



RESULTS CERTIFIED BY: VERNON LALONE
LABORATORY DIRECTOR, CAMBIUM ANALYTICA
SEP 26, 2022

RESULTS CERTIFIED BY: DOUGLAS SMITH
CHIEF SCIENTIST, CAMBIUM ANALYTICA
SEP 26, 2022



PGC-03: CHEMICAL RESIDUE ANALYSIS BY GC-MS/MS // SEP 26, 2022

ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/kg)	PASS/FAIL	ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/kg)	PASS/FAIL
CHLORFENAPYR	1 µg/g	ND	6.320/21.100	PASS	METHYL PARATHION	0.2 µg/g	ND	3.220/10.800	PASS

PLC-02: CHEMICAL RESIDUE ANALYSIS BY LC-MS/MS // SEP 26, 2022

ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/kg)	PASS/FAIL	ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/kg)	PASS/FAIL
ABAMECTIN	0.5 µg/g	ND	72.600/242.000	PASS	IMAZALIL	0.2 µg/g	ND	16.300/54.200	PASS
ACEPHATE	0.4 µg/g	ND	17.100/57.000	PASS	IMIDACLOPRID	0.4 µg/g	ND	35.600/119.000	PASS
ACEQUINOCYL	2 µg/g	ND	29.600/98.600	PASS	KRESOXIM-METHYL	0.4 µg/g	ND	12.500/41.500	PASS
ACETAMIPRID	0.2 µg/g	ND	15.200/50.700	PASS	MALATHION	0.2 µg/g	ND	16.400/54.700	PASS
ALDICARB	0.4 µg/g	ND	44.500/148.000	PASS	METALAXYL	0.2 µg/g	ND	18.400/61.500	PASS
AZOXYSTROBIN	0.2 µg/g	ND	11.000/36.700	PASS	METHIOCARB	0.2 µg/g	ND	14.500/48.500	PASS
BIFENAZATE	0.2 µg/g	ND	26.300/87.700	PASS	METHOMYL	0.4 µg/g	ND	9.900/33.000	PASS
BIFENTHRIN	0.2 µg/g	ND	15.300/50.900	PASS	MGK-264	0.2 µg/g	ND	20.200/67.300	PASS
BOSCALID	0.4 µg/g	ND	13.400/43.800	PASS	MYCLOBUTANIL	0.2 µg/g	ND	20.700/69.000	PASS
CARBARYL	0.2 µg/g	ND	12.700/42.200	PASS	NALED	0.5 µg/g	ND	24.100/80.500	PASS
CARBOFURAN	0.2 µg/g	ND	11.200/37.400	PASS	OXAMYL	1 µg/g	ND	37.000/123.000	PASS
CHLORANTRANIL-IPROLE	0.2 µg/g	ND	25.800/86.100	PASS	PACLOBUTRAZOL	0.4 µg/g	ND	38.100/127.000	PASS
CHLORPYRIFOS	0.2 µg/g	ND	25.900/86.500	PASS	PERMETHRIN	0.2 µg/g	ND	39.700/132.000	PASS
CLOFENTEZINE	0.2 µg/g	ND	21.200/70.600	PASS	PHOSMET	0.2 µg/g	ND	25.100/83.700	PASS
CYFLUTHRIN	1 µg/g	ND	40.600/135.000	PASS	PRALLETHRIN	0.2 µg/g	ND	39.000/130.000	PASS
CYPERMETHRIN	1 µg/g	ND	29.100/97.000	PASS	PROPICONAZOLE	0.4 µg/g	ND	42.500/142.000	PASS
DAMINOZIDE	1 µg/g	ND	25.100/83.700	PASS	PROPOXUR	0.2 µg/g	ND	12.200/40.700	PASS
DIAZINON	0.2 µg/g	ND	19.600/65.200	PASS	PYRETHRINS	1 µg/g	ND	21.000/70.100	PASS
DICHLORVOS	1 µg/g	ND	13.200/44.000	PASS	PYRIDABEN	0.2 µg/g	ND	27.400/91.500	PASS
DIMETHOATE	0.2 µg/g	ND	12.900/42.900	PASS	SPINOSAD	0.2 µg/g	ND	6.190/20.700	PASS
ETHOPROPHOS	0.2 µg/g	ND	20.100/66.900	PASS	SPINOSAD A		ND	6.710/22.300	N/A
ETOFENPROX	0.4 µg/g	ND	15.100/50.300	PASS	SPINOSAD D		ND	2.530/8.410	N/A
ETOXAZOLE	0.2 µg/g	ND	14.200/47.400	PASS	SPIROMESIFEN	0.2 µg/g	ND	15.300/51.200	PASS
FENOXYCARB	0.2 µg/g	ND	21.000/70.000	PASS	SPIROTETRAMAT	0.2 µg/g	ND	37.300/124.000	PASS
FENPYROXIMATE	0.4 µg/g	ND	46.200/154.000	PASS	SPIROXAMINE	0.4 µg/g	ND	12.900/43.000	PASS
FIPRONIL	0.4 µg/g	ND	47.400/158.000	PASS	TEBUCONAZOLE	0.4 µg/g	ND	39.500/132.000	PASS
FLONICAMID	1 µg/g	ND	23.300/77.800	PASS	THIACLOPRID	0.2 µg/g	ND	16.200/54.200	PASS
FLUDIOXONIL	0.4 µg/g	ND	11.600/38.500	PASS	THIAMETHOXAM	0.2 µg/g	ND	14.400/47.900	PASS
HEXYTHIAZOX	1 µg/g	ND	29.600/98.800	PASS	TRIFLOXYSTROB-IN	0.2 µg/g	ND	19.700/65.600	PASS



MET-05: HEAVY METALS ANALYSIS BY ICP-MS // SEP 23, 2022

ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/kg)	PASS/FAIL	ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/kg)	PASS/FAIL
ARSENIC	0.2 µg/g	0.118 µg/g	0.045/0.500	PASS	LEAD	0.5 µg/g	0.065 µg/g	0.017/0.500	PASS
CADMIUM	0.2 µg/g	ND	0.026/0.500	PASS	MERCURY	0.1 µg/g	0.002 µg/g	0.004/0.050	PASS
CHROMIUM	0.6 µg/g	0.024 µg/g	0.027/0.500	PASS	NICKEL	0.5 µg/g	ND	0.027/0.500	PASS
COPPER		0.676 µg/g	0.045/0.500	N/A					

SOL-04: RESIDUAL SOLVENT ANALYSIS BY GC-MS/HS // SEP 26, 2022

ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/g)	PASS/FAIL	ANALYTE	LIMIT	AMT (µg/g)	LOD/LOQ (µg/g)	PASS/FAIL
1,2-DICHLOROETHANE	2 µg/g	ND	0.400/1.340	PASS	ETHYL ETHER	500 µg/g	ND	1.370/4.550	PASS
2,2-DIMETHYLBTANE	50 µg/g	ND	0.980/3.270	PASS	HEPTANE	500 µg/g	ND	1.310/4.370	PASS
2,3-DIMETHYLBTANE	50 µg/g	ND	2.190/7.320	PASS	HEXANE	50 µg/g	ND	1.420/4.740	PASS
2-METHYLBTANE	750 µg/g	ND	1.540/5.140	PASS	HEXANES ALL ISOMERS *	50 µg/g	ND		PASS
2-METHYLPENTANE	50 µg/g	ND	0.730/2.440	PASS	ISOBUTANE	800 µg/g	ND	1.600/5.340	PASS
3-METHYLPENTANE	50 µg/g	ND	0.730/2.440	PASS	ISOPROPYL ALCOHOL	500 µg/g	ND	4.900/16.300	PASS
ACETONE	750 µg/g	ND	1.570/5.230	PASS	METHANOL	250 µg/g	ND	7.890/26.400	PASS
ACETONITRILE	60 µg/g	ND	1.850/6.170	PASS	METHYLENE CHLORIDE	125 µg/g	ND	1.360/4.530	PASS
BENZENE	1 µg/g	ND	0.180/0.590	PASS	NEOPENTANE	750 µg/g	ND	1.490/4.970	PASS
BUTANE	800 µg/g	ND	1.680/5.590	PASS	PENTANE	750 µg/g	ND	1.460/4.870	PASS
BUTANES ALL ISOMERS *	800 µg/g	ND		PASS	PENTANES ALL ISOMERS *	750 µg/g	ND		PASS
CHLOROFORM	2 µg/g	ND	0.780/2.590	PASS	PROPANE	2100 µg/g	ND	1.950/6.510	PASS
ETHANOL	1000 µg/g	ND	6.020/20.100	PASS	TOLUENE	150 µg/g	ND	1.880/6.260	PASS
ETHYL ACETATE	400 µg/g	ND	1.950/6.490	PASS	TRICHLOROETHYLENE	25 µg/g	ND	0.290/0.960	PASS
ETHYLENE OXIDE	5 µg/g	ND	0.150/0.490	PASS	TOTAL XYLENES	150 µg/g	ND	2.020/6.720	PASS

* BEYOND SCOPE OF ACCREDITATION

ACCREDITATIONS



ILAC-MRA



ISO/IEC 17025

ILAC-MRA, PJLA ACCREDITED

PLC-02: CHEMICAL RESIDUE ANALYSIS BY LC-MS/MS

ABAMECTIN, ABAMECTIN BA, ABAMECTIN BB, ACEPHATE, ACEQUINOCYL, ACETAMIPRID, ALDICARB, AZOXYSTROBIN, BIFENAZATE, BIFENTHRIN, BOSCALID, CARBARYL, CARBOFURAN, CHLORANTRANILIPROLE, CHLORFENAPYR, CHLORPYRIFOS, CLOFENTEZINE, CYFLUTHRIN, CYPERMETHRIN, DAMINOZIDE, DIAZINON, DICHLORVOS, DIMETHOATE, ETHOPROPHOS, ETOFENPROX, ETOXAZOLE, FENOXYCARB, FENPYROXIMATE, FIPRONIL, FLONICAMID, FLUDIOXONIL, HEXYTHIAZOX, IMAZALIL, IMIDACLOPRID, KRESOXIM-METHYL, MGK-264, MALATHION, MALATHION A, METALAXYL, METHIOCARB, METHOMYL, METHYL PARATHION, MYCLOBUTANIL, NALED, OXAMYL, PACLOBUTRAZOL, PERMETHRIN, PERMETHRIN CIS, PERMETHRIN TRANS, PHOSMET, PRALLETHRIN, PROPICONAZOLE, PROPOXUR, PYRETHRINS, PYRETHRINS CINERIN I, PYRETHRINS CINERIN I-3, PYRETHRINS JASMOLIN I, PYRETHRINS JASMOLIN I-3, PYRETHRINS PYRETHRIN I, PYRIDABEN, SPINOSAD, SPINOSAD A, SPINOSAD D, SPIROMESIFEN, SPIROTETRAMAT, SPIROXAMINE, TEBUCONAZOLE, THIACLOPRID, THIAMETHOXAM, TRIFLOXYSTROBIN

POT-01: CANNABINOID POTENCY ANALYSIS BY HPLC-DAD

CBD, CBDA, DELTA-9-THC, THCA, CBDV, THCV, CBG, CBGA, CBN, DELTA-8-THC, CBC, DELTA-8 + DELTA-9-THC, TOTAL CBD, TOTAL THC

TRP-013: TERPENE ANALYSIS BY GC-MS

(+)-FENCHONE, (1R)-ENDO-(+)-FENCHYL ALCOHOL, CAMPHENE, CAMPHOR, CARYOPHYLLENE OXIDE, CEDROL, DELTA-3-CARENE, EUCALYPTOL, FENCHOL, GERANIOL, GERANYL ACETATE, GUAJOL, ISOBORNEOL, ISOPULEGOL, LIMONENE, NEROLIDOL, OCIMENE, PHELLANDRENE, PULEGONE, SABINENE, SABINENE HYDRATE, TERPINEOL 3, TERPINOLENE, VALENCENE, ALPHA-BISABOLOL, ALPHA-CEDRENE, ALPHA-HUMULENE, ALPHA-PHELLANDRENE, ALPHA-PINENE, ALPHA-TERPINENE, BETA-MYRCENE, BETA-PINENE, CIS-NEROLIDOL, CIS-BETA-OCIMENE, GAMMA-TERPINENE, TRANS-CARYOPHYLLENE, TRANS-NEROLIDOL, TRANS-BETA-OCIMENE

SOL-04: RESIDUAL SOLVENT ANALYSIS BY GC-MS/HS

1,2-DICHLOROETHANE, 2,2-DIMETHYLBTANE, 2,3-DIMETHYLBTANE, 2-METHYLBTANE, 2-METHYLPENTANE, 3-METHYLPENTANE, ACETONE, ACETONITRILE, BENZENE, BUTANE, CHLOROFORM, ETHANOL, ETHYL ACETATE, ETHYL ETHER, ETHYLENE OXIDE, HEPTANE, HEXANE, ISOBUTANE, ISOPROPYL ALCOHOL, METHANOL, METHYLENE CHLORIDE, NEOPENTANE, PENTANE, PROPANE, TOLUENE, TOTAL XYLENES, TRICHLOROETHYLENE, M-XYLENE, O-XYLENE, P- AND M-XYLENE, P-XYLENE

MET-05: HEAVY METALS ANALYSIS BY ICP-MS

ARSENIC, CADMIUM, CHROMIUM, COPPER, LEAD, MERCURY, NICKEL

PGC-03: CHEMICAL RESIDUE ANALYSIS BY GC-MS/MS

CHLORFENAPYR, METHYL PARATHION

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