



DEA No. RA0571996
FL License # CMTL-0003
CLIA No. 10D1094068

Certificate of Analysis

R&D

CAROLINA HEMP REFINERY Batch # CHR-Purekana-D8-1 ml-bar-BD-002 Test Reg State: Florida Production Facility: Carolina Hemp Refinery
800 UNION RIDGE ROAD Batch Date: 2022-04-27 Production Date: 2022-04-20
BURLINGTON, NC 27217 Extracted From: HEMP

Order # CAR220504-060001 Sampling Date: 2022-05-05 Initial Gross Weight: 218.436 g Number of Units: 12
Order Date: 2022-05-04 Lab Batch Date: 2022-05-05 Net Weight: 14.364 g Net Weight per Unit: 1197.000 mg
Sample # AACU190 Completion Date: 2022-05-11



Product Image

Potency Tested	Terpenes Tested	Heavy Metals Passed	2,3-Butanedione Passed	Mycotoxins Passed
Pesticides Passed	Residual Solvents Passed	Listeria Monocytogenes Passed	Pathogenic Passed	Vitamin E Passed

Delta 8/Delta 10 Potency 12

Specimen Weight: 47.760 mg

Analyte	LOD (%)	LOQ (%)	Result (mg/g)	(%)
Delta-8 THC	0.000026	0.001	838.850	83.885
CBN	0.000014	0.001	7.900	0.790
CBG	0.000248	0.001	5.150	0.515
CBC	0.000018	0.001	<LOQ	<LOQ
CBD	0.000054	0.001	<LOQ	<LOQ
THCA	0.000032	0.001	<LOQ	<LOQ
Delta-9 THC	0.000013	0.001	<LOQ	<LOQ
Delta-10 THC	0.000003	0.001	<LOQ	<LOQ
CBGA	0.000008	0.001	<LOQ	<LOQ
CBDV	0.000065	0.001	<LOQ	<LOQ
CBDA	0.000011	0.001	<LOQ	<LOQ
THCV	0.000007	0.001	<LOQ	<LOQ

Tested (LCUV)

Potency Summary

83.885% Total Delta 8 1,004.100mg	Total Delta 10 None Detected
Total THC None Detected	Total CBD None Detected
0.515% Total CBG 6.160mg	Total CBN 9.460mg
Other Cannabinoids None Detected	Total Cannabinoids 1,019.720mg

Terpenes Summary

Analyte	Result (mg/g)	(%)
trans-Caryophyllene	3.027	0.303%
alpha-Pinene	2.949	0.295%
beta-Myrcene	2.449	0.245%
beta-Pinene	1.137	0.114%

Total Terpenes: 0.957%

Detailed Terpenes Analysis is on the following page

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

Aixia Sun
Aixia Sun Lab Director/Principal Scientist
D.H.Sc., M.Sc., B.Sc., MT (AAB)



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Order Date: 2022-05-04 Lab Batch Date: 2022-05-05 Net Weight: 14.364 g Net Weight per Unit: 1197.000 mg
Sample # AACU190 Completion Date: 2022-05-11

Terpenes

Specimen Weight: 45.160 mg

Tested
(GC/GCMS)

Dilution Factor: 20.000

Analyte	LOQ (%)	Result (mg/g)	(%)	Analyte	LOQ (%)	Result (mg/g)	(%)
trans-Caryophyllene	0.002	3.027	0.303	Geranyl acetate	0.002	<LOQ	
alpha-Pinene	0.002	2.949	0.295	Fenchyl Alcohol	0.002	<LOQ	
beta-Myrcene	0.002	2.449	0.245	Gamma-Terpinene	0.002	<LOQ	
beta-Pinene	0.002	1.137	0.114	Borneol	0.004	<LOQ	
Ocimene	0.000	<LOQ		3-Carene	0.002	<LOQ	
Guaiol	0.002	<LOQ		alpha-Bisabolol	0.002	<LOQ	
Hexahydrothymol	0.002	<LOQ		alpha-Cedrene	0.002	<LOQ	
Isoborneol	0.002	<LOQ		alpha-Humulene	0.002	<LOQ	
Isopulegol	0.002	<LOQ		alpha-Phellandrene	0.002	<LOQ	
Linalool	0.002	<LOQ		alpha-Terpinene	0.002	<LOQ	
Nerol	0.002	<LOQ		Camphene	0.002	<LOQ	
(+)-Cedrol	0.002	<LOQ		(R)-(+)-Limonene	0.002	<LOQ	
Pulegone	0.002	<LOQ		Camphors	0.006	<LOQ	
Geraniol	0.002	<LOQ		Caryophyllene oxide	0.002	<LOQ	
Sabinene	0.002	<LOQ		cis-Nerolidol	0.002	<LOQ	
Sabinene Hydrate	0.002	<LOQ		Eucalyptol	0.002	<LOQ	
Terpinolene	0.002	<LOQ		Farnesene	0.002	<LOQ	
Total Terpineol	0.001	<LOQ		Fenchone	0.002	<LOQ	
trans-Nerolidol	0.002	<LOQ		Valencene	0.002	<LOQ	

Total Terpenes: 0.957%

Mycotoxins

Specimen Weight: 269.000 mg

Dilution Factor: 5.576

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

Passed Heavy Metals

Specimen Weight: 251.370 mg

Dilution Factor: 198

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

Xueli Gao Lab Toxicologist
Ph.D., DABT

Aixia Sun Lab Director/Principal Scientist
D.H.Sc., M.Sc., B.Sc., MT (AAB)



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BURLINGTON, NC 27217 Extracted From: HEMP

Production Facility: Carolina Hemp Refinery
Production Date: 2022-04-20

Order # CAR220504-060001
Order Date: 2022-05-04
Sample # AACU190

Sampling Date: 2022-05-05
Lab Batch Date: 2022-05-05
Completion Date: 2022-05-11

Initial Gross Weight: 218.436 g
Net Weight: 14.364 g

Number of Units: 12
Net Weight per Unit: 1197.000 mg

Pesticides FL V4

Specimen Weight: 269.000 mg

Dilution Factor: 5.576

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Abamectin	28.23	300	<LOQ	Fludioxonil	48	3000	<LOQ
Acephate	30	3000	<LOQ	Hexythiazox	30	2000	<LOQ
Acequinocyl	48	2000	<LOQ	Imazalil	30	100	<LOQ
Acetaminiprid	30	3000	<LOQ	Imidacloprid	30	3000	<LOQ
Aldicarb	30	100	<LOQ	Kresoxim Methyl	30	1000	<LOQ
Azoxystrobin	10	3000	<LOQ	Malathion	30	2000	<LOQ
Bifenazate	30	3000	<LOQ	Metaxalyl	10	3000	<LOQ
Bifenthrin	30	500	<LOQ	Methiocarb	30	100	<LOQ
Boscalid	10	3000	<LOQ	Methomyl	30	100	<LOQ
Captan	30	3000	<LOQ	methyl-Parathion	10	100	<LOQ
Carbaryl	10	500	<LOQ	Mevinphos	10	100	<LOQ
Carbofuran	10	100	<LOQ	Myclobutanil	30	3000	<LOQ
Chlorantranilprole	10	3000	<LOQ	Naled	30	500	<LOQ
Chlordane	10	100	<LOQ	Oxamyl	30	500	<LOQ
Chlorfenapyr	30	100	<LOQ	Paclotbutrazol	30	100	<LOQ
Chloromequat Chloride	10	3000	<LOQ	Pentachloronitrobenzene	10	200	<LOQ
Chlorpyrifos	30	100	<LOQ	Permethrin	30	1000	<LOQ
Clofentezine	30	500	<LOQ	Phosmet	30	200	<LOQ
Coumaphos	48	100	<LOQ	Piperonylbutoxide	30	3000	<LOQ
Cyfluthrin	30	1000	<LOQ	Prallethrin	30	400	<LOQ
Cypermethrin	30	1000	<LOQ	Propiconazole	30	1000	<LOQ
Daminozide	30	100	<LOQ	Propoxur	30	100	<LOQ
Diazinon	30	200	<LOQ	Pyrethrins	30	1000	<LOQ
Dichlorvos	30	100	<LOQ	Pyridaben	30	3000	<LOQ
Dimethoate	30	100	<LOQ	Spinetoram	10	3000	<LOQ
Dimethomorph	48	3000	<LOQ	Spinosad	30	3000	<LOQ
Ethoprophos	30	100	<LOQ	Spiromesifen	30	3000	<LOQ
Etofenprox	30	100	<LOQ	Spirotetramat	30	3000	<LOQ
Etoxazole	30	1500	<LOQ	Spiroxamine	30	100	<LOQ
Fenhexamid	10	3000	<LOQ	Tebuconazole	30	1000	<LOQ
Fenoxycarb	30	100	<LOQ	Thiacloprid	30	100	<LOQ
Fenpyroximate	30	2000	<LOQ	Thiamethoxam	30	1000	<LOQ
Fipronil	30	100	<LOQ	Trifloxystrobin	30	3000	<LOQ
Fonicamid	30	2000	<LOQ				

Passed (LCMS/GCMS)



Residual Solvents - FL (CBD)

Specimen Weight: 12.800 mg

Dilution Factor: 1.000

Analyte	LOQ (ppm)	Action Level (ppm)	Result (ppm)	Analyte	LOQ (ppm)	Action Level (ppm)	Result (ppm)
1,1-Dichloroethene	0.16	8	<LOQ	Heptane	1.39	5000	<LOQ
1,2-Dichloroethane	0.04	5	<LOQ	Hexane	1.17	290	<LOQ
Acetone	2.08	5000	<LOQ	Isopropyl alcohol	1.39	500	<LOQ
Acetonitrile	1.17	410	<LOQ	Methanol	0.69	3000	<LOQ
Benzene	0.02	2	<LOQ	Methylene chloride	2.43	600	<LOQ
Butanes	2.5	2000	<LOQ	Pentane	2.08	5000	<LOQ
Chloroform	0.04	60	<LOQ	Propane	5.83	2100	<LOQ
Ethanol	2.78	5000	<LOQ	Toluene	2.92	890	<LOQ
Ethyl Acetate	1.11	5000	<LOQ	Total Xylenes	2.92	2170	<LOQ
Ethyl Ether	1.39	5000	<LOQ	Trichloroethylene	0.49	80	<LOQ
Ethylene Oxide	0.1	5	<LOQ				

Passed (GCMS)

Pathogenic SAE (qPCR)

Specimen Weight: 220.940 mg

Dilution Factor: 1.000

Analyte	Action Level (cfu/g)	Result (cfu/g)	Analyte	Action Level (cfu/g)	Result (cfu/g)
Aspergillus (Flavus, Fumigatus, Niger, Terreus)	1	Absence in 1g	Salmonella	1	Absence in 1g
E.Coli	1	Absence in 1g			

Passed (qPCR)



2,3-butanedione(Diacetyl)

Specimen Weight: 12.800 mg

Dilution Factor: 1.000

Analyte	LOQ (ppm)	Result (ppm)
2,3-Butanedione	0.024	<LOQ

Passed (GCMS)



Listeria Monocytogenes

Specimen Weight: 979.970 mg

Dilution Factor: 1.000

Analyte	Action Level (cfu/g)	Result
Listeria Monocytogenes	1	Absence in 1g

Passed (qPCR)

Xueli Gao Lab Toxicologist
Ph.D., DABT

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Extracted From: HEMP

Production Facility: Carolina Hemp Refinery
Production Date: 2022-04-20

Order # CAR220504-060001
Order Date: 2022-05-04
Sample # AACU190

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Lab Batch Date: 2022-05-05
Completion Date: 2022-05-11

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Net Weight: 14.364 g

Number of Units: 12
Net Weight per Unit: 1197.000 mg



Vitamin E (Tocopheryl Acetate)

Specimen Weight: 269.000 mg

Passed
(LC-MS)

Dilution Factor: 5.576

Analyte	Result (ppb)
Vitamin E Acetate	<LOQ

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Xueli Gao Lab Toxicologist
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