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#### **Certificate of Analysis**

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#### **HHC** Distillate Client **CleanAF** Operations Sample ID: SA-11012021-5192 Received: 11/01/2021 PO Box 15598 Batch: Completed: 11/15/2021 Type: In-Process Materials Las Vegas, NV 89114 Matrix: Concentrate - Distillate USA Lic. #: G68-04351 Summary **Date Tested** Test Status 11/11/2021 Cannabinoids Tested Cannabinoids (Additional) 11/11/2021 Tested 11/03/2021 Heavy Metals Tested Baked HHC Microbials 11/10/2021 Tested Mycotoxins 11/15/2021 Tested Pesticides 11/15/2021 Tested **Residual Solvents** 11/15/2021 Tested Terpenes 11/15/2021 Tested **Cannabinoids by HPLC-PDA** ND 0.911 % 0.911 % Not Tested Not Tested Yes Total ∆9-THC CBN Total Cannabinoids Moisture Content Foreign Matter Internal Marker Recovered LOD LOQ Result Result Analyte (%) (%) (%) (mg/g) CBC SA-11012021-5192 0.0095 0.0284 ND ND uAU CBCA 0.0181 0.0543 ND ND 600000 CBCV 0.018 ND 0.006 ND CBD 0.0081 0.0242 ND ND 0.0043 0.013 500000 CBDA ND ND CBDV 0.0061 0.0182 ND ND 0.0021 0.0063 CBDVA ND ND 400000 CBG 0.0057 0.0172 ND ND CBGA 0.0049 0.0147 ND ND CBL 0.0112 0.0335 ND ND 300000 CBLA 0.0124 0.0371 ND ND 0.0056 0.0169 0.911 CBN 9.11 200000 CBNA 0.006 0.0181 ND ND **∆8-THC** 0.0104 0.0312 ND ND ∆9-THC 0.0076 0.0227 ND ND 100000 Δ9-THCA 0.0084 0.0251 ND ND 0.0069 Δ9-THCV 0.0206 ND ND Δ9-THCVA 0.0062 0.0186 ND ND 0 7.5 2.5 5.0 10.0 Total ∆9-THC ND ND min Total CBD ND ND Total 0.911 9.11

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; RL = Reporting Limit;  $\Delta$  = Delta; Total  $\Delta$ 9-THC =  $\Delta$ 9-THC +  $\Delta$ 9-THC; Total CBD = CBDA \* 0.877 + CBD;



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# Cannabinoids by HPLC-PDA, LC-MS/MS, and/or GC-MS/MS

Analyte	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	2.00 <sup>(x1,000,000)</sup> 1.TIC (1.00)			tandard		R-HHO		
(9R)-HHC	(70)	(70)	59.3	593.0	1.50			nal S	Ŷ			
					1.25			Inter	S-HF			
(9S)-HHC			40.4	404.0	1.00				6			
					0.75				11			
					0.50							
								<				
					0.25			- II - A				1
					3.0 4	.0 5.0	6.0	7.0 8.0	9.0 10	.0 11.0	12.0 13.0	14.0

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; RL = Reporting Limit;  $\Delta$  = Delta; Total  $\Delta$ 9-THC =  $\Delta$ 9-THC + 0.877 +  $\Delta$ 9-THC; Total CBD = CBDA + 0.877 + CBD;



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### Heavy Metals by ICP-MS

Analyte	LOD (ppb)	LOQ (ppb)	Result	(ppb)
Arsenic	2	20	ND	
Cadmium	1	20	ND	
Lead	2	20	ND	
Mercury	12	50	ND	

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**HHC Distillate** 

Sample ID: SA-11012021-5192 Batch: Type: In-Process Materials Matrix: Concentrate - Distillate

Received: 11/01/2021 Completed: 11/15/2021 Client CleanAF Operations PO Box 15598 Las Vegas, NV 89114 USA Lic. #: G68-04351

# Pesticides by LC-MS/MS and GC-MS/MS

Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)
Abamectin	30	100	ND	Hexythiazox	30	100	ND
Acephate	30	100	ND	Imazalil	30	100	ND
Acequinocyl	30	100	ND	Imidacloprid	30	100	ND
Acetamiprid	30	100	ND	Kresoxim methyl	30	100	ND
Aldicarb	30	100	ND	Malathion	30	100	ND
Azoxystrobin	30	100	ND	Metalaxyl	30	100	ND
Bifenazate	30	100	ND	Methiocarb	30	100	ND
Bifenthrin	30	100	ND	Methomyl	30	100	ND
Boscalid	30	100	ND	Mevinphos	30	100	ND
Carbaryl	30	100	ND	Myclobutanil	30	100	ND
Carbofuran	30	100	ND	Naled	30	100	ND
Chloranthraniliprole	30	100	ND	Oxamyl	30	100	ND
Chlorfenapyr	30	100	ND	Paclobutrazol	30	100	ND
Chlorpyrifos	30	100	ND	Permethrin	30	100	ND
Clofentezine	30	100	ND	Phosmet	30	100	ND
Coumaphos	30	100	ND	Piperonyl Butoxide	30	100	ND
Cypermethrin	30	100	ND	Prallethrin	30	100	ND
Daminozide	30	100	ND	Propiconazole	30	100	ND
Diazinon	30	100	ND	Propoxur	30	100	ND
Dichlorvos	30	100	ND	Pyrethrins	30	100	ND
Dimethoate	30	100	ND	Pyridaben	30	100	ND
Dimethomorph	30	100	ND	Spinetoram	30	100	ND
Ethoprophos	30	100	ND	Spinosad	30	100	ND
Etofenprox	30	100	ND	Spiromesifen	30	100	ND
Etoxazole	30	100	ND	Spirotetramat	30	100	ND
Fenhexamid	30	100	ND	Spiroxamine	30	100	ND
Fenoxycarb	30	100	ND	Tebuconazole	30	100	ND
Fenpyroximate	30	100	ND	Thiacloprid	30	100	ND
Flonicamid	30	100	ND	Thiamethoxam	30	100	ND
				Trifloxystrobin	30	100	ND

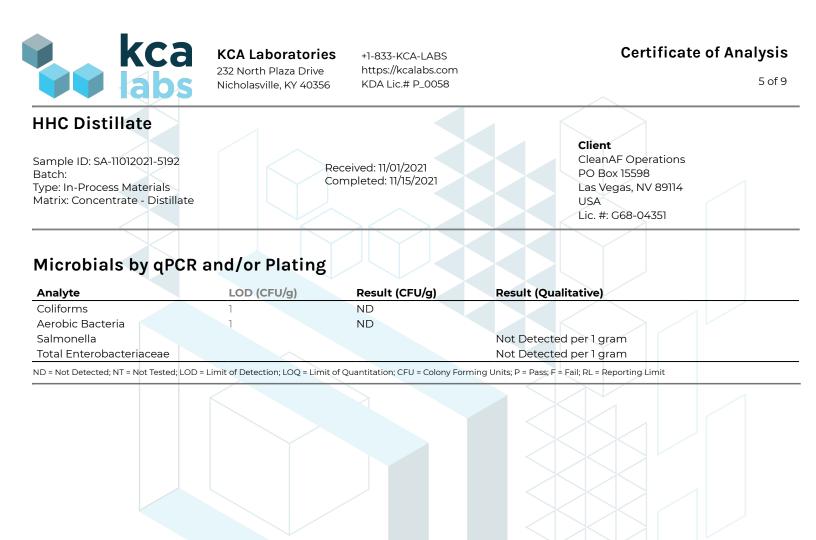
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**KCA** Laboratories 232 North Plaza Drive Nicholasville, KY 40356

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HHC Distilla Sample ID: SA-110 Batch: Type: In-Process M Matrix: Concentra	12021-5192 1aterials	Received: 11/01/20 Completed: 11/15/:	21	Client CleanAF Operations PO Box 15598 Las Vegas, NV 89114 USA Lic. #: G68-04351
Mycotoxins	by LC-MS/MS			
Analyte	LOD (ppb)	LOQ (ppb)	Result (ppb)	
B1	1	5	ND	
B2	1	5	ND	
G1	1	5	ND	

ND

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# **HHC Distillate**

Sample ID: SA-11012021-5192 Batch: Type: In-Process Materials Matrix: Concentrate - Distillate

Received: 11/01/2021 Completed: 11/15/2021 Client CleanAF Operations PO Box 15598 Las Vegas, NV 89114 USA Lic. #: G68-04351

# Residual Solvents by HS-GC-MS/MS

Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)	Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)
Acetone	167	500	ND	Ethylene Oxide	0.5	1	ND
Acetonitrile	14	41	ND	Heptane	167	500	ND
Benzene	0.5	1	ND	n-Hexane	10	29	ND
Butane	167	500	ND	Isobutane	167	500	ND
1-Butanol	167	500	ND	Isopropyl Acetate	167	500	ND
2-Butanol	167	500	ND	Isopropyl Alcohol	167	500	ND
2-Butanone	167	500	ND	Isopropylbenzene	167	500	ND
Chloroform	2	6	ND	Methanol	100	300	ND
Cyclohexane	130	388	ND	2-Methylbutane	167	500	ND
1,2-Dichloroethane	0.5	1	ND	Methylene Chloride	20	60	ND
1,2-Dimethoxyethane	4	10	ND	2-Methylpentane	10	29	ND
Dimethyl Sulfoxide	167	500	ND	3-Methylpentane	10	29	ND
N,N-Dimethylacetamide	37	109	ND	n-Pentane	167	500	ND
2,2-Dimethylbutane	10	29	ND	1-Pentanol	167	500	ND
N,N-Dimethylformamide	30	88	ND	n-Propane	167	500	ND
2,2-Dimethylpropane	167	500	ND	1-Propanol	167	500	ND
1,4-Dioxane	13	38	ND	Pyridine	7	20	ND
Ethanol	167	500	ND	Tetrahydrofuran	24	72	ND
2-Ethoxyethanol	6	16	ND	Toluene	30	89	ND
Ethyl Acetate	167	500	ND	Trichloroethylene	3	8	ND
Ethyl Ether	167	500	ND	Tetramethylene Sulfone	6	16	ND
Ethylbenzene	3	7	ND	Xylenes (o-, m-, and p-)	73	217	ND
Ethylene Glycol	21	62	ND				

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### **HHC** Distillate

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Received: 11/01/2021 Completed: 11/15/2021 Client CleanAF Operations PO Box 15598 Las Vegas, NV 89114 USA Lic. #: G68-04351

# Terpenes by HS-GC-MS/MS

Analyte	LOD (%)	LOQ (%)	Result (%)	Analyte	LOD (%)	LOQ (%)	Result (%)
α-Bisabolol	0.00001	0.00005	ND	Limonene	0.00001	0.00001	<loq< th=""></loq<>
(+)-Borneol	0.00001	0.00005	ND	Linalool	0.00001	0.00001	ND
Camphene	0.00001	0.00005	ND	β-myrcene	0.00001	0.00001	ND
Camphor	0.00001	0.00005	ND	Nerol	0.00001	0.00001	ND
3-Carene	0.00001	0.00005	ND	cis-Nerolidol	0.00001	0.00001	ND
$\beta$ -Caryophyllene	0.00001	0.00005	ND	trans-Nerolidol	0.00001	0.00001	ND
Caryophyllene Oxide	0.00001	0.00005	ND	Ocimene	0.00001	0.00001	ND
<b>α</b> -Cedrene	0.00001	0.00005	ND	<b>α</b> -Phellandrene	0.00001	0.00001	ND
Cedrol	0.00001	0.00005	ND	<b>α</b> -Pinene	0.00001	0.00001	ND
Eucalyptol	0.00001	0.00005	ND	β-Pinene	0.00001	0.00001	ND
Fenchone	0.00001	0.00005	ND	Pulegone	0.00001	0.00001	ND
Fenchyl Alcohol	0.00001	0.00005	ND	Sabinene	0.00001	0.00001	ND
Geraniol	0.00001	0.00005	ND	Sabinene Hydrate	0.00001	0.00001	ND
Geranyl Acetate	0.00001	0.00005	ND	<b>α</b> -Terpinene	0.00001	0.00001	ND
Guaiol	0.00001	0.00005	ND	γ-Terpinene	0.00001	0.00001	ND
Hexadhydrothymol	0.00001	0.00005	ND	<b>α</b> -Terpineol	0.00001	0.00001	ND
<b>α</b> -Humulene	0.00001	0.00005	ND	γ-Terpineol	0.00001	0.00001	ND
Isoborneol	0.00001	0.00005	ND	Terpinolene	0.00001	0.00001	ND
Isopulegol	0.00001	0.00005	ND	Total Terpenes (%)			2.6e-05

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Pesticides - CA BCC

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# **HHC Distillate**

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# **Reporting Limit Appendix**

#### Heavy Metals -

Analyte	Li	mit (ppl	o) Analyte	Limit (ppb)
Arsenic		200	Lead	500
Cadmium		200	Mercury	100

#### **Microbials** -

Analyte	Limit (CF	U/g) Analyte	Limit (CFU/g)
Coliforms	1	Aerobic Bacteria	1000

#### Residual Solvents - USP 467

Analyte	Limit (ppm)	Analyte	Limit (ppm)
Acetone	5000	Ethylene Oxide	1
Acetonitrile	410	Heptane	5000
Benzene	2	n-Hexane	290
Butane	5000	Isobutane	5000
1-Butanol	5000	Isopropyl Acetate	5000
2-Butanol	5000	Isopropyl Alcohol	5000
2-Butanone	5000	Isopropylbenzene	5000
Chloroform	60	Methanol	3000
Cyclohexane	3880	2-Methylbutane	5000
1,2-Dichloroethane	5	Methylene Chloride	600
1,2-Dimethoxyethane	100	2-Methylpentane	290
Dimethyl Sulfoxide	5000	3-Methylpentane	290
N,N-Dimethylacetamide	1090	n-Pentane	5000
2,2-Dimethylbutane	290	1-Pentanol	5000
N,N-Dimethylformamide	880	n-Propane	5000
2,2-Dimethylpropane	5000	1-Propanol	5000
1,4-Dioxane	380	Pyridine	200
Ethanol	5000	Tetrahydrofuran	720
2-Ethoxyethanol	160	Toluene	890
Ethyl Acetate	5000	Trichloroethylene	80
Ethyl Ether	5000	Tetramethylene Sulfone	160
Ethylbenzene	70	Xylenes (o-, m-, and p-)	2170
Ethylene Glycol	620		

Analyte	Limit (ppb)	Analyte	Limit (ppb)
Acetamiprid	5000	Kresoxim methyl	1000
Aldicarb	30	Malathion	5000
Azoxystrobin	40000	Metalaxyl	15000
Bifenazate	5000	Methiocarb	30
Bifenthrin	500	Methomyl	100
Boscalid	10000	Mevinphos	30
Carbaryl	500	Myclobutanil	9000
Carbofuran	30	Naled	500
Chloranthraniliprole	40000	Oxamyl	200
Chlorfenapyr	30	Paclobutrazol	30
Chlorpyrifos	30	Permethrin	20000
Clofentezine	500	Phosmet	200
Coumaphos	30	Piperonyl Butoxide	8000
Cypermethrin	1000	Prallethrin	400
Daminozide	30	Propiconazole	20000
Diazinon	200	Propoxur	30
Dichlorvos	30	Pyrethrins	1000
Dimethoate	30	Pyridaben	3000
Dimethomorph	20000	Spinetoram	3000
Ethoprophos	30	Spinosad	3000
Etofenprox	30	Spiromesifen	12000
Etoxazole	1500	Spirotetramat	13000
Fenhexamid	10000	Spiroxamine	30
Fenoxycarb	30	Tebuconazole	2000
Fenpyroximate	2000	Thiacloprid	30
Flonicamid	2000	Thiamethoxam	4500

#### Mycotoxins -

Analyte	Limit (ppm) Analyte	Limit (ppm)
B1	20 B2	20
GI	20 G2	20

#### Pesticides - CA BCC

Analyte		Limit (ppb)	Analyte	Limit (ppb)
Abamectin		300	Hexythiazox	2000
Acephate		5000	Imazalil	30
Acequinoc <sup>, ,</sup>		4000	Imidacloprid	3000



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