

**Nanticoke Hemp Inc.**

1543 Union Center Maine Hwy  
 pete@nanticokegardens.com  
 607-754-5008  
 License #: OCM-PROC-24-000002

**Certificate of Analysis**

Final



Date Released: 8/12/2024 2:52:46PM

Report #: 20608

**Fugue State Jar**

Sample #: 5515, Weight: 45.50g, Unit Count:  
 Order #: K240805-0002

Category/Type: Plant, Flower - Cured  
 Date Collected: 8/3/2024 10:06:05AM  
 Date Received: 8/5/2024 5:56:40AM  
 Date Sampled: 8/3/2024 10:06:05AM

Regulator Sample ID: 090327  
 Regulator Source Package ID: 090327  
 Regulator Batch ID: 090327

Size: 3200Units, Unit Count:



**Total Cannabinoids**  
 27.2 %  
 272.5 mg/g



**Total THC**  
 22.9 %  
 229.5 mg/g



**Total CBD**  
 0.128 %  
 1.284 mg/g



**Total Terpenes**  
 2.3 %



**Moisture**  
 10.2 %



**Heavy Metals**  
 PASS



**Microbials**  
 PASS



**Pesticides**  
 PASS



**Mycotoxins**  
 PASS



**Foreign Matter**  
 PASS



**Water Activity**  
 PASS

**Potency Analysis by HPLC**

Total Cannabinoids: **27.2 % - 272.5 mg/g**  
 Total THC: **22.9 % - 229.5 mg/g**  
 Total CBD: **0.128 % - 1.284 mg/g**

Date Completed: 08/06/2024 9:21AM

Compound	CAS#	LOQ (%)	%	mg/g	Relative Concentration
THCa	23978-85-0	0.001000	24.27	242.7	<div style="width: 24.27%;"></div>
d9-THC	1972-08-3	0.001000	1.662	16.62	<div style="width: 1.662%;"></div>
CBGa	25555-57-1	0.001000	0.8913	8.913	<div style="width: 0.8913%;"></div>
CBG	25654-31-3	0.001000	0.2280	2.280	<div style="width: 0.228%;"></div>
CBDa	1244-58-2	0.001000	0.1464	1.464	<div style="width: 0.1464%;"></div>
CBC	20675-51-8	0.001000	0.03300	0.3300	<div style="width: 0.033%;"></div>
CBN	521-35-7	0.001000	0.01481	0.1481	<div style="width: 0.01481%;"></div>
d8-THC	5957-75-5	0.001000	ND	ND	
d10/R9-THC	95543-62-7	0.001000	ND	ND	
d10/S9-THC	95588-87-7	0.001000	ND	ND	
THCV	31262-37-0	0.001000	ND	ND	
CBD	13956-29-1	0.001000	ND	ND	

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*Kelly Greenland*

Dr. Kelly Greenland, Lab Director





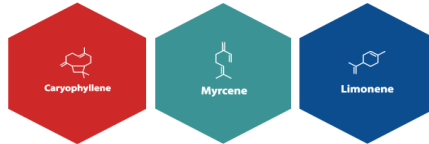
**Sample #: 5515**

**Fugue State Jar**

Compound	CAS#	LOQ (%)	%	mg/g	Relative Concentration
CBDV	24274-48-4	0.001000	ND	ND	
<b>Test Comment:</b> Cannabinoids analyzed by HPLC using P-NY100. The reported result is based on a sample weight using moisture content for flower samples unless moisture is listed as zero or ND. Unless otherwise stated all QC passed.					
THCa		0.001000	24.27	242.7	<div style="width: 24.27%;"></div>
d9-THC		0.001000	1.662	16.62	<div style="width: 1.662%;"></div>
CBGa		0.001000	0.8913	8.913	<div style="width: 0.8913%;"></div>
CBG		0.001000	0.2280	2.280	<div style="width: 0.228%;"></div>
CBDa		0.001000	0.1464	1.464	<div style="width: 0.1464%;"></div>
CBC		0.001000	0.03300	0.3300	<div style="width: 0.033%;"></div>
CBN		0.001000	0.01481	0.1481	<div style="width: 0.01481%;"></div>
CBDV		0.001000	ND	ND	
THCV		0.001000	ND	ND	
CBD		0.001000	ND	ND	
d8-THC		0.001000	ND	ND	
d10/R9-THC	95543-62-7	0.001000	ND	ND	
d10/S9-THC	95588-87-7	0.001000	ND	ND	

**Terpenes by HS-GC-MS**

Date Completed: 08/06/2024 5:37PM



Compound	CAS#	LOQ (%)	%	Relative Concentration
Beta-caryophyllene	87-44-5	0.1000	0.6864	<div style="width: 0.6864%;"></div>
Beta-myrcene	123-35-3	0.1000	0.4250	<div style="width: 0.425%;"></div>
Farnesene	502-61-4	0.1000	0.3362	<div style="width: 0.3362%;"></div>
Limonene	5989-27-5	0.1000	0.3079	<div style="width: 0.3079%;"></div>
Valencene	4630-07-3	0.1000	0.2410	<div style="width: 0.241%;"></div>
Alpha-humulene	6753-98-6	0.1000	0.1433	<div style="width: 0.1433%;"></div>
Linalool	78-70-6	0.1000	0.1237	<div style="width: 0.1237%;"></div>

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**Sample #: 5515**

**Fugue State Jar**

Compound	CAS#	LOQ (%)	%	Relative Concentration
Alpha-pinene	80-56-8	0.1000	ND	
Beta-pinene	127-91-3	0.1000	ND	
Terpinolene	586-62-9	0.1000	ND	
Borneol	464-45-9	0.1000	ND	
Ocimene	13877-91-3	0.1000	ND	
Alpha-bisabolol	515-69-5	0.1000	ND	
Caryophyllene-oxide	1139-30-6	0.1000	ND	
Geraniol	106-24-1	0.1000	ND	
Camphene	79-92-5	0.1000	ND	
Guaiol	489-86-1	0.1000	ND	
Alpha-terpinene	99-86-5	0.1000	ND	
Terpineol	8006-39-1	0.1000	ND	
Fenchol	14575-74-7	0.1000	ND	
Alpha-phellandrene	99-83-2	0.1000	ND	
Camphor	464-49-3	0.1000	ND	
3-Carene	13466-78-9	0.1000	ND	
Alpha-cedrene	469-61-4	0.1000	ND	
Cedrol	77-53-2	0.1000	ND	
Eucalyptol	470-82-6	0.1000	ND	
Fenchone	1195-79-5	0.1000	ND	
Gamma-terpinene	99-85-4	0.1000	ND	
Geranyl Acetate	105-87-3	0.1000	ND	
Isopulegol	89-79-2	0.1000	ND	
Menthol	15356-70-4	0.1000	ND	
Nerol	106-25-2	0.1000	ND	
Nerolidol		0.1000	ND	

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Fugue State Jar

Compound	CAS#	LOQ (%)	%	Relative Concentration
Pulegone	89-82-7	0.1000	ND	
Sabinene	3387-41-5	0.1000	ND	
Sabinene Hydrate	546-79-2	0.1000	ND	

Test Comment: Terpenes tested by GCMS using P-NY210. Unless otherwise stated, all QC passed.

Foreign Matter by microscopy

Pass

Analysis Date: 08/05/2024 5:20 pm

Compound	LOQ (%)	Limits (%)	Result (%)	Status
% Foreign Matter	0.00100	2.0	ND	Pass
Mammalian Excreta	0.00100	0.03	ND	Pass
Stems	0.00100	5.0	ND	Pass

Comment: Physical chemistry was tested using moisture analyzer, water activity meter using P-NY 160. Unless otherwise stated, all QC passed.

Moisture Content

Pass

Analysis Date: 08/05/2024 5:20 pm

Compound	LOQ (%)	Limits (%)	Result (%)	Status
Moisture	1.2	5 - 15	10.2	Pass

Comment: Physical chemistry was tested using moisture analyzer, water activity meter using P-NY 160. Unless otherwise stated, all QC passed.

Water Activity

Pass

Analysis Date: 08/05/2024 5:20 pm

Compound	LOQ (Aw)	Limits (Aw)	Result (Aw)	Status
Water Activity	0.05	0.65	0.60	Pass

Comment: Physical chemistry was tested using moisture analyzer, water activity meter using P-NY 160. Unless otherwise stated, all QC passed.

Pesticides by LCMSMS

Pass

Analysis Date: 08/08/2024 5:17 pm

Compound	LOQ (µg/g)	Limits (µg/g)	Result (µg/g)	Status
Abamectin	0.0100	0.500	ND	Pass
Acephate	0.0100	0.400	ND	Pass

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Sample #: 5515

Fugue State Jar

Pesticides by LCMSMS

Pass

Analysis Date: 08/08/2024 5:17 pm

Compound	LOQ (µg/g)	Limits (µg/g)	Result (µg/g)	Status
Acequinocyl	0.0100	2.00	ND	Pass
Acetamiprid	0.0100	0.200	ND	Pass
Aldicarb	0.0100	0.400	ND	Pass
Azadirachtin	0.0100	1.00	ND	Pass
Azoxystrobin	0.0100	0.200	ND	Pass
Bifenazate	0.0100	0.200	ND	Pass
Bifenthrin	0.0100	0.200	ND	Pass
Boscalid	0.0100	0.400	ND	Pass
Captan	0.0100	1.00	ND	Pass
Carbaryl	0.0100	0.200	ND	Pass
Carbofuran	0.0100	0.200	ND	Pass
Chlorantraniliprole	0.0100	0.200	ND	Pass
Chlordane-alpha	0.0100	1.00	ND	Pass
Chlorfenapyr	0.0100	1.00	ND	Pass
Chlormequat Chloride	0.0100	1.00	ND	Pass
Chlorpyrifos	0.0100	0.200	ND	Pass
Clofentezine	0.0100	0.200	ND	Pass
Coumaphos	0.0100	1.00	ND	Pass
Cyfluthrin	0.0100	1.00	ND	Pass
Cypermethrin	0.0100	1.00	ND	Pass
Daminozide	0.0100	1.00	ND	Pass
Diazinon	0.0100	0.200	ND	Pass
Dichlorvos	0.0100	1.00	ND	Pass
Dimethoate	0.0100	0.200	ND	Pass
Dimethomorph	0.0100	1.00	ND	Pass
Ethoprophos	0.0100	0.200	ND	Pass

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Sample #: 5515

Fugue State Jar

Pesticides by LCMSMS

Pass

Analysis Date: 08/08/2024 5:17 pm

Compound	LOQ (µg/g)	Limits (µg/g)	Result (µg/g)	Status
Etofenprox	0.0100	0.400	ND	Pass
Etoxazole	0.0100	0.200	ND	Pass
Fenhexamid	0.0100	1.00	ND	Pass
Fenoxycarb	0.0100	0.200	ND	Pass
Fenpyroximate	0.0100	0.400	ND	Pass
Fipronil	0.0100	0.400	ND	Pass
Fonicamid	0.0100	1.00	ND	Pass
Fludioxonil	0.0100	0.400	ND	Pass
Hexythiazox	0.0100	1.00	ND	Pass
Imazalil	0.0100	0.200	ND	Pass
Imidacloprid	0.0100	0.400	ND	Pass
Indolebutyric Acid	0.0100	1.00	ND	Pass
Kresoxim-methyl	0.0100	0.400	ND	Pass
Malathion	0.0100	0.200	ND	Pass
Metalaxyl	0.0100	0.200	ND	Pass
Methiocarb	0.0100	0.200	ND	Pass
Methomyl	0.0100	0.400	ND	Pass
Methyl Parathion	0.0100	0.200	ND	Pass
Mevinphos	0.0100	1.00	ND	Pass
MGK-264	0.0100	0.200	ND	Pass
Myclobutanil	0.0100	0.200	ND	Pass
Naled	0.0100	0.500	ND	Pass
Oxamyl	0.0100	1.00	ND	Pass
Paclobutrazol	0.0100	0.400	ND	Pass
Pentachloronitrobenzene	0.0100	1.00	ND	Pass
Permethrins, Total	0.0100	0.200	ND	Pass

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Sample #: 5515

Fugue State Jar

Pesticides by LCMSMS

Pass

Analysis Date: 08/08/2024 5:17 pm

Compound	LOQ (µg/g)	Limits (µg/g)	Result (µg/g)	Status
Phosmet	0.0100	0.200	ND	Pass
Piperonyl Butoxide	0.0100	2.00	ND	Pass
Prallethrin	0.0100	0.200	ND	Pass
Propiconazole	0.0100	0.400	ND	Pass
Propoxur	0.0100	0.200	ND	Pass
Pyrethrins Total	0.0100	1.00	ND	Pass
Pyridaben	0.0100	0.200	ND	Pass
Spinetoram Total	0.0100	1.00	ND	Pass
Spinosad Total	0.0100	0.200	ND	Pass
Spiromesifen	0.0100	0.200	ND	Pass
Spirotetramat	0.0100	0.200	ND	Pass
Spiroxamine	0.0100	0.200	ND	Pass
Tebuconazole	0.0100	0.400	ND	Pass
Thiacloprid	0.0100	0.200	ND	Pass
Thiamethoxam	0.0100	0.200	ND	Pass
Trifloxystrobin	0.0100	0.200	ND	Pass

Comment: Pesticides tested by LCMSMS by using P-NY150. Unless otherwise stated, all QC passed.

Mycotoxins

Pass

Analysis Date: 08/08/2024 5:17 pm

Compound	LOQ (µg/g)	Limits (µg/g)	Result (µg/g)	Status
Aflatoxin B1	0.0050	0.020	ND	Pass
Aflatoxin B2	0.0050	0.020	ND	Pass
Aflatoxin G1	0.0050	0.020	ND	Pass
Aflatoxin G2	0.0050	0.020	ND	Pass
Ochratoxin A	0.0050	0.020	ND	Pass
Total Aflatoxin	0.0050	0.020	ND	Pass

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**Sample #: 5515**

**Fugue State Jar**

Comment: Mycotoxin contamination tested by LCMSMS using P-NY125. Unless otherwise stated, all QC passed.

**Metals** **Pass** **Analysis Date: 08/08/2024 4:56 pm**

Compound	LOQ (µg/g)	Limits (µg/g)	Result (µg/g)	Status
Antimony	0.0100	2.00	ND	Pass
Arsenic	0.00100	0.200	ND	Pass
Cadmium	0.00150	0.200	ND	Pass
Chromium	0.280	110	ND	Pass
Copper	0.0750	30.0	ND	Pass
Lead	0.00250	0.500	ND	Pass
Mercury	0.000500	0.100	ND	Pass
Nickel	0.0100	5.00	ND	Pass

Comment: Heavy Metal contamination tested by ICPMS using P-NY140. Unless otherwise stated, all QC passed.

**Microbials Count/Qualitative** **Pass** **Analysis Date: 08/07/2024 12:20 pm**

Compound	LOQ (CFU/g)	Limits (CFU/g)	Result (CFU/g)	Status
Aspergillus flavus Qualitative	1	0	Not Detected	Pass
Aspergillus fumigatus Qualitative	1	0	Not Detected	Pass
Aspergillus niger Qualitative	1	0	Not Detected	Pass
Aspergillus terreus Qualitative	1	0	Not Detected	Pass
Salmonella Qualitative	1	0	Not Detected	Pass
Shiga Toxin-Producing E. coli Qualitative	1	0	Not Detected	Pass
Total Aerobic Bacteria	10		4000	Pass
Total Yeast & Mold	10		14000	Pass

Comment: Microbial contamination tested by Petrifilm plates and qPCR using P-NY120. Unless otherwise stated, all QC passed.

**Due to COA validation limitations:** "Not Detected" = "Absent" and "Detected" = "Presumptive Presence". Acceptance Limits: "0" = "Absence" and "1" = "Presence". "Passed" for an adult-use product implies the results contain less than 1,000,000 cfu/g.

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