



THE UNIVERSITY OF MISSISSIPPI

National Center for Cannabis Research and Education

Certificates of Analysis

How to Analyze Cannabis CoA's as a Patient



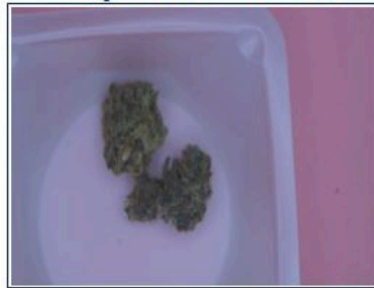
2001 Airport Road, Suite 301
Flowood, Mississippi 39232
License #: TESL000161
601-910-3001
info@ms.steepphill.com

Regulatory Compliance Testing Certificate of Analysis

Client Name: [REDACTED]
Client Address: , ,
License Number:

Sample Name: Shirley Temple
Sample ID: MS11637
METRC ID (LOT#): 1A4230100003EE5000003760
Batch Number: 1A4230100003EE5000003745
Sample Matrix: Flower
Total Batch Size (#), Units in Batch (count):
Total Sample Weight (g), Units Sampled (count): 10
Sample Density(g/ml):
Servings Per Container (#):
Serving Mass (g):
Grams per Package:
Date Sampled: 4/28/2025
Date Received: 4/28/2025
Date Reported: 5/2/2025

Sample Result: PASS



Cannabinoids PASS

Standard potency analysis utilizing High Performance Liquid Chromatography (HPLC) | Test ID: #94589

Analyte	% (Dry)	mg/g (Dry)	%	mg/g	LOD (mg/g)	LOQ (mg/g)
CBC	0.0358	0.358	0.0324	0.324	0.0199	0.0602
CBD	ND	ND	ND	ND	0.0293	0.0886
CBDA	0.0984	0.984	0.0891	0.891	0.0325	0.0980
CBDV	< LOQ	< LOQ	< LOQ	< LOQ	0.0362	0.1102
CBG	0.1316	1.316	0.1191	1.191	0.0297	0.0902
CBGA	1.3414	13.414	1.2142	12.142	0.0313	0.0947
CBN	ND	ND	ND	ND	0.0285	0.0858
d8-THC	ND	ND	ND	ND	0.0232	0.0703
d9-THC	2.7027	27.027	2.4465	24.465	0.0236	0.0711
THCA	30.5648	305.648	27.6673	276.673	0.0244	0.0732
THCV	ND	ND	ND	ND	0.0289	0.0870

Total Cannabinoids		
	% (Dry)	mg/g (Dry)
Total THC:	29.5	295.080
Total CBD:	0.086	0.863
Total Cannabinoids:	30.938	309.381

Total theoretical THC % = (delta-9-THC%) + (THCA% * 0.877)

What is a Certificate of Analysis (CoA)?

The term “**certificate of analysis**” means the report prepared for the party requesting testing and the Department about the analytical testing performed and results obtained by the cannabis testing facility. This term may be abbreviated as “**COA**”.

- Certificates of Analysis are required for all medical cannabis products available under the MMCP.
- CoA's are valid for 1-year (products that are still on the market after 1 year must be retested to maintain compliance).
- CoA's for all products must be available by request at the dispensary, and available through a QR Code on the packaging.

Required Elements of a CoA

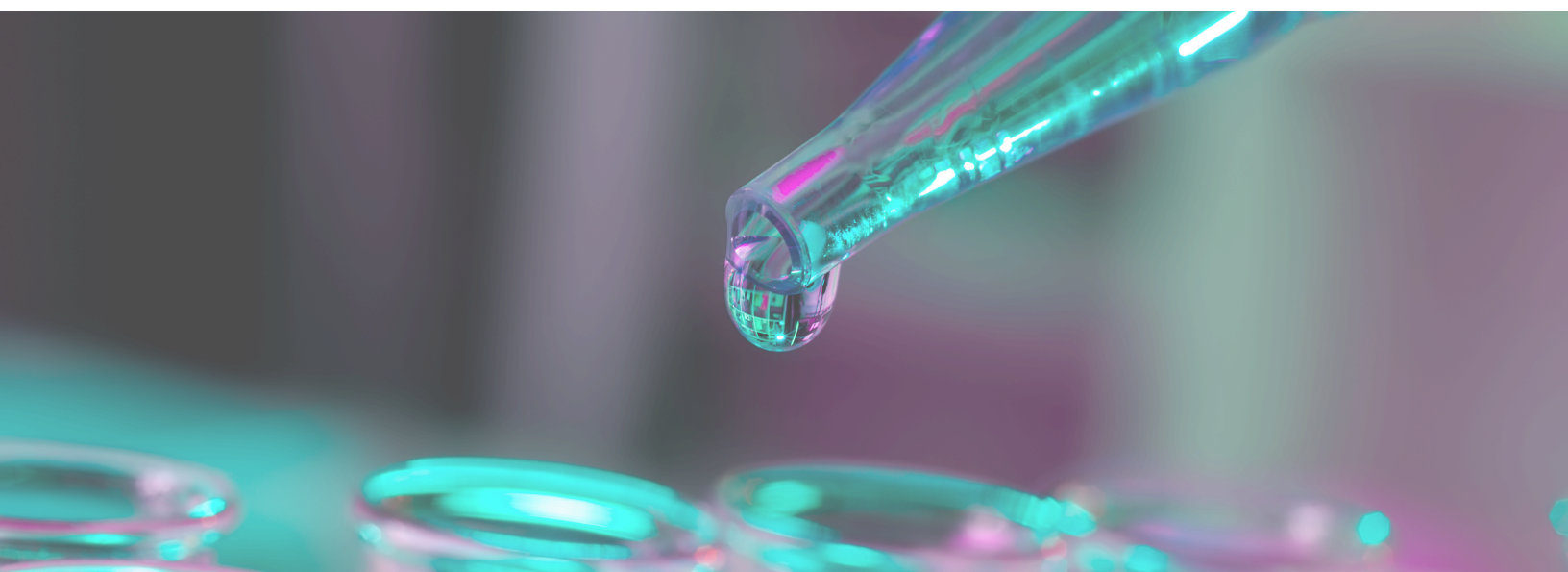
All Valid Certificates of Analysis must include:

- The term “Regulatory Compliance Testing” in font no smaller than 14- point, which shall appear in the upper-right corner of each page of the COA. No text or images shall appear above the term “Regulatory Compliance Testing” on any page of the COA.
- The cannabis testing entity’s name, premises address, and license number; cultivator’s, or processor’s name, premises address, and license number.
- Batch number of the batch from which the sample was obtained. For cannabis and cannabis products that are already packaged at the time of sampling, the labeled batch number on the packaged cannabis and cannabis products shall match the batch number on the COA.
- Sample identifying information, including matrix type and unique sample identifiers.
- Sample history, including the date collected, the date received by the cannabis testing entity, and the date(s) of sample analyses and corresponding testing results.
- A picture of the sample of cannabis and cannabis products. If the sample is pre-packaged, the picture shall include an unobstructed image of the packaging.
- For dried flower samples, the total weight of the batch in grams and the total weight of the representative sample in grams.

Required Elements of a CoA

All Valid Certificates of Analysis must include:

- For cannabis product or pre-rolls samples, the total unit count of both the representative sample and the total batch size.
- Measures of the cannabis and cannabis products.
- The analytical methods, analytical instrumentation used, and corresponding Limits of Detection (“LOD”) and Limits of Quantitation (“LOQ”).
- An attestation on the COA from the cannabis testing entity supervisory or management employee that all LQC samples required by this Part were performed and met the acceptance criteria.
- Analytes detected during the analyses of the sample that are unknown, unidentified, or injurious to human health if consumed, if any.



Example CoA

Testing Entity Info



2001 Airport Road, Suite 301
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Regulatory Compliance Testing Certificate of Analysis

Producer Information

Client Name: MSDOH
Client Address: , ,
License Number:

Sample Name: Shirley Temple
Sample ID: MS11637
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Batch Number: 1A4230100003EE5000003745
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Sample Result: PASS



Sample Testing Result

Product Information

Cannabinoids

PASS

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Panel 1 Cannabinoids

Total Cannabinoids

	% (Dry)	mg/g (Dry)
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Total CBD:	0.086	0.863
Total Cannabinoids:	30.938	309.381

Total theoretical THC % = (delta-9-THC%) + (THCA% * 0.877)

Total Cannabinoids

Note: Although the Total CANNABINOIDS for this sample is over 30%, the total THC is under the 30% threshold.



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Terpenes

Standard terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS) | Test ID: #94593

Panel 2
 Terpenes

Analyte	%	mg/g	LOD (mg/g)	LOQ (mg/g)
Limonene	0.6769	6.769	0.003	0.009
trans-Caryophyllene	0.5645	5.645	0.007	0.021
Linalool	0.3644	3.644	0.004	0.011
Myrcene	0.2033	2.033	0.003	0.009
a-Humulene	0.1785	1.785	0.004	0.011
beta-Pinene	0.1261	1.261	0.003	0.010
a-Pinene	0.0804	0.804	0.002	0.005
trans-Nerolidol	0.0636	0.636	0.003	0.011
Carophyllene Oxide	0.04	0.4	0.011	0.033
Camphene	0.0347	0.347	0.004	0.014
Cineole	0.0312	0.312	0.004	0.012
Geraniol	0.0298	0.298	0.011	0.032
a-Terpinolene	0.0278	0.278	0.002	0.005
Isopulegol	0.0205	0.205	0.008	0.024
alpha-Terpinene	0.0205	0.205	0.001	0.004
gamma-terpinene	0.0194	0.194	0.003	0.008
trans-Ocimene	0.0193	0.193	0.005	0.016
cis-Ocimene	0.0149	0.149	0.003	0.008
3-Carene	ND	ND	0.003	0.008
cis-Nerolidol	ND	ND	0.003	0.011
Guaiol	ND	ND	0.007	0.020
a-Bisabolol	ND	ND	0.009	0.026
Total Terpenes	2.5158	25.158		

Panel 3
 Moisture

Moisture

PASS

Water Activity and Moisture Content Analysis | Test ID: #94591

Analyte	Result	Limit	Pass/Fail
Moisture (%)	9.48	15	PASS
Water Activity (Aw)	0.48	0.65	PASS

Heavy Metals

PASS

Heavy metals analysis utilizing Inductively Coupled Plasma Mass Spectrometry (ICP-MS) - Limit units: µg/kg | Test ID: #94590

Panel 4
 Heavy Metals

Analyte	Pass/Fail	Result (ug/g)	Limit	LOD (ug/g)	LOQ (ug/g)
Arsenic	Pass	0.059	0.400	0.016	0.050
Cadmium	Pass	ND	0.400	0.022	0.067
Chromium	Pass	< LOQ	1.200	0.065	0.198
Copper	NT	NT	NT	0.083	0.251
Lead	Pass	ND	1.000	0.021	0.062
Mercury	Pass	ND	0.200	0.028	0.084
Nickel	Pass	< LOQ	1.000	0.055	0.166



Determination of Pass/Fail is based on RULES AND REGULATIONS GOVERNING MEDICAL MARIJUANA REGISTRATION, TESTING, AND LABELING IN MISSISSIPPI. Steep Hill Mississippi does not use Measurement Uncertainty when determining results. Measurement Uncertainty information is available upon request. These results only relate to the item tested and apply to the sample as received. This report should only be reproduced in its entirety.





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Pesticides

PASS

Panel 5
 Pesticides

Residual pesticide analysis utilizing Liquid and Gas Chromatography – Mass Spectrometry (LC-MSMS) - Limit units: ug/g = ppm | Test ID: #94594

Analyte	Pass/Fail	Result (µg/g)	Limit	LOD (g/g)	LOQ (g/g)
Abamectin	PASS	ND	0.500	0.001	0.002
Acephate	PASS	ND	0.400	0.015	0.047
Acequinocyl	PASS	ND	2.000	0.024	0.072
Acetamiprid	PASS	ND	0.200	0.002	0.006
Aldicarb	PASS	ND	0.400	0.005	0.015
Azoxystrobin	PASS	ND	0.200	0.002	0.006
Bifenazate	PASS	ND	0.200	0.002	0.007
Bifenthrin	PASS	ND	0.200	0.004	0.012
Boscalid	PASS	ND	0.400	0.008	0.023
Carbaryl	PASS	ND	0.200	0.001	0.003
Carbofuran	PASS	ND	0.200	0.002	0.005
Chlorantraniliprole	PASS	ND	0.200	0.004	0.011
Chlorfenapyr	PASS	ND	1.000	0.056	0.170
Chlormequat chloride	PASS	ND	0.200	0.004	0.013
Chlorpyrifos	PASS	ND	0.200	0.004	0.011
Clofentezine	PASS	ND	0.200	0.002	0.006
Cyfluthrin	PASS	ND	1.000	0.025	0.076
Cypermethrin	PASS	ND	1.000	0.010	0.029
Daminozide	PASS	ND	1.000	0.014	0.044
Diazinon	PASS	ND	0.200	0.001	0.004
Dichlorvos	PASS	ND	0.100	0.001	0.002
Dimethoate	PASS	ND	0.200	0.002	0.005
Ethoprophos	PASS	ND	0.200	0.002	0.006
Etofenprox	PASS	ND	0.400	0.009	0.029
Etoxazole	PASS	ND	0.200	0.001	0.004
Fenoxycarb	PASS	ND	0.200	0.002	0.005
Fenpyroximate	PASS	ND	0.400	0.002	0.007
Fipronil	PASS	ND	0.400	0.008	0.023
Flonicamid	PASS	ND	1.000	0.043	0.130
Fludioxonil	PASS	ND	0.400	0.010	0.030
Hexythiazox	PASS	ND	1.000	0.007	0.021
Imazalil	PASS	ND	0.200	0.003	0.008
Imidacloprid	PASS	ND	0.400	0.004	0.011
Kresoxim-methyl	PASS	ND	0.400	0.003	0.009
Malathion	PASS	ND	0.200	0.003	0.008
Metalaxyl	PASS	ND	0.200	0.002	0.004
Methiocarb	PASS	ND	0.200	0.002	0.005
Methomyl	PASS	ND	0.400	0.005	0.014
Methyl parathion	PASS	ND	0.200	0.005	0.016
Myclobutanil	PASS	ND	0.200	0.002	0.005
Naled	PASS	ND	0.500	0.004	0.013
Oxamyl	PASS	ND	1.000	0.013	0.012
Paclobutrazol	PASS	ND	0.400	0.009	0.040
Permethrins	PASS	ND	0.200	0.001	0.028
Phosmet	PASS	ND	0.200	0.001	0.002
Piperonyl Butoxide	PASS	ND	2.000	0.048	0.004
Prallethrin	PASS	ND	0.200	0.001	0.0145
Propiconazole	PASS	ND	0.400	0.004	0.004
Propoxur	PASS	ND	0.200	0.002	0.011
Pyrethrins	PASS	ND	1.000	0.000	0.005
Pyridaben	PASS	ND	0.200	0.001	0.001
Spinosad	PASS	ND	0.200	0.000	0.004
Spiromesifen	PASS	ND	0.200	0.001	0.001
Spirotetramat	PASS	ND	0.200	0.005	0.003
Spiroxamine	PASS	ND	0.400	0.002	0.006
Tebuconazole	PASS	ND	0.400	0.006	0.015
Thiacloprid	PASS	ND	0.200	0.002	0.006
Thiamethoxam	PASS	ND	0.200	0.002	0.017
Trifloxystrobin	PASS	ND	0.200	0.015	0.007
					0.007
					0.045



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Panel 6
Mycotoxins

Mycotoxins PASS

Mycotoxins (LC-MS) - Limit units: ug/kg = ppb | Test ID: #94592

Analyte	Pass/Fail	Result (µg/kg)	Limit	LOD (g/kg)
Aflatoxin B1	PASS	ND	20.0	0.679
Aflatoxin B2	PASS	ND	20.0	0.433
Aflatoxin G1	PASS	ND	20.0	0.373
Aflatoxin G2	PASS	ND	20.0	0.632
Ochratoxin A	PASS	ND	20.0	0.446

Microbials PASS

Microbial analysis utilizing quantitative Polymerase Chain Reaction and microbial enumeration - Limit units: CFU/g

Analyte	Results (CFU/g)	Limit (CFU/g)	Pass/Fail
Aspergillus Fumigatus	ND	Detectable in 1 gram	Pass
Aspergillus Niger	ND	Detectable in 1 gram	Pass
Aspergillus Flavus1	ND	Detectable in 1 gram	Pass
Aspergillus Terrus	ND	Detectable in 1 gram	Pass
Shiga Toxin E.Coli	ND	Detectable in 1 gram	Pass
Salmonella	ND	Detectable in 1 gram	Pass
Total Yeast and Mold	0	10,000 CFU/g	Pass
Total Coliforms	0	100 CFU/g	Pass

Panel 7
Microbials

Foreign
Material
Inspection

Foreign Material Pass

Foreign Matter Inspection

Analyte	Pass/Fail
Foreign Matter	Pass

I hereby attest that all information contained within this report is complete and accurate, and further that all LQC samples have met required regulatory standards as enacted by the Mississippi Medical Cannabis Program as administered by the Mississippi Department of Health.

Whitney Morris

Whitney Morris
 Laboratory Director
 Date: 5/2/2025

Signed
 Attestation
 by Testing
 Lab



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