

Client



Source



Cassia (*Cinnamomum cassia*)
NF-CASS-20-A

Sample

Cassia (*Cinnamomum cassia*)
Batch #:..... NF-CASS-20-A
Type:..... Essential Oil
CAS Number:... 8007-80-5
Nature's Fusions

Client



Website

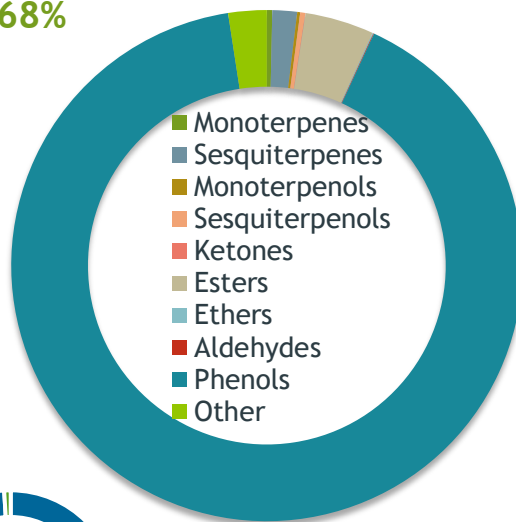


Primary

76.49% | (E)-Cinnamaldehyde
9.67% | (E)-2-
4.18% | (E)-Cinnamyl acetate

Phenols

90.68%



Percentage Identified

Result



Conclusion

No adulterants, diluents, or contaminants were detected via this method. This oil meets the expected profile for genuine Essential Oil of Cassia (*Cinnamomum cassia*)

Internal Number: | EVS-4112



Essential Validation Services

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Alan Christen

Monoterpenes	0.34%
Sesquiterpenes	1.56%
Monoterpenols	0.19%
Sesquiterpenols	0.32%
Ketones	0.02%
Esters	4.36%
Ethers	0.06%
Aldehydes	0.04%
Phenols	90.68%
Other	2.43%

Client


Nature's FUSIONS
 ESSENTIAL OILS

Source

Cassia (*Cinnamomum cassia*)

NF-CASS-20-A

Total Percentage		99.02%		
Number	RT	Area %	Compound Name	Chemical Family
1	5.04	0.02%	Furfural	Furan
2	6.75	0.22%	Styrene	Phenylpropanoid
3	8.25	0.11%	alpha-Pinene	Monoterpene
4	8.87	0.08%	Camphene	Monoterpene
5	9.33	1.00%	Benzaldehyde	Simple Phenolic
6	9.98	0.04%	beta-Pinene	Monoterpene
7	10.38	0.02%	6-Methyl-5-hepten-2-one	Aliphatic Ketone
8	12.01	0.05%	para-Cymene	Monoterpene
9	12.22	0.06%	Limonene	Monoterpene
10	12.34	0.01%	1,8-Cineole	Monoterpene Ether
11	12.81	0.21%	Salicylaldehyde	Simple Phenolic
12	13.80	0.04%	Acetophenone	Simple Phenolic
13	14.73	0.04%	Guaiacol	Simple Phenolic
14	15.93	0.74%	2-Phenylethanol	Simple Phenolic
15	17.31	0.01%	2-Methylbenzofuran	Phenylpropanoid
16	18.23	0.70%	Hydrocinnamaldehyde	Phenylpropanoid
17	18.68	0.16%	Borneol	Monoterpenol
18	19.79	0.03%	alpha-Terpineol	Monoterpenol
19	20.81	0.47%	(Z)-Cinnamaldehyde	Phenylpropanoid
20	21.38	0.17%	Hydrocinnamyl alcohol	Phenylpropanoid
21	21.72	0.75%	ortho-Anisaldehyde	Simple Phenolic
22	22.48	0.06%	2-Phenylethyl acetate	Phenolic Ester
23	23.57	76.49%	(E)-Cinnamaldehyde	Phenylpropanoid
24	24.78	0.15%	Cinnamyl alcohol	Phenylpropanoid
25	26.77	0.02%	Eugenol	Phenylpropanoid
26	27.77	0.43%	alpha-Copaene	Sesquiterpene
27	28.40	0.01%	beta-Elemene	Sesquiterpene
28	29.40	0.03%	cis-alpha-Bergamotene	Sesquiterpene
29	29.56	0.13%	beta-Caryophyllene	Sesquiterpene
30	30.10	1.43%	Coumarin	Coumarin
31	30.23	0.04%	trans-alpha-Bergamotene	Sesquiterpene
32	30.34	0.02%	Aromadendrene	Sesquiterpene
33	30.73	4.18%	(E)-Cinnamyl acetate	Phenylpropanoid Ester
34	31.03	0.01%	alpha-Humulene	Sesquiterpene
35	31.22	0.06%	allo-Aromadendrene	Sesquiterpene



Essential Validation Services





Sample:

Client: | Nature's Fusions
 Sample: | Cinnamon Cassia (Cinnamomum cassia)
 Batch # | 12890G
 CAS Number | 8007-80-5
 Type: | Essential Oil

Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.



X 

Validated By:

Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

Phone: 317-361-5044 E-mail: Adam@essentialvalidationservices.com

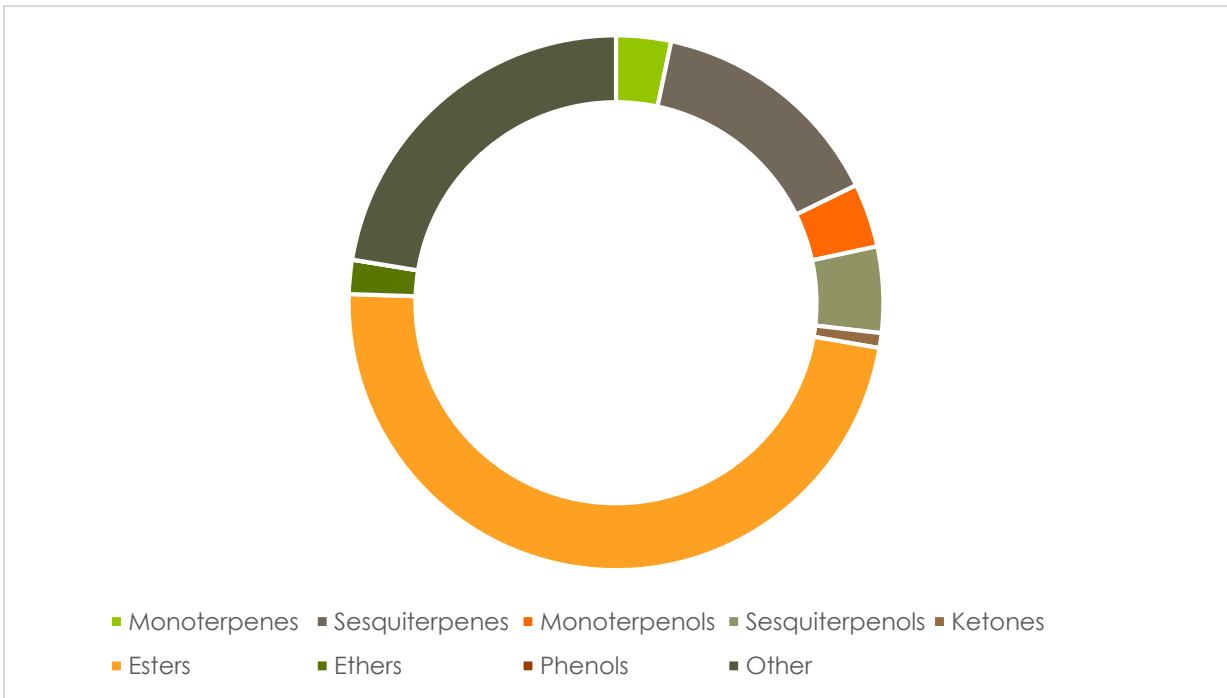
Summary of Analyses

A fresh sample of Cinnamon Cassia (Cinnamomum cassia) Essential Oil (10 uL in .5to.5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.



Main Compounds	Percentages
(E)-Cinnamaldehyde	66.88%
(E)-Cinnamyl acetate	4.43%
Coumarin	2.50%
Benzaldehyde	1.06%
2-Phenylethanol	0.72%
alpha-Copaene	0.67%
Anisaldehyde	0.65%
Hydrocinnamaldehyde	0.51%

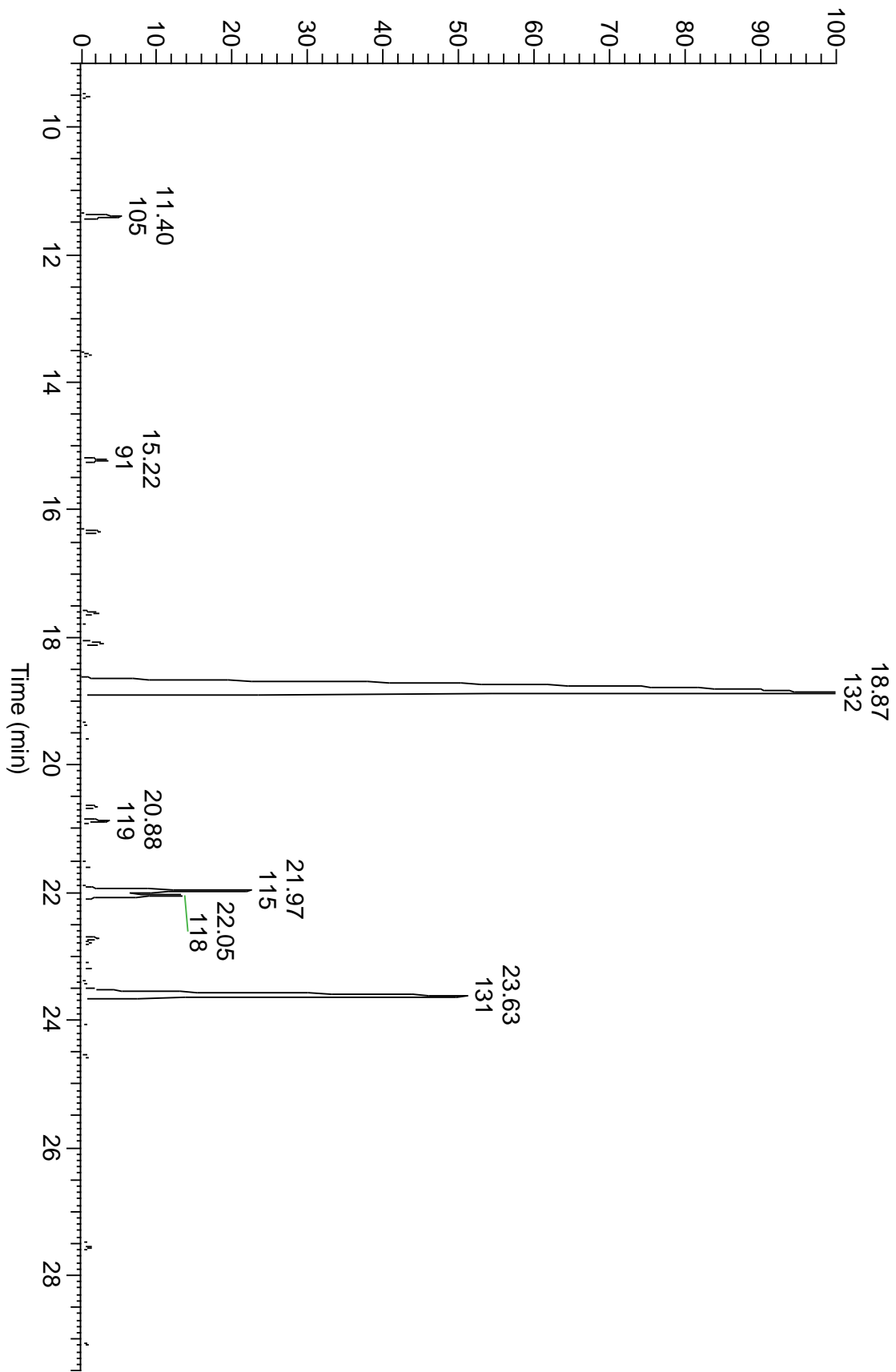
Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
0.37%	1.61%	0.43%	0.58%	0.10%
Esters	Ethers	Aldehydes	Phenols	Other
5.33%	0.23%	0.00%	87.27%	2.50%



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RT: 8.99 - 29.57



Total Percentage	98.42%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	9.51	0.22%	Styrene	890.50	Phenols
2	10.72	0.12%	alpha-Pinene	936.10	Monoterpenes
3	11.14	0.08%	Camphene	953.30	Monoterpenes
4	11.40	1.06%	Benzaldehyde	962.70	Phenols
5	11.89	0.06%	beta-Pinene	977.70	Monoterpenes
6	12.07	0.05%	6-Methyl-5-hepten-2-one	985.90	Ketones
7	13.09	0.07%	para-Cymene	1024.30	Monoterpenes
8	13.21	0.04%	Limonene	1029.50	Monoterpenes
9	13.21	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes
10	13.21	Co-Eluting	1,8-Cineole	1031.80	Ethers
11	13.30	0.03%	Benzyl alcohol	1036.90	Phenols
12	13.57	0.24%	Salicylaldehyde	1046.50	Phenols
13	14.13	0.05%	Acetophenone	1067.40	Ketones
14	14.66	0.04%	Guaiacol	1087.33	Monoterpenols
15	15.22	0.72%	2-Phenylethanol	1116.30	Phenols
16	16.35	0.51%	Hydrocinnamaldehyde	1164.50	Phenols
17	16.50	0.11%	Borneol	1168.71	Monoterpenols
18	16.62	0.02%	2-Phenylethyl formate	1174.50	Esters
19	16.72	0.03%	Menthol	1177.40	Monoterpenols
20	17.00	0.03%	alpha-Terpineol	1191.71	Monoterpenols
21	17.62	0.45%	(Z)-Cinnamyl aldehyde	1231.10	Phenols
22	17.81	0.17%	3-Phenylpropanol	1234.35	Monoterpenols
23	18.09	0.65%	Anisaldehyde	1262.00	Phenols
24	18.33	0.05%	Linalyl acetate	1263.80	Esters
25	18.87	66.88%	(E)-Cinnamaldehyde	1286.00	Phenols
26	19.01	0.09%	Anethole	1288.33	Ethers
27	19.13	0.03%	Safrole	1290.14	Ethers
28	19.35	0.18%	(E)-Cinnamyl alcohol	1300.00	Phenols
29	19.77	0.05%	Carvacrol	1306.29	Monoterpenols
30	20.38	0.04%	Eugenol	1365.89	Phenols
31	20.65	0.37%	3-Phenylpropyl acetate	1369.00	Esters
32	20.74	0.10%	alpha-Ylangene	1371.33	Sesquiterpenes
33	20.88	0.67%	alpha-Copaene	1379.00	Sesquiterpenes
34	21.58	0.42%	Methyleugenol	1407.29	Phenols
35	21.75	0.10%	beta-Caryophyllene	1427.14	Sesquiterpenes
36	21.97	4.43%	(E)-Cinnamyl acetate	1443.00	Esters
37	22.05	2.50%	Coumarin	1431.00	Other
38	22.22	0.10%	(E)-Cinnamic acid	1470.00	Phenols
39	22.53	0.08%	allo-Aromadendrene	1471.00	Sesquiterpenes
40	22.72	0.38%	Ethyl cinnamate	1474.33	Esters
41	23.12	0.24%	beta-Selinene	1487.57	Sesquiterpenes
42	23.17	0.22%	alpha-Muurolene	1501.14	Sesquiterpenes



43	23.40	0.11%	beta-Bisabolene	1509.86	Sesquiterpenes
44	23.63	15.77%	(E)-2-Methoxycinnamaldehyde	1536.00	Phenols
45	23.74	0.09%	alpha-Calacorene	1537.14	Sesquiterpenes
46	24.05	0.08%	(E)-Nerolidol	1542.25	Sesquiterpenols
47	24.56	0.18%	Spathulenol	1578.71	Sesquiterpenols
48	24.70	0.11%	Caryophyllene oxide	1594.86	Ethers
49	25.33	0.07%	trans-Muurolol	1643.29	Sesquiterpenols
50	25.55	0.10%	alpha-Muurolol	1649.33	Sesquiterpenols
51	25.79	0.10%	alpha-Cadinol	1655.00	Sesquiterpenols
52	25.85	0.05%	Humulenol	1655.20	Sesquiterpenols
53	28.83	0.08%	2-Phenylethyl benzoate	1841.00	Esters