



## *Essential Validation Services*



## Sample:

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Client: | 21 Drops  
Sample: | Lavender (Lavandula angustifolia)  
Batch # | BIO1016/1  
CAS Number | 8000-28-0  
Type: | Essential Oil

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## Conclusion:

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



X *Adam Christen*

Validated By:

Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

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

## Summary of Analyses

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

Sesquiterpenes	
beta-Caryophyllene	4.02%
(E)-beta-Farnesene	2.91%

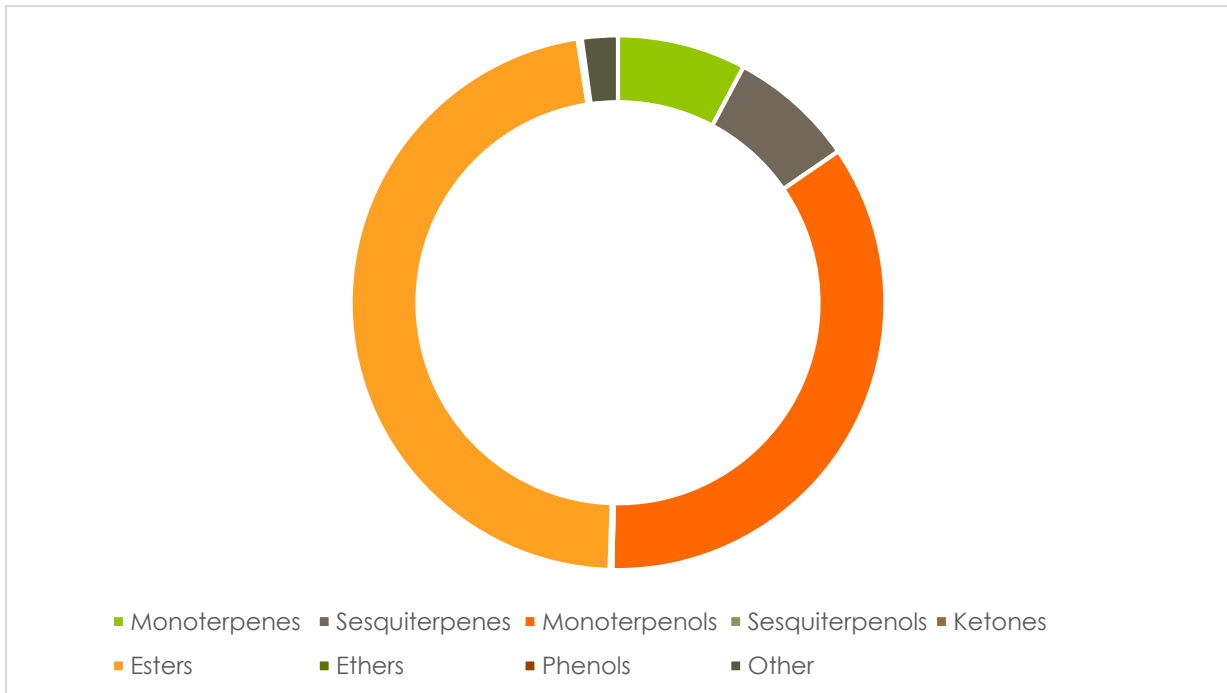
Other	
Alloocimene (unknowr	2.15%

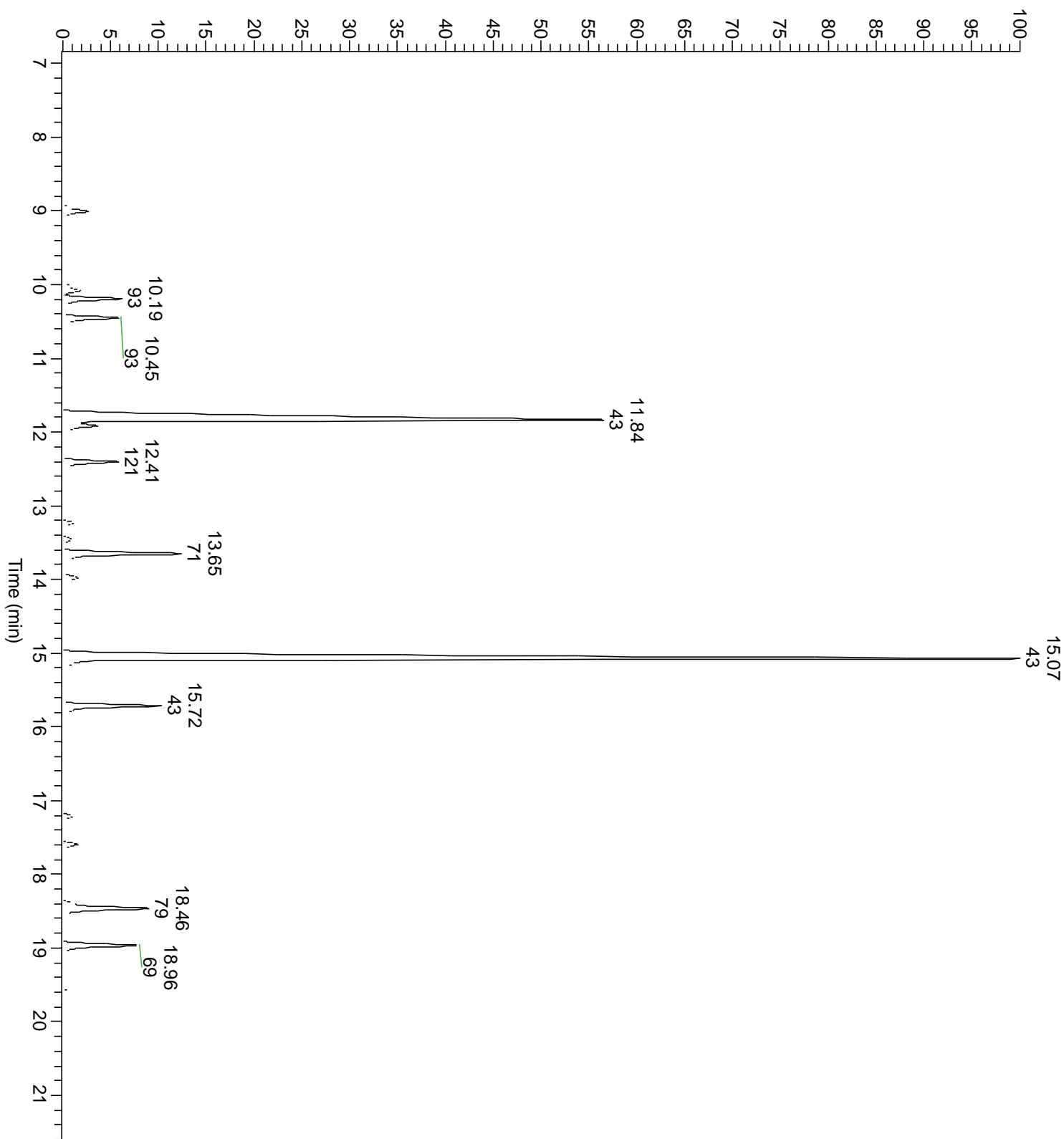
Monoterpenols	
Linalool	27.92%
Terpinen-4-ol	4.74%
alpha-Terpineol	0.74%
Lavandulol	0.47%
Borneol	0.41%

Monoterpenes	
(Z)-beta-Ocimene	2.33%
(E)-beta-Ocimene	2.30%
Myrcene	1.36%
Limonene	0.93%

Esters	
Linalyl acetate	39.73%
Lavandulyl acetate	3.66%
1-Octenyl-3 acetate	1.59%
Geranyl acetate	0.62%
Neryl acetate	0.43%
Hexyl butyrate	0.41%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
7.72%	7.56%	34.61%	0.00%	0.17%
Esters	Ethers	Aldehydes	Phenols	Other
46.65%	0.25%	0.00%	0.00%	2.15%





Total Percentage		99.48%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	7.30	0.08%	alpha-Thujene	927.80	Monoterpenes
2	7.49	0.17%	alpha-Pinene	936.10	Monoterpenes
3	7.92	0.08%	Camphene	950.30	Monoterpenes
4	8.55	0.02%	Sabinene	973.00	Monoterpenes
5	8.67	0.02%	beta-Pinene	977.70	Monoterpenes
6	8.84	0.04%	1-Octenol-3	980.00	Monoterpenols
7	9.01	1.36%	Myrcene	989.20	Monoterpenes
8	9.01	Co-Eluting	3-Octanone	984.50	Ketones
9	9.47	0.13%	delta-3-Carene	1011.30	Monoterpenes
10	9.63	0.21%	Hexyl acetate	1015.00	Esters
11	9.80	0.02%	ortho-Cymene	1021.33	Monoterpenes
12	9.92	0.14%	para-Cymene	1024.30	Monoterpenes
13	10.08	0.93%	Limonene	1029.50	Monoterpenes
14	10.08	Co-Eluting	1,8-Cineole	1031.80	Ethers
15	10.08	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes
16	10.19	2.33%	(Z)-beta-Ocimene	1037.80	Monoterpenes
17	10.45	2.30%	(E)-beta-Ocimene	1047.70	Monoterpenes
18	10.75	0.14%	gamma-Terpinene	1063.71	Monoterpenes
19	11.05	0.16%	cis-Linalool oxide (5) (furanoid)	1075.10	Monoterpenols
20	11.43	0.13%	trans-Linalool oxide (5) (furanoid)	1092.20	Monoterpenols
21	11.84	27.92%	Linalool	1099.00	Monoterpenols
22	11.92	1.59%	1-Octenyl-3 acetate	1113.75	Esters
23	12.04	0.18%	Unknown Mass (112)	#N/A	#N/A
24	12.41	2.15%	Alloocimene (unknown isomer)	1129.90	Other
25	12.90	0.17%	Camphor	1153.86	Ketones
26	13.23	0.47%	Lavandulol	1161.50	Monoterpenols
27	13.45	0.41%	Borneol	1168.71	Monoterpenols
28	13.65	4.74%	Terpinen-4-ol	1180.57	Monoterpenols
29	13.81	0.41%	Hexyl butyrate	1185.50	Esters
30	13.97	0.74%	alpha-Terpineol	1191.71	Monoterpenols
31	15.07	39.73%	Linalyl acetate	1263.80	Esters
32	15.72	3.66%	Lavandulyl acetate	1285.00	Esters
33	15.72	Co-Eluting	Bornyl acetate	1288.29	Esters
34	17.21	0.43%	Neryl acetate	1362.90	Esters
35	17.59	0.62%	Geranyl acetate	1384.71	Esters
36	17.78	0.19%	Farnesene Isomer	#N/A	#N/A
37	18.46	4.02%	beta-Caryophyllene	1427.14	Sesquiterpenes
38	18.46	Co-Eluting	alpha-Santalene	1426.50	Sesquiterpenes
39	18.64	0.15%	trans-alpha-Bergamotene	1435.00	Sesquiterpenes
40	18.86	0.01%	Bicyclosesquiphellandrene	1448.00	Sesquiterpenes
41	18.96	2.91%	(E)-beta-Farnesene	1456.29	Sesquiterpenes
42	19.13	0.16%	alpha-Humulene	1461.43	Sesquiterpenes

