



Essential Validation Services



Sample:

Client: | 21 Drops
Sample: | Juniper (*Juniperus communis*)
Batch # | 0117/1
CAS Number | 8002-68-4
Type: | Essential Oil

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

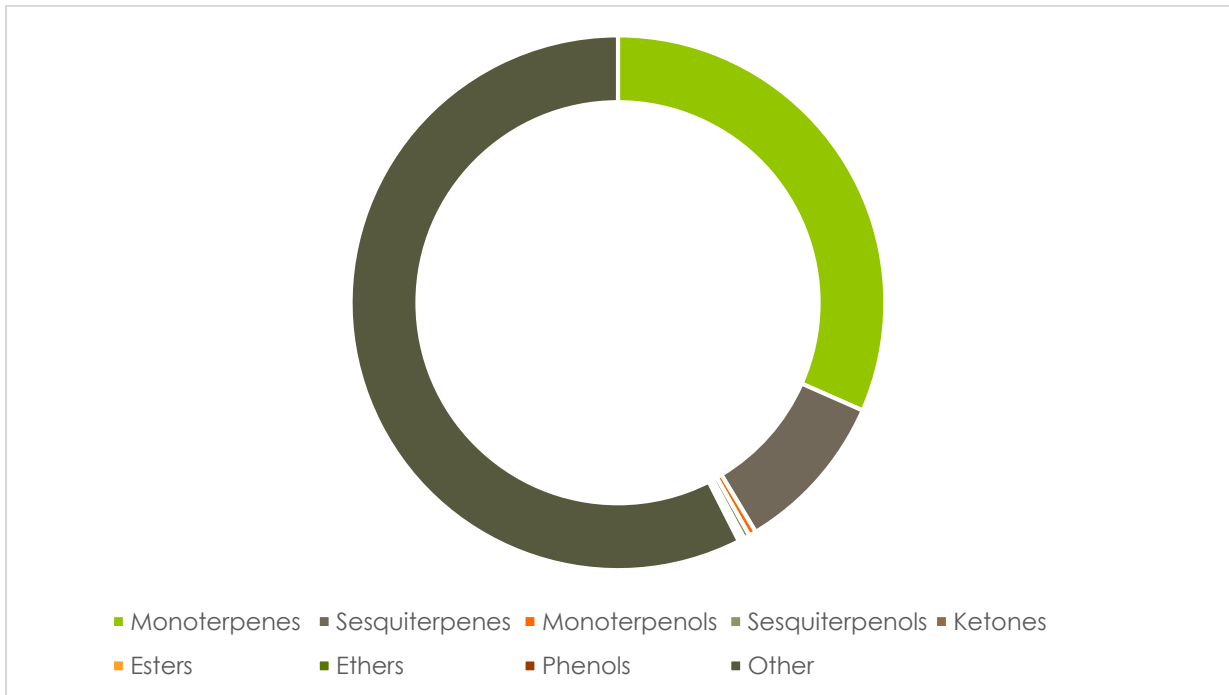
Phone: 317-361-5044 E-mail: Adam@essentialvalidationservices.com

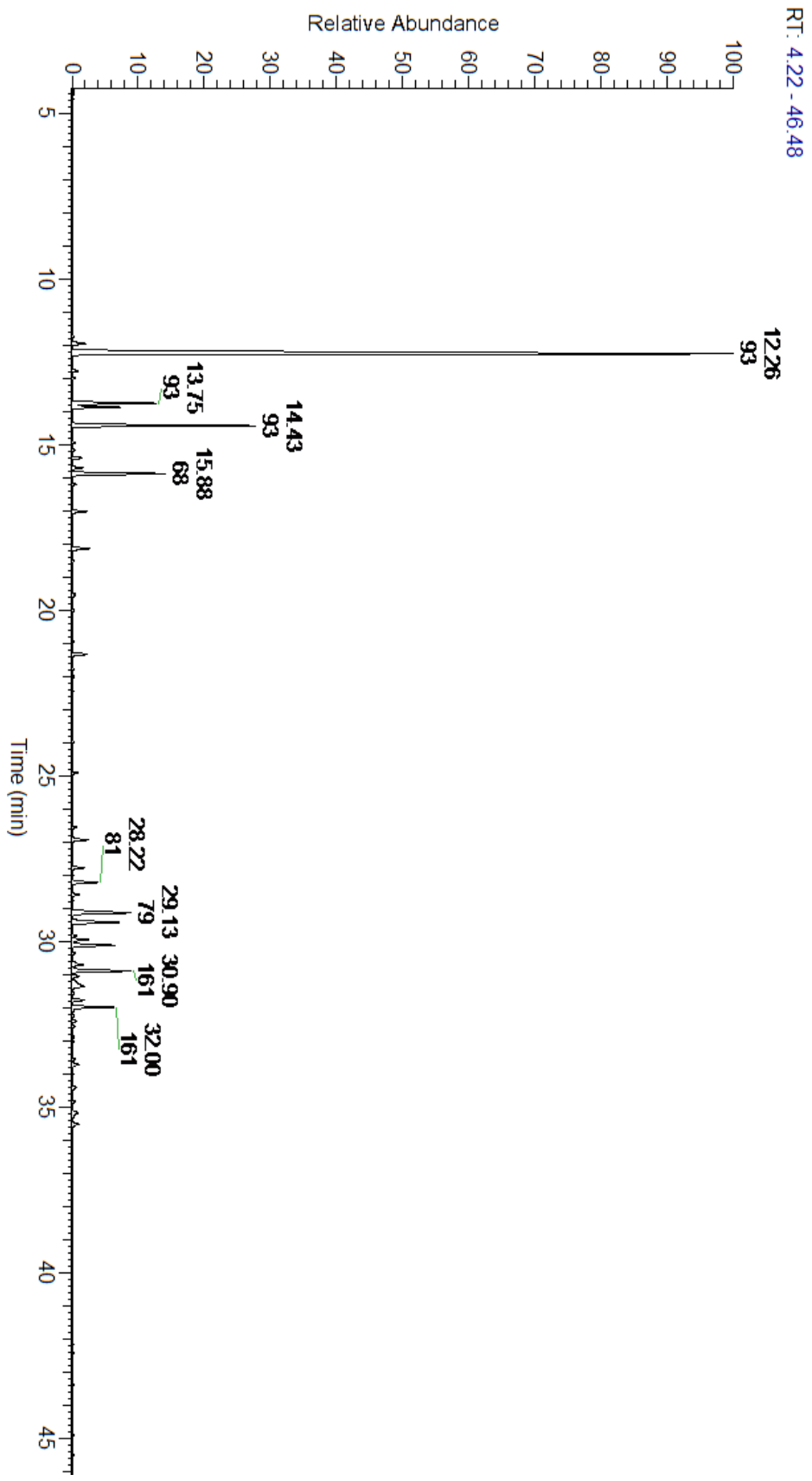
Summary of Analyses

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

Main Compounds	Percentages
alpha-Pinene	46.82%
Myrcene	9.85%
Limonene	5.09%
Sabinene	4.53%
beta-Caryophyllene	4.07%
Germacrene D	3.33%
gamma-Elemene	3.03%
beta-Pinene	2.57%
alpha-Humulene	2.44%
delta-Cadinene	2.33%
beta-Elemene	1.36%
alpha-Muurolene	1.13%
Terpinolene	0.98%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
73.32%	22.70%	1.01%	0.83%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.27%	0.32%	0.23%	0.00%	1.32%





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Peak Number	RT	Area %	Compound Name	RI	Chemical Family
Total Percentage		98.68%			
1	11.73	0.08%	Tricyclene	923.00	Monoterpene
2	11.95	0.80%	alpha-Thujene	927.80	Monoterpene
3	12.26	46.82%	alpha-Pinene	936.10	Monoterpene
4	12.76	0.32%	Camphene	950.30	Monoterpene
5	12.99	0.12%	Thuja-2,4(10)-diene	953.00	Monoterpene
6	13.75	4.53%	Sabinene	973.00	Monoterpene
7	13.87	2.57%	beta-Pinene	974.00	Monoterpene
8	14.43	9.85%	Myrcene	989.20	Monoterpene
9	14.94	0.13%	alpha-Phellandrene	1002.00	Monoterpene
10	15.17	0.09%	delta-3-Carene	1008.00	Monoterpene
11	15.40	0.49%	alpha-Terpinene	1014.00	Monoterpene
12	15.70	0.52%	para-Cymene	1024.30	Monoterpene
13	15.88	5.09%	Limonene	1029.50	Monoterpene
14	15.88	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
15	16.20	0.18%	(Z)-beta-Ocimene	1037.80	Monoterpene
16	17.02	0.75%	gamma-Terpinene	1054.00	Monoterpene
17	18.14	0.98%	Terpinolene	1092.10	Monoterpene
18	18.52	0.08%	Linalool	1099.00	Monoterpenol
19	19.51	0.23%	alpha-Campholenal	1125.29	Monoterpene Aldehyde
20	20.00	0.07%	alpha-Pinocarveol	1143.75	Monoterpenol
21	21.33	0.77%	Terpinen-4-ol	1180.57	Monoterpenol
22	21.78	0.09%	alpha-Terpineol	1191.71	Monoterpenol
23	24.91	0.27%	Bornyl acetate	1288.29	Monoterpene Ester
24	26.55	0.19%	delta-Elemene	1335.83	Sesquiterpene
25	26.94	0.84%	alpha-Cubebene	1355.71	Sesquiterpene
26	27.78	0.62%	alpha-Copaene	1379.00	Sesquiterpene
27	28.22	1.36%	beta-Elemene	1389.20	Sesquiterpene
28	28.59	0.36%	Sibirene	1401.20	Sesquiterpene
29	29.13	4.07%	beta-Caryophyllene	1427.14	Sesquiterpene
30	29.43	3.03%	gamma-Elemene	1434.00	Sesquiterpene
31	29.84	0.20%	beta-Copaene	1445.00	Sesquiterpene
32	29.95	0.88%	(E)-beta-Farnesene	1456.29	Sesquiterpene
33	30.13	2.44%	alpha-Humulene	1461.43	Sesquiterpene
34	30.36	0.13%	gamma-Selinene	1465.50	Sesquiterpene
35	30.71	0.65%	gamma-Murolene	1478.86	Sesquiterpene
36	30.90	3.33%	Germacrene D	1484.71	Sesquiterpene
37	31.06	0.31%	beta-Selinene	1487.57	Sesquiterpene
38	31.35	1.13%	alpha-Murolene	1500.25	Sesquiterpene
39	31.78	0.63%	gamma-Cadinene	1515.29	Sesquiterpene
40	32.00	2.33%	delta-Cadinene	1524.14	Sesquiterpene
41	32.41	0.20%	alpha-Cadinene	1537.86	Sesquiterpene
42	33.74	0.32%	Caryophyllene oxide	1594.86	Sesquiterpene Ether