



Sample:

Client: | Nature's Gift
Sample: | Tagetes (Marigold) (Tagetes minuta)
Batch # | IN-58591
CAS Number | 8016-84-0
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

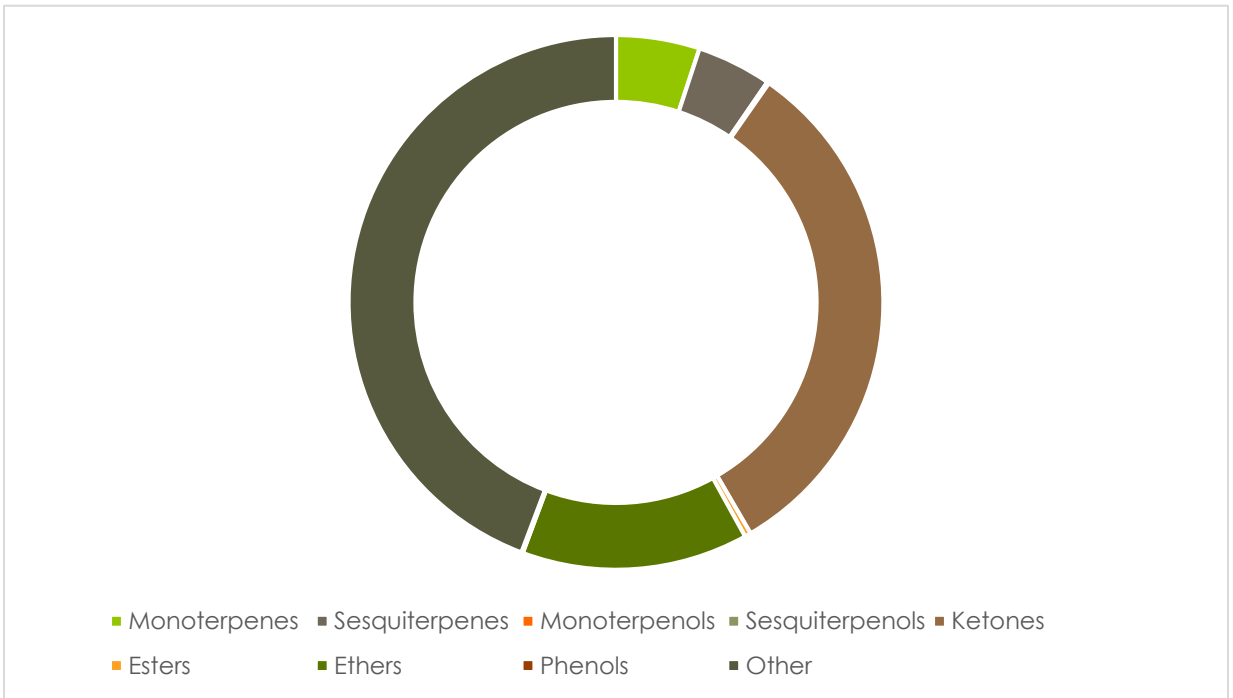
Summary of Analyses

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



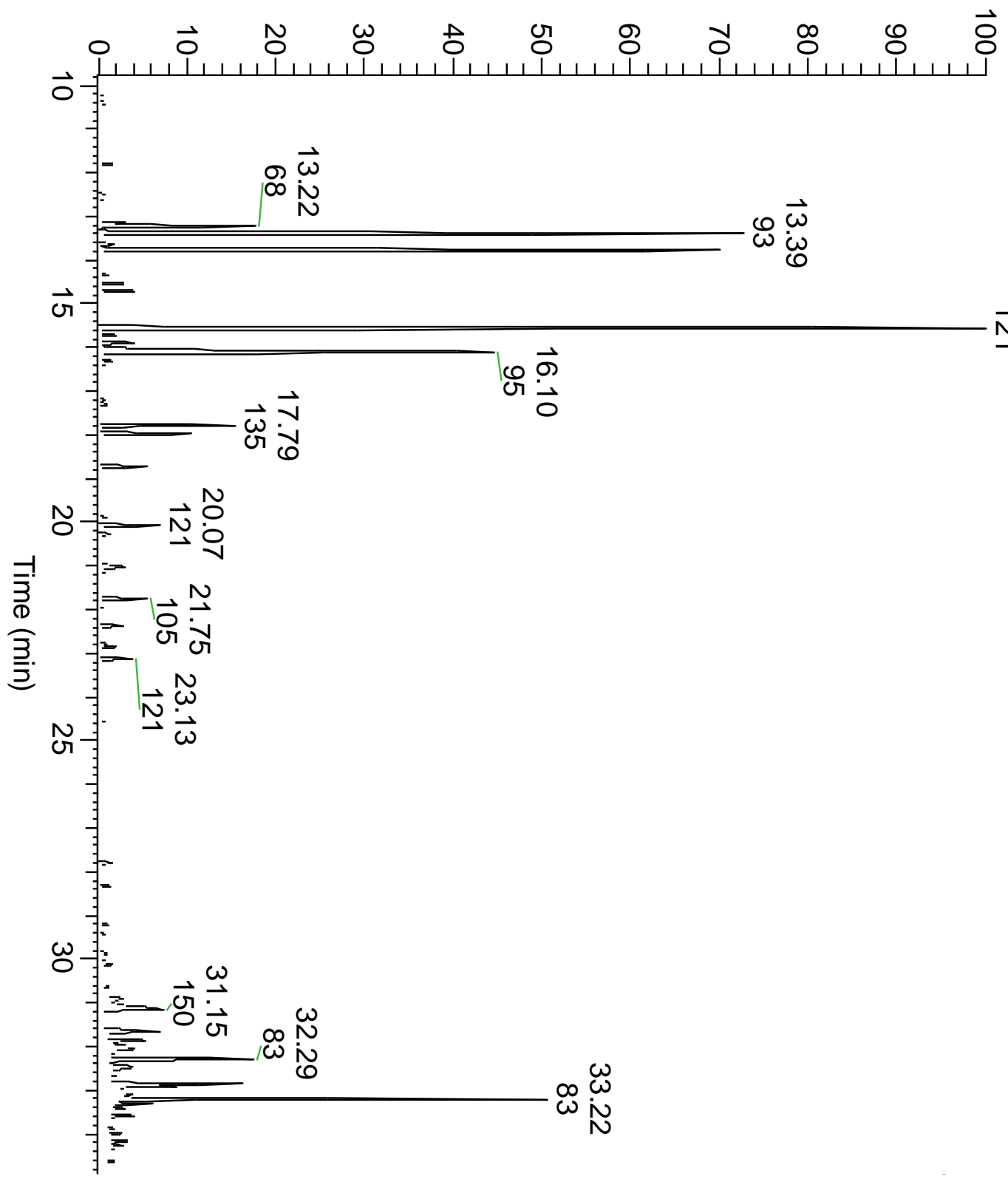
Main Compounds	Percentages
Alloocimene	19.56%
1,8-Cineole	13.56%
Dihydrotagetone	13.41%
(Z)-Tagetone	11.63%
Limonene	2.93%
(Z)-Tagetenone	2.46%
Unidentified Ketone	2.42%
(E)-Tagetenone	1.97%
Unidentified Ketone	1.14%
Bicycloelemene	1.03%
UK	1.02%
Isopiperitenone	0.97%
Isopiperitenone	0.97%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
5.01%	4.48%	0.11%	0.00%	31.60%
Esters	Ethers	Aldehydes	Phenols	Other
0.37%	13.56%	0.09%	0.00%	43.81%



ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

RT: 9.75 - 34.92



ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

Total Percentage		99.03%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family	
1	8.40	0.30%	Ethyl 2-methylbutyrate	853.50	Esters	
2	9.19	0.07%	2-Methylbutyl acetate	882.50	Esters	
3	11.80	0.30%	alpha-Pinene	936.10	Monoterpenes	
4	12.49	0.09%	Octanal	1002.43	Aldehydes	
5	13.15	0.40%	para-Cymene	1024.30	Monoterpenes	
6	13.22	2.93%	Limonene	1029.50	Monoterpenes	
7	13.22	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes	
8	13.39	13.56%	1,8-Cineole	1031.80	Ethers	
9	13.39	Co-Eluting	(Z)-beta-Ocimene	1037.80	Monoterpenes	
10	13.63	0.26%	(E)-beta-Ocimene	1047.70	Monoterpenes	
11	13.77	13.41%	Dihydrotagetone	1053.50	Ketones	
12	14.33	0.20%	alpha-Pinene epoxide	1095.00	Monoterpenes	
13	14.53	0.43%	UK	#N/A	#N/A	
14	14.71	0.63%	Terpinolene	1089.43	Monoterpenes	
15	14.85	0.11%	Linalool	1099.00	Monoterpenols	
16	15.21	0.10%	beta-Thujone	1118.00	Ketones	
17	15.56	19.56%	Alloocimene	1129.90	Other	
18	15.71	0.29%	3,4-Dimethyloct-2,4,6-triene	1132.00	Monoterpenes	
19	15.89	0.63%	(E)-Tagetone	1145.00	Ketones	
20	16.10	11.63%	(Z)-Tagetone	1154.00	Ketones	
21	16.40	0.11%	UK Tagetes	#N/A	#N/A	
22	16.99	0.12%	UK Tagetes	#N/A	#N/A	
23	17.20	0.11%	UK Tagetes	#N/A	#N/A	
24	17.30	0.21%	Verbenone	1209.71	Ketones	
25	17.79	2.46%	(Z)-Tagetenone	1234.00	Ketones	
26	17.97	1.97%	(E)-Tagetenone	1243.00	Ketones	
27	18.72	0.97%	Isopiperitenone	1275.20	Ketones	
28	19.88	0.11%	delta-Elemene	1335.83	Sesquiterpenes	
29	20.07	1.03%	Bicycloelemene	1340.00	Sesquiterpenes	
30	20.27	0.22%	Piperitenone	1340.33	Ketones	
31	21.03	0.80%	beta-Cubebene	1390.50	Sesquiterpenes	
32	21.12	0.16%	beta-Longipinene	1398.00	Sesquiterpenes	
33	21.75	0.97%	beta-Caryophyllene	1427.14	Sesquiterpenes	
34	22.37	0.46%	alpha-Humulene	1461.43	Sesquiterpenes	
35	22.85	0.31%	Germacrene D	1484.71	Sesquiterpenes	
36	23.13	0.64%	gamma-Elemene	1491.25	Sesquiterpenes	
37	30.90	0.67%	UK	#N/A	#N/A	
38	31.15	2.42%	Unidentified Ketone	#N/A	#N/A	
39	31.66	1.14%	Unidentified Ketone	#N/A	#N/A	
40	31.86	0.72%	Unidentified Ketone	#N/A	#N/A	
41	31.98	0.51%	UK	#N/A	#N/A	
42	32.05	1.02%	UK	#N/A	#N/A	

