

Sample Information

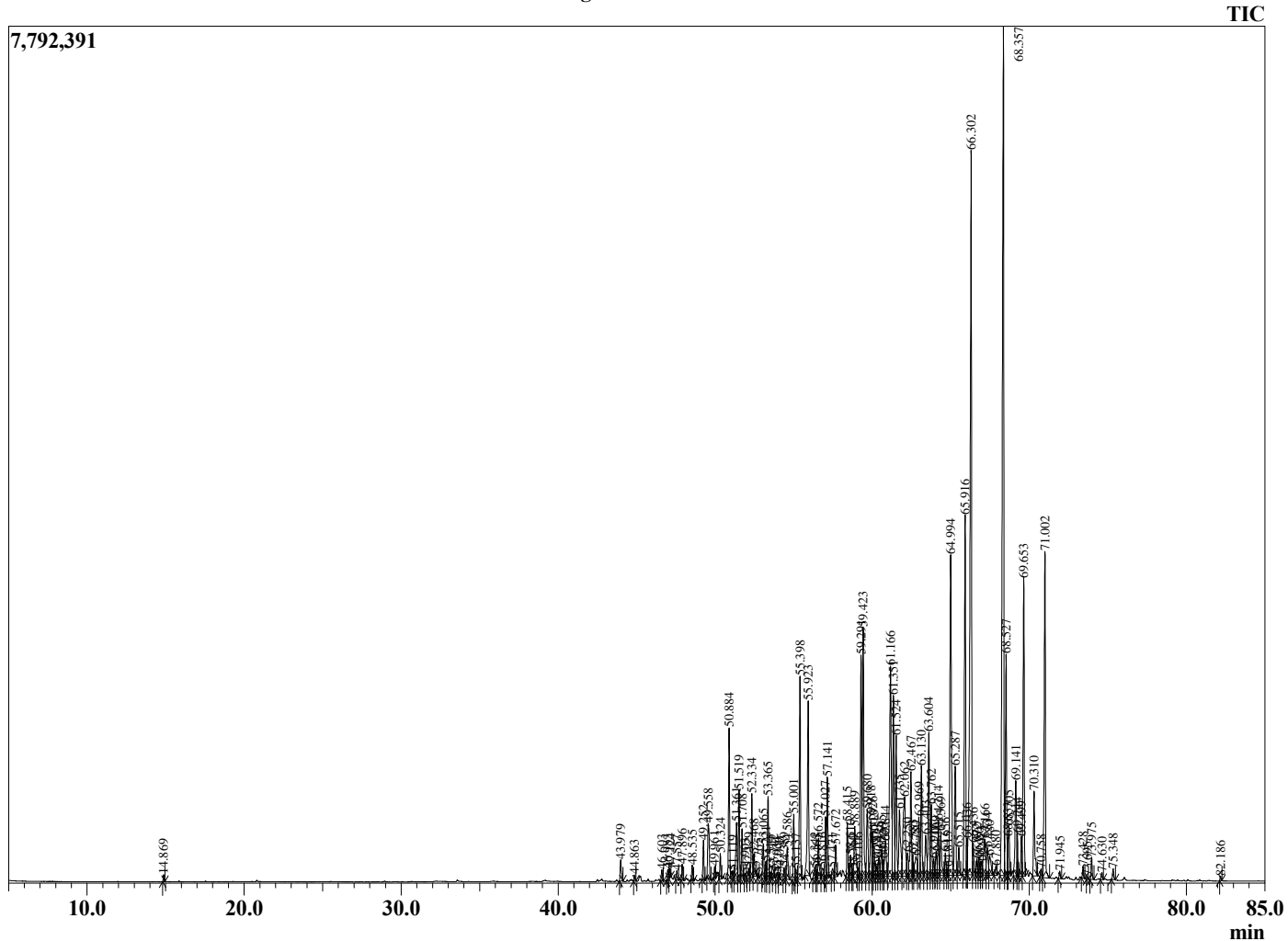
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 11/18/2020 2:33:54 PM  
 Sample Type : Essential Oil  
 Sample Name : Vetiver - Barefut  
 Sample ID : 0106  
 Injection Volume : 0.10  
 Instrument ID: GC-2



Peak Report TIC

R.Time	Name	Area%
14.869	alpha-Pinene	0.05
43.979	alpha-Ylangene	0.25
44.863	Unidentified	0.07
46.603	Unidentified	0.10
46.983	alpha-Cedrene	0.10
47.124	alpha-Gurjunene	0.08
47.557	beta-Cedrene	0.11
47.896	epi-Bicyclosesquiphellandrene	0.15
48.535	6,9-Guaiadiene	0.13
49.252	Prezizaene	0.39
49.558	Khusimene	0.83
49.961	Unidentified	0.11
50.324	(E)-Eremophila-1(10),7(11)-dien-12-yl acetat	0.23
50.884	alpha-Amorphene	1.50
51.119	alpha-Vetispirene	0.07
51.361	delta-Selinene	0.74
51.519	beta-Vetispirene	0.85
51.708	trans-Murrola-4(14),5-diene	0.51
51.903	Cubedol	0.05
52.129	Unidentified	0.11
52.334	delta-Amorphene	0.89
52.468	Unidentified	0.29
52.765	Unidentified	0.03
53.065	Unidentified	0.40
53.221	delta-Cadinene	0.16
53.365	Selina-4(15),7(11)-diene	0.81
53.514	Zonarene	0.08
53.742	Unidentified	0.08
53.934	Unidentified	0.08
54.090	Unidentified	0.06
54.389	Unidentified	0.11
54.586	Unidentified	0.39
55.001	alpha-Elemol	0.69
55.137	Unidentified	0.15
55.398	beta-Vetivenene	2.29
55.923	cis-Eudesm-6-en-11-ol	2.12
56.342	13-nor-Eudesm-5-en-11-ol	0.14
56.465	Unidentified	0.07
56.572	Unidentified	0.50
56.816	Unidentified	0.18
57.027	Unidentified	0.65
57.141	3,5,11-Eudesmatriene	1.00
57.471	Unidentified	0.13
57.672	Unidentified	0.36
58.415	Khusimone	0.53
58.610	Unidentified	0.24
58.760	Unidentified	0.07
58.889	Eudesmatriene isomer	0.92
59.106	Unidentified	0.09
59.291	Germacon D-4-ol	2.46
59.423	Selina-6-en-4-ol	2.96
59.680	Unidentified	0.91
59.918	Unidentified	0.73
60.026	Unidentified	0.49
60.113	Unidentified	0.33
60.287	Unidentified	0.12
60.425	Unidentified	0.24
60.595	Unidentified	0.37
60.706	tau-Cadinol	0.18
60.844	Unidentified	0.55
61.166	alpha-Cadinol	3.59
61.351	Cyclocopacamphan-12-ol <epimer A>	2.27

Chromatogram Vetiver - Barefut



Comments:

The analysis of this Vetiver batch sample meets the expected chemical profile for authentic essential oil of *Vetiveria zizanioides*. No contamination or adulteration was detected. The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.

R.Time	Name	Area%
61.524	Cyclocopacamphan-12-ol <epimer B>	1.53
61.735	Unidentified	1.15
62.062	Zizanal	1.80
62.250	Unidentified	0.31
62.467	2-epi-Ziza-6(13)-en-3-alpha-ol	1.33
62.583	Unidentified	0.20
62.780	Unidentified	0.46
62.969	Unidentified	0.80
63.130	Khusian-2-ol	1.24
63.403	Zizanal	0.59
63.604	Selin-7(11)-en-4-ol	1.61
63.762	2-epi-Ziza-6(13)-en-3-alpha-ol isomer	0.82
63.916	Methyl ziza-6(13)-en-12-oate	0.18
64.069	Unidentified	0.31
64.214	13-nor-Eudesma-4,6-dien-11-one	0.57
64.369	Nootkatol	0.59
64.656	Isovetiselinol	0.25
64.815	Unidentified	0.08
64.994	Vetiselinol	4.79
65.287	Unidentified	1.47
65.515	Unidentified	0.32
65.916	Zizanol	4.41
66.036	Unidentified	0.32
66.302	Khusimol	10.52
66.436	Unidentified	0.36
66.672	Unidentified	0.17
66.802	Unidentified	0.19
66.973	Unidentified	0.14
67.166	Unidentified	0.69
67.334	Unidentified	0.40
67.480	Unidentified	0.38
67.880	(Z)-Isovalencenol	0.12
68.357	(E)-Isovalencenol	12.26
68.527	Unidentified	2.44
68.633	Unidentified	0.24
68.705	Unidentified	0.58
69.141	Unidentified	1.39
69.244	Zizanoic acid	0.37
69.499	(Z)-Isovalencenal	0.48
69.653	beta-Vetivone	3.33
70.310	(E)-Isovalencenal	1.07
70.758	Unidentified	0.08
71.002	alpha-Vetivone	3.81
71.945	Unidentified	0.08
73.428	Unidentified	0.12
73.695	Unidentified	0.03
73.975	Isovalencenyl formate	0.23
74.630	Unidentified	0.09
75.348	Unidentified	0.13
82.186	Unidentified	0.04
		100.00