



Jade Bloom

Health, Healing, & Happiness®

Date: March 19, 2020

CERTIFICATE OF ANALYSIS - GC PROFILING

Sample identification: Vetiver Haiti - JB2018-817832

Type: Essential oil

Source: Vetiveria zizanoides

Country of Origin: Haiti

ANALYSIS

Method: 121min_vetiver_1:1splitter.m - Analysis of the composition of an essential oil, or other volatile liquid, by GC-FID, identifications validated by GC-MS.

Analysis date: March 19, 2020

Physical aspect: Yellow liquid

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method. The oil nearly complies with ISO specifications.

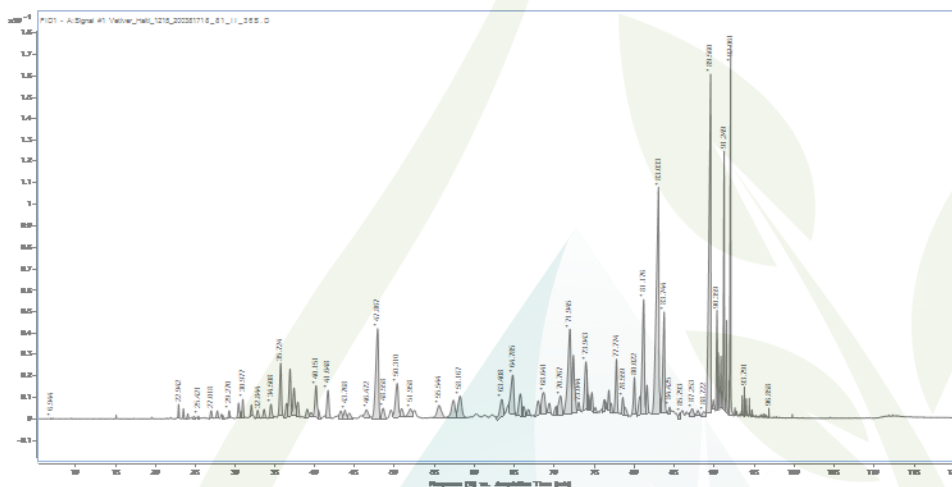
Compound	Area Sum %	ISO
β -Vetivenene	4.88	0.7-3.0
Khusimol	11.35	9.0-15
Isovalencenol	11.78	10.0-16
β -Vetivone	3.95	2.0-4.0
α -Vetivone	4.89	2.0-4.0



Peak	Compound	RT	Area Sum %
1	α -Pinene	6.944	0.01
2	Cyclosativene I	22.942	0.23
3	α -Ylangene	23.544	0.17
4	unknown	24.091	0.11
5	2-Norprezizene	24.845	0.1
6	β -Elemene	25.421	0.07
7	β -Funebrene	27.018	0.24
8	Aristolene	27.799	0.18
9	unknown	28.482	0.09
10	β -Copaene	29.27	0.17
11	Prezizaene	30.452	0.39
12	6,9-Guaiadiene	30.685	0.13
13	Khusimene	30.977	0.47
14	unknown	32.057	0.26
15	unknown	32.844	0.29
16	unknown	33.642	0.28
17	unknown	34.508	0.49
18	α -Amorphene	35.724	1.8
19	cis-Eudesma-6,11-diene	36.452	0.49
20	β -Vetispirene	36.898	1.79
21	unknown	37.393	1.05
22	γ -Amorphene	37.876	0.56
23	Nootkatene	39.047	0.39
24	unknown	39.523	0.19
25	δ -Cadinene	40.151	1.26
26	unknown	40.382	0.26
27	Selina-3,7(11)-diene	41.648	1.11
28	unknown	43.248	0.44
29	unknown	43.768	0.4
30	unknown	44.318	0.32
31	unknown	46.472	0.49
32	β -Vetivenene	47.867	4.88
33	Elemol	48.558	0.55
34	cis-Eudesm-6-en-11-ol	50.31	1.9
35	unknown	50.862	0.43
36	unknown	51.958	0.58
37	unknown	55.544	1.01
38	unknown	57.357	1.18
39	Khusimone	58.167	1.54
40	Selin-6-en-4 α -ol	63.408	1.08

41	unknown	64.785	2.31
42	unknown	65.728	1.15
43	unknown	66.156	0.35
44	unknown	66.738	0.25
45	unknown	67.972	0.74
46	unknown	68.641	1.38
47	unknown	69.353	0.41
48	unknown	70.2	0.38
49	unknown	70.767	1.15
50	unknown	71.945	4.47
51	Cyclocopacamphan-12-ol epimer A + epimer B	72.371	2.38
52	unknown	73.044	0.26
53	Zizanol	73.943	1.78
54	Khusiol	74.047	0.56
55	unknown	74.257	0.34
56	unknown	74.691	0.59
57	unknown	75.131	0.18
58	unknown	76.261	0.34
59	unknown	76.329	0.21
60	unknown	76.817	0.56
61	unknown	77.108	0.26
62	unknown	77.774	1.68
63	unknown	78.559	0.59
64	unknown	78.755	0.34
65	unknown	80.022	1.15
66	unknown	80.787	0.7
67	Vetiselinenol	81.176	4.7
68	α -Vetivol	81.598	0.87
69	Khusimol	83.033	11.35
70	unknown	83.744	3.48
71	10-epi-Acora-3,11-dien-15-al	84.425	0.22
72	unknown	85.793	0.21
73	unknown	87.253	0.42
74	unknown	87.975	0.18
75	unknown	88.722	0.27
76	Isovalencenol	89.56	11.78
77	unknown	89.899	0.19
78	unknown	90.359	1.93
79	unknown	90.503	0.77
80	(Z)-Isovalencenal	90.847	0.89
81	β -Vetivone	91.249	3.95
82	(E)-Isovalencenal	91.561	1.11
83	α -Vetivone	92.061	4.89

84	unknown	92.612	0.08
85	unknown	93.514	0.16
86	unknown	93.791	0.21
87	unknown	94.023	0.21
88	β -Cyclodihydrocostunolide	94.411	0.11
89	unknown	94.492	0.03
90	unknown	94.759	0.04
91	unknown	96.858	0.04
	Total identified		65.17%



DISCLAIMER:

The information contained in this Certificate of Analysis and/or GC/MS is obtained from current and reliable sources. Jade Bloom provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. As the ordinary or otherwise use(s) of this product is outside the control of Jade Bloom, no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. Jade Bloom expressly disclaims responsibility as to the ordinary or otherwise use(s). Furthermore, nothing contained herein should be considered as a recommendation by Jade Bloom as to the fitness for any use. The liability Jade Bloom is limited to the value of the goods and does not include any consequential loss. Jade Bloom shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. Jade Bloom shall not be responsible for any damages resulting from use of or reliance upon this information. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. This document is computer automated and is valid without signature. This report may not be published, including online, without the written consent from Jade Bloom