



Laboratory Test Report

SAMPLE NAME : Vetiver

COMPANY NAME : Kam Vetiver Oil Production

COMPANY LOT # : B1-0620

Column: ZB5 (60 m length × 0.25 mm inner diameter × 0.25 μm film thickness)

Instrument: Shimadzu GCMS-QP2010 Ultra

Carrier gas: Helium 80 psi

Temperature ramp: 2 degrees Celsius per minute up to 260-degree Celsius

Split ratio: 30:1

Sample preparation: 5% w/v solution with Dichloromethane

Interpretation on sample:

The analysis of Vetiver sample meets the standard chemical profile of Vetiveria zizanioides essential oil.

Analyzed by: Dr. Prabodh Satyal

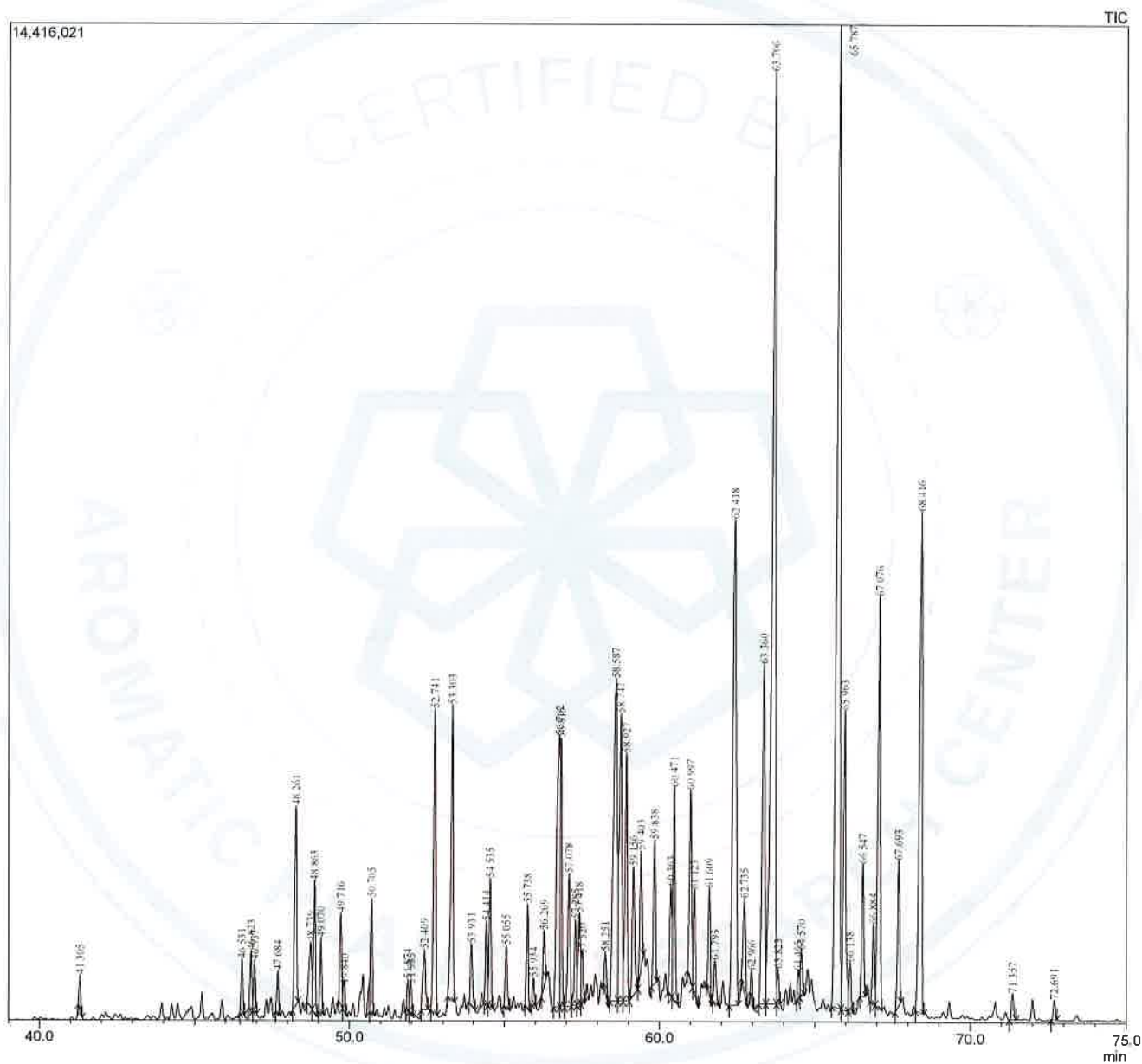
Reviewed by: Ambika Poudel

Issued Date: 9/9/2020

Sample Information

Analyzed by : Dr. Prabodh Satyal
Analyzed : 9/9/2020 6:07:03 AM
Sample Type : Essential Oil
Sample Name : Vetiver
Company Name : Kam Vetiver Oil Production
Lot# : B1-0620
Injection Volume : 0.30

Chromatogram





Laboratory Test Report

SAMPLE NAME : Vetiver Oil

COMPANY NAME : Kam Vetiver Oil Production

COMPANY LOT # : C1-0520

Column: ZB5 (60 m length × 0.25 mm inner diameter × 0.25 μm film thickness)

Instrument: Shimadzu GCMS-QP2010 Ultra

Carrier gas: Helium 80 psi

Temperature ramp: 2 degrees Celsius per minute up to 260-degree Celsius

Split ratio: 30:1

Sample preparation: 5% w/v solution with Dichloromethane

Interpretation on sample:

The analysis of Vetiver sample meets the standard chemical profile of Vetiveria zizanioides essential oil.

Analyzed by: Dr. Prabodh Satyal

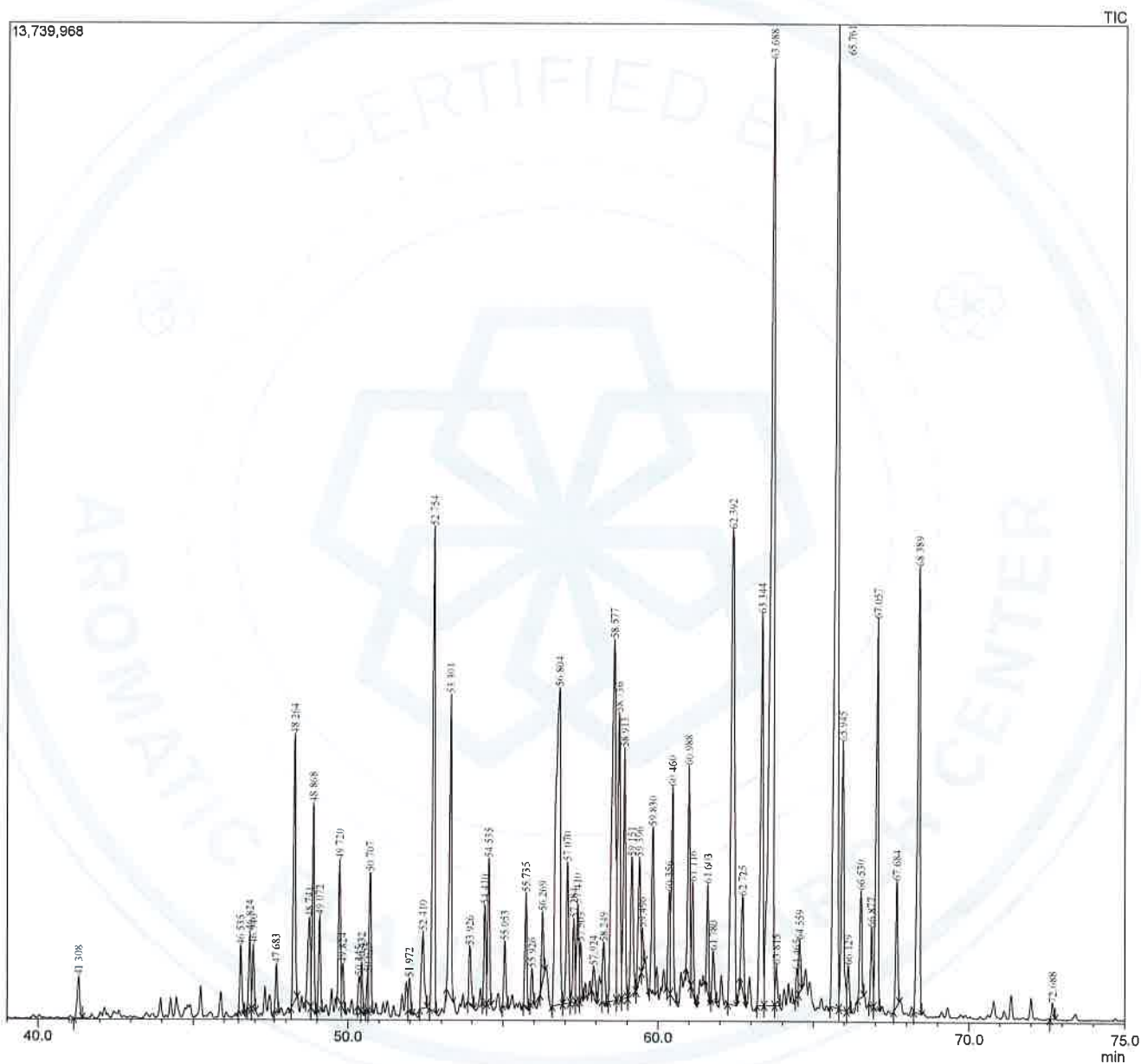
Reviewed by: Ambika Poudel

Issued Date: 9/9/2020

Sample Information

Analyzed by : Dr. Prabodh Satyal
Analyzed : 9/9/2020 6:32:33 PM
Sample Type : Essential Oil
Sample Name : Vetiver Oil
Company Name : Kam Vetiver Oil Production
Lot# : C1-0520
Injection Volume : 0.30

Chromatogram



Peak Report

Peak#	R.Time	Name	Area%
1	41.308	Ylangene+Biphenylene, 1,2,3,6,7,8,8-alpha,8-beta-octahydro-4,5-di	0.38
2	46.535	Prezizaene	0.51
3	46.824	Khusimene	0.54
4	46.940	Gurjunene isomer	0.43
5	47.683	Dehydro isolongifolenene	0.32
6	48.264	alpha-Amorphene	2.08
7	48.741	delta-Selinene	0.83
8	48.868	beta-Vetispiene	1.49
9	49.072	gamma-Amorphene	0.66
10	49.720	beta-Cadinene	0.99
11	49.824	alpha-Cuprenene	0.29
12	50.345	Nootkatene	0.27
13	50.432	Unidentified	0.28
14	50.625	delta-Cadinene	0.21
15	50.707	beta-Guaine	1.04
16	51.972	alpha-Calacorene	0.22
17	52.410	alpha-Elemol	0.80
18	52.754	beta-Vetivenene	3.94
19	53.301	Eudesmenol	2.50
20	53.926	Unidentified	0.47
21	54.410	Unidentified	0.70
22	54.535	Sesquiterpitriene A	1.02
23	55.053	Unidentified	0.49
24	55.735	Khusimone	0.80
25	55.926	Unidentified	0.23
26	56.269	Sesquiterpitriene B	0.51
27	56.804	Selina-6-en-4-ol isomer	5.41
28	57.070	Unidentified	1.20
29	57.284	Rosifolol isomer	0.68
30	57.410	cis-Cadin-4-en-7-ol	0.84
31	57.503	Hinesol	0.37
32	57.924	1,7-Di-epi-alpha-cedrenal	0.26
33	58.249	epi-beta-Murolol+Unidentified	0.51
34	58.577	alpha-Cadinol	4.98
35	58.736	epi-Eudesmol isomer	2.86
36	58.913	epi-Eudesmol isomer	2.03
37	59.151	Vetiver Spiro isomer	1.30
38	59.396	epi-Zizanone	1.10
39	59.496	epi-beta-Bisabolol	0.24
40	59.830	2-epi-Ziza-6(13)-en-3-alpha-ol	1.41
41	60.356	Zizanal	0.76
42	60.460	Nootkatol isomer	1.66
43	60.988	Juniper camphor	1.66
44	61.116	Amorphadienol isomer	0.81
45	61.603	Guaiol acetate	0.69
46	61.780	Nootkatol	0.42
47	62.392	Vetiselinenol	6.16
48	62.725	Unidentified	0.84
49	63.344	Zizanal	3.60
50	63.688	Khusimol	12.53
51	63.815	Cyclocolorenone	0.31
52	64.465	Unidentified	0.19
53	64.559	13-Hydroxy valencene	0.35
54	65.761	trans-Isovalencenol	12.17
55	65.945	Unidentified	2.45
56	66.129	Cedrandiol	0.36
57	66.530	Nootkatone	0.82
58	66.877	Nootkatone isomer	0.56
59	67.057	beta-Vetivone	3.32
60	67.684	Unidentified	0.93
61	68.389	alpha-Vetivone	4.08
62	72.688	11,12-Dihydroxy spirovetiva-1(10)-en-2-one	0.13
			100.00

Peak Report

Peak#	R. Time	Name	Area%
1	41.305	Ylangene+Biphenylene, 1,2,3,6,7,8,8-alpha,8-beta-octahydro-4,5-di	0.23
2	46.531	Prezizaene	0.38
3	46.823	Khusimene	0.42
4	46.937	Gurjunene isomer	0.35
5	47.684	Dehydro isolongifolenene	0.29
6	48.261	alpha-Amorphene	1.63
7	48.739	delta-Selinene	0.64
8	48.863	beta-Vetispirene	0.97
9	49.070	gamma-Amorphene	0.52
10	49.716	beta-Cadinene	0.67
11	49.840	alpha-Cuprenene	0.22
12	50.705	beta-Guaine	0.85
13	51.874	Eudesmone	0.20
14	51.985	alpha-Calacorene	0.24
15	52.409	alpha-Elemol	0.65
16	52.741	beta-Vetivenene	2.62
17	53.303	Eudesmenol	2.53
18	53.931	Unidentified	0.49
19	54.414	Unidentified	0.61
20	54.535	Sesquiterpitriene A	0.93
21	55.055	Unidentified	0.50
22	55.738	Khusimone	0.75
23	55.934	Unidentified	0.18
24	56.269	Sesquiterpitriene B	0.43
25	56.762	Humulane-1,6-dien-3-ol	3.58
26	56.815	Selina-6-en-4-ol isomer	1.64
27	57.078	Unidentified	1.20
28	57.285	Rosifoliol isomer	0.72
29	57.418	cis-Cadin-4-en-7-ol	0.85
30	57.520	Hinesol	0.37
31	58.251	epi-beta-Murolol+Unidentified	0.30
32	58.587	alpha-Cadinol	4.74
33	58.747	epi-Eudesmol isomer	3.03
34	58.927	epi-Eudesmol isomer	2.17
35	59.156	Vetiver Spiro isomer	1.21
36	59.403	epi-Zizanone	0.99
37	59.838	2-epi-Ziza-6(13)-en-3-alpha-ol	1.16
38	60.363	Zizanal	0.91
39	60.471	Nootkatol isomer	1.75
40	60.997	Juniper camphor	1.59
41	61.123	Amorphadienol isomer	0.84
42	61.609	Guaiol acetate	0.75
43	61.793	Nootkatol	0.40
44	62.418	Vetiselinenol	6.50
45	62.735	Unidentified	0.90
46	62.966	Oplopanone	0.17
47	63.360	Zizanal	3.61
48	63.706	Khusimol	13.18
49	63.823	Cyclocolorenone	0.24
50	64.465	Unidentified	0.21
51	64.570	13-Hydroxy valencene	0.34
52	65.787	trans-Isovalencenol	13.77
53	65.963	Unidentified	2.85
54	66.138	Cedrandiol	0.42
55	66.547	Nootkatone	1.05
56	66.884	Nootkatone isomer	0.59
57	67.076	beta-Vetivone	3.81
58	67.693	Unidentified	1.17
59	68.416	alpha-Vetivone	5.32
60	71.357	Unidentified	0.21
61	72.691	11,12-Dihydroxy spirovetiva-1(10)-en-2-one	0.16
			100.00

