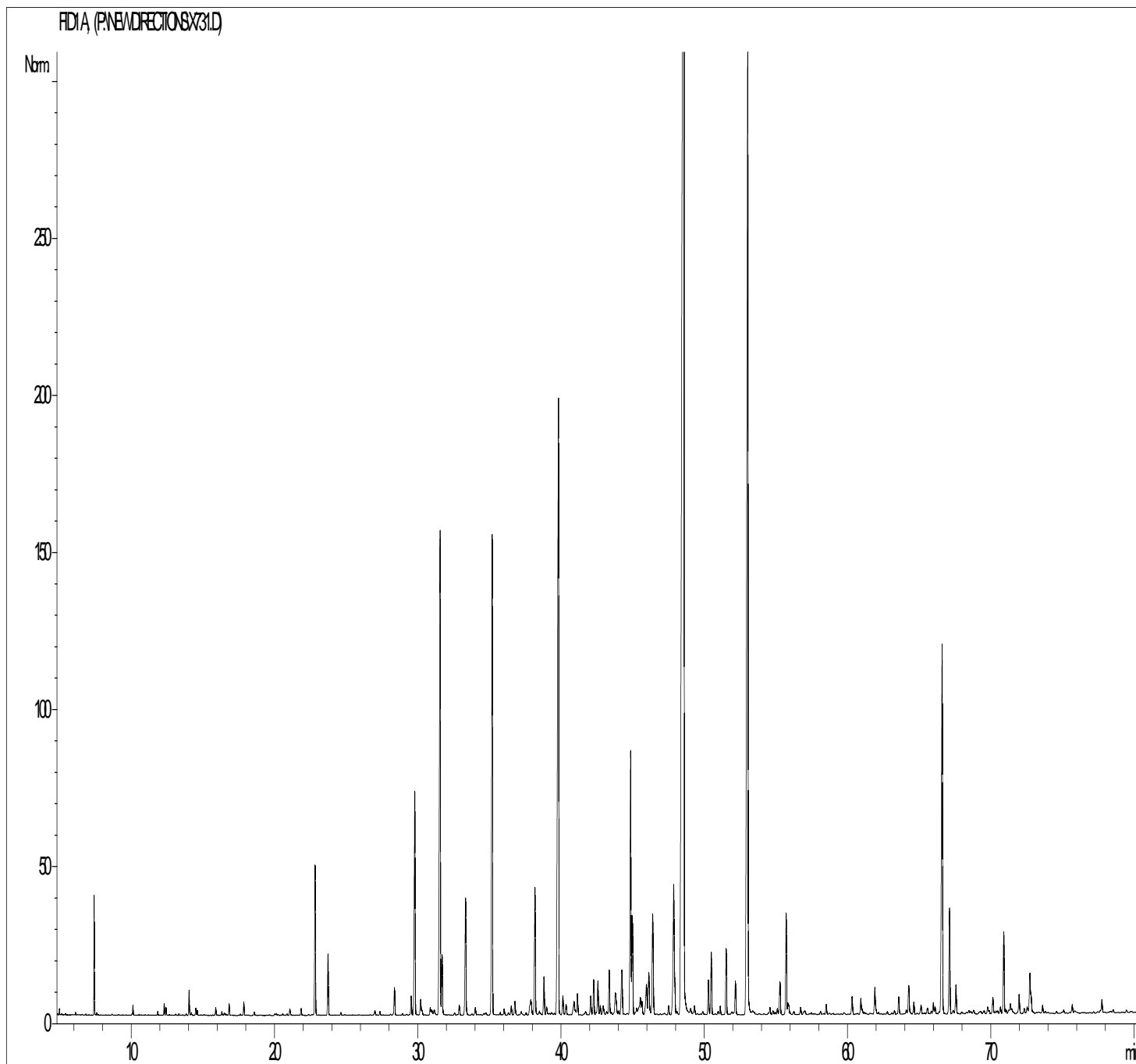


GCMS ANALYSIS

PRODUCT NAME: GERANIUM EGYPTIAN ESSENTIAL OIL - 11062

DATE: June 19, 2019



*Due to volume turnover, this report is not lot specific. It is representative of the quality of this oil produced by the manufacturer of this product. Specific lots may vary slightly as is the case in natural products.*

GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GERANIUM E GYPTIAN ESSENTIAL OIL - 11062

Peak	RT (min)	Compound name	%
1	4,4	ACETONE	0,04
2	5,0	CYCLOHEXANE ETHYLIDENE	0,02
3	7,4	alpha-PINENE	0,54
4	7,6	alpha-THUYENE	0,01
5	10,0	beta-PINENE	0,01
6	10,1	DEHYDROXYLINALOL A OXIDE	0,05
7	11,8	gamma-PYRONNE	0,03
8	12,2	beta-MYRCENE	0,07
9	12,4	alpha-PHELLANDRENE	0,05
10	13,3	ALIPHATIC ESTER	0,01
11	13,8	ISOAMYL ALCOHOL	0,01
12	14,0	LIMONENE	0,18
13	14,2	1,8-CINEOLE	0,02
14	14,5	beta-PHELLANDRENE	0,05
15	14,6	Cis-ARBUSCULONE	0,03
16	15,8	Cis-beta-OCIMENE	0,05
17	16,3	Trans-ARBUSCULON	0,03
18	16,5	COMPOUND Mw=122	0,02
19	16,6	gamma-TERPINENE	0,01
20	16,8	Trans-beta-OCIMENE	0,08
21	17,8	p-CYMENE	0,10
22	18,6	TERPINOLENE	0,03
23	20,0	TETRAMETHYL CYCLOHEXANE ISOMER	0,01
24	20,2	TETRAMETHYL CYCLOHEXANE ISOMER	0,01
25	20,5	ALIPHATIC ALCOHOL	0,01
26	21,0	3-METHYL-1-PENTANOL	0,06
27	21,8	5-HEPTEN-2-ONE-6-METHYL	0,06
28	22,8	<b>ROSE cis-OXIDE</b>	<b>1,27</b>
29	23,7	<b>ROSE trans-OXIDE</b>	<b>0,52</b>
30	24,6	3-HEXEN-1-OL	0,03

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GERANIUM EGYPTIAN ESSENTIAL OIL - 11062

Peak	RT (min)	Compound name	%
31	27,0	cis-p-MENTHANE-8-OL	0,04
32	27,3	Trans-p-MENTHANE-8-OL	0,03
33	28,3	LINALOOL cis-OXIDE	0,26
34	28,9	1-OCTEN-3-OL	0,01
35	29,5	alpha-CUBEBENE	0,18
36	29,8	<b>MENTHONE</b>	<b>2,14</b>
37	30,1	Trans-THUYANOL	0,16
38	20,3	LINALOOL trans-OXIDE	0,04
39	30,8	SESQUITERPENE	0,07
40	30,9	CITRONELLAL	0,07
41	31,1	alpha-ELEMENE	0,07
42	31,5	<b>ISOMENTHONE</b>	<b>5,13</b>
43	31,6	alpha-COPAENE	0,57
44	32,5	ISONERAL	0,02
45	32,9	alpha-BOURBONENE	0,10
46	33,3	beta-BOURBONENE	1,19
47	34,0	alpha-GURJUNENE	0,09
48	34,6	beta1-CUBEBENE	0,02
49	34,8	Cis-THUYANOL	0,03
50	35,1	<b>LINALOOL</b>	<b>4,47</b>
51	35,7	DIMETHYL SULFOXYDE	0,02
52	36,0	NEOISOPULEGOL	0,06
53	36,5	ISOPULEGOL	0,10
54	36,8	epsilon-CADINENE	0,15
55	37,2	alpha-trans-BERGAMOTENE	0,05
56	37,5	beta-ELEMENE	0,03
57	37,9	CALARENE	0,29
58	31,8	beta-CARYOPHYLLENE	1,28
59	38,4	TERPINENE-4-OL	0,07
60	38,8	<b>6,9-GUAIADIENE</b>	<b>0,38</b>

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### GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GERANIUM EGYPTIAN ESSENTIAL OIL - 11062

Peak	RT (min)	Compound name	%
61	39,0	AROMADENDRENE	0,09
62	39,2	ALIPHATIC ESTER	0,02
63	39,3	SESQUITERPENE	0,03
64	39,8	<b>CITRONELLYL FORMIATE</b>	<b>7,56</b>
65	40,1	CADINA-3,5-DIENE	0,19
66	40,3	NEOISOMENTHOL	0,11
67	40,9	CADINADIENE ISOMER	0,17
68	41,0	GERMACRENE A	0,06
69	41,1	ALLO-AROMADENDRENE	0,22
70	41,7	SESQUITERPENE	0,06
71	42,1	ZONARENE	0,19
72	42,3	CITRONELLYL ACETATE	0,33
73	42,5	alpha-HUMULENE	0,36
74	42,7	Cis-4,5-MUUROLADIENE	0,09
75	42,9	NERYL FORMIATE	0,11
76	43,2	gamma-SELINENE	0,03
77	43,3	NERAL	0,43
78	43,8	SESQUITERPENE	0,35
79	44,0	SESQUITERPENE	0,04
80	44,1	LEDENE	0,24
81	44,2	<b>alpha-TERPINEOL</b>	<b>0,33</b>
82	44,8	<b>GERANYL FORMIATE</b>	<b>2,57</b>
83	45,0	GERMACRENE D	1,01
84	45,3	CADINADIENE ISOMER	0,09
85	45,5	beta-SELINENE + PIPERITONE	0,28
86	45,6	alpha-MUUROLENE	0,14
87	45,9	CITRONELLYL PROPIONATE	0,41
88	46,1	BICYCLOGERMACRENE	0,50
89	46,4	GERANIAL	1,13
90	47,5	alpha-FARNESENE	0,09

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GERANIUM EGYPTIAN ESSENTIAL OIL - 11062

Peak	RT (min)	Compound name	%
91	47,8	delta-CADINENE	1,42
92	47,9	gamma-CADINENE	0,10
93	48,0	GERANYL ACETATE	0,26
94	48,6	<b>CITRONELLOL</b>	<b>32,93</b>
95	49,0	SESQUITERPENE	0,08
96	49,3	CADINA-1,4-DIENE	0,10
97	49,9	alpha-AMORPHENE	0,03
98	50,3	NEROL	0,32
99	50,5	CITRONELLYL BUTYRATE	0,57
100	50,9	NERYL BUTYRATE	0,08
101	51,1	CITRONELIC ESTER	0,03
102	51,5	GERANYL PROPIONATE	0,62
103	51,9	GERMACRENE B	0,03
104	52,2	CALAMENENE	0,35
105	53,0	<b>GERANIOL</b>	<b>12,78</b>
106	53,4	ISOGERANIOL ISOMER	0,08
107	54,5	2-PHENYLETHYL ISOBUTYRATE	0,07
108	54,8	2-PHENYLETHYL BUTYRATE	0,03
109	54,9	Epi-CUBEBOL	0,03
110	55,1	ISOGERANIOL ISOMER	0,06
111	55,3	alpha-AGAROFURAN	0,35
112	55,7	<b>GERANYL BUTYRATE</b>	<b>0,98</b>
113	55,8	NERYL METHYLBUTYRATE	0,16
114	56,2	AROMADENDRENE EPOXIDE	0,03
115	56,7	alpha-CALACORENE	0,07
116	57,0	GERANYL METHYLBUTYRATE	0,07
117	58,1	CUBEBOL	0,03
118	58,5	CITRONELIC ESTER	0,09
119	60,3	CARYOPHYLLENE EPOXIDE	0,19
120	60,9	TERPENIC ESTER	0,16

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### GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GERANIUM EGYPTIAN ESSENTIAL OIL - 11062

Peak	RT (min)	Compound name	%
121	61,0	CITRONELLYL ISOVALERATE	0,05
122	61,9	CITRONELLYL TIGLATE	0,25
123	62,0	GERANYL VALERATE	0,07
124	62,7	LEDOL	0,03
125	63,3	EPOXY-6,7-HUMULENE	0,04
126	63,6	NERIC ESTER	0,17
127	64,1	GLEENOL	0,04
128	64,2	Epi-CUBENOL + JUNEOL	0,33
129	64,6	CUBENOL	0,12
130	65,1	GLOBULOL	0,10
131	65,5	VIRIDIFLOROL	0,06
132	65,8	FUROPALGONE	0,02
133	65,9	GERANYL CAPROATE	0,11
134	66,1	CITRONELLYL ESTER	0,06
135	66,6	<b>10-épi-gamma-EUDESOL</b>	<b>4,22</b>
136	67,1	<b>GERANYL TIGLATE</b>	<b>1,06</b>
137	67,4	EUDESOL ISOMER	0,04
138	67,6	SPATHULENOL	0,30
139	68,5	7-épi-alpha-EUDESOL	0,07
140	68,8	SESQUITERPENOL Mw=222	0,05
141	69,3	AROMATIC COMPOUND	0,06
142	69,5	SESQUITERPENOL	0,04
143	69,7	gamma-EUDESOL	0,07
144	69,9	T-CADINOL	0,03
145	70,1	AGAROSPIROL	0,18
146	70,3	EUDESOL ISOMER	0,03
147	70,5	SESQUITERPENOL	0,03
148	70,7	alpha-MUUROLOL	0,07
149	70,9	<b>beta-PHENYLETHYL TIGLATE</b>	<b>0,84</b>
150	71,2	delta-CADINOL	0,03

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GERANIUM EGYPTIAN ESSENTIAL OIL - 11062

Peak	RT (min)	Compound name	%
151	71,3	SESQUITERPENOL	0,12
152	71,5	CITRONELIC ESTER	0,05
153	72,0	VALERIANOL	0,20
154	72,3	alpha-EUDESOL	0,05
155	72,5	ISOSPATULENOL	0,08
156	72,7	4-HYDROXY-DIHYDRO-alpha-AGAROFURAN	0,42
157	72,8	beta-EUDESOL	0,05
158	72,9	alpha-CADINOL	0,23
159	73,6	CITRONELIC ACID	0,08
160	75,6	NERIC ACID	0,10
161	77,7	GERANIC ACID	0,13
		<b>TOTAL</b>	<b>99,94</b>

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