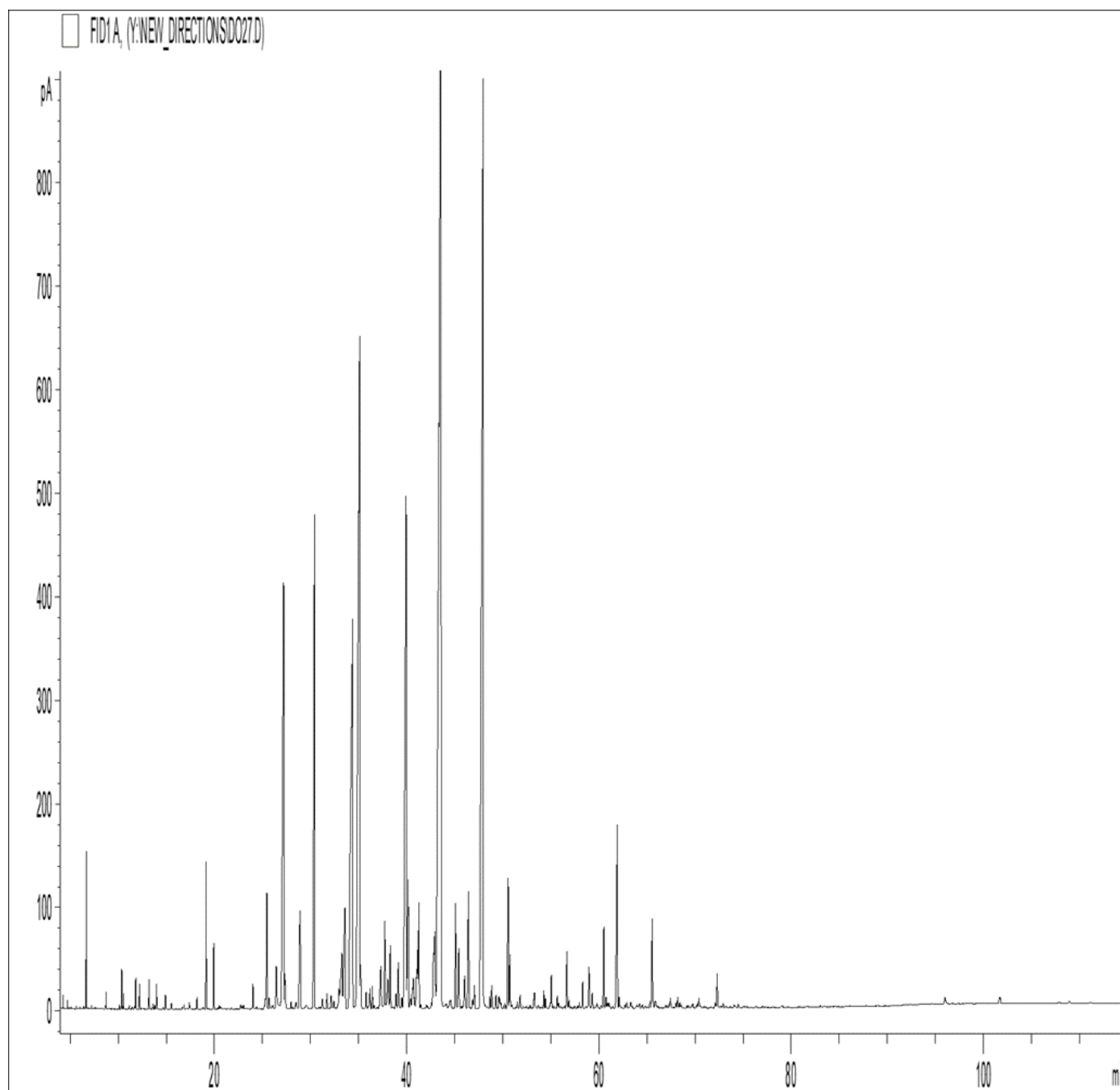


### GCMS ANALYSIS

PRODUCT NAME: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244

DATE: September 14, 2023



*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: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244

Peak	RT (min)	Compound name	%
1	4,26	ACETONE	0,03
2	6,67	alpha-PINENE	0,43
3	8,70	beta-PINENE	0,02
4	8,73	DEHYDROXYLINALOOL OXIDE A	0,04
5	10,36	beta-MYRCENE	0,15
6	10,54	alpha-PHELLANDRENE	0,06
7	11,81	LIMONENE	0,13
8	12,21	1,8-CINEOLE	0,11
9		beta-PHELLANDRENE	
10	13,20	cis-beta-OCIMENE	0,13
11	13,59	trans-ARBUSCULON	0,03
12	13,76	COMPOUND Mw=122	0,02
13	13,98	trans-beta-OCIMENE	0,11
14	14,90	p-CYMENE	0,07
15	15,52	TERPINOLENE	0,03
16	17,39	1-PENTANOL, 3-METHYL-	0,03
17	18,19	5-HEPTEN-2-ONE, 6-METHYL-	0,06
18	19,15	<b>ROSE cis-OXIDE</b>	<b>0,88</b>
19	19,95	<b>ROSE trans-OXIDE</b>	<b>0,37</b>
20	22,75	PERILLENE	0,03
21	23,05	trans-p-MENTHANE-8-OL	0,02
22	24,02	LINALOOL cis-OXIDE	0,16
23	25,31	alpha-CUBEBENE	0,06
24	25,47	<b>MENTHONE</b>	<b>0,83</b>
25	25,70	LINALOOL trans-OXIDE	0,07
26	26,09	SESQUITERPENE	0,04
27	26,45	CITRONELLAL	0,46
28	26,93	ISOGERANIAL	0,06
29	27,21	<b>ISOMENTHONE</b>	<b>4,70</b>
30	27,33	alpha-COPAENE	0,38

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GCMS ANALYSIS (cont'd,)

PRODUCT NAME: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244

Peak	RT (min)	Compound name	%
31	27,98	ISONERAL	0,04
32	28,50	alpha-BOURBONENE	0,09
33	28,92	beta-BOURBONENE	1,10
34	29,54	alpha-GURJUNENE	0,04
35	29,60	SESQUITERPENE	0,02
36	30,43	<b>LINALOOL</b>	<b>4,56</b>
37	31,25	NEOISOPULEGOL	0,09
38	31,72	ISOPULEGOL	0,11
39	32,15	epsilon-CADINENE	0,14
40	32,43	ISOMENTHYL ACETATE	0,06
41	32,88	beta-ELEMENE	0,03
42	32,97	beta-CUBEBENE	0,18
43	33,21	alpha-trans-BERGAMOTENE	0,38
44	33,27	alpha-GUAIENE	0,48
45	33,59	beta-CARYOPHYLLENE	1,42
46	34,38	<b>6,9-GUAIADIENE</b>	<b>7,46</b>
47	34,54	SESQUITERPENE	0,02
48	35,11	<b>CITRONELLYL FORMIATE</b>	<b>10,57</b>
49	35,22	NEOISOMENTHOL	0,42
50	35,80	CADINA-3,5-DIENE	0,11
51	36,19	GERMACRENE A	0,15
52	36,44	ALLO-AROMADENDRENE	0,13
53	36,63	MYRTENIC ESTER	0,03
54	37,30	ZONARENE	0,16
55	37,32	alpha-HUMULENE	0,32
56	37,70	CITRONELLYL ACETATE	0,35
57	37,73	NERYL FORMATE	0,34
58	37,95	cis-4,5-MUROLADIENE	0,10
59	38,00	CALAMENENE ISOMER	0,10
60	38,05	SESQUITERPENE	0,19

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GCMS ANALYSIS (cont'd,)

PRODUCT NAME: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244

Peak	RT (min)	Compound name	%
61	38,31	NERAL	0,42
62	38,91	gamma-MUUROLENE	0,14
63	39,14	<b>alpha-TERPINEOL</b>	<b>0,36</b>
64	39,51	CALAMENENE ISOMER	0,08
65	39,95	<b>GERANYL FORMIATE</b>	<b>6,10</b>
66	40,17	GERMACRENE D	1,31
67	40,37	SESQUITERPENE	0,04
68	40,41	PIPERITONE	0,08
69	40,61	MUUROLADIENE ISOMER	0,15
70	40,70	beta-SELINENE	0,26
71	40,82	alpha-SELINENE	0,07
72	41,03	alpha-MUUROLENE	0,25
73	41,14	CITRONELLYL PROPIONATE	0,49
74	41,28	GERANIAL	0,75
75	41,47	cis-alpha-BISABOLENE	0,03
76	42,06	SESQUITERPENE	0,03
77	42,59	E,E-alpha-FARNESENE	0,05
78	42,83	GERANYL ACETATE	0,55
79	42,93	delta-CADINENE	0,74
80	43,58	<b>CITRONELLOL</b>	<b>22,74</b>
81	43,87	delta-SELINENE	0,02
82	44,05	MYRTENOL ISOMER	0,03
83	44,12	CADINA-1,4-DIENE	0,05
84	44,53	NERYL PROPIONATE	0,08
85	44,62	SESQUITERPENE	0,05
86	45,09	NEROL	0,68
87	45,44	CITRONELLYL BUTYRATE	0,49
88	45,51	cis-ISOGERANIOL	0,02
89	46,06	NERYL BUTYRATE	0,32
90	46,45	GERANYL PROPIONATE	1,02

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**GCMS ANALYSIS (cont'd,)**

**PRODUCT NAME: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244**

Peak	RT (min)	Compound name	%
91	46,87	GERMACRENE B	0,08
92	47,05	CALAMENENE	0,16
93	47,96	<b>GERANIOL</b>	<b>14,27</b>
94	48,67	GERANYL ISOBUTYRATE	0,08
95	48,86	trans-MYRTANOL	0,20
96	49,30	2-PHENYLETHYL ISOBUTYRATE	0,10
97	49,60	2-PHENYLETHYL BUTYRATE	0,09
98	49,70	ISOGERANIOL ISOMER	0,06
99	49,81	ISOGERANIOL ISOMER	0,05
100	50,08	Epi-CUBEBOL	0,02
101	50,25	PHENYLETHYL ALCOHOL	0,04
102	50,57	<b>GERANYL BUTYRATE</b>	<b>1,03</b>
103	50,75	NERYL METHYLBUTYRATE	0,38
104	50,98	AROMATIC COMPOUND	0,04
105	51,53	SESQUITERPENIC EPOXIDE	0,06
106	51,82	GERANYL METHYLBUTYRATE	0,11
107	52,84	SESQUITERPENONE	0,03
108	53,28	SESQUITERPENIC EPOXIDE	0,07
109	53,31	BISNORSESQUITERPENE-1,4,5-ESQUEL-7-EN-9-ONE	0,10
110	53,69	CUBEBOL	0,02
111	54,28	2-PHENYLETHYL ISOVALERATE	0,12
112	54,45	FUROPOLARGON ISOMER	0,07
113	54,94	CITRONELIC ESTER	0,04
114	55,07	CARYOPHYLLENE EPOXIDE	0,25
115	55,68	NERYL METHYLVALERATE	0,09
116	55,81	Epi-GLOBULOL	0,04
117	56,00	CITRONELLYL CAPROATE	0,02
118	56,45	COMPOUND Mw=234	0,03
119	56,67	CITRONELLYL TIGLATE	0,40
120	56,90	GERANYL METHYLVALERATE	0,06

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244

Peak	RT (min)	Compound name	%
121	57,47	EPOXY-6,7-HUMULENE	0,02
122	57,80	JUNEOL	0,02
123	57,97	IONONE ISOMER	0,05
124	58,32	NERYL CAPROATE	0,19
125	58,97	Epi-CUBENOL	0,34
126	59,32	CUBENOL	0,13
127	59,80	GLOBULOL	0,05
128	60,24	TERPENIC ESTER	0,03
129	60,52	FUROPALGON	0,59
130	60,74	GERANYL CAPROATE	0,09
131	60,91	2-PHENYLETHYL METHYLVALERATE	0,05
132	61,04	CITRONELLYL HEPTANOATE	0,05
133	61,43	SESQUITERPENIC EPOXIDE	0,02
134	61,92	<b>GERANYL TIGLATE</b>	<b>1,64</b>
135	62,12	GERANIC ESTER	0,08
136	62,18	SESQUITERPENIC EPOXIDE	0,02
137	62,72	TERPENIC ESTER	0,03
138	62,91	SESQUITERPENOL	0,06
139	63,34	SESQUITERPENIC EPOXIDE	0,05
140	63,96	beta-BETULENAL	0,04
141	64,21	CITRONELLYL CAPRYLATE	0,05
142	64,55	T-CADINOL	0,03
143	64,82	gamma-EUDESOL	0,02
144	65,33	1-TETRADECANOL	0,06
145	65,55	<b>2-PHENYLETHYL TIGLATE</b>	<b>0,66</b>
146	65,62	alpha-MUROL	0,05
147	65,82	PHENYLETHYLIC ESTER	0,04
148	65,89	delta-CADINOL	0,07
149	66,03	NERYL CAPRYLATE	0,02
150	66,96	alpha-EUDESOL	0,02

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**GCMS ANALYSIS (cont'd,)**

**PRODUCT NAME: ROSE GERANIUM (SOUTH AFRICA) ESSENTIAL OIL – 11244**

Peak	RT (min)	Compound name	%
151	67,14	SESQUITERPENIC EPOXIDE	0,03
152	67,33	beta-EUDESOL	0,03
153	67,45	alpha-CADINOL	0,08
154	68,02	EUDESMA-7(11)-EN-4-OL	0,05
155	68,21	CITRONELIC ACID	0,08
156	68,42	GERANYL CAPRYLATE	0,05
157	68,55	SESQUITERPENONE	0,03
158	69,19	CITRONELIC ESTER	0,02
159	69,35	ACID COMPOUND	0,03
160	69,75	CARYOPHYLLA-2,6-DIEN-5-alpha-OL	0,04
161	70,24	ALIPHATIC ALCOHOL	0,04
162	70,41	TERPENIC ESTER	0,08
163	72,09	SESQUITERPENIC EPOXIDE	0,04
164	72,31	GERANIC ACID	0,27
165	72,94	MANOYL OXIDE	0,05
166	74,07	GERANYL CITRONELLATE	0,03
167	74,52	ALIPHATIC ALCOHOL	0,03
168	95,99	SESQUITERPENIC COMPOUND	0,08
169	101,69	SESQUITERPENIC COMPOUND	0,10
170	108,94	SESQUITERPENIC COMPOUND	0,03
		<b>TOTAL</b>	<b>99,96</b>

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