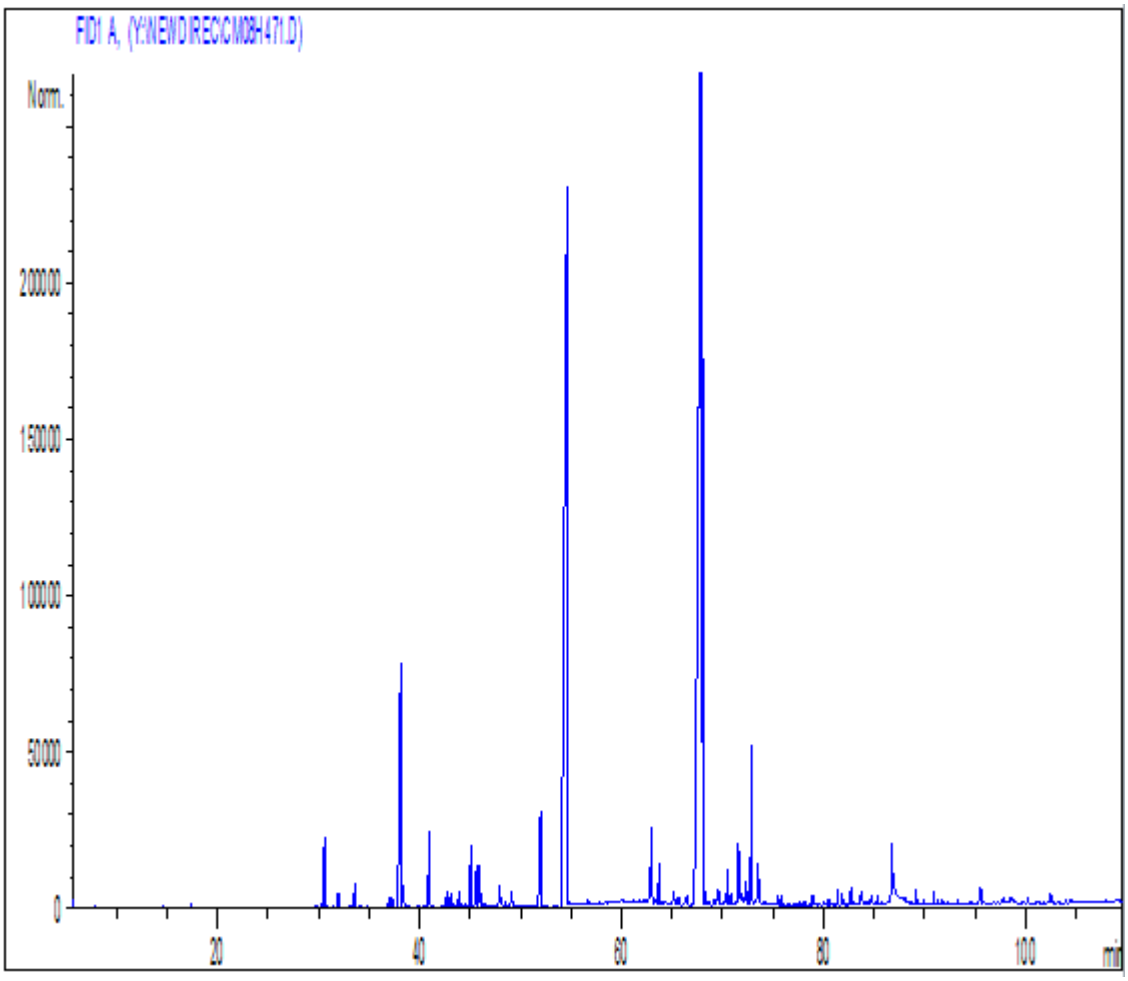
NEW DIRECTIONS
AROMATICS

GCMS ANALYSIS

PRODUCT NAME: Myrrh Essential Oil (Egypt)
DATE: June 21, 2016



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.

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Peak	RT (min)	Compound name	%
1	5,7	ETHANOL	0,03
2	7,8	α-PINENE	0,01
3	11,9	o-XYLENE	0,01
4	12,9	β-MYRCENE	0,01
5	14,6	LIMONENE	0,01
6	17,4	Trans-β-OCIMENE	0,02
7	29,8	α-CUBEBENE	0,03
8	30,2	ELEMENE ISOMER	0,03
9	30,6	δ-ELEMENE	0,85
10	30,7	SESQUITERPENE	0,03
11	30,8	SESQUITERPENE	0,01
12	31,4	YLANGENE	0,02
13	31,9	α-COPAENE	0,17
14	33,2	α-BOURBONENE	0,03
15	33,5	β-BOURBONENE	0,29
16	34,0	α-GURJUNENE	0,02
17	34,2	ARISTOLENE	0,01
18	34,5	SESQUITERPENE	0,01
19	34,8	LINALOOL	0,01
20	34,9	SESQUITERPENE	0,01
21	35,1	β1-CUBEBENE	0,01
22	36,5	SESQUITERPENE	0,01
23	36,7	SESQUITERPENE	0,01
24	36,9	ε-CADINENE	0,13
25	37,3	ELEMENE ISOMER	0,14
26	37,7	α-cis-BERGAMOTENE	0,01
27	38,1	**β-ELEMENE**	**4,50**
28	38,3	β-CUBEBENE	0,08
29	38,4	β-CARYOPHYLLENE	0,24
30	38,8	SESQUITERPENE	0,01
31	38,9	6,9-GUAIADIENE	0,02
32	39,9	GERMACRENE ISOMER	0,02
33	40,4	SESQUITERPENE	0,02
34	40,9	GERMACRENE A	0,91
35	41,0	CADINENE ISOMER	0,04
36	41,2	ALLO-AROMADENDRENE	0,01
37	42,2	ZONARENE	0,03
38	42,4	SESQUITERPENE	0,05
39	42,7	α-HUMULENE	0,18
40	43,1	γ-SELINENE	0,22
41	43,3	4,5-di-epi-ARISTOLOCHENE	0,04
42	43,9	γ-MUUROLENE	0,21
43	44,1	CALARENE ISOMER	0,04
44	44,3	SESQUITERPENE Mw=202	0,01
45	44,5	GURJUNENE ISOMER	0,03

Disclaimer & Caution
Please refer to the Material Safety Data Sheet (MSDS) and all other relevant technical information specific to the product, prior to use. The user of this product is solely responsible for determining the suitability of the product for their particular use and to be in compliance with all laws and regulations applying to the use of this product. New Directions Aromatics Inc. shall not be held responsible for any damages or for any adverse physical effects (including injury or bodily harm) caused by insufficient knowledge, wrongful application or the improper handling or use of this product. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., 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. The information on the New Directions Aromatics Inc. website is obtained from current and reliable sources but makes no representation as to its comprehensiveness or accuracy. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.

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Peak	RT (min)	Compound name	%
46	44,6	SESQUITERPENE	0,01
47	45,0	GERMACRENE D	0,90
48	45,2	CADINENE ISOMER	0,12
49	45,3	α-BISABOLENE	0,04
50	45,6	β-SELINENE	0,51
51	45,9	α-SELINENE	0,58
52	46,3	α-MUUROLENE	0,05
53	46,4	BICYCLOGERMACRENE	0,04
54	47,9	δ-CADINENE	0,38
55	48,1	γ-CADINENE	0,07
56	48,5	SELINA-3,7-DIENE	0,07
57	49,1	δ-SELINENE	0,14
58	49,2	CADINA-1,4-DIENE	0,14
59	49,9	α-AMORPHENE	0,04
60	50,8	SESQUITERPENE	0,01
61	51,9	GERMACRENE B	1,80
62	52,1	FARNESENE ISOMER	0,01
63	53,3	SESQUITERPENE Mw=202	0,01
64	54,6	**CURZERENE Mw = 216**	**28,76**
65	54,9	α-CALACORENE	0,02
66	56,6	β-CALACORENE	0,04
67	59,9	SESQUITERPENOL	0,03
68	60,0	CARYOPHYLLENE EPOXIDE	0,04
69	61,7	SESQUITERPENOL	0,03
70	62,2	SESQUITERPENOL	0,06
71	62,7	COMPONENT Mw=216	0,32
72	62,9	Cis-β-ELEMENONE	0,94
73	63,0	COMPONENT Mw=216	0,07
74	63,3	EPOXY-6,7-HUMULENE	0,03
75	63,6	FURANOGERMACRENE ISOMER Mw=216	0,45
76	64,0	EPI-CUBENOL	0,06
77	64,3	CUBENOL	0,05
78	64,8	SESQUITERPENOL	0,02
79	65,1	ELEMOL	0,29
80	65,6	Trans-β-ELEMENONE	0,19
81	66,4	FURANODIENE Mw=216	0,26
82	66,8	COMPONENT Mw=216	0,03
83	67,8	**FURANOEUDESMA-1,3-DIENE**	**35,54**
84	68,0	**LINDESTRENE Mw = 214**	**7,61**
85	68,3	FURANOEUDESMADIENE ISOMER	0,14
86	68,4	SESQUITERPENOL	0,06
87	68,7	COMPONENT ISOMER Mw=214	0,06
88	69,1	COMPONENT ISOMER Mw=214	0,05
89	69,4	γ-EUDESMOL	0,20
90	69,6	T-CADINOL	0,15

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Peak	RT (min)	Compound name	%
91	70,1	SESQUITERPENOL Mw=220	0,05
92	70,3	COMPONENT Mw=246	0,14
93	70,5	ACETYL-8,12-EPOXYGERMACRA-1,4-7-11-TET. ISOMER	0,33
94	70,8	CADINOL ISOMER	0,17
95	71,2	SESQUITERPENOL	0,02
96	71,5	CURZERENONE Mw=230	0,94
97	71,8	α-CADINOL	0,04
98	71,9	α-EUDESMOL	0,08
99	72,3	β-EUDESMOL	0,35
100	72,4	COMPONENT Mw=214	0,10
101	72,8	ACETYL-8,12-EPOXYGERMACRA-1,4-7-11-TETRAENE	2,15
102	73,4	SESQUITERPENOL	0,29
103	73,5	β-NOOTKATOL	0,43
104	73,6	EUDESMA-7,11-EN-4-OL	0,05
105	74,0	SESQUITERPENOL Mw=220	0,02
106	74,2	SESQUITERPENOL Mw=220	0,01
107	74,5	SESQUITERPENOL Mw=220	0,02
108	75,0	SESQUITERPENOL Mw=220	0,02
109	75,3	SESQUITERPENOL Mw=220	0,01
110	75,5	EUDESMOL ISOMER	0,13
111	75,8	SESQUITERPENOL Mw=220	0,14
112	76,5	SESQUITERPENOL	0,03
113	76,9	SESQUITERPENOL Mw=220	0,03
114	77,3	SESQUITERPENOL Mw=220	0,02
115	77,5	OXYGENED COMPONENT Mw=232	0,04
116	77,7	SESQUITERPENOL Mw=220	0,02
117	78,1	SESQUITERPENOL Mw=220	0,04
118	78,7	SESQUITERPENOL Mw=220	0,10
119	79,0	SESQUITERPENOL Mw=220	0,10
120	79,2	SESQUITERPENOL Mw=220	0,02
121	79,6	SESQUITERPENOL Mw=220	0,02
122	80,0	OXYGENED COMPONENT Mw=232	0,07
123	80,5	2-METHOXYFURANODIENONE ISOMER	0,09
124	80,7	2-METHOXYFURANODIENONE ISOMER	0,03
125	81,3	2-METHOXYFURANODIENONE ISOMER	0,21
126	81,7	2-METHOXYFURANODIENONE ISOMER	0,15
127	81,9	2-METHOXYFURANODIENONE ISOMER	0,09
128	82,1	2-METHOXYFURANODIENONE ISOMER	0,05
129	82,3	2-METHOXYFURANODIENONE ISOMER	0,01
130	82,6	2-METHOXYFURANODIENONE ISOMER	0,17
131	82,8	2-METHOXYFURANOGUAIA-9-EN-8-ONE Mw = 246	0,17
132	83,0	SESQUITERPENOL Mw=220	0,03
133	83,2	SESQUITERPENOL Mw=220	0,02
134	83,7	CURZERENIC ESTER Mw=274	0,26
135	84,2	2-METHOXYFURANODIENONE ISOMER	0,04

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Peak	RT (min)	Compound name	%
136	84,6	2-METHOXYFURANODIENONE ISOMER	0,11
137	85,1	ESTER CURZERENIQUE Mw=274	0,01
138	85,3	ESTER CURZERENIQUE Mw=274	0,09
139	85,7	2-METHOXYFURANODIENONE ISOMER	0,02
140	86,7	CURZERENIC ESTER Mw=274	1,59
141	88,0	CURZERENIC ESTER Mw=274	0,04
152	88,6	CURZERENIC ESTER	0,02
143	89,1	CURZERENIC ESTER	0,15
144	89,8	OXYGENED COMPONENT Mw=232	0,07
145	90,9	CURZERENIC ESTER Mw=274	0,14
146	91,2	OXYGENED COMPONENT	0,06
147	91,7	OXYGENED COMPONENT	0,07
148	92,3	OXYGENED COMPONENT	0,04
149	93,0	OXYGENED COMPONENT	0,02
150	93,2	OXYGENED COMPONENT Mw=232	0,07
151	94,4	OXYGENED COMPONENT Mw=234	0,06
152	94,7	DITERPENE Mw=272	0,04
153	95,5	COMPONENT Mw=272	0,18
154	95,6	COMPONENT Mw=272	0,16
155	96,7	COMPONENT Mw=272	0,03
156	97,2	COMPONENT Mw=272	0,02
157	97,7	OXYGENED COMPONENT Mw=232	0,09
158	98,5	PYRANONE COMPONENT Mw=228	0,11
159	98,8	OXYGENED COMPONENT Mw=232	0,02
160	99,0	OXYGENED COMPONENT Mw=232	0,02
161	99,5	OXYGENED COMPONENT Mw=232	0,01
162	99,8	OXYGENED COMPONENT Mw=232	0,02
163	100,1	OXYGENED COMPONENT Mw=232	0,06
164	101,1	AROMATIC COMPONENT	0,02
165	102,1	OXYGENED COMPONENT Mw=232	0,02
166	102,4	AROMATIC COMPONENT	0,12
167	103,9	AROMATIC COMPONENT	0,03
168	104,4	AROMATIC COMPONENT	0,04
		TOTAL	**99,85**

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