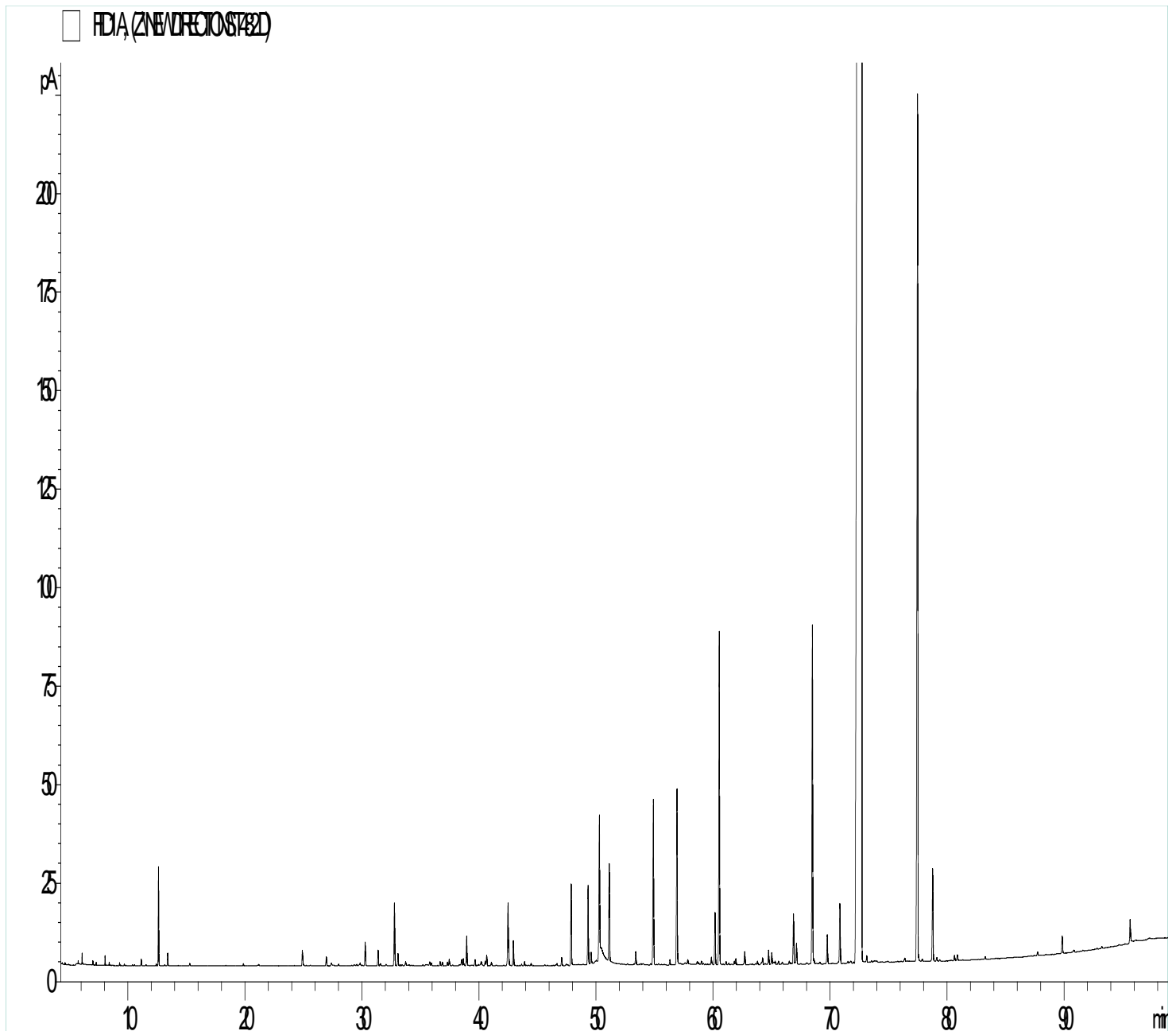




GCMS ANALYSIS

PRODUCT NAME: CALAMUS ROOT ESSENTIAL OIL - 11016

DATE: October 9, 2018



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: CALAMUS ROOT ESSENTIAL OIL - 11016

Peak	RT (min)	Compound name	%
1	6,1	alpha-PINENE	0,02
2	8,0	beta-PINENE	0,02
3	9,2	beta-MYRCENE	0,01
4	9,7	alpha-TERPINENE	0,01
5	11,1	LIMONENE	0,02
6	12,6	Cis-beta-OCIMENE	0,25
7	13,4	Trans-beta-OCIMENE	0,03
8	15,3	TERPINOLENE	0,01
9	19,9	ALLO-OCIMENE	0,01
10	24,9	FURFURALDEHYDE	0,06
11	26,9	alpha-COPAENE	0,03
12	27,4	DECANAL	0,02
13	28,0	CAMPHOR	0,01
14	30,3	LINALOOL	0,08
15	31,3	FURFURAL METHYL	0,01
16	31,4	ARISTOLENE	0,06
17	32,7	CALARENE	0,25
18	33,1	beta-CARYOPHYLLENE	0,05
19	33,7	AROMADENDRENE	0,02
20	35,7	ALIPHATIC ESTER	0,02
21	36,6	ALLO-AROMADENDRENE	0,02
22	36,8	ZONARENE	0,02
23	37,3	alpha-HUMULENE	0,02
24	37,4	E-beta-FARNESENE	0,03
25	38,5	gamma-MUUROLENE	0,03
26	38,6	SESQUITERPENE	0,03
27	38,9	LEDENE	0,11
28	39,6	GERMACRENE D	0,02
29	40,1	SESQUITERPENE	0,03
30	40,5	alpha-MUUROLENE + beta-SELINENE	0,04

Disclaimer & Caution:

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GCMS ANALYSIS (cont'd.)
PRODUCT NAME: CALAMUS ROOT ESSENTIAL OIL - 11016

Peak	RT (min)	Compound name	%
31	40,6	alpha-SELINENE	0,02
32	41,0	BICYCLOGERMACRENE	0,02
33	42,4	delta-CADINENE	0,25
34	42,5	gamma-CADINENE	0,04
35	42,9	ACETOXYFURALDEHYDE COMPONENT	0,10
36	43,9	CADINA-1,4-DIENE	0,01
37	44,5	alpha-AMORPHENE	0,01
38	46,6	CALAMENENE	0,01
39	47,1	DEHYDRO CYCLOISOLONGIFOLENE ISO, Mw=202	0,03
40	47,8	SHYOBUNONE	0,32
41	49,3	PREISOCALAMENDIOL	0,34
42	49,6	SESQUITERPENOL Mw=220	0,04
43	50,3	ISOSHYOBUNONE	1,33
44	51,1	alpha-CALACORENE	0,39
45	53,4	beta-CALACORENE	0,05
46	54,9	DEHYDRO CYCLOISOLONGIFOLENE ISOMER Mw=202	0,69
47	56,3	METHYLEUGENOL	0,02
48	56,9	ISOACARONE	0,75
49	57,8	CUBENOL	0,02
50	59,9	ELEMOL	0,03
51	60,2	SESQUITERPENIC KETONE Mw=220	0,21
52	60,5	Cis-METHYLISOEUGENOL	1,32
53	61,9	SPATHULENOL	0,03
54	62,7	SESQUITERPENOL	0,06
55	64,2	T-CADINOL	0,04
56	64,7	Trans-METHYLISOEUGENOL	0,06
57	65,0	alpha-MUUROLOL	0,05
58	65,3	delta-CADINOL	0,03
59	65,6	SESQUITERPENOL	0,02
60	65,9	PROPIOPHENONE	0,01

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CALAMUS ROOT ESSENTIAL OIL - 11016

Peak	RT (min)	Compound name	%
61	66,5	CADALENE	0,02
62	66,8	ELEMICINE	0,20
63	67,1	alpha-CADINOL	0,09
64	68,4	Cis-ISOELEMICINE	1,37
65	69,8	SESQUITERPENONE Mw=220 ISOMER	0,12
66	70,8	SESQUITERPENONE Mw=220 ISOMER	0,27
67	72,7	beta-ASARONE	85,36
68	73,1	AROMATIC COMPONENT	0,02
69	77,5	alpha-ASARONE	4,17
70	78,8	HYDROXY PYRIMIDIC COMPONENT	0,40
71	79,1	COMPONENT Mw=218	0,02
72	80,6	ELEMICINE ISOMER	0,02
73	80,9	DIMETHOXY PROPIOPHENONE Mw=194	0,03
74	87,7	AROMATIC COMPONENT Mw=224	0,02
75	89,8	BENZALDEHYDE, 2,5,5-TRIMETHOXY	0,07
76	90,8	OSTHOLE	0,03
77	95,6	PALMITIC ACID	0,10
		TOTAL	99,95

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