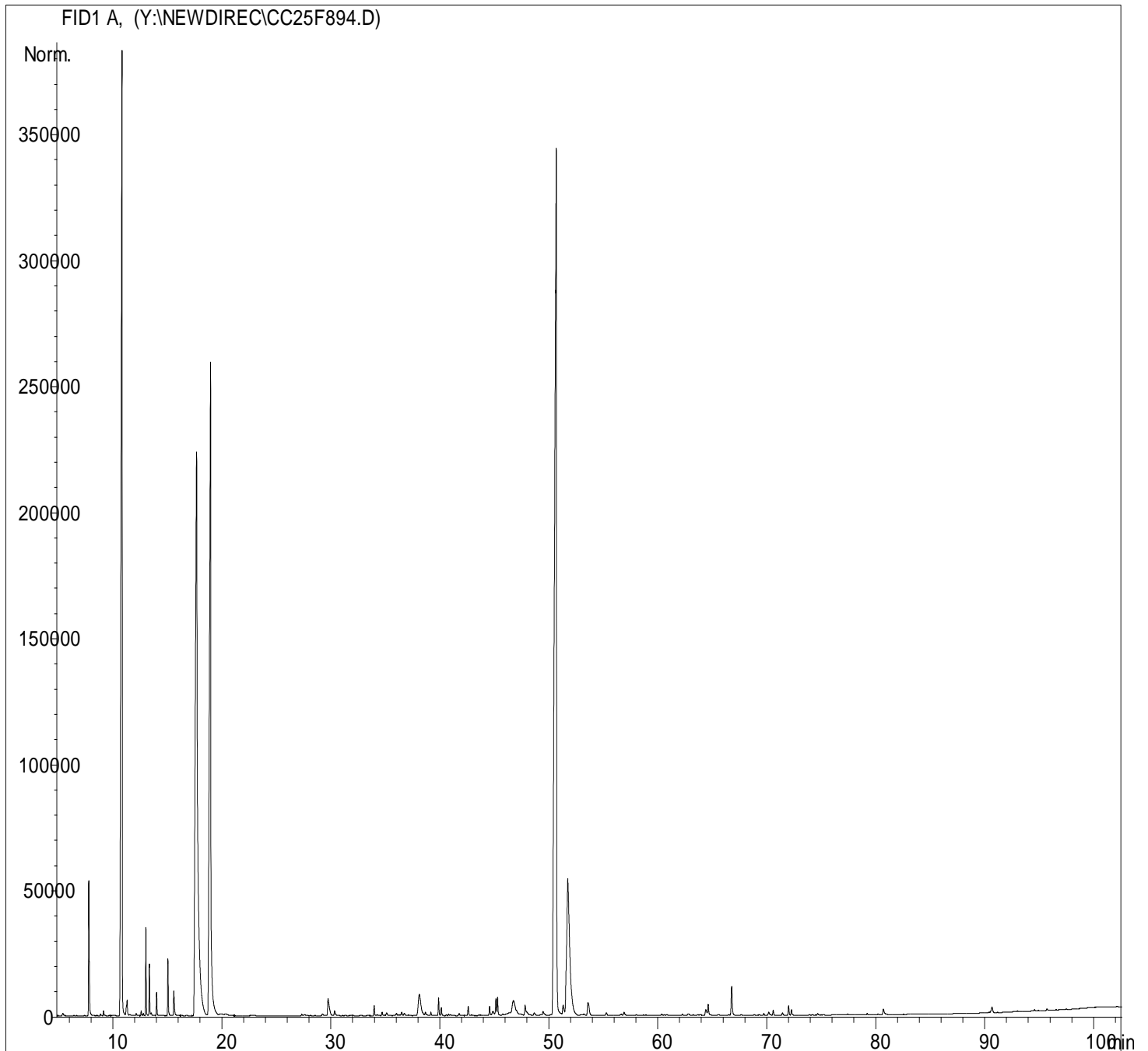




GCMS ANALYSIS

PRODUCT NAME: CUMIN ESSENTIAL OIL - 11044

DATE: April 10, 2017



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: CUMIN ESSENTIAL OIL - 11044

Peak	RT (min)	COMPONENT name	%
1	5,4	2-METHYLBUTANAL + ETHANOL	0,05
2	7,7	α-PINENE	1,09
3	7,9	α-THUYENE	0,34
4	7,9	CYCLOHEXANE METHYLETHYLIDENE ISO, Mw=124	0,04
5	8,2	TOLUENE	0,01
6	8,9	α-FENCHENE	0,02
7	9,2	CAMPHENE	0,06
8	10,1	DIMETHYL OCTADIENE ISOMER	0,01
9	10,8	β-PINENE	17,57
10	11,2	ISOAMYL ACETATE	0,13
11	11,3	SABINENE	0,16
12	11,5	PINADIENE	0,02
13	11,6	THUYADIENE	0,02
14	12,1	p-MENTH-2-ENE	0,03
15	12,6	Δ3-CARENE	0,05
16	12,8	COMPONENT Mw=122	0,02
17	13,0	β-MYRCENE	0,77
18	13,4	α-PHELLANDRENE	0,48
19	13,4	ψ-LIMONENE	0,01
20	13,5	METHYL ETHYL BENZENE ISOMER	0,05
21	14,0	α-TERPINENE	0,23
22	14,3	2-HEXENAL	0,01
23	14,5	2,3-DEHYDRO-1,8-CINEOLE	0,01
24	15,1	LIMONENE	0,59
25	15,6	β-PHELLANDRENE + 1,8-CINEOLE	0,37
26	16,4	FURAN, 2-PENTYL-	0,01
27	16,8	Cis-β-OCIMENE	0,01
28	17,7	γ-TERPINENE	20,49
29	19,0	p-CYMENE	14,96
30	19,9	ISOTERPINOLENE	0,11
31	20,4	TERPINOLENE	0,11

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CUMIN ESSENTIAL OIL - 11044

Peak	RT (min)	COMPONENT name	%
32	27,3	MENTHATRIENE ISOMER	0,03
33	29,2	MENTHATRIENE ISOMER	0,05
34	29,8	α ,p-DIMETHYLSTYRENE	0,47
35	30,4	MENTHATRIENE ISOMER	0,10
36	30,7	ACETIC ACID	0,01
37	31,3	α -CUBEBENE + Trans-THUYANOL	0,02
38	32,7	AROMATIC COMPONENT	0,01
39	34,0	DAUCENE	0,13
40	34,3	α -COPAENE	0,02
41	34,7	ALIPHATIC ALCOHOL	0,06
42	35,1	TERPENIC KETONE ISOMER Mw=152	0,05
43	36,0	LINALOOL	0,05
44	36,2	IONONE COMPONENT	0,02
45	36,3	SESQUITERPENE	0,02
46	36,5	LINALYL ACETATE + β 1-CUBEBENE	0,06
47	36,7	Cis-p-MENTH-3-EN-7-AL	0,06
48	37,3	Trans-p-MENTH-2-EN-1-OL	0,01
49	37,7	4-CARANONE	0,02
50	38,1	p-MENTH-3-EN-7-AL	0,88
51	38,4	FENCHOL	0,04
52	38,7	TERPENIC KETONE	0,08
53	39,1	α ,trans-BERGAMOTENE	0,04
54	39,9	TERPINENE-4-OL	0,22
55	40,1	β -CARYOPHYLLENE	0,11
56	40,6	SESQUITERPENE	0,01
57	40,8	Cis-DIHYDROCARVONE	0,02
58	41,0	β -CEDRENE	0,02
59	41,2	Cis-p-MENTH-2-EN-1-OL	0,01
60	41,8	MYRTENAL	0,04
61	42,0	SABINACETONE	0,02
62	42,6	THUYENYL ACETATE ISOMER + trans-PINOCARVEOL	0,13

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CUMIN ESSENTIAL OIL - 11044

Peak	RT (min)	COMPONENT name	%
63	43,6	ZONARENE	0,02
64	43,8	AROMATIC COMPONENT	0,01
65	44,6	E- β -FARNESENE	0,13
66	44,9	NERAL + CRYPTONE	0,12
67	45,2	CARVOTANACETONE	0,24
68	45,3	α -TERPINEOL	0,23
69	46,3	BORNEOL	0,14
70	46,8	DAUCENE ISOMER	0,75
71	47,0	SESQUITERPENE	0,12
72	47,2	CARVENONE	0,08
73	50,5	SESQUITERPENE	0,01
74	47,8	PELLANDRAL	0,21
75	48,0	SESQUITERPENE + CARVONE	0,11
76	48,7	α -FARNESENE	0,07
77	49,3	δ -CADINENE	0,04
78	49,5	TIGLIC ACID	0,12
79	50,7	CUMINAL	26,90
80	51,3	MYRTENOL	0,25
81	51,7	p-MENTH-1,3-DIEN-7-AL	6,70
82	51,8	p-MENTH-1,4-DIEN-7-AL	
83	52,4	SABINOL ISOMER + β -DAMASCENONE	0,06
84	52,9	Trans-ANETHOLE	0,04
85	53,2	Trans-CARVEOL	0,05
86	53,6	p-CYMENE-8-OL	0,39
87	55,3	TERPENIC ESTER	0,06
88	56,6	TERPENIC ESTER	0,04
89	56,9	SABINOL ISOMER	0,08
90	58,0	HYDROXYETHYL ISOBUTYL BENZENE Mw=178	0,02
91	60,4	α -PELLANDRENE- Δ -5,6-DIMERE	0,02
92	62,3	PERILLIC ALCOHOL	0,02
93	62,8	CARYOPHYLLENE EPOXIDE + COMPONENT Mw=150	0,04

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: CUMIN ESSENTIAL OIL - 11044

Peak	RT (min)	COMPONENT name	%
94	64,4	p-MENTHA-1,4-DIEN-7-OL	0,14
95	64,6	CAROTOL	0,17
96	65,6	CEDRENE OXIDE	0,02
97	66,5	CAPRYLIC ACID	0,02
98	66,8	CUMINOL	0,50
99	67,7	AROMATIC COMPONENT Mw=234	0,01
100	69,3	SPATHULENOL	0,01
101	69,7	ISOTHYMOL	0,02
102	70,2	PENTADECANONE TRIMETHYL	0,05
103	70,6	THYMOL	0,06
104	71,4	ISOCARVACROL	0,04
105	72,0	CARVACROL	0,13
106	72,3	4(1-METHYLETHYL) PHENOL	0,07
107	74,7	EUDESMOL ISOMER	0,03
108	77,4	DAUCOL	0,02
109	79,2	DILLAPIOL	0,03
110	80,7	AROMATIC COMPONENT Mw=168	0,14
111	90,7	TERPENIC COMPONENT	0,13
112	93,0	AROMATIC COMPONENT	0,05
113	94,6	TERPENIC COMPONENT	0,02
114	95,7	AROMATIC COMPONENT	0,03
115	97,5	AROMATIC COMPONENT	0,01
116	102,1	AROMATIC COMPONENT	0,02
		TOTAL	99,43

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