

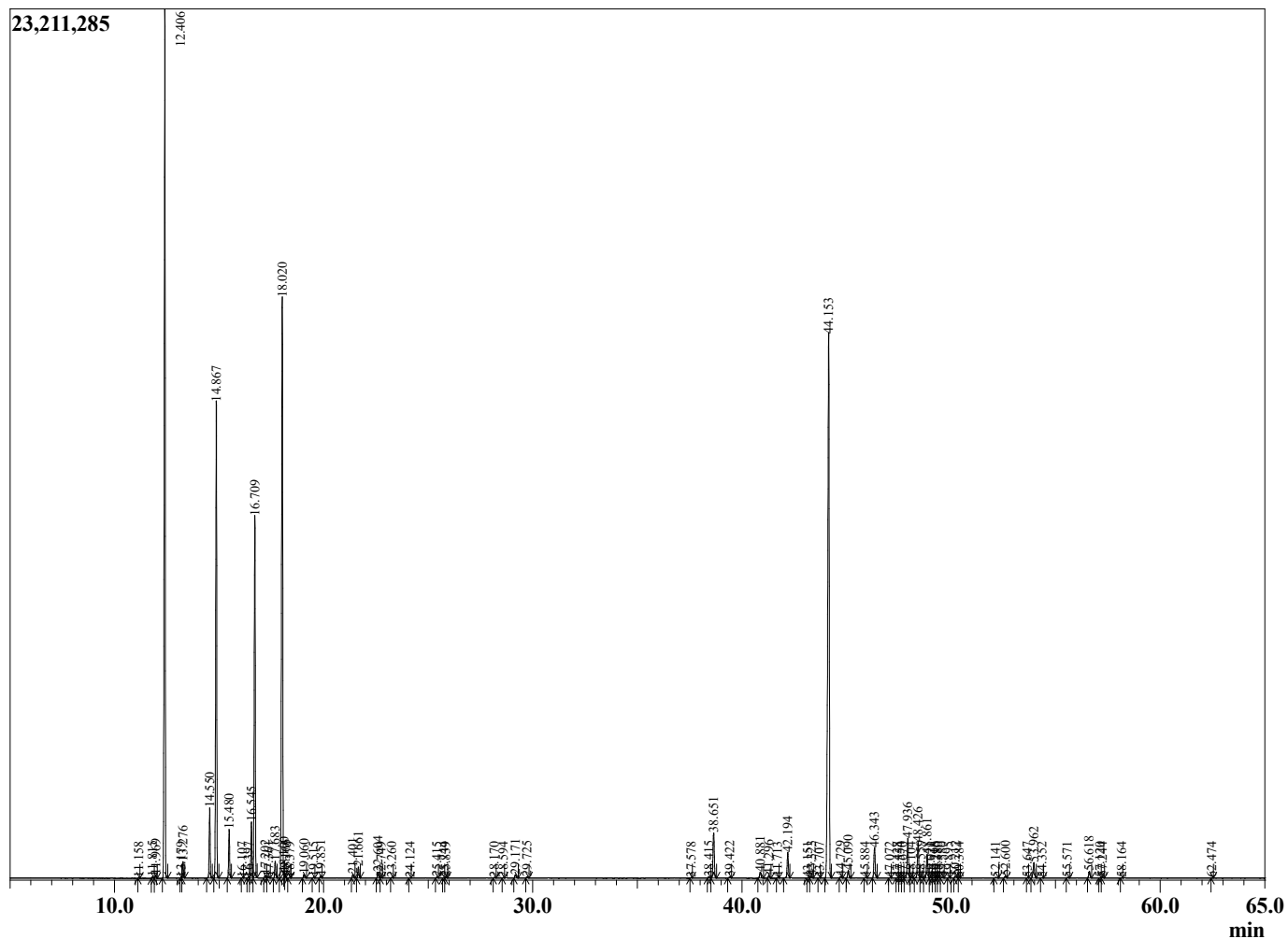
Sample Information

Sample Type : Essential Oil  
 Sample Name : Piper nigrum  
 Injection : 0.10  
 Volume :

Pepper Black  
 Lot# MAE33-EK  
 Country: Madagascar



Chromatogram Piper nigrum



R.Time	Name	Area%
11.158	Octene analog	0.01
11.815	Tricyclene	0.03
11.969	alpha-Thujene	0.07
12.406	alpha-Pinene	22.72
13.179	alpha-Fenchene	0.01
13.276	Camphene	0.39
14.550	Sabinene	1.78
14.867	beta-Pinene	12.44
15.480	Myrcene	1.20
16.107	delta-2-Carene	0.01
16.397	Pseudolimonene	0.02
16.545	alpha-Phellandrene	1.52
16.709	delta-3-Carene	9.72
17.202	alpha-Terpinene	0.08
17.361	Cymene isomer	0.03
17.683	para-Cymene	0.46
18.020	Limonene	17.92
18.100	beta-Phellandrene	0.01
18.166	1,8-Cineole	0.02
18.379	cis-beta-Ocimene	0.01
19.060	trans-beta-Ocimene	0.11
19.515	alpha-Thujene	0.02
19.851	gamma-Terpinene	0.05
21.401	Terpinolene analog	0.11
21.661	Terpinolene	0.32
22.604	Linalool	0.18
22.749	Unidentified	0.01
23.260	Thujol	0.02
24.124	trans-para-Mentha-2,8-dienol	0.01
25.415	trans-Pinocarveol	0.02
25.744	trans-Verbenol	0.01
25.839	Camphor	0.03
28.170	Terpinen-4-ol	0.02
28.594	Unidentified	0.01
29.171	alpha-Terpineol	0.12
29.725	2-Pinen-4-ol	0.04
37.578	Unidentified	0.02
38.415	Elemene isomer	0.04
38.651	delta-Elemene	1.51
39.422	alpha-Cubebene	0.05
40.881	Cyclosativene	0.22
41.296	alpha-Copaene	0.09
41.713	Elemene isomer	0.01
42.194	beta-Elemene	0.85
43.151	Unidentified	0.01
43.323	alpha-Gurjunene	0.06
43.707	Unidentified	0.01
44.153	beta-Caryophyllene	21.37
44.729	gamma-Elemene	0.05
45.090	alpha-Guaiene	0.26
45.884	Unidentified	0.02
46.343	alpha-Humulene	1.04
47.072	beta-Elemene	0.01
47.428	Unidentified	0.01
47.554	trans-Cadina-1(6),4-diene	0.02
47.670	Valencene	0.01

R.Time	Name	Area%
47.936	Germacrene D	1.37
48.104	Selina-4,11-diene	0.02
48.426	beta-Selinene	1.24
48.559	Viridiflorene	0.05
48.861	alpha-Selinene	0.85
49.021	alpha-Murolene	0.03
49.218	Unidentified	0.03
49.290	Unidentified	0.04
49.380	trans,trans-alpha-Farnesene	0.03
49.580	beta-Bisabolene	0.03
49.895	gamma-Cadinene	0.02
50.212	delta-Cadinene	0.09
50.384	Unidentified	0.01
52.141	Caryophyllene oxide	0.04
52.600	Germacrene B	0.07
53.647	Unidentified	0.01
53.962	Caryophyllene oxide	0.59
54.352	Unidentified	0.01
55.571	Humulene epoxide II	0.02
56.618	Spathulenol	0.22
57.120	Unidentified	0.02
57.244	Unidentified	0.03
58.164	Unidentified	0.01
62.474	Unidentified	0.01
		100.00