

Sample Information

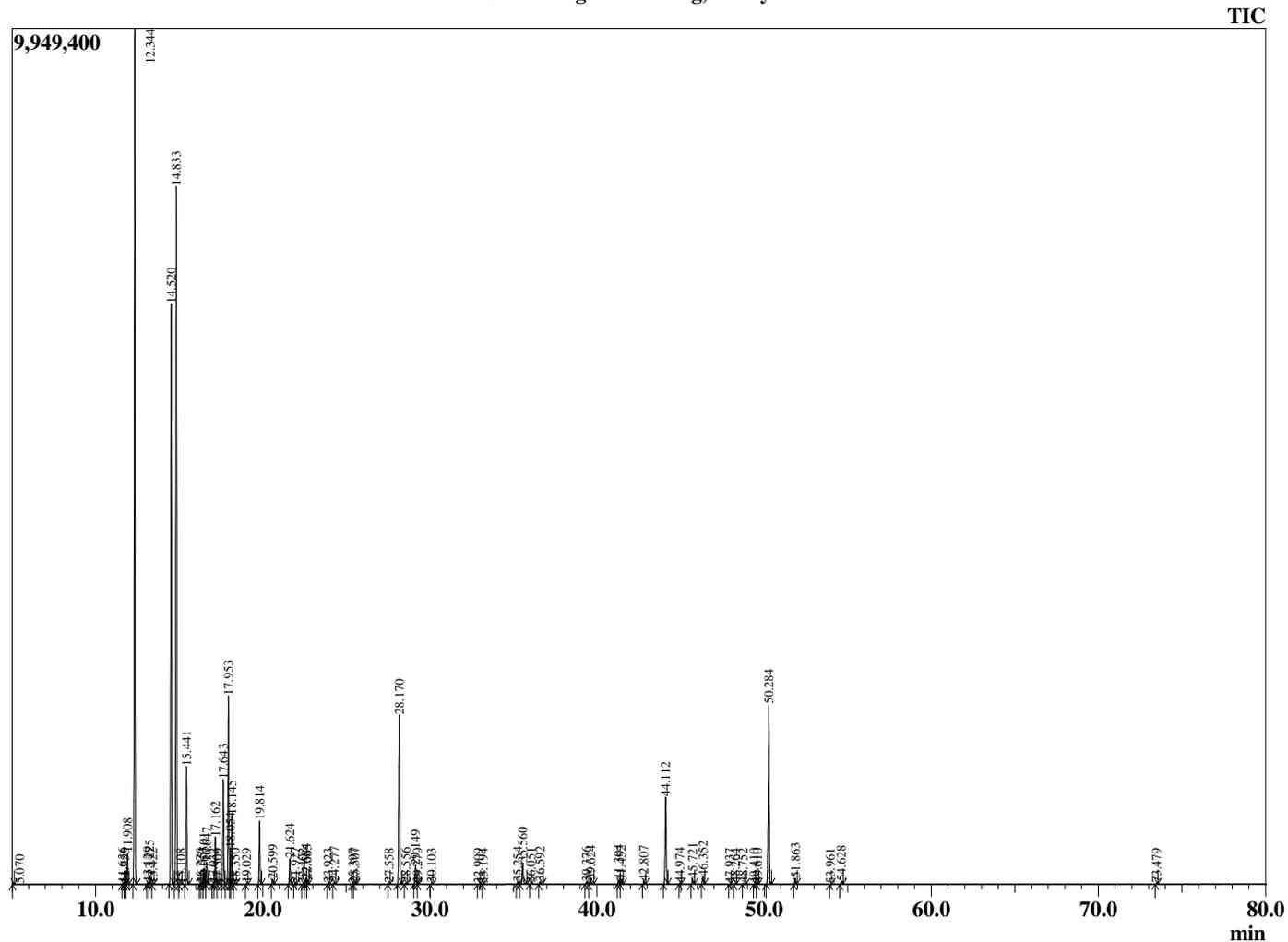
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 10/2/2018 10:32:17 PM
 Sample Type : Essential Oil
 Sample Name : Nutmeg, Malaysia
 Sample ID : DOB1002B
 Injection Volume : 0.10
 Instrument ID : GC-3



Peak Report TIC

R.Time	Name	Area%
5.070	1-Pentanol	0.01
11.636	Hashishene	0.03
11.755	Tricyclene	0.01
11.908	alpha-Thujene	0.75
12.344	alpha-Pinene	23.35
13.129	alpha-Fenchene	0.05
13.225	Camphene	0.22
13.422	Thuja-2,4(10)diene	0.01
14.520	Sabinene	16.37
14.833	beta-Pinene	19.75
15.108	Unidentified	0.02
15.441	Myrcene	3.13
16.276	Octanal	0.01
16.351	Pseudolimonene	0.07
16.501	alpha-Phellandrene	0.45
16.647	delta-3-Carene	0.60
17.032	1,4-Cineole	0.02
17.162	alpha-Terpinene	1.34
17.309	ortho-Cymene	0.02
17.643	para-Cymene	3.02
17.953	Limonene	5.52
18.054	beta-Phellandrene	0.98
18.145	1,8-Cineole	1.94
18.350	cis-beta-Ocimene	0.02
19.029	trans-beta-Ocimene	0.02
19.814	gamma-Terpinene	1.88
20.599	trans-Sabinene hydrate	0.15
21.624	Terpinolene	0.80
21.927	para-Cymenene	0.04
22.402	Unidentified	0.02
22.584	Linalool	0.17
22.665	cis-Sabinene hydrate	0.13
23.923	alpha-Fenchol	0.03
24.277	cis-para-Menth-2-en-1-ol	0.07
25.397	trans-Pinocarveol	0.02
25.507	trans-para-Menth-2-en-1-ol	0.06
27.558	Borneol	0.03
28.170	Terpinen-4-ol	5.66
28.556	para-Cymen-8-ol	0.03
29.149	alpha-Terpineol	0.65
29.270	cis-Piperitol	0.02
30.103	trans-Piperitol	0.03
32.909	Geraniol	0.02
33.194	Unidentified	0.01
35.254	Bornyl acetate	0.06
35.560	Safrole	0.81
36.051	Unidentified	0.02
36.592	Unidentified	0.09
39.376	alpha-Terpinyl acetate	0.10
39.624	Eugenol	0.15
41.304	alpha-Copaene	0.15
41.452	Geranyl acetate	0.10
42.807	Methyleugenol	0.11
44.112	beta-Caryophyllene	3.28
44.974	trans-alpha-Bergamotene	0.03
45.721	trans-Isoeugenol	0.20
46.352	alpha-Humulene	0.28
47.937	Germacrene D	0.01
48.264	Unidentified	0.02
48.752	Methyl isoeugenol	0.03
49.410	(E,E)-alpha-Farnesene	0.01
49.610	beta-Bisabolene	0.02

Chromatogram Nutmeg, Malaysia



Comments:

The analysis of this Nutmeg batch sample meets the expected chemical profile for authentic essential oil of *Myristica fragrans*. No contamination or adulteration was detected. The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.

R.Time	Name	Area%
50.284	Myristicin	6.70
51.863	Elemicin	0.19
53.961	Caryophyllene oxide	0.01
54.628	Methoxyeugenol	0.11
73.479	beta-Springene	0.02
		100.00