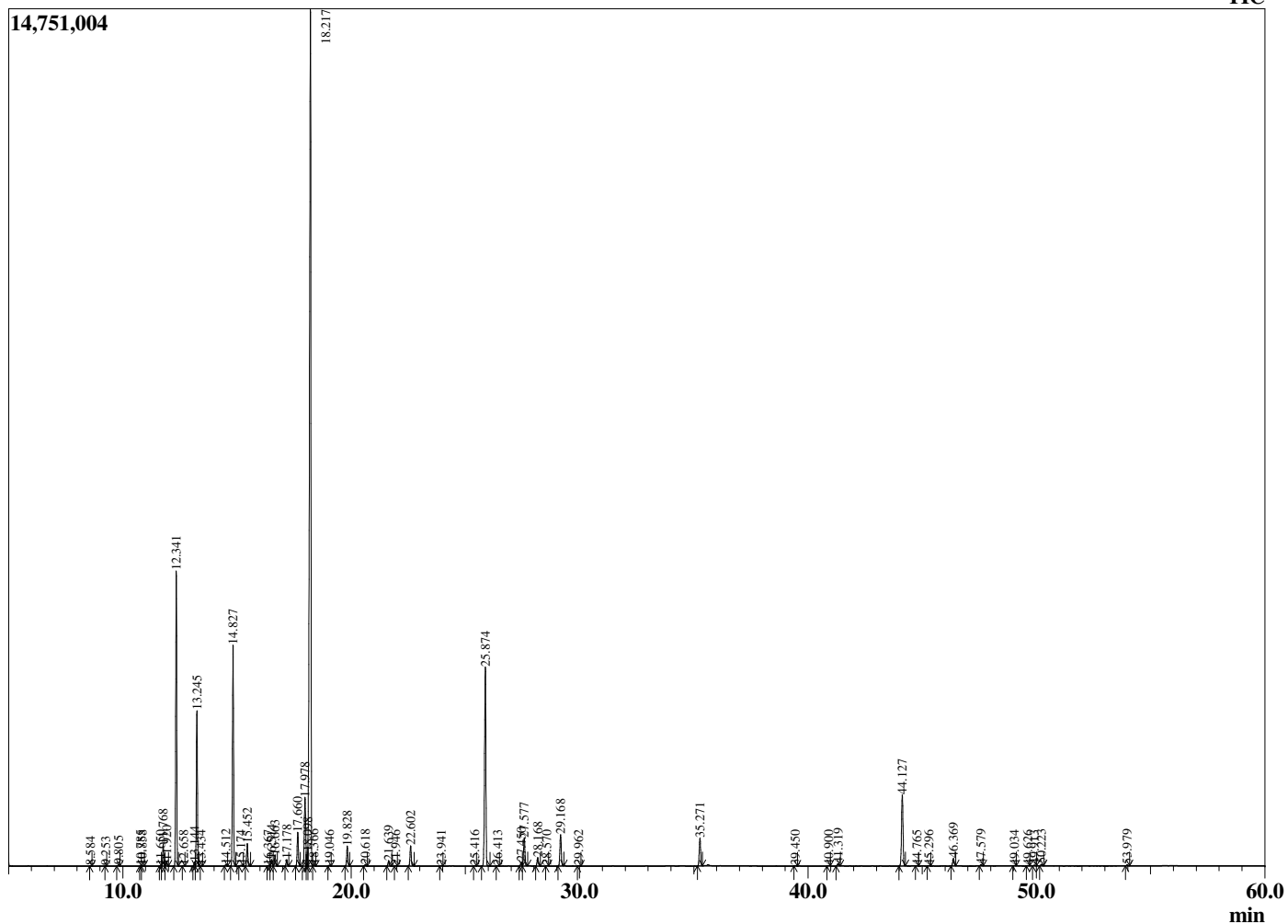## Sample Information

Analyzed by   : Dr. Robert S. Pappas
Analyzed   : 11/09/2018 10:24:41 PM
Sample Type   : Essential Oil
Sample Name : Rosemary, Morocco
Sample ID   : D0B1002J
Injection Volume : 0.10
Instrument ID: : GC-3

Essential Oil University — Est. 1999

Chromatogram Rosemary, Morocco

TIC

14,751,004

Peak Report TIC

R.Time	Name	Area%
8.584	3-cis-Hexenol	0.01
9.253	Unidentified	0.01
9.805	Cyclofenchene	0.05
10.785	Bornylene	0.01
10.858	Bornylene isomer	0.02
11.650	Hashishene	0.02
11.768	Tricyclene	0.75
11.920	alpha-Thujene	0.17
12.341	alpha-Pinene	10.70
12.658	beta-Fenchene	0.02
13.144	alpha-Fenchene	0.14
13.245	Camphene	5.78
13.434	Thuja-2,4(10)diene	0.01
14.512	Sabinene	0.06
14.827	beta-Pinene	8.75
15.174	3-Octanone	0.04
15.452	Myrcene	0.88
16.367	Pseudolimonene	0.02
16.514	alpha-Phellandrene	0.26
16.663	delta-3-Carene	0.43
17.178	alpha-Terpinene	0.27
17.660	para-Cymene	1.44
17.978	Limonene	3.39
18.098	beta-Phellandrene	0.41
18.217	1,8-Cineole	44.99
18.366	cis-beta-Ocimene	0.04
19.046	trans-beta-Ocimene	0.03
19.828	gamma-Terpinene	0.86
20.618	trans-Sabinene hydrate	0.05
21.639	Terpinolene	0.22
21.946	para-Cymenene	0.01
22.602	Linalool	0.93
23.941	alpha-Fenchol	0.03
25.416	trans-Pinocarveol	0.02
25.874	Camphor	9.71
26.413	trans-beta-Terpineol	0.02
27.450	delta-Terpineol	0.18
27.577	Borneol	1.36
28.168	Terpinen-4-ol	0.40
28.570	para-Cymen-8-ol	0.02
29.168	alpha-Terpineol	1.51
29.962	Unidentified	0.02
35.271	Bornyl acetate	1.38
39.450	alpha-Cubebene	0.02
40.900	alpha-Ylangene	0.02
41.319	alpha-Copaene	0.11
44.127	beta-Caryophyllene	3.77
44.765	beta-Copaene	0.01
45.296	Aromadendrene	0.02
46.369	alpha-Humulene	0.39
47.579	trans-Cadina-1(6),4-diene	0.07
49.034	alpha-Muurolene	0.02
49.626	beta-Bisabolene	0.02
49.913	gamma-Cadinene	0.04
50.223	delta-Cadinene	0.08
53.979	Caryophyllene oxide	0.05
		100.00

Comments:

The analysis of this Rosemary, Morocco batch sample meets the
expected chemical profile for authentic essential oil of
Rosmarinus officinalis. 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.