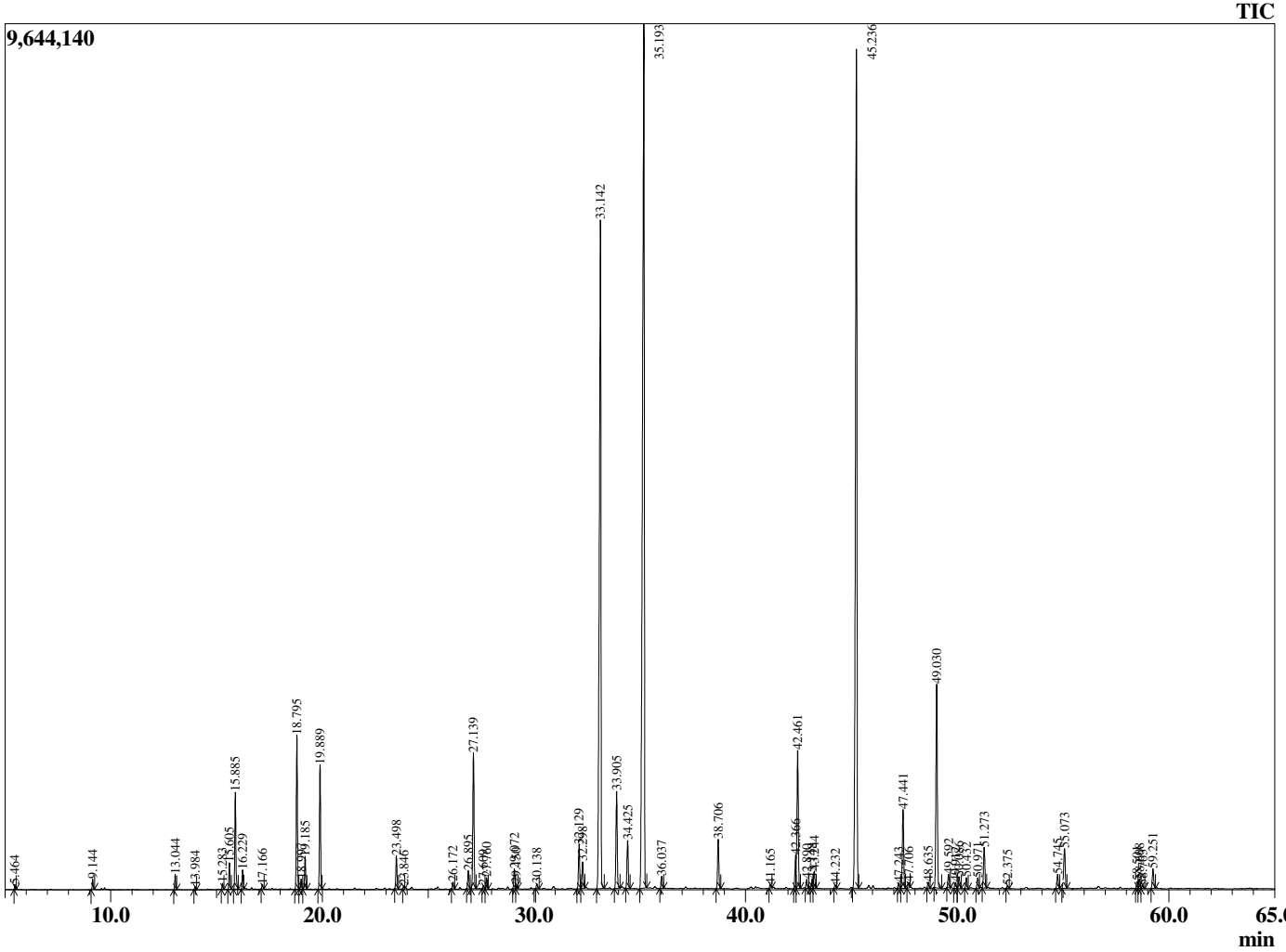
Sample Information

Analyzed by : Dr. Robert S. Pappas
Analyzed : 4/25/2020 7:04:56 AM
Sample Type : Essential Oil
Sample Name : Melissa - Barefut
Sample ID : 0104
Injection Volume : 0.10
Instrument ID: : GC-3

Chromatogram Melissa - Barefut



Peak Report TIC

R.Time	Name	Area%
4.247	3-Methylbutanal	0.08
4.360	2-Methylbutanal	0.04
5.464	1-Pentanol	0.06
9.144	Hex-3(Z)-enol	0.16
13.044	alpha-Pinene	0.24
13.984	Camphene	0.05
15.283	Sabinene	0.10
15.605	1-Octen-3-ol	0.44
15.885	6-Methyl hept-5-en-2-one	1.70
16.229	Myrcene	0.33
17.166	Hex-3(Z)-enyl acetate	0.08
18.795	Limonene	2.73
18.997	1,8-cineole	0.20
19.185	cis-beta-Ocimene	0.60
19.889	trans-beta-Ocimene	2.22
23.498	Linalool	0.62
23.846	Nonanal	0.06
26.172	Epiphotocitral A	0.13
26.895	trans-Chrysanthemal	0.36
27.139	Citronellal	2.79
27.609	Isopulegol	0.06
27.760	Isoneral	0.22
29.072	Isogeranial	0.42
29.150	Unidentified	0.08
30.138	alpha-Terpineol	0.09
32.129	Nerol	0.89
32.298	Citronellol	0.59
33.142	Neral	17.59
33.905	Geraniol	2.06
34.425	Methyl citronellate	1.02
35.193	Geranial	25.82
36.037	trans-Carvone oxide	0.26
38.706	Methyl geranate	1.03
41.165	Neryl acetate	0.07
42.366	alpha-Copaene	0.65
42.461	Geranyl acetate	3.08
42.890	beta-Bourbonene	0.19
43.148	beta-Cubebene	0.20
43.244	beta-Elemene	0.40
44.232	cis-beta-Caryophyllene	0.08
45.236	beta-Caryophyllene	20.94
47.243	trans-beta-Farnesene	0.11
47.441	alpha-Humulene	1.76
47.706	Alloaromadendrene	0.11
48.635	trans-Cadina-1(6),4-diene	0.13
49.030	Germacrene D	4.75
49.592	(Z,Z)-alpha-Farnesene	0.30
49.912	Bicyclogermacrene	0.16
50.086	alpha-Muurolene	0.26
50.432	(E,E)-alpha-Farnesene	0.23
50.971	gamma-Cadinene	0.22
51.273	delta-Cadinene	0.94
52.375	alpha-Cadinene	0.06
54.745	Germacren D-4-ol	0.31
55.073	Caryophyllene oxide	1.05
58.501	tau-Cadinol	0.15
58.608	epi-alpha-Cadinol	0.22
58.763	delta-Cadinol	0.07
59.251	alpha-Cadinol	0.45
		100.00

Comments:

The analysis of this Melissa batch sample meets the expected chemical profile for authentic essential oil of *Melissa 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.