

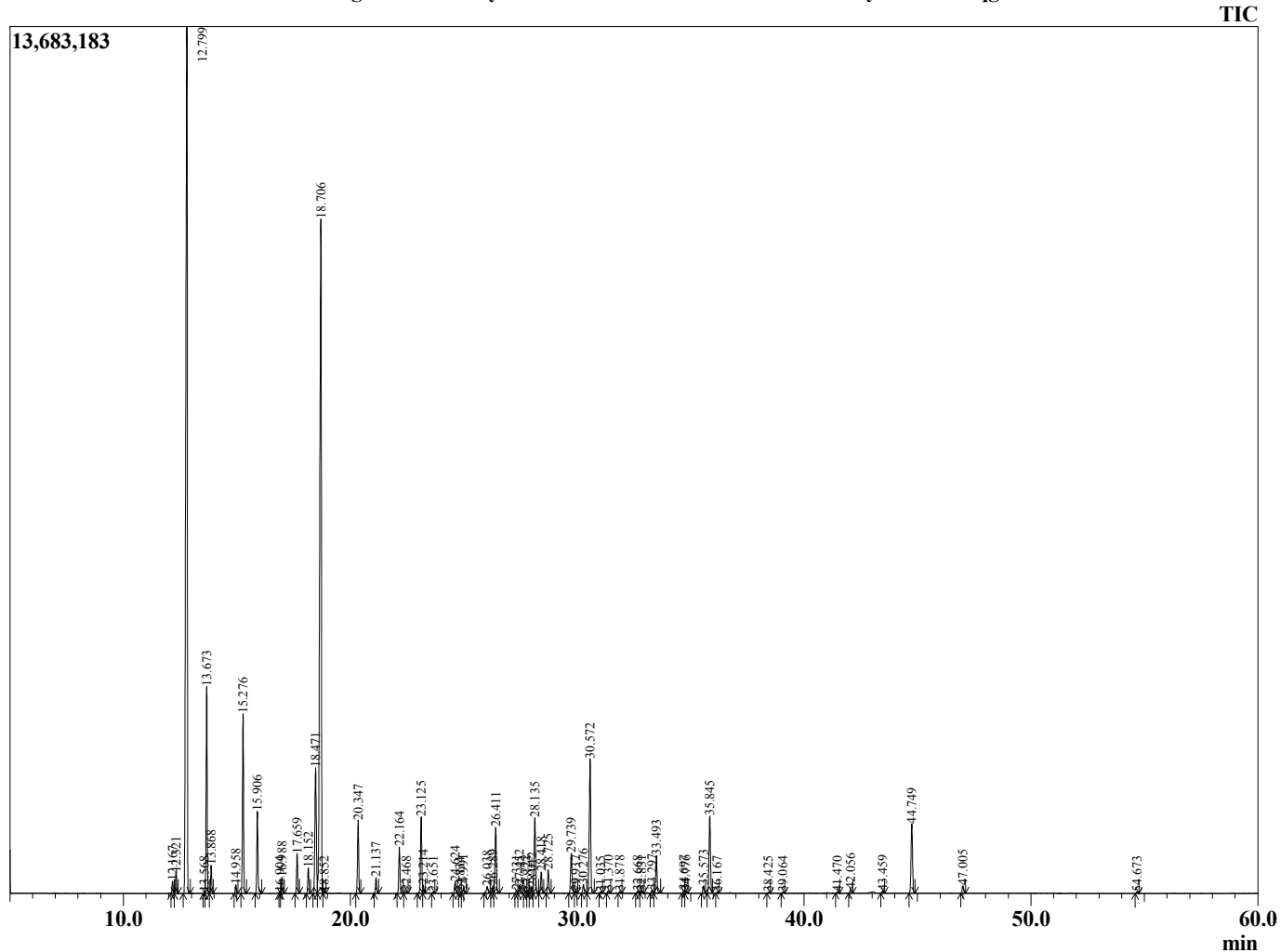
Sample Information

Analyzed by : Dr. S
 Analyzed : 1/24/17 2:12:23 PM
 Sample Type : Essential Oil
 Sample Name : Rosemary
 Sample ID : 17085001
 Injection Volume : 0.20
 Data File : C:\GCMSsolution\Data\EOU\Rosemary 17085001.qgd



R.Time	Name	Area%
12.167	Tricyclene	0.27
12.321	Thujene <alpha->	0.47
12.799	Pinene <alpha->	29.59
13.568	Fenchene <alpha->	0.03
13.673	Camphene	4.92
13.868	Thuja-2,4(10)diene	0.63
14.958	Sabinene	0.20
15.276	Pinene <beta->	4.41
15.906	Myrcene	2.07
16.904	1,4-Cyclohexadiene, 3-ethenyl-1,2-dimethyl-	0.03
16.988	Phellandrene <alpha->	0.41
17.659	Terpinene <alpha->	1.01
18.152	Cymene<para->	0.68
18.471	Limonene	4.08
18.706	Cineole <1.8>	24.87
18.852	Ocimene <Z-beta>	0.04
20.347	Terpinene <gamma>	1.92
21.137	Sabinene hydrate <cis->	0.42
22.164	Terpinolene	1.26
22.468	Cymenene-para	0.06
23.125	Linalool	2.21
23.214	Sabinene hydrate <trans->	0.18
23.651	Isochrysanthenone	0.03
24.624	Chrysanthenone	0.32
24.834	Menth-2-en-1-ol <cis-p>	0.02
24.991	Campholenal<alpha->	0.13
26.038	Verbenol<cis->	0.26
26.289	Verbenol<trans->	0.20
26.411	Camphor	1.93
27.331	Pinocamphone<trans->	0.09
27.452	Pinocarvone	0.23
27.722	Isofenchol	0.07
27.823	Camphene<acetoxy-exo>	0.03
28.012	Terpineol <delta>	0.17
28.135	Borneol	2.31
28.418	Pinocamphone<cis->	0.61
28.725	Terpinen-4-ol	0.68
29.739	Terpineol <alpha>	1.36
29.937	Methyl chavicol	0.05
30.276	Borneol <epi->	0.26
30.572	Verbenone	4.32
31.035	Cineole <3-oxo>	0.04
31.370	Cyclohexane, (4-methylpentyl)-	0.07
31.878	Citronellol	0.06
32.668	Neral	0.08
32.831	Shisool <cis->	0.06
33.297	Shisool <trans->	0.09
33.493	Geraniol	1.10
34.697	Geranial	0.09
34.776	Isopiperitenone	0.06
35.573	Verbenyl acetate<cis->	0.23
35.845	Bornyl acetate	2.39
36.167	Verbenyl acetate<trans->	0.03
38.425	Myrtenyl acetate<cis->	0.03
39.064	Elemene<delta>	0.03
41.470	Dihydrocarvyl acetate <trans->	0.05
42.056	Geranyl acetate	0.13
43.459	Methyleugenol	0.07
44.749	Caryophyllene <trans>	2.29
47.005	Humulene <alpha>	0.25
54.673	Caryophyllene oxide <beta>	0.05
		100.00

Chromatogram Rosemary C:\GCMSsolution\Data\EOU\Rosemary 17085001.qgd



Comments:

Typical Ranges of Main Components:

The sample conforms to the expected chemical profile for the alpha-pinene chemotype of rosemary essential oil. Verbenone content was very healthy at 4.32%. Odor quality is excellent.