

Sample Information

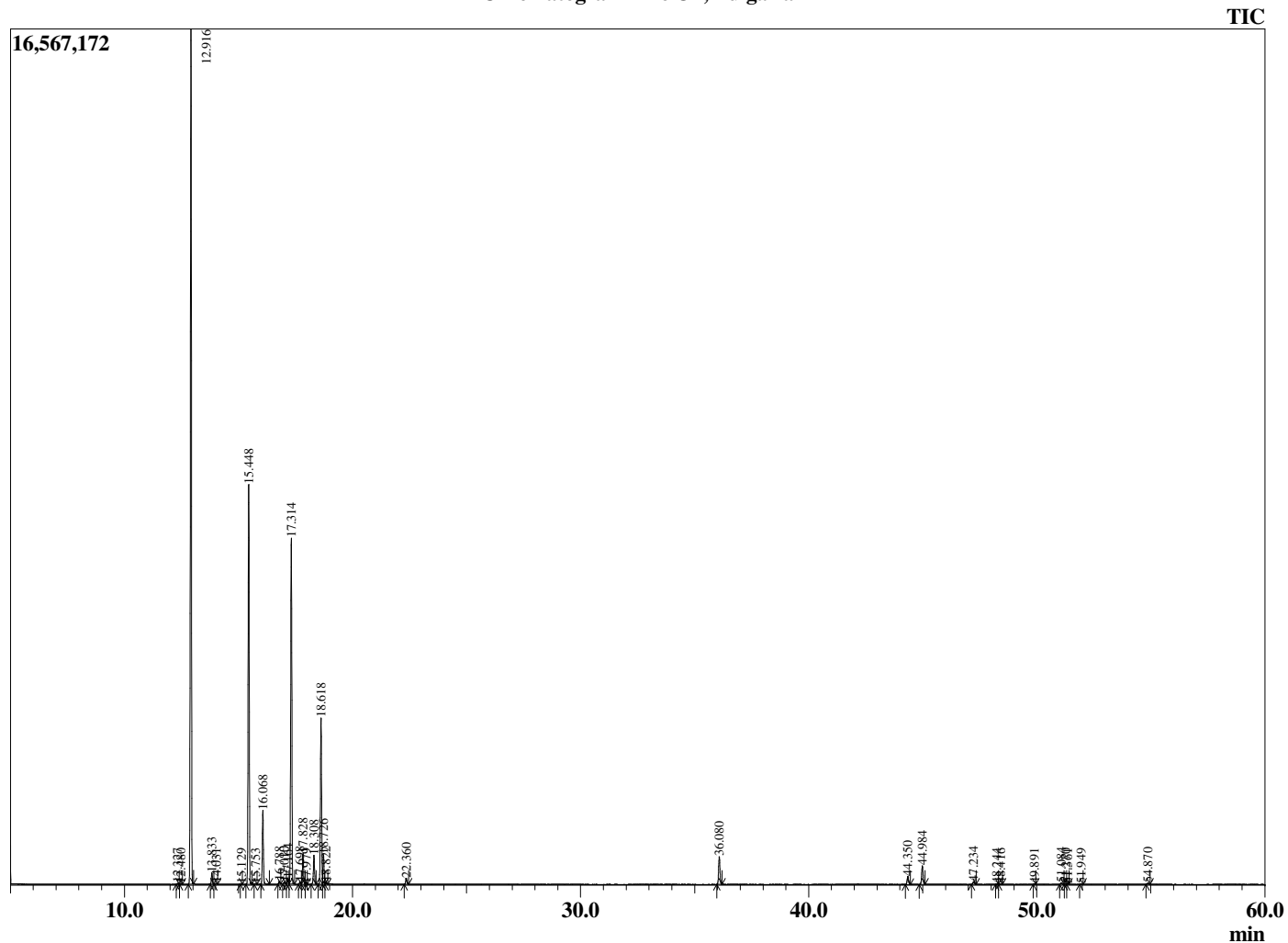
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 9/26/2018 8:09:02 AM
 Sample Type : Essential Oil
 Sample Name : Pine Oil, Bulgaria
 Sample ID : A0804C
 Injection Volume : 0.10
 Instrument ID : GC-3



Peak Report TIC

R.Time	Name	Area%
12.327	Tricyclene	0.04
12.480	alpha-Thujene	0.02
12.916	alpha-Pinene	39.82
13.833	Camphene	0.53
14.031	Thuja-2,4(10)diene	0.04
15.129	Sabinene	0.02
15.448	beta-Pinene	19.79
15.753	Unidentified	0.03
16.068	Myrcene	3.59
16.788	3-para-Menthene	0.13
17.010	Pseudolimonene	0.12
17.164	alpha-Phellandrene	0.28
17.314	delta-3-Carene	17.64
17.698	1,4-Cineole	0.13
17.828	alpha-Terpinene	1.48
17.979	ortho-Cymene	0.01
18.308	para-Cymene	1.55
18.618	Limonene	8.84
18.726	beta-Phellandrene	1.53
18.822	1,8-Cineole	0.11
22.360	Terpinolene	0.34
36.080	Bornyl acetate	1.69
44.350	Junipene	0.53
44.984	beta-Caryophyllene	1.20
47.234	alpha-Humulene	0.20
48.244	Unidentified	0.03
48.416	trans-Cadina-1(6),4-diene	0.02
49.891	alpha-Murolene	0.02
51.084	delta-Cadinene	0.10
51.270	Unidentified	0.03
51.361	Zonarene	0.03
51.949	Unidentified	0.03
54.870	Caryophyllene oxide	0.07
		100.00

Chromatogram Pine Oil, Bulgaria



Comments:

The analysis of this Pine Oil, Bulgaria batch sample meets the expected chemical profile for authentic essential oil of *Pinus sylvestris*. 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.