

Sample Information

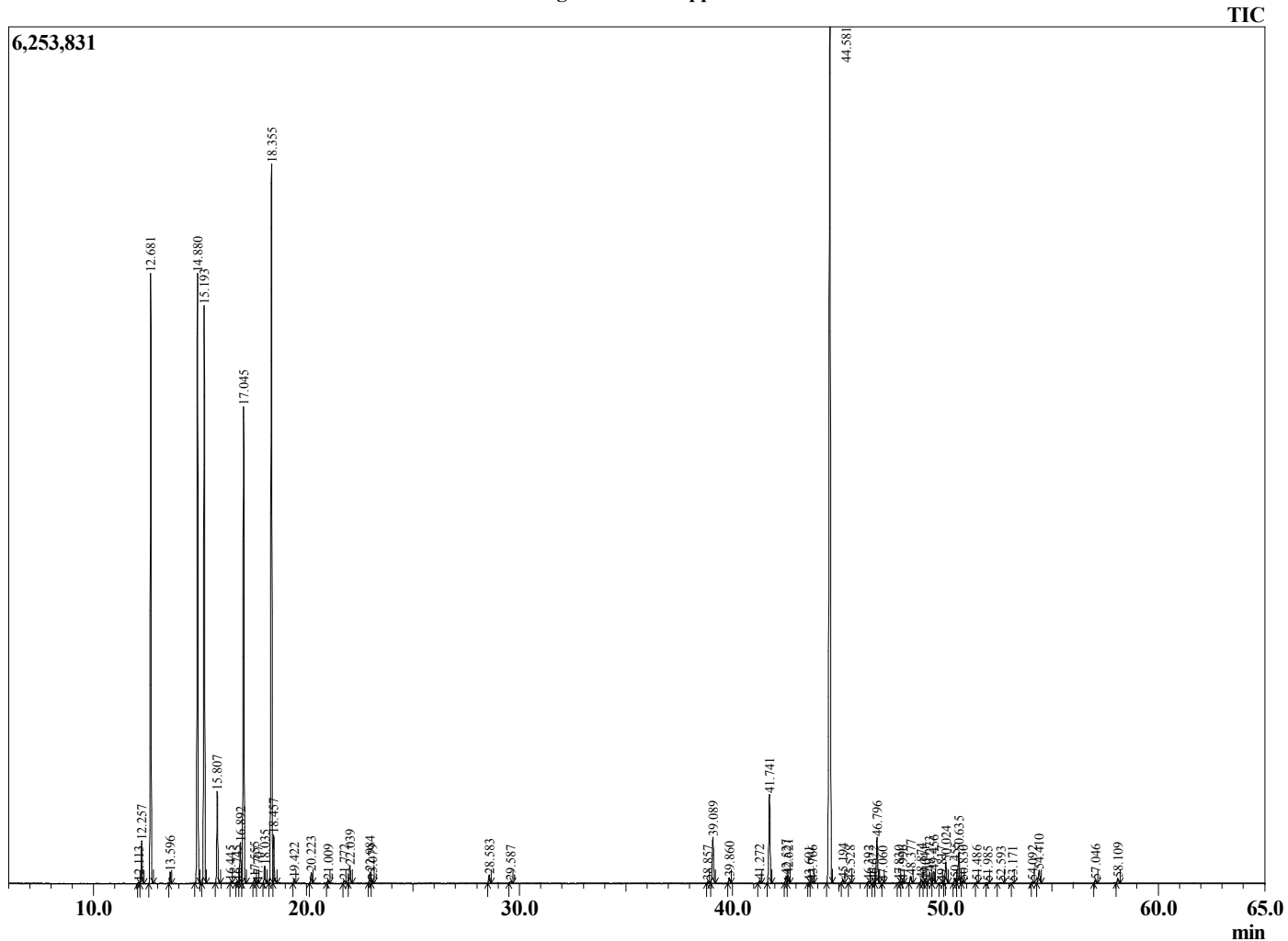
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 8/27/2019 1:53:18 PM  
 Sample Type : Essential Oil  
 Sample Name : Black Pepper - Revive  
 Sample ID : E0C0528D  
 Injection Volume : 0.10  
 Instrument ID : GC-2



Peak Report TIC

R.Time	Name	Area%
12.113	Tricyclene	0.01
12.257	alpha-Thujene	0.77
12.681	alpha-Pinene	11.10
13.596	Camphene	0.21
14.880	Sabinene	11.96
15.193	beta-Pinene	11.48
15.807	Myrcene	1.86
16.445	2-Carene	0.02
16.745	Pseudolimonene	0.03
16.892	alpha-Phellandrene	0.86
17.045	3-Carene	9.97
17.555	alpha-Terpinene	0.11
17.707	ortho-Cymene	0.02
18.035	para-Cymene	0.37
18.355	Limonene	15.61
18.457	beta-Phellandrene	0.99
19.422	E-beta-Ocimene	0.09
20.223	gamma-Terpinene	0.24
21.009	cis-Sabinene hydrate	0.08
21.772	m-Mentha-3(8),6-diene	0.07
22.039	Terpinolene	0.40
22.984	Linalool	0.25
23.079	trans-Sabinene hydrate	0.05
28.583	Terpinen-4-ol	0.21
29.587	alpha-Terpineol	0.06
38.857	Black Pepper unidentified	0.04
39.089	delta-Elemene	1.22
39.860	alpha-Cubebene	0.13
41.272	Isoledene	0.07
41.741	alpha-Copaene	2.42
42.527	beta-Cubebene	0.19
42.621	beta-Elemene	0.21
43.601	cis-Caryophyllene	0.02
43.766	alpha-Gurjunene	0.05
44.581	beta-Caryophyllene	24.06
45.194	beta-Copaene	0.10
45.528	alpha-Guaiene	0.03
46.392	trans-Muurolo-3,5-diene	0.04
46.622	E-beta-Farnesene	0.03
46.796	alpha-Humulene	1.24
47.060	Alloaromadendrene	0.02
47.830	cis-Muurolo-4(14),5-diene	0.03
47.996	trans-Cadina-1(6),4-diene	0.04
48.377	Germacrene D	0.18
48.874	beta-Selinene	0.09
49.041	trans-Muurolo-4(14),5-diene	0.05
49.273	Bicyclogermacrene	0.32
49.456	alpha-Muurolo	0.32
49.817	E,E-alpha-Farnesene	0.03
50.024	beta-Bisabolene	0.55
50.455	4-epi-Cubedol	0.13
50.635	delta-Cadinene	0.82
50.830	cis-Calamenene	0.03
51.486	trans-Cadina-1,4-diene	0.03
51.985	Black Pepper unidentified	0.02
52.593	Black Pepper unidentified	0.03
53.171	E-Nerolidol	0.02
54.092	Spathulenol	0.03
54.410	Caryophyllene oxide	0.40
57.046	Black Pepper unidentified	0.07
58.109	alpha-Cadinol	0.12
		100.00

Chromatogram Black Pepper - Revive



Comments:

The analysis of this Black Pepper batch sample meets the expected chemical profile for authentic essential oil of *Piper nigrum*. 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.

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