

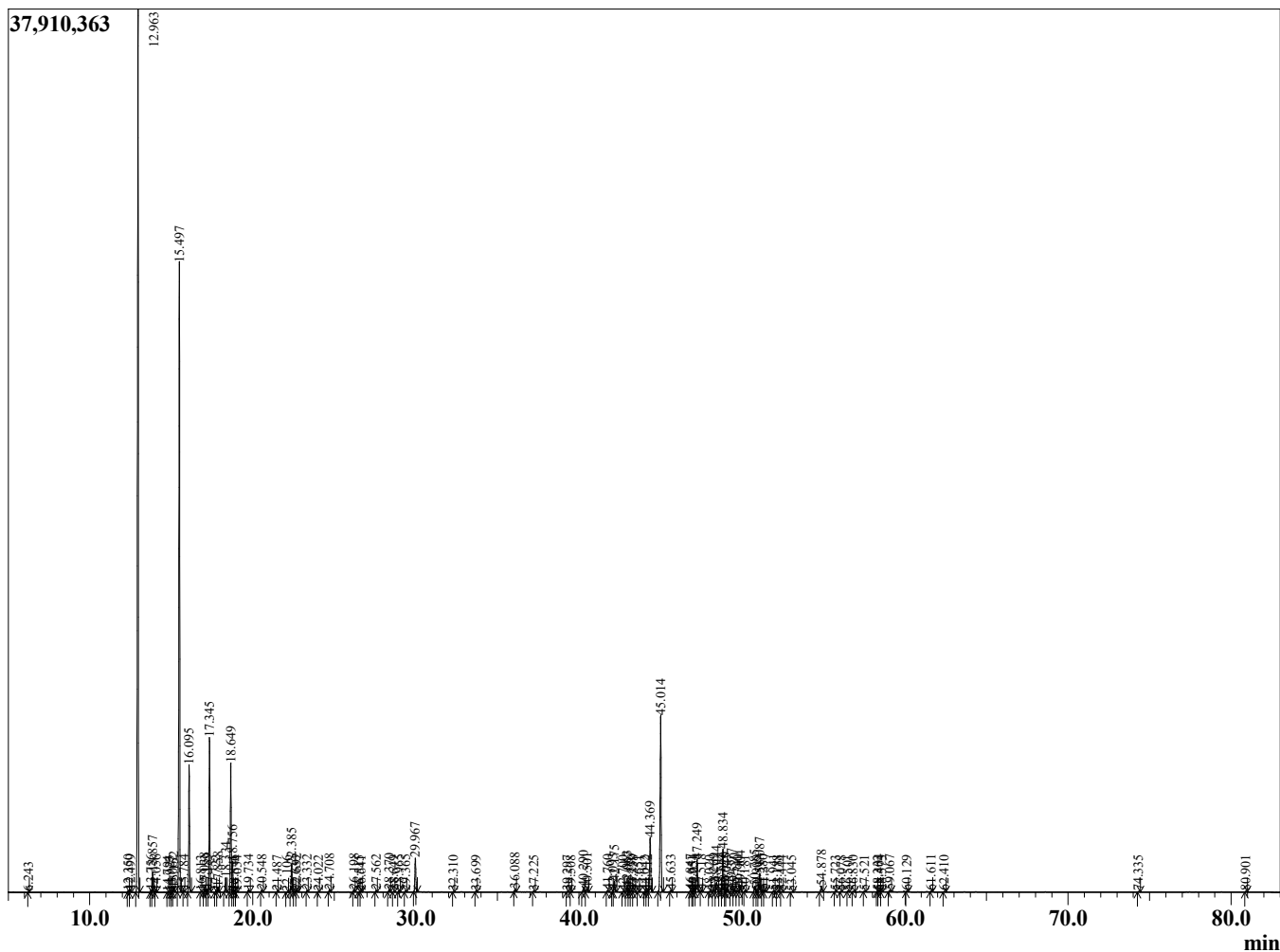
Sample Information

Sample Type : Essential Oil
 Sample Name : Pinus pinaster
 Injection Volume : 0.10

Pine Needle Maritime
 Lot# FRD21-DE
 Country: France



Chromatogram Pinus pinaster



R.Time	Name	Area%
6.243	Toluene	0.01
12.350	Tricyclene	0.04
12.499	alpha-Thujene	0.06
12.963	alpha-Pinene	34.64
13.756	alpha-Fenchene	0.06
13.857	Camphene	0.66
14.056	Thuja-2,4(10)diene	0.05
14.794	Unidentified	0.01
14.927	Unidentified	0.01
15.062	Unidentified	0.03
15.152	Sabinene	0.14
15.497	beta-Pinene	23.87
15.784	Camphene	0.05
16.095	Myrcene	4.30
16.813	Unidentified	0.02
17.038	Pseudolimonene	0.14
17.189	alpha-Phellandrene	0.10
17.345	delta-3-Carene	5.38
17.722	1,4-Cineole	0.03
17.858	alpha-Terpinene	0.16
18.334	para-Cymene	0.52
18.649	Limonene	4.75
18.756	beta-Phellandrene	1.06
18.846	1,8-Cineole	0.03
19.034	(Z)-beta-Ocimene	0.01
19.734	(E)-beta-Ocimene	0.07
20.548	gamma-Terpinene	0.07
21.487	Unidentified	0.02
22.106	Isoterpinolene	0.02
22.385	Terpinolene	1.08
22.633	Fenchone	0.02
22.692	Dehydro-para-cymene	0.09
23.332	Linalool	0.05
24.022	Thujol	0.02
24.708	alpha-Fenchol	0.10
26.198	trans-Pinocarveol	0.09
26.515	trans-Verbenol	0.01
26.641	Camphor	0.02
27.562	trans-Pinocamphone	0.05
28.370	Borneol	0.09
28.649	Isopinocampnone	0.03
28.965	Terpinen-4-ol	0.08
29.365	para-Cymen-8-ol	0.04
29.967	alpha-Terpineol	1.43
32.310	Methyl thymol ether	0.02
33.699	Linalyl acetate	0.04
36.088	Bornyl acetate	0.13
37.225	Tridecane	0.03
39.297	Elemene isomer	0.02
39.508	delta-Elemene	0.01
40.290	alpha-Cubebene	0.24
40.501	alpha-Longipinene	0.15
41.760	alpha-Ylangene	0.06
42.093	Longicyclene	0.06
42.175	alpha-Copaene	0.54
42.700	beta-Bourbonene	0.02

R.Time	Name	Area%
42.963	beta-Cubebene	0.22
43.057	beta-Elemene	0.20
43.230	Sativene	0.07
43.338	Unidentified	0.04
43.651	Methyleugenol	0.02
44.042	cis-beta-Caryophyllene	0.02
44.212	alpha-Gurjunene	0.05
44.369	Junipene	2.54
45.014	trans-beta-Caryophyllene	8.37
45.633	beta-Copaene	0.08
46.847	cis-Murrola-3,5-diene	0.08
46.951	trans-Murrola-3,5-diene	0.01
47.054	(E)-beta-Farnesene	0.05
47.249	alpha-Humulene	1.48
47.518	Alloaromadendrene	0.06
48.020	Unidentified	0.02
48.269	10-beta-H-Cadina-1(6),4-diene	0.11
48.444	trans-Cadina-1(6),4-diene	0.45
48.714	alpha-Amorphene	0.05
48.834	Germacrene D	2.05
48.920	Unidentified	0.09
49.045	Phenethyl 2-methylbutyrate	0.10
49.377	Phenethyl isovalerate	0.31
49.520	trans-Muurolo-4(14),5-diene	0.14
49.740	alpha-Selinene	0.04
49.904	alpha-Muuroloene	0.20
50.181	delta-Amorphene	0.03
50.785	gamma-Cadinene	0.25
50.909	Cubebol	0.02
51.087	delta-Cadinene	0.85
51.280	trans-Calamenene	0.06
51.377	Zonarene	0.12
51.941	trans-Cadina-1,4-diene	0.05
52.188	alpha-Cadinene	0.04
52.444	alpha-Calacorene	0.03
53.045	Unidentified	0.02
54.878	Caryophyllene oxide	0.31
55.723	Guaiol	0.02
56.078	Longiborneol	0.02
56.501	Humulene epoxide II	0.03
56.830	Unidentified	0.02
57.521	1-epi-Cubenol	0.04
58.332	tau-Cadinol	0.02
58.404	epi-alpha-Cadinol	0.06
58.573	delta-Cadinol	0.03
59.067	alpha-Cadinol	0.07
60.129	alpha-Santalol	0.03
61.611	Unidentified	0.05
62.410	beta-Santalol	0.03
74.335	Myrcene dimer I	0.02
80.901	Abietadiene	0.03
		100.00