

Laboratory Test Report

SAMPLE NAME : Fir Needle
CLIENT NAME : Plant Therapy
CLIENT LOT # : F20113R
APRC LOT# : PT241118A

Column : ZB5 (60 m length × 0.25 mm inner diameter × 0.25 µm film thicknes
Instrument : Shimadzu GCMS-QP2010 Ultra
Carrier gas : Helium 80 psi
Temperature ramp : 2 degrees Celsius per minute up to 260-degree Celsius
Split ratio : 30:1
Sample preparation : 5% w/v solution with Dichloromethane

Interpretation on this sample

The analysis of Fir Needle sample meets the standard chemical profile of *Abies sibirica* essential oil.

Analyzed by : Dr Prabodh Satyal
Reviewed by : Ambika Poudel

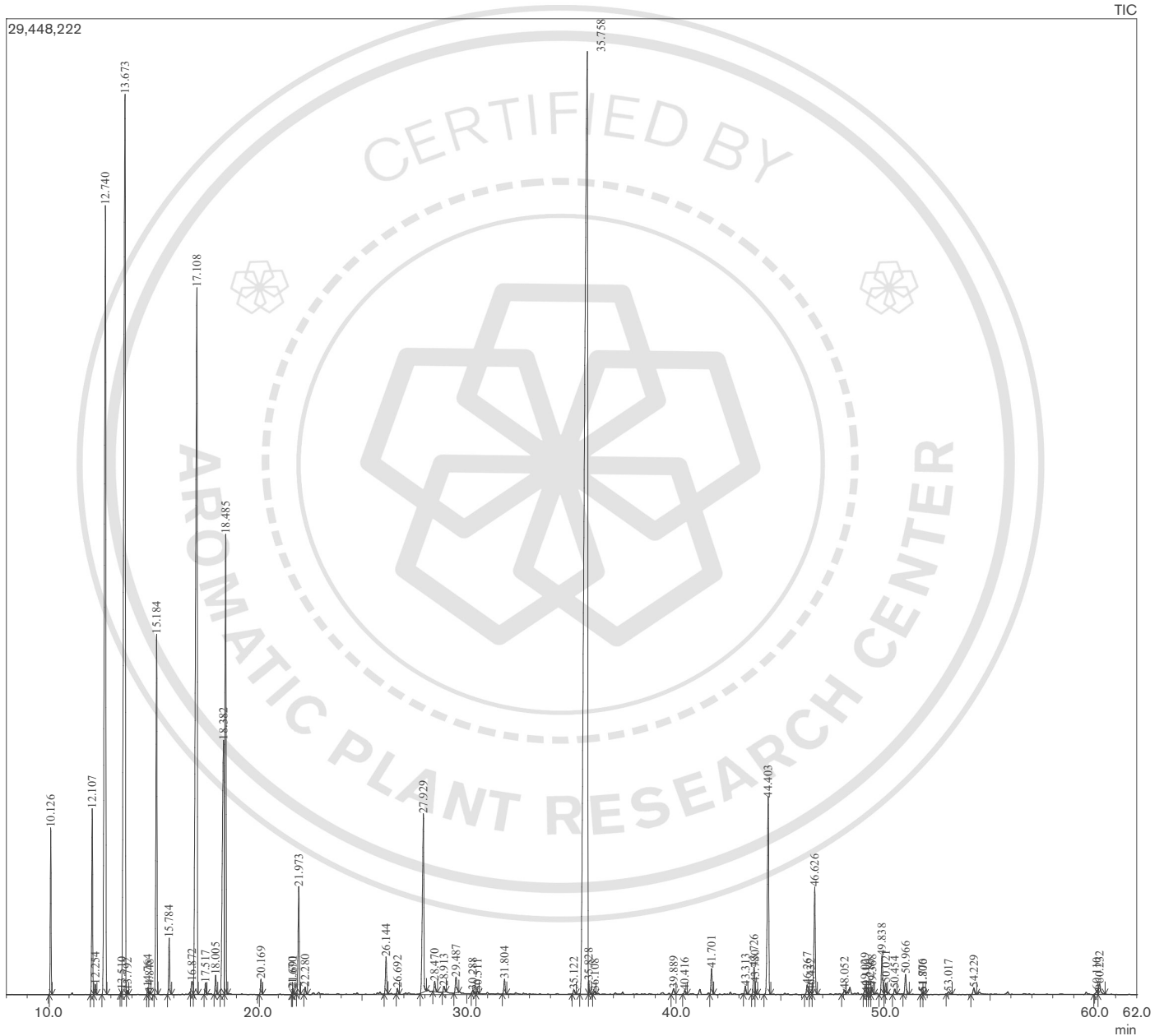
Issued Date : 11/19/2024

GCMS Analysis

Sample Information

Analyzed by : Dr. Prabodh Satyal
Analyzed : 11/19/2024 8:26:11 AM
Sample Type : Essential Oil
Sample Name : Fir Needle
Client Name : Plant Therapy
Client Lot# : F20113R
APRC Lot# : PT241118A
Injection Volume : 0.30

Chromatogram



Peak Report

Peak#	R.Time	Name	Area%
1	10.126	Santene	1.34
2	12.107	Tricyclene	1.68
3	12.254	alpha-Thujene	0.10
4	12.740	alpha-Pinene	11.47
5	13.510	alpha-Fenchene	0.02
6	13.673	Camphene	15.15
7	13.792	Thuja-2,4(10)-diene	0.03
8	14.764	3,7,7-Trimethyl-1,3,5-cycloheptatriene	0.07
9	14.848	Sabinene	0.03
10	15.184	beta-Pinene	3.90
11	15.784	Myrcene	0.56
12	16.872	alpha-Phellandrene	0.19
13	17.108	delta-3-Carene	11.96
14	17.517	alpha-Terpinene	0.12
15	18.005	para-Cymene	0.21
16	18.382	Limonene	4.69
17	18.485	beta-Phellandrene	5.44
18	20.169	gamma-Terpinene	0.16
19	21.670	meta-Cymene	0.02
20	21.691	para-Mentha-2,4(8)-diene	0.05
21	21.973	Terpinolene	1.19
22	22.280	para-Cymenene	0.08
23	26.144	Camphor	0.43
24	26.692	trans-beta-Terpineol	0.06
25	27.929	Borneol	2.61
26	28.470	Terpinen-4-ol	0.13
27	28.913	Cryptone+Cymenol	0.08
28	29.487	alpha-Terpineol	0.24
29	30.288	Verbenone	0.04
30	30.511	4-Methylene isophorone	0.03
31	31.804	Thymol methyl ether	0.18
32	35.122	Phellandral	0.06
33	35.758	Bornyl acetate	30.31
34	35.828	Isobornyl acetate	0.10
35	36.108	2-Undecanone	0.04
36	39.889	alpha-Longipinene	0.09
37	40.416	Neryl acetate	0.05
38	41.701	Geranyl acetate	0.31
39	43.313	Sibirene	0.10
40	43.726	Longifolene	0.40
41	43.780	Acora-3,7(14)-diene	0.06
42	44.403	beta-Caryophyllene	2.82
43	46.267	alpha-Himachalene	0.13
44	46.432	trans-beta-Farnesene	0.04
45	46.626	alpha-Humulene	1.43
46	48.052	gamma-Himachalene	0.07
47	49.029	beta-Alaskene	0.12
48	49.110	alpha-Selinene	0.01
49	49.280	alpha-Murolene	0.03
50	49.368	beta-Himachalene	0.10
51	49.838	beta-Bisabolene	0.51
52	50.021	cis-gamma-Bisabolene	0.15
53	50.454	delta-Cadinene	0.07
54	50.966	trans-gamma-Bisabolene	0.27
55	51.776	trans-alpha-Bisabolene	0.03
56	51.800	alpha-Calacorene	0.01
57	53.017	trans-Nerolidol	0.05
58	54.229	Caryophyllene oxide	0.10
59	60.110	epi-alpha-Bisabolol	0.07
60	60.232	alpha-Bisabolol	0.20
			100.00