Date : March 29, 2022

Certificate of Analysis – GC Profiling

Sample identification

Internal code : 22C15-PTH12
Customer identification : Frankincense Carteri ORGANIC - Somalia - FO0108219R
Type : Essential oil
Source : *Boswellia carteri*
Customer : Plant Therapy

Analysis

Method: PC-MAT-014 ISO - Analysis of the composition of an essential oil or other volatile liquid by FAST GC-FID (in French); identifications validated by GC-MS.
Analyst : Pamela Lavoie, M.Sc., Chimiste
Analysis date : March 28, 2022

Checked and approved by :

Alexis St-Gelais, Ph. D., Chimiste 2013-174

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Méthode certifiée ISO 17025:2017 Certified method

Laboratoire PhytoChemia

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PHYSICOCHEMICAL DATA

Physical aspect: Faintly yellow liquid
Refractive index: 1.4731 ± 0.0003 (20 °C; method PC-MAT-016)

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method.

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Analysis summary – Consolidated contents

New readers of similar reports are encouraged to read table footnotes at least once.

Identification	%	Class
2-Methylfuran	0.02	Furan
(*E*)-2-Methyl-1,3-pentadiene	0.01	Alkene
3-Methyl-2-butanone	0.01	Aliphatic ketone
Toluene	0.06	Simple phenolic
Unknown	0.01	Alkene
Unknown	tr	Unknown
Unknown	0.01	Unknown
Hashishene	0.18	Monoterpene
Tricyclene	0.06	Monoterpene
α-Thujene	3.53	Monoterpene
α-Pinene	39.64	Monoterpene
α-Fenchene	0.01	Monoterpene
Unknown	0.12	Monoterpene
Camphene	0.80	Monoterpene
Thuja-2,4(10)-diene	0.25	Monoterpene
3,7,7-Trimethylcyclohepta-1,3,5-triene	0.06	Monoterpene
Sabinene	4.42	Monoterpene
β-Pinene	1.32	Monoterpene
Pseudolimonene isomer	0.01	Monoterpene
cis-Carane	0.01	Monoterpene
6-Methyl-5-hepten-2-one	0.01	Aliphatic ketone
Menthatriene isomer 0	0.03	Monoterpene
Dehydro-1,8-cineole	0.03	Monoterpenic ether
Myrcene	6.97	Monoterpene
α-Phellandrene	2.73	Monoterpene
Pseudolimonene	0.03	Monoterpene
Octanal	0.01	Aliphatic aldehyde
Menthatriene isomer I	0.06	Monoterpene
ortho-Methylanisole	0.09	Simple phenolic
Δ3-Carene	0.74	Monoterpene
Unknown	0.02	Monoterpene
α-Terpinene	0.15	Monoterpene
meta-Cymene	0.02	Monoterpene
para-Cymene	3.40	Monoterpene
1,8-Cineole	0.86*	Monoterpenic ether
β-Phellandrene	0.86*	Monoterpene
Limonene	14.84	Monoterpene
ortho-Cymene	0.02	Monoterpene
(*Z*)-β-Ocimene	0.17	Monoterpene
Unknown	0.03	Unknown
(*E*)-β-Ocimene	0.10	Monoterpene
γ-Terpinene	0.23	Monoterpene
cis-Sabinene hydrate	0.04	Monoterpenic alcohol
Unknown	0.01	Oxygenated monoterpene
meta-Cymenene	0.08	Monoterpene

Terpinolene	0.10	Monoterpene
para-Cymenene	0.04	Monoterpene
2-Nonanone	0.01	Aliphatic ketone
6,7-Epoxymyrcene	0.03	Monoterpenic ether
trans-Sabinene hydrate	0.04	Monoterpenic alcohol
α-Thujone	0.04	Monoterpenic ketone
Linalool	0.12	Monoterpenic alcohol
Unknown	0.02	Monoterpenic alcohol
Verbenol analog?	0.05	Monoterpenic alcohol
β-Thujone	0.13	Monoterpenic ketone
cis-para-Menth-2-en-1-ol	0.04	Monoterpenic alcohol
trans-para-Mentha-2,8-dien-1-ol	0.08	Monoterpenic alcohol
α-Campholenal	0.19	Monoterpenic aldehyde
Myrcenol	0.09	Monoterpenic alcohol
Unknown	0.08	Unknown
cis-Limonene oxide	0.04	Monoterpenic ether
trans-Pinocarveol	0.42	Monoterpenic alcohol
trans-Limonene oxide	0.02	Monoterpenic ether
trans-Sabinol	0.05	Monoterpenic alcohol
cis-Verbenol	0.18	Monoterpenic alcohol
trans-Verbenol	0.79	Monoterpenic alcohol
meta-Mentha-4,6-dien-8-ol	0.09	Monoterpenic alcohol
Pinocamphone	0.04	Monoterpenic ketone
Pinocarvone	0.05	Monoterpenic ketone
Unknown	0.02	Oxygenated monoterpene
Borneol	0.06	Monoterpenic alcohol
α-Phellandren-8-ol	0.25	Monoterpenic alcohol
cis-Sabinol	0.08	Monoterpenic alcohol
Terpinen-4-ol	0.40	Monoterpenic alcohol
meta-Cymen-8-ol	0.03	Monoterpenic alcohol
para-Cymen-8-ol	0.07	Monoterpenic alcohol
α-Terpineol	0.33	Monoterpenic alcohol
Myrtenal	0.02	Monoterpenic aldehyde
β-Phellandren-8-ol	0.01	Monoterpenic alcohol
Myrtenol	0.15	Monoterpenic alcohol
cis-α-Phellandrene epoxide (iPr vs Me)	0.09	Monoterpenic ether
Verbenone	0.29	Monoterpenic ketone
trans-Piperitol	0.02	Monoterpenic alcohol
Octyl acetate	0.04	Aliphatic ester
trans-Carveol	0.11	Monoterpenic alcohol
Unknown	0.03	Oxygenated monoterpene
exo-2-Hydroxycineole	0.01	Monoterpenic alcohol
cis-Carveol	0.05	Monoterpenic alcohol
Cuminal	0.01	Monoterpenic aldehyde
Carvone	0.12	Monoterpenic ketone
Carvotanacetone	0.01	Monoterpenic ketone
Piperitone	0.03	Monoterpenic ketone
(2*E*)-Decenyl methyl ether	0.01	Aliphatic ether
Linalyl acetate	0.01	Monoterpenic ester
3,5-Dimethoxytoluene	0.03	Simple phenolic
Unknown	0.02	Oxygenated monoterpene
Unknown	0.01	Unknown

Bornyl acetate	0.24	Monoterpenic ester
para-Cymen-7-ol	0.01	Monoterpenic alcohol
Thymol	0.01	Monoterpenic alcohol
Carvacrol	0.01	Monoterpenic alcohol
Unknown	0.03	Unknown
Bicycloelemene	0.04	Sesquiterpene
Unknown	0.02	Unknown
α-Cubebene	0.17	Sesquiterpene
α-Terpinyl acetate	0.03	Monoterpenic ester
Cyclosativene I	0.02	Sesquiterpene
Cyclosativene II	0.03	Sesquiterpene
α-Copaene	0.88	Sesquiterpene
β-Bourbonene	0.14	Sesquiterpene
β-Cubebene	0.10	Sesquiterpene
β-Elemene	0.85	Sesquiterpene
α-Gurjunene	0.09	Sesquiterpene
β-Caryophyllene	3.25	Sesquiterpene
β-Copaene	0.05	Sesquiterpene
trans-α-Bergamotene	0.14	Sesquiterpene
6,9-Guaiadiene	0.02	Sesquiterpene
trans-Muurola-3,5-diene	0.04	Sesquiterpene
α-Humulene	0.83	Sesquiterpene
allo-Aromadendrene	0.16	Sesquiterpene
(*E*)-β-Farnesene	0.02	Sesquiterpene
trans-Cadina-1(6),4-diene	0.03	Sesquiterpene
γ-Muurolene	0.26	Sesquiterpene
Germacrene D	0.45	Sesquiterpene
β-Selinene	0.34	Sesquiterpene
trans-Muurola-4(15),5-diene	0.06	Sesquiterpene
δ-Selinene	0.03	Sesquiterpene
α-Selinene	0.27	Sesquiterpene
epi-Cubebol	0.14	Sesquiterpenic alcohol
Bicyclogermacrene	0.01	Sesquiterpene
α-Muurolene	0.19	Sesquiterpene
Germacrene A	0.02	Sesquiterpene
γ-Cadinene	0.31	Sesquiterpene
Cubebol	0.43	Sesquiterpenic alcohol
δ-Cadinene	0.54	Sesquiterpene
trans-Cadina-1,4-diene	0.03	Sesquiterpene
α-Cadinene	0.03	Sesquiterpene
α-Calacorene	0.01	Sesquiterpene
Isocaryophyllene epoxide B	0.02	Sesquiterpenic ether
α-Elemol	0.06	Sesquiterpenic alcohol
Germacrene B	0.01	Sesquiterpene
Elemicin	0.01	Phenylpropanoid
Palustrol	0.01	Sesquiterpenic alcohol
Unknown	0.05	Oxygenated sesquiterpene
Germacrene D-4-ol	0.04	Sesquiterpenic alcohol
Caryophyllene oxide	0.36	Sesquiterpenic ether
Caryophyllene oxide isomer	0.03	Sesquiterpenic ether
Viridiflorol	0.08	Sesquiterpenic alcohol
Copaborneol	0.05	Sesquiterpenic alcohol

Humulene epoxide II	0.07	Sesquiterpenic ether
Unknown	0.05	Sesquiterpenic alcohol
10-epi-Cubenol	0.05	Sesquiterpenic alcohol
1-epi-Cubenol	0.02	Sesquiterpenic alcohol
τ-Muurolol	0.01	Sesquiterpenic alcohol
τ-Cadinol	0.16	Sesquiterpenic alcohol
α-Muurolol	0.02	Sesquiterpenic alcohol
β-Eudesmol	0.03	Sesquiterpenic alcohol
α-Eudesmol	0.02	Sesquiterpenic alcohol
α-Cadinol	0.01	Sesquiterpenic alcohol
(3*Z*)-Caryophylla-3,8(13)-dien-5β-ol	0.02	Sesquiterpenic alcohol
Shyobunol	0.01	Sesquiterpenic alcohol
α-Phellandrene dimer II	0.05	Diterpene
α-Phellandrene dimer III	0.02	Diterpene
α-Phellandrene dimer IV	0.01	Diterpene
(3*E*)-Cembrene A	0.09	Diterpene
para-Camphorene	0.01	Diterpene
Cembrene C	0.03	Diterpene
Verticilla-4(20),7,11-triene	0.01	Diterpene
Serratol	0.22	Diterpenic alcohol
Incensole	0.08	Diterpenic alcohol
Consolidated total	**98.41%**	

*: Individual compounds concentration could not be found due to overlapping coelutions on columns considered
[xx]: Duplicate percentage due to coelutions, not taken into account in the consolidated total
tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied

About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm is set to prioritize data from the most standard DB-5 column, and smallest values so as to avoid overestimating individual content. This process is semi-automatic. Advanced users are invited to consult the "Full analysis data" table after the chromatograms in this report to access the full untreated data and perform their own calculations if needed.

Unknowns: Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

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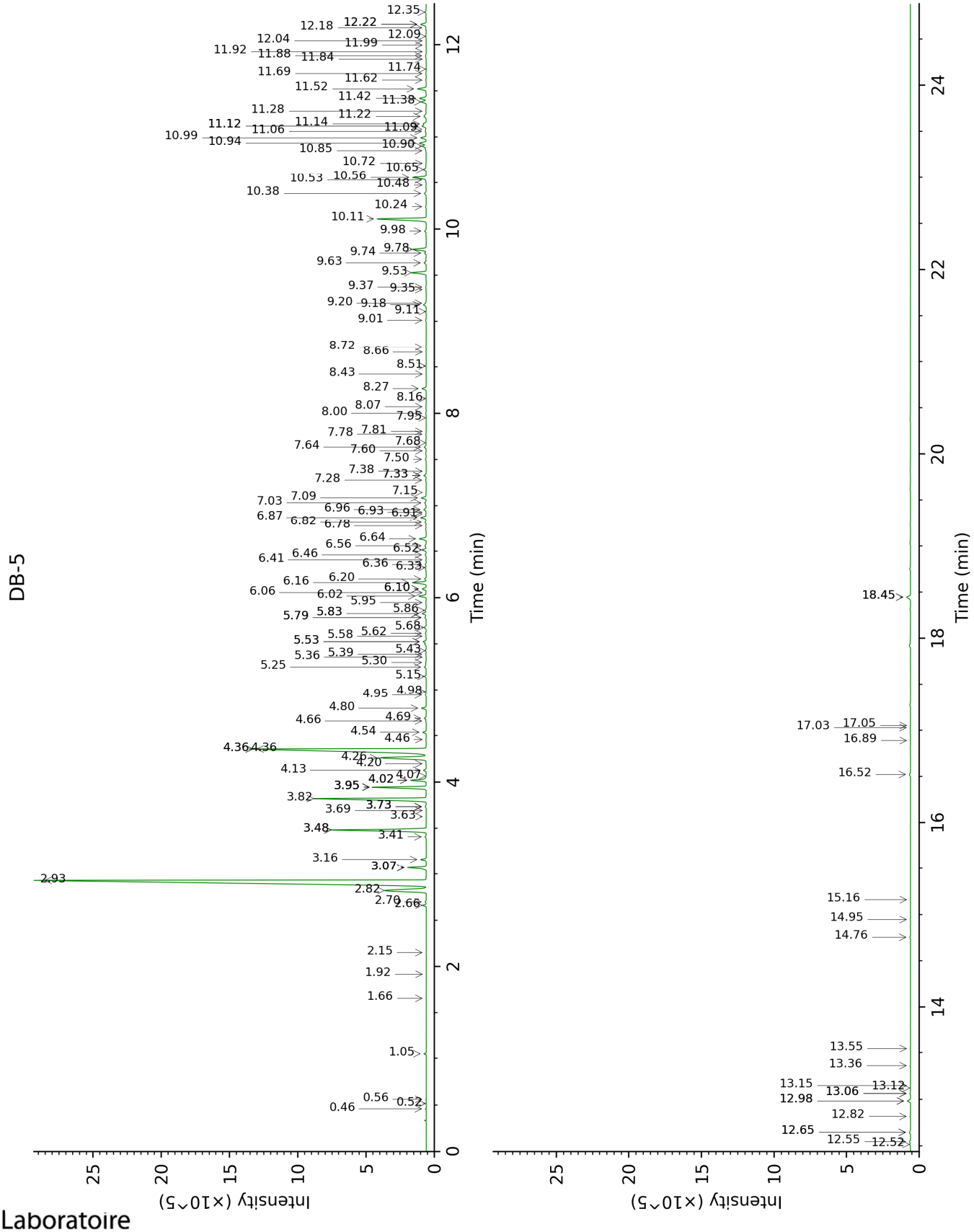
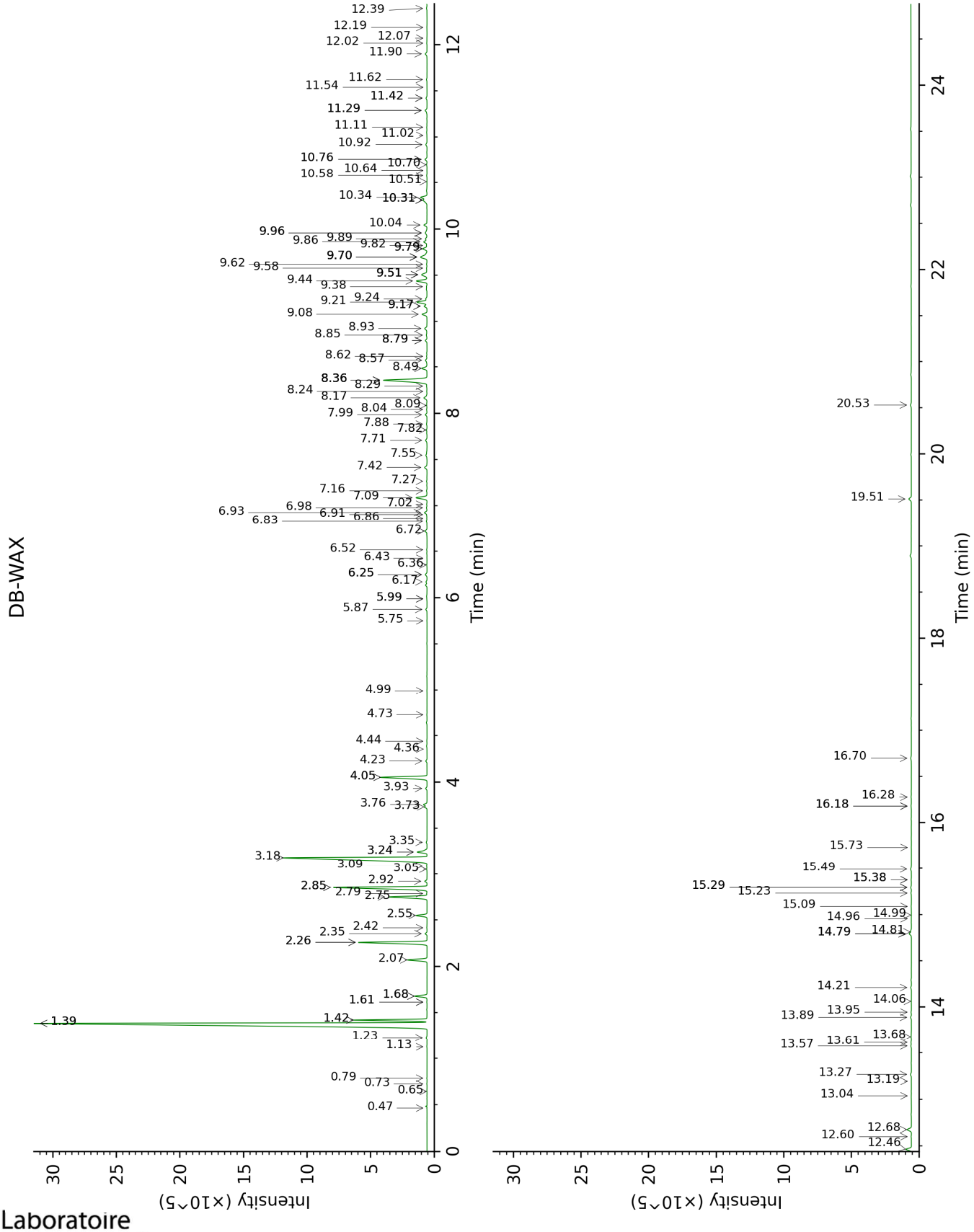

DB-5
Intensity (×10^5)
Time (min)
12.35
12.18
12.22
12.04
12.09
11.92
11.99
11.88
11.84
11.69
11.74
11.62
11.52
11.42
11.38
11.28
11.22
11.12
11.14
11.06
11.09
10.99
10.94
10.85
10.90
10.72
10.65
10.53
10.56
10.48
10.38
10.24
10.11
9.98
9.74
9.78
9.63
9.53
9.37
9.35
9.20
9.18
9.11
9.01
8.72
8.66
8.51
8.43
8.27
8.16
8.07
8.00
7.95
7.78
7.81
7.64
7.68
7.60
7.50
7.38
7.33
7.28
7.15
7.09
7.03
6.96
6.93
6.91
6.87
6.82
6.78
6.64
6.56
6.52
6.46
6.41
6.36
6.33
6.20
6.16
6.10
6.06
6.02
5.95
5.86
5.83
5.79
5.68
5.62
5.58
5.53
5.43
5.39
5.36
5.30
5.25
5.15
4.98
4.95
4.80
4.69
4.66
4.54
4.46
4.36
4.36
4.26
4.20
4.13
4.07
4.02
3.95
3.82
3.73
3.69
3.63
3.48
3.41
3.16
3.07
2.93
2.82
2.70
2.66
2.15
1.92
1.66
1.05
0.56
0.52
0.46
18.45
17.03
17.05
16.89
16.52
15.16
14.95
14.76
13.55
13.36
13.15
13.12
13.06
12.98
12.82
12.65
12.55
12.52


DB-WAX
Time (min)
Intensity (×10^5)
12.39
12.19
12.07
12.02
11.90
11.62
11.54
11.42
11.29
11.11
11.02
10.92
10.76
10.70
10.64
10.58
10.51
10.34
10.31
10.04
9.96
9.89
9.86
9.82
9.79
9.70
9.62
9.58
9.51
9.44
9.38
9.24
9.21
9.17
9.08
8.93
8.85
8.79
8.62
8.57
8.49
8.36
8.29
8.24
8.17
8.09
8.04
7.99
7.88
7.82
7.71
7.55
7.42
7.27
7.16
7.09
7.02
6.98
6.93
6.91
6.86
6.83
6.72
6.52
6.43
6.36
6.25
6.17
5.99
5.87
5.75
4.99
4.73
4.44
4.36
4.23
4.05
3.93
3.76
3.73
3.35
3.24
3.18
3.09
3.05
2.92
2.85
2.79
2.75
2.55
2.42
2.35
2.26
2.07
1.68
1.61
1.42
1.39
1.23
1.13
0.79
0.73
0.65
0.47
20.53
19.51
16.70
16.28
16.18
15.73
15.49
15.38
15.29
15.23
15.09
14.99
14.96
14.81
14.79
14.21
14.06
13.95
13.89
13.68
13.61
13.57
13.27
13.19
13.04
12.68
12.60
12.46

FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
2-Methylfuran	0.46	605	0.02	0.65	851	tr
(*E*)-2-Methyl-1,3-pentadiene	0.52	628	0.01	0.47	766	tr
3-Methyl-2-butanone	0.56	646	0.01	0.79	902	0.01
Toluene	1.05	757	0.06	1.42*	1002	3.63
Unknown [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)]	1.66	830	0.01	0.73	880	0.01
Unknown [m/z 109, 43 (28), 124 (28), 41 (14), 55 (11), 79 (9), 81 (8)...]	1.92	853	tr	1.62*	1021	0.02
Unknown [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	2.15	873	0.01	1.13	956	0.02
Hashishene	2.66	915	0.18	1.38*	997	39.69
Tricyclene	2.70	917	0.06	1.23	972	0.06
α-Thujene	2.82	926	3.53	1.42*	1002	[3.63]
α-Pinene	2.93	933	39.64	1.38*	997	[39.69]
α-Fenchene	3.07*	942	0.92	1.62*	1021	[0.02]
Unknown [m/z 91, 92 (47), 65 (11)... 134 (1)]	3.07*	942	[0.92]	2.36	1094	0.12
Camphene	3.07*	942	[0.92]	1.68*	1028	0.81
Thuja-2,4(10)-diene	3.16	949	0.25	2.26*	1085	4.67
3,7,7-Trimethylcyclohepta-1,3,5-triene	3.41	966	0.06	2.86*	1135	6.99
Sabinene	3.48*	971	5.77	2.26*	1085	[4.67]
β-Pinene	3.48*	971	[5.77]	2.07	1066	1.32
Pseudolimonene isomer	3.63	980	0.01	2.42	1100	0.02
cis-Carane	3.69	985	0.01	1.68*	1028	[0.81]
6-Methyl-5-hepten-2-one	3.74*	988	0.07	4.99	1298	0.01
Menthatriene isomer 0	3.74*	988	[0.07]	3.09	1153	0.03
Dehydro-1,8-cineole	3.74*	988	[0.07]	3.05	1150	0.03
Myrcene	3.82	994	6.97	2.86*	1135	[6.99]
α-Phellandrene	3.95*	1002	2.82	2.75	1126	2.73
Pseudolimonene	3.95*	1002	[2.82]	2.79	1129	0.03
Octanal	3.95*	1002	[2.82]	4.36	1250	0.01
Menthatriene isomer I	3.95*	1002	[2.82]	3.35	1174	0.06
ortho-Methylanisole	4.02*	1007	0.83	5.87	1359	0.09
Δ3-Carene	4.02*	1007	[0.83]	2.55	1111	0.74

Unknown [m/z 117, 132 (88), 115 (68), 91 (55), 77 (20)]	4.07	1010	0.02			
α-Terpinene	4.13	1014	0.15	2.92	1140	0.15
meta-Cymene	4.20	1018	0.02	4.05*	1228	3.41
para-Cymene	4.26	1022	3.40	4.05*	1228	[3.41]
1,8-Cineole	4.36*	1028	15.70	3.24*	1165	0.77
β-Phellandrene	4.36*	1028	[15.70]	3.24*	1165	[0.77]
Limonene	4.36*	1028	[15.70]	3.18	1160	14.84
ortho-Cymene	4.46	1035	0.02	4.44	1256	0.02
(*Z*)-β-Ocimene	4.54	1040	0.17	3.73	1204	0.17
Unknown [m/z 109, 43 (57), 91 (28), 67 (25), 93 (24), 95 (22), 77 (21), 137 (21), 41 (17), 79 (14)...]	4.66	1047	0.03	7.27	1461	0.03
(*E*)-β-Ocimene	4.69	1049	0.10	3.93	1219	0.10
γ-Terpinene	4.80	1056	0.23	3.76	1206	0.25
cis-Sabinene hydrate	4.94	1065	0.04	6.83	1428	0.05
Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	4.98	1068	0.01	4.73	1278	0.02
meta-Cymenene	5.15	1078	0.08	6.17	1380	0.08
Terpinolene	5.25	1085	0.10	4.23	1240	0.09
para-Cymenene	5.30	1088	0.04	6.25*	1386	0.14
2-Nonanone	5.36	1092	0.01	5.75	1350	0.01
6,7-Epoxymyrcene	5.39	1093	0.03	5.99*†	1367	0.07
trans-Sabinene hydrate	5.43	1096	0.04	7.88	1507	0.05
α-Thujone	5.53*	1102	0.17	5.99*†	1367	[0.07]
Linalool	5.53*	1102	[0.17]	7.99	1515	0.12
Unknown [m/z 119, 109 (94), 43 (61), 95 (56), 91 (48), 77 (32), 152 (32), 137 (31), 134 (24)]	5.58	1106	0.02	8.36*	1544	4.17
Verbenol analog?	5.62	1108	0.05	8.24	1534	0.02
β-Thujone	5.68	1112	0.13	6.25*	1386	[0.14]
cis-para-Menth-2-en-1-ol	5.79*	1119	0.09	8.04	1519	0.04
trans-para-Mentha-2,8-dien-1-ol	5.79*	1119	[0.09]	8.85	1582	0.08
α-Campholenal	5.83*	1122	0.22	6.93†	1436	[0.23]
Myrcenol	5.83*	1122	[0.22]	8.80*	1578	0.13
Unknown [m/z 111, 43 (22), 55 (14), 41 (12), 110 (11)...]	5.86	1124	0.08			
cis-Limonene oxide	5.95	1129	0.04	6.36	1394	0.02
trans-Pinocarveol	6.02	1134	0.42	9.08	1600	0.39
trans-Limonene oxide	6.06	1136	0.02	6.52	1406	0.03

trans-Sabinol	6.10*	1139	0.24	9.70*	1650	0.78
cis-Verbenol	6.10*	1139	[0.24]	9.17*	1607	0.21
trans-Verbenol	6.16	1143	0.79	9.44	1629	0.82
meta-Mentha-4,6-dien-8-ol	6.20	1146	0.09	9.24	1613	0.10
Pinocamphone	6.33	1153	0.04	7.16	1453	0.04
Pinocarvone	6.36	1156	0.05	7.82	1502	0.04
Unknown [m/z 109, 43 (75), 137 (46), 67 (31), 93 (25)... 152 (4)]	6.41	1159	0.02			
Borneol	6.46	1162	0.06	9.70*	1650	[0.78]
α-Phellandren-8-ol	6.52	1166	0.25	10.04	1678	0.23
cis-Sabinol	6.56	1169	0.08	10.76*	1738	0.15
Terpinen-4-ol	6.64	1174	0.40	8.49	1554	0.43
meta-Cymen-8-ol	6.78	1183	0.03	11.42*	1794	0.08
para-Cymen-8-ol	6.82	1185	0.07	11.42*	1794	[0.08]
α-Terpineol	6.87	1188	0.33	9.70*	1650	[0.78]
Myrtenal	6.91	1191	0.02	8.62	1564	0.03
β-Phellandren-8-ol	6.93	1192	0.01	10.64	1728	0.01
Myrtenol	6.96	1194	0.15	10.76*	1738	[0.15]
cis-α-Phellandrene epoxide (iPr vs Me)	7.03	1199	0.09	10.92	1751	0.10
Verbenone	7.09	1202	0.29	9.51*	1634	0.56
trans-Piperitol	7.15	1206	0.02	10.31*	1700	0.43
Octyl acetate	7.28	1215	0.04	7.02	1442	0.03
trans-Carveol	7.33*	1218	0.14	11.29*	1783	0.18
Unknown [m/z 43, 111 (88), 126 (74), 125 (61)... 168? (2)]	7.33*	1218	[0.14]	11.11	1767	0.03
exo-2-Hydroxycineole	7.38	1222	0.01	11.54	1804	0.01
cis-Carveol	7.50	1230	0.05	11.62	1812	0.04
Cuminal	7.60	1236	0.01	10.51	1717	0.01
Carvone	7.64	1239	0.12	9.89	1666	0.12
Carvotanacetone	7.68	1242	0.01	9.38	1624	0.04
Piperitone	7.78	1248	0.03	9.82	1660	0.04
(2*E*)-Decenyl methyl ether	7.81	1250	0.01	6.43	1399	0.01
Linalyl acetate	7.95	1260	0.01	8.09	1523	0.02
3,5-Dimethoxytoluene	8.00	1264	0.03	11.29*	1783	[0.18]
Unknown [m/z 109, 41 (22), 81 (14), 43 (11)... 152 (4)]	8.07	1268	0.02			
Unknown [m/z 83, 69 (66), 43 (65), 98 (38), 41 (36), 55 (32)...	8.16	1274	0.01			
Bornyl acetate	8.27	1282	0.24	8.17	1529	0.30
para-Cymen-7-ol	8.42	1292	0.01	14.06	2037	0.02
Thymol	8.51	1298	0.01	15.00	2128	0.01
Carvacrol	8.66	1308	0.01	15.29*	2158	0.06

Unknown [m/z 69, 41 (75), 55 (58), 83 (33), 121 (33)...]	8.72	1312	0.03	14.79*†	2108	0.24
Bicycloelemene	9.01	1333	0.04	6.98	1440	0.05
Unknown [m/z 133, 105 (45), 91 (38), 119 (36)... 150 (3)]	9.11	1340	0.02			
α-Cubebene	9.18†	1345	0.21	6.72	1420	0.17
α-Terpinyl acetate	9.20†	1346	[0.21]	9.62	1643	0.03
Cyclosativene I	9.35	1356	0.02	6.86	1431	0.02
Cyclosativene II	9.37	1358	0.03	6.91†	1434	0.23
α-Copaene	9.53	1369	0.88	7.09	1448	0.90
β-Bourbonene	9.63	1377	0.14	7.42	1472	0.22
β-Cubebene	9.74	1384	0.10	7.71	1494	0.13
β-Elemene	9.78	1387	0.85	8.36*	1544	[4.17]
α-Gurjunene	9.98	1401	0.09	7.55	1482	0.11
β-Caryophyllene	10.11	1411	3.25	8.36*	1544	[4.17]
β-Copaene	10.24	1421	0.05	8.29	1539	0.04
trans-α-Bergamotene	10.38	1432	0.14	8.36*	1544	[4.17]
6,9-Guaiadiene	10.48	1438	0.02	8.57	1560	0.15
trans-Muurola-3,5-diene	10.53	1443	0.04	8.80*	1578	[0.13]
α-Humulene	10.56	1444	0.83	9.21	1610	0.85
allo-Aromadendrene	10.65	1451	0.16	8.93	1588	0.20
(*E*)-β-Farnesene	10.72	1456	0.02	9.51*	1634	[0.56]
trans-Cadina-1(6),4-diene	10.85	1467	0.03	9.17*	1607	[0.21]
γ-Muurolene	10.90	1470	0.26	9.51*	1634	[0.56]
Germacrene D	10.94	1473	0.45	9.70*	1650	[0.78]
β-Selinene	10.99	1477	0.34	9.79*	1657	0.35
trans-Muurola-4(15),5-diene	11.06	1482	0.06	9.79*	1657	[0.35]
δ-Selinene	11.09	1484	0.03	9.58	1640	0.04
α-Selinene	11.12*†	1486	0.47	9.86	1663	0.27
epi-Cubebol	11.12*†	1486	[0.47]	11.90	1837	0.14
Bicyclogermacrene	11.14†	1488	[0.47]	9.96*	1671	0.21
α-Muurolene	11.22	1494	0.19	9.96*	1671	[0.21]
Germacrene A	11.28	1498	0.02	10.31*	1700	[0.43]
γ-Cadinene	11.38	1506	0.31	10.31*	1700	[0.43]
Cubebol	11.42	1509	0.43	12.46	1887	0.42
δ-Cadinene	11.52	1517	0.54	10.34	1702	0.53
trans-Cadina-1,4-diene	11.62	1525	0.03	10.58	1722	0.03
α-Cadinene	11.69	1530	0.03	10.70	1733	0.04
α-Calacorene	11.74	1534	0.01	12.02	1847	0.02
Isocaryophyllene epoxide B	11.84	1542	0.02	12.07	1852	0.02
α-Elemol	11.88	1545	0.06	13.95	2025	0.03
Germacrene B	11.92	1549	0.01	11.02	1760	0.02
Elemicin	12.00	1554	0.01	15.38*	2167	0.02
Palustrol	12.04	1558	0.01	12.19	1862	0.01

Unknown [m/z 152, 109 (61), 43 (21), 137 (16), 151 (16)... 222 (6)]	12.09	1562	0.05			
Germacrene D-4-ol	12.18	1569	0.04	13.61	1993	0.04
Caryophyllene oxide	12.22*	1572	0.38	12.68	1906	0.36
Caryophyllene oxide isomer	12.22*	1572	[0.38]	12.60	1899	0.03
Viridiflorol	12.35	1582	0.08	13.89	2020	0.07
Copaborneol	12.52	1595	0.05	14.81†	2110	[0.24]
Humulene epoxide II	12.55	1598	0.07	13.27	1961	0.08
Unknown [m/z 161, 189 (76), 204 (66), 105 (60), 119 (46), 107 (41), 59 (38)...222 (3)]	12.65*	1606	0.08	14.21	2051	0.05
10-epi-Cubenol	12.65*	1606	[0.08]	13.58	1990	0.05
1-epi-Cubenol	12.82	1620	0.02	13.68	1999	0.03
τ-Muurolol	12.98*	1634	0.19	14.96	2124	0.01
τ-Cadinol	12.98*	1634	[0.19]	14.79*†	2108	[0.24]
α-Muurolol	13.06*	1640	0.05	15.09	2138	0.02
β-Eudesmol	13.06*	1640	[0.05]	15.29*	2158	[0.06]
α-Eudesmol	13.12	1645	0.02	15.23	2152	0.03
α-Cadinol	13.15	1647	0.01	15.38*	2167	[0.02]
(3*Z*)-Caryophylla-3,8(13)-dien-5β-ol	13.36	1665	0.02	16.70	2305	0.08
Shyobunol	13.55	1680	0.01	16.18*	2250	0.05
α-Phellandrene dimer II	14.76	1784	0.05	12.39	1881	0.05
α-Phellandrene dimer III	14.95	1801	0.02	13.04	1940	0.03
α-Phellandrene dimer IV	15.16	1820	0.01	13.19	1954	0.01
(3*E*)-Cembrene A	16.52	1946	0.09	15.49	2179	0.07
para-Camphorene	16.89	1981	0.01	15.73	2203	0.01
Cembrene C	17.03	1994	0.03	16.18*	2250	[0.05]
Verticilla-4(20),7,11-triene	17.05	1996	0.01	16.28	2260	0.03
Serratol	18.45*	2136	0.29	19.51	2626	0.22
Incensole	18.45*	2136	[0.29]	20.53	2752	0.08
Total identified		**98.03%**			**97.90%**	
Total reported		**98.37%**			**98.18%**	

*: Two or more compounds are coeluting on this column
[xx]: Duplicate percentage due to coelutions, not taken into account in the consolidated total
†: Peaks apexes were resolved, but peaks overlapped and were summed for analysis
tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied
R.T.: Retention time (minutes)
R.I.: Retention index