Date : June 13, 2023

Certificate of Analysis – GC Profiling

Sample identification

Internal code : 23E30-NSO01
Customer identification : Organic Frankincense - BCE000109-032023
Type : Essential oil
Source : *Boswellia carteri*
Customer : Natural Sourcing LLC

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 : Amélie Simard, Analyste
Analysis date : June 09, 2023

Checked and approved by :

Sylvain Mercier, M. Sc., Chimiste 2014-005

Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia. This report is digitally signed, it is only considered valid if the digital signature is intact. The results only describe the samples that were submitted to the assays.

Laboratoire PhytoChemia
628 Boulevard du Saguenay Ouest, Saguenay (Qc) G7J 1H4 | www.phytochemia.com

PHYSICOCHEMICAL DATA

Physical aspect: Clear liquid
Refractive index: 1.4754 ± 0.0003 (20 °C; method PC-MAT-016)

CONCLUSION

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

628 Boulevard du Saguenay, Saguenay (Qc) G7J 1H4 | www.phytochemia.com

Analysis summary – Consolidated contents

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

Identification	%	Class
Acetone	0.04	Aliphatic ketone
2-Methyl-3-buten-2-ol	0.01	Aliphatic alcohol
(*E*)-2-Methyl-1,3-pentadiene	tr	Alkene
3-Methyl-2-butanone	tr	Aliphatic ketone
Unknown	tr	Unknown
Toluene	0.08	Simple phenolic
Unknown	0.02	Alkene
Unknown	tr	Unknown
Unknown	0.02	Unknown
Unknown	0.02	Unknown
Hashishene	0.67	Monoterpene
Tricyclene	0.06	Monoterpene
α-Thujene	1.63	Monoterpene
α-Pinene	38.38	Monoterpene
Unknown	0.05	Monoterpene
Camphene	0.66	Monoterpene
α-Fenchene	0.02	Monoterpene
Thuja-2,4(10)-diene	0.45	Monoterpene
3,7,7-Trimethylcyclohepta-1,3,5-triene	0.19	Monoterpene
β-Pinene	1.33	Monoterpene
Sabinene	5.74	Monoterpene
Pseudolimonene isomer	0.02	Monoterpene
6-Methyl-5-hepten-2-one	0.03	Aliphatic ketone
Dehydro-1,8-cineole	0.06	Monoterpenic ether
Myrcene	7.15	Monoterpene
6-Methyl-5-hepten-2-ol	0.02	Aliphatic alcohol
α-Phellandrene	1.40	Monoterpene
Pseudolimonene	0.03	Monoterpene
Δ3-Carene	1.36	Monoterpene
ortho-Methylanisole	0.01	Simple phenolic
α-Terpinene	0.16	Monoterpene
meta-Cymene	0.03	Monoterpene
para-Cymene	4.00	Monoterpene
Limonene	12.67	Monoterpene
β-Phellandrene	0.70	Monoterpene
ortho-Cymene	0.03	Monoterpene
(*Z*)-β-Ocimene	0.36	Monoterpene
(*E*)-β-Ocimene	0.10	Monoterpene
γ-Terpinene	0.29	Monoterpene
cis-Sabinene hydrate	0.04	Monoterpenic alcohol
Unknown	0.02	Oxygenated monoterpene
cis-Linalool oxide (fur.)	0.02	Monoterpenic alcohol
Octanol	0.01	Aliphatic alcohol
meta-Cymenene	0.07	Monoterpene
Isoterpinolene	0.01	Monoterpene

Terpinolene	0.11	Monoterpene
para-Cymenene	0.04	Monoterpene
6,7-Epoxymyrcene	0.05	Monoterpenic ether
α-Pinene oxide	0.05	Monoterpenic ether
trans-Sabinene hydrate	0.03	Monoterpenic alcohol
Linalool	0.16	Monoterpenic alcohol
α-Thujone	0.02	Monoterpenic ketone
Unknown	0.15	Monoterpenic alcohol
Verbenol analog?	0.05	Monoterpenic alcohol
β-Thujone	0.09	Monoterpenic ketone
cis-para-Menth-2-en-1-ol	0.08	Monoterpenic alcohol
α-Campholenal	0.23	Monoterpenic aldehyde
Myrcenol	0.10	Monoterpenic alcohol
cis-Limonene oxide	0.06	Monoterpenic ether
trans-Pinocarveol	0.48	Monoterpenic alcohol
trans-Limonene oxide	0.02	Monoterpenic ether
trans-Sabinol	0.20	Monoterpenic alcohol
trans-Verbenol	0.53	Monoterpenic alcohol
meta-Mentha-4,6-dien-8-ol	0.15	Monoterpenic alcohol
Unknown	0.05	Oxygenated monoterpene
Pinocamphone	0.06	Monoterpenic ketone
Pinocarvone	0.07	Monoterpenic ketone
Borneol	0.06	Monoterpenic alcohol
α-Phellandren-8-ol	0.22	Monoterpenic alcohol
cis-Sabinol	0.02	Monoterpenic alcohol
Umbellulone	0.03	Monoterpenic ketone
Terpinen-4-ol	0.59	Monoterpenic alcohol
Thuj-3-en-10-al	0.09	Monoterpenic aldehyde
meta-Cymen-8-ol	0.06	Monoterpenic alcohol
para-Cymen-8-ol	0.15	Monoterpenic alcohol
α-Terpineol	0.41	Monoterpenic alcohol
Myrtenal	0.04	Monoterpenic aldehyde
Myrtenol	0.18	Monoterpenic alcohol
cis-α-Phellandrene epoxide (iPr vs Me)	0.09	Monoterpenic ether
Verbenone	0.33	Monoterpenic ketone
trans-Piperitol	0.04	Monoterpenic alcohol
Unknown	0.07	Oxygenated monoterpene
trans-Carveol	0.17	Monoterpenic alcohol
exo-2-Hydroxycineole	0.03	Monoterpenic alcohol
cis-Carveol	0.05	Monoterpenic alcohol
Cuminal	0.04	Monoterpenic aldehyde
Hexyl 2-methylbutyrate	0.01	Aliphatic ester
Carvone	0.15	Monoterpenic ketone
Carvotanacetone	0.03	Monoterpenic ketone
Piperitone	0.10	Monoterpenic ketone
3,5-Dimethoxytoluene	0.06	Simple phenolic
Unknown	0.04	Oxygenated monoterpene
Decanol	0.02	Aliphatic alcohol
Bornyl acetate	0.27	Monoterpenic ester
para-Cymen-7-ol	0.04	Monoterpenic alcohol
trans-Pinocarvyl acetate	0.02	Monoterpenic ester
Thymol	0.02	Monoterpenic alcohol

Carvacrol	0.05	Monoterpenic alcohol
Bicycloelemene	0.03	Sesquiterpene
Unknown	0.02	Unknown
α-Cubebene	0.18	Sesquiterpene
α-Terpinyl acetate	0.03	Monoterpenic ester
Cyclosativene I	0.04	Sesquiterpene
Cyclosativene II	0.05	Sesquiterpene
α-Ylangene	0.06	Sesquiterpene
α-Copaene	0.70	Sesquiterpene
β-Bourbonene	0.33	Sesquiterpene
1,5-diepi-β-Bourbonene	0.05	Sesquiterpene
β-Cubebene	0.09	Sesquiterpene
β-Elemene	1.07	Sesquiterpene
Isocaryophyllene	0.05	Sesquiterpene
α-Gurjunene	0.16	Sesquiterpene
β-Caryophyllene	2.34	Sesquiterpene
cis-α-Bergamotene	0.08	Sesquiterpene
β-Copaene	0.06	Sesquiterpene
trans-α-Bergamotene	0.13	Sesquiterpene
6,9-Guaiadiene	0.10	Sesquiterpene
Unknown	0.04	Sesquiterpene
trans-Muurola-3,5-diene	0.06	Sesquiterpene
α-Humulene	0.50	Sesquiterpene
allo-Aromadendrene	0.19	Sesquiterpene
cis-Muurola-4(15),5-diene	0.03	Sesquiterpene
trans-Cadina-1(6),4-diene	0.05	Sesquiterpene
γ-Muurolene	0.31	Sesquiterpene
Germacrene D	0.41	Sesquiterpene
β-Selinene	0.47	Sesquiterpene
δ-Selinene	0.06	Sesquiterpene
trans-Muurola-4(15),5-diene	tr	Sesquiterpene
Bicyclogermacrene	0.05	Sesquiterpene
epi-Cubebol	0.16	Sesquiterpenic alcohol
α-Selinene	0.33	Sesquiterpene
α-Muurolene	0.17	Sesquiterpene
Germacrene A	0.05	Sesquiterpene
δ-Amorphene	0.02	Sesquiterpene
γ-Cadinene	0.34	Sesquiterpene
Cubebol	0.29	Sesquiterpenic alcohol
δ-Cadinene	0.77	Sesquiterpene
trans-Cadina-1,4-diene	0.04	Sesquiterpene
α-Cadinene	0.04	Sesquiterpene
α-Calacorene	0.02	Sesquiterpene
α-Elemol	0.03	Sesquiterpenic alcohol
Germacrene B	0.08	Sesquiterpene
Elemicin	0.02	Phenylpropanoid
Palustrol	0.03	Sesquiterpenic alcohol
Unknown	0.05	Oxygenated sesquiterpene
Spathulenol	0.11	Sesquiterpenic alcohol
Germacrene D-4-ol	0.07	Sesquiterpenic alcohol
Caryophyllene oxide isomer	0.06	Sesquiterpenic ether
Caryophyllene oxide	0.58	Sesquiterpenic ether

10-epi-Liguloxide	0.03	Sesquiterpenic ether
Viridiflorol	0.85	Sesquiterpenic alcohol
Salvial-4(14)-en-1-one	0.02	Aliphatic alcohol
Copaborneol	0.09	Sesquiterpenic alcohol
Humulene epoxide II	0.11	Sesquiterpenic ether
10-epi-Cubenol	0.04	Sesquiterpenic alcohol
Unknown	0.10	Sesquiterpenic alcohol
1-epi-Cubenol	0.05	Sesquiterpenic alcohol
τ-Cadinol	0.21	Sesquiterpenic alcohol
τ-Muurolol	0.02	Sesquiterpenic alcohol
α-Muurolol	0.04	Sesquiterpenic alcohol
β-Eudesmol	0.05	Sesquiterpenic alcohol
α-Eudesmol	0.03	Sesquiterpenic alcohol
α-Cadinol	0.03	Sesquiterpenic alcohol
Dihydroeudesmol	0.02	Sesquiterpenic alcohol
(3*Z*)-Caryophylla-3,8(13)-dien-5β-ol	0.04	Sesquiterpenic alcohol
Shyobunol	0.01	Sesquiterpenic alcohol
α-Phellandrene dimer II	0.06	Diterpene
α-Phellandrene dimer III	0.01	Diterpene
α-Phellandrene dimer IV	0.01	Diterpene
Unknown	0.01	Unknown
(3*E*)-Cembrene A	0.14	Diterpene
Cembrene C	0.04	Diterpene
Cembrenol	0.06	Diterpenic alcohol
Serratol	0.47	Diterpenic alcohol
Incensole	0.09	Diterpenic alcohol
Consolidated total	**97.78%**	

tr: The compound has been detected below 0.005% of total signal.

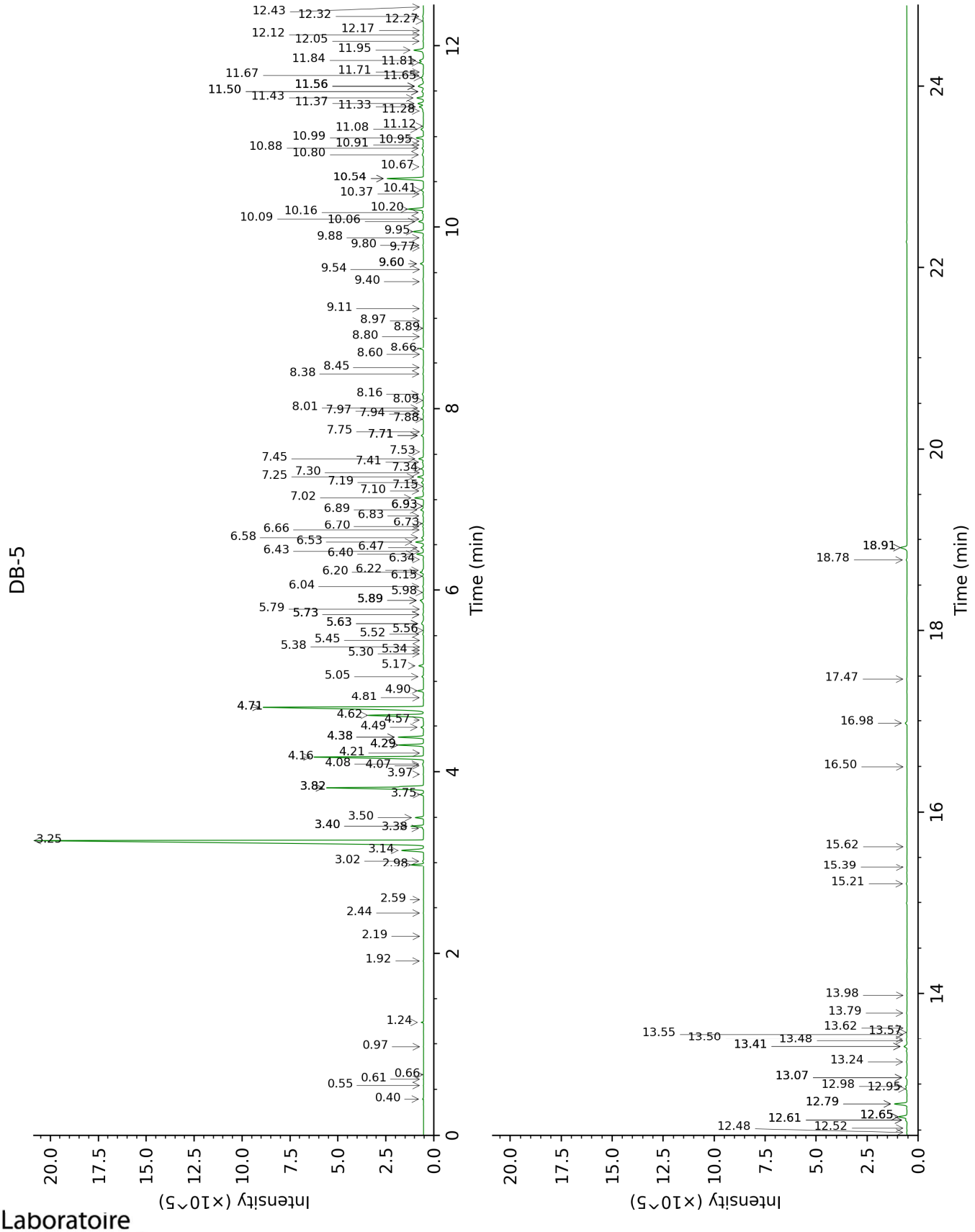
Note: no correction factor was applied

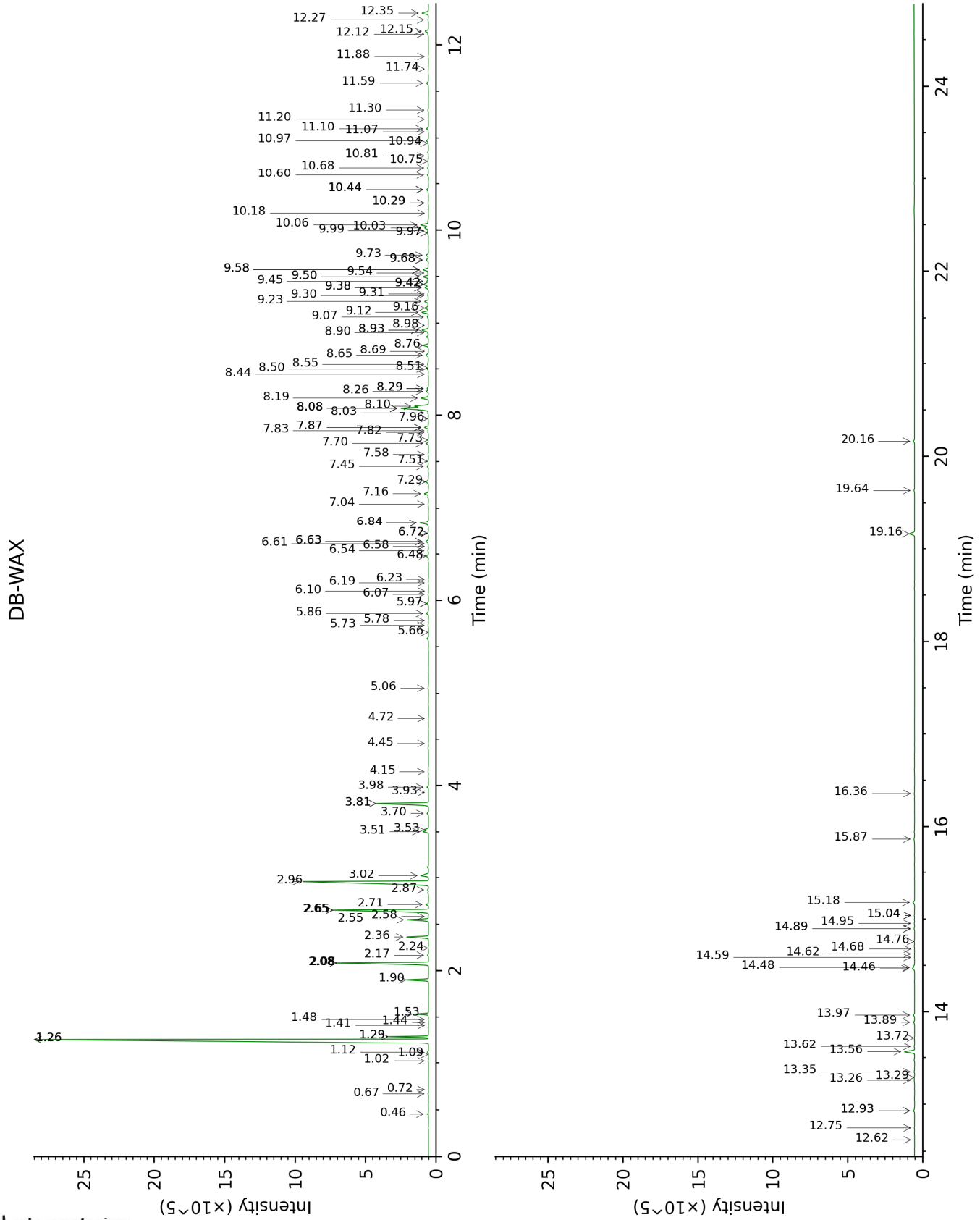
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm 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.

This page was intentionally left blank. The following pages present the complete data of the analysis.

628 Boulevard du Saguenay, Saguenay (Qc) G7J 1H4 | www.phytochemia.com


DB-5
Time (min)
Intensity (×10^5)
12.43
12.32
12.27
12.12
12.17
12.05
11.95
11.84
11.81
11.67
11.71
11.65
11.50
11.56
11.43
11.37
11.33
11.28
11.08
11.12
10.99
10.95
10.88
10.91
10.80
10.67
10.54
10.37
10.41
10.09
10.16
10.20
10.06
9.88
9.95
9.80
9.77
9.54
9.60
9.40
9.11
8.97
8.89
8.80
8.60
8.66
8.38
8.45
8.16
8.09
8.01
7.97
7.94
7.88
7.75
7.71
7.53
7.45
7.41
7.34
7.25
7.30
7.19
7.10
7.15
7.02
6.89
6.93
6.83
6.66
6.70
6.73
6.58
6.53
6.43
6.40
6.47
6.34
6.20
6.22
6.15
6.04
5.98
5.89
5.79
5.73
5.63
5.52
5.56
5.45
5.38
5.30
5.34
5.17
5.05
4.90
4.81
4.71
4.62
4.57
4.49
4.38
4.29
4.21
4.16
4.08
4.07
3.97
3.82
3.75
3.50
3.40
3.38
3.25
3.14
3.02
2.98
2.59
2.44
2.19
1.92
1.24
0.97
0.55
0.61
0.66
0.40
18.91
18.78
17.47
16.98
16.50
15.62
15.39
15.21
13.98
13.79
13.62
13.57
13.55
13.50
13.41
13.48
13.24
13.07
12.98
12.95
12.79
12.61
12.65
12.48
12.52


DB-WAX
Time (min)
Intensity (×10^5)
12.27
12.35
12.12
12.15
11.88
11.74
11.59
11.30
11.20
11.10
11.07
10.97
10.94
10.81
10.75
10.68
10.60
10.44
10.29
10.18
10.06
9.99
10.03
9.97
9.73
9.68
9.58
9.45
9.50
9.54
9.38
9.42
9.23
9.30
9.31
9.07
9.12
9.16
8.90
8.93
8.98
8.65
8.69
8.76
8.44
8.50
8.55
8.51
8.26
8.29
8.19
8.08
8.03
8.10
7.96
7.83
7.87
7.82
7.70
7.73
7.58
7.45
7.51
7.29
7.16
7.04
6.84
6.72
6.61
6.63
6.54
6.58
6.48
6.19
6.23
6.10
6.07
5.97
5.86
5.73
5.78
5.66
5.06
4.72
4.45
4.15
3.98
3.93
3.81
3.70
3.51
3.53
3.02
2.96
2.87
2.71
2.65
2.55
2.58
2.36
2.24
2.17
2.08
1.90
1.53
1.48
1.41
1.44
1.26
1.29
1.12
1.09
1.02
0.67
0.72
0.46
20.16
19.64
19.16
16.36
15.87
15.18
15.04
14.89
14.95
14.76
14.59
14.62
14.68
14.48
14.46
13.97
13.89
13.72
13.62
13.56
13.35
13.26
13.29
12.93
12.75
12.62

FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
Acetone	0.40	499	0.04	0.46	785	0.03
2-Methyl-3-buten-2-ol	0.55	607	0.01	1.41	1017	tr
(*E*)-2-Methyl-1,3-pentadiene	0.61	629	tr			
3-Methyl-2-butanone	0.66	646	tr	0.72	902	tr
Unknown [m/z 93, 91 (70), 77 (48), 108 (42)]	0.97	722	tr			
Toluene	1.24	759	0.08	1.29*	1004	1.72
Unknown [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)]	1.92	832	0.02	0.67	885	0.02
Unknown [m/z 109, 43 (28), 124 (28), 41 (14), 55 (11), 79 (9), 81 (8)...]	2.19	854	tr	1.44	1020	tr
Unknown [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	2.44	875	0.02	1.02	958	0.01
Unknown [m/z 119, 91 (35), 79 (17), 77 (13), 120 (11), 117 (9)...134 (1)]	2.59	887	0.02	1.09	970	tr
Hashishene	2.98	916	0.67	1.26*	999	39.01
Tricyclene	3.02	919	0.06	1.12	974	0.06
α-Thujene	3.14	926	1.63	1.29*	1004	[1.72]
α-Pinene	3.25	934	38.38	1.26*	999	[39.01]
Unknown [m/z 91, 92 (47), 65 (11)... 134 (1)]	3.38	942	0.05	2.17	1095	0.06
Camphene	3.40*	944	0.67	1.53	1029	0.66
α-Fenchene	3.40*	944	[0.67]	1.48	1023	0.02
Thuja-2,4(10)-diene	3.50	950	0.45	2.08*	1086	6.20
3,7,7-Trimethylcyclohepta-1,3,5-triene	3.75	967	0.19	2.65*	1136	7.36
β-Pinene	3.82*	972	7.10	1.90	1067	1.33
Sabinene	3.82*	972	[7.10]	2.08*	1086	[6.20]
Pseudolimonene isomer	3.97	981	0.02	2.24	1103	0.04
6-Methyl-5-hepten-2-one	4.07	988	0.03	4.72	1302	0.02
Dehydro-1,8-cineole	4.08	989	0.06	2.87	1154	0.06
Myrcene	4.16	994	7.15	2.65*	1136	[7.36]
6-Methyl-5-hepten-2-ol	4.21	997	0.02	6.58	1432	0.02

α-Phellandrene	4.29*	1002	1.50	2.55	1128	1.40
Pseudolimonene	4.29*	1002	[1.50]	2.58	1131	0.03
Δ3-Carene	4.38*	1008	1.45	2.36	1113	1.36
ortho-Methylanisole	4.38*	1008	[1.45]	5.66	1363	0.01
α-Terpinene	4.49	1015	0.16	2.71	1142	0.16
meta-Cymene	4.57	1020	0.03	3.81*	1230	3.99
para-Cymene	4.62	1023	4.00	3.81*	1230	[3.99]
Limonene	4.71*	1028	13.34	2.96	1162	12.67
β-Phellandrene	4.71*	1028	[13.34]	3.02	1167	0.70
ortho-Cymene	4.81	1035	0.03	4.15	1257	0.03
(*Z*)-β-Ocimene	4.90	1040	0.36	3.51	1207	0.38
(*E*)-β-Ocimene	5.05	1050	0.10	3.70	1222	0.11
γ-Terpinene	5.17	1057	0.29	3.53	1209	0.29
cis-Sabinene hydrate	5.30	1066	0.04	6.54	1428	0.05
Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	5.34	1068	0.02	4.45	1281	0.03
cis-Linalool oxide (fur.)	5.38	1070	0.02	6.19	1402	0.04
Octanol	5.45	1075	0.01	7.84	1527	0.03
meta-Cymenene	5.52	1079	0.07	5.86	1378	0.17
Isoterpinolene	5.56	1082	0.01	3.93	1240	0.01
Terpinolene	5.63*	1086	0.25	3.98	1244	0.11
para-Cymenene	5.63*	1086	[0.25]	5.97*	1386	0.13
6,7-Epoxymyrcene	5.73*	1092	0.08	5.73	1368	0.05
α-Pinene oxide	5.73*	1092	[0.08]	5.06	1319	0.05
trans-Sabinene hydrate	5.79	1096	0.03	7.58	1507	0.03
Linalool	5.89*†	1102	0.33	7.70	1516	0.16
α-Thujone	5.89*†	1102	[0.33]	5.78	1372	0.02
Unknown [m/z 119, 109 (94), 43 (61), 95 (56), 91 (48), 77 (32), 152 (32), 137 (31), 134 (24)]	5.89*†	1102	[0.33]	8.10†	1548	[3.68]
Verbenol analog?	5.98	1108	0.05	7.96	1537	0.04
β-Thujone	6.04	1112	0.09	5.97*	1386	[0.13]
cis-para-Menth-2-en-1-ol	6.15	1119	0.08	7.73	1519	0.05
α-Campholenal	6.20	1122	0.23	6.64*	1436	0.23
Myrcenol	6.22	1123	0.10	8.50	1580	0.10
cis-Limonene oxide	6.34	1131	0.06	6.07	1393	0.04
trans-Pinocarveol	6.40	1134	0.48	8.76	1600	0.45
trans-Limonene oxide	6.43	1136	0.02	6.23	1405	0.02
trans-Sabinol	6.47	1139	0.20	9.38*†	1651	0.79
trans-Verbenol	6.53	1143	0.53	9.12	1629	0.54
meta-Mentha-4,6-dien-8-ol	6.58	1146	0.15	8.92*	1613	0.64

Unknown [m/z 109, 81 (39), 41 (38), 95 (24)... 152 (1)]	6.66	1151	0.05			
Pinocamphone	6.70	1154	0.06	6.84*	1451	0.77
Pinocarvone	6.73	1156	0.07	7.51	1501	0.08
Borneol	6.82	1162	0.06	9.38*†	1651	[0.79]
α-Phellandren-8-ol	6.89	1166	0.22	9.73	1680	0.19
cis-Sabinol	6.93*	1168	0.05	10.44*	1739	0.19
Umbellulone	6.93*	1168	[0.05]	8.51	1580	0.03
Terpinen-4-ol	7.02	1174	0.59	8.19	1555	0.60
Thuj-3-en-10-al	7.10	1179	0.09	8.29*	1563	0.12
meta-Cymen-8-ol	7.15	1182	0.06	11.07	1794	0.02
para-Cymen-8-ol	7.19	1185	0.15	11.10	1796	0.15
α-Terpineol	7.25	1189	0.41	9.42*†	1654	[0.79]
Myrtenal	7.30	1192	0.04	8.29*	1563	[0.12]
Myrtenol	7.34	1194	0.18	10.44*	1739	[0.19]
cis-α-Phellandrene epoxide (iPr vs Me)	7.41	1199	0.09	10.60	1753	0.10
Verbenone	7.45	1202	0.33	9.23	1639	0.34
trans-Piperitol	7.53	1206	0.04	9.97	1700	0.09
Unknown [m/z 43, 111 (88), 126 (74), 125 (61)... 168? (2)]	7.71*	1218	0.18	10.75	1766	0.07
trans-Carveol	7.71*	1218	[0.18]	10.97	1785	0.17
exo-2-Hydroxycineole	7.75	1221	0.03	11.20	1805	0.02
cis-Carveol	7.88	1230	0.05	11.30	1814	0.06
Cuminal	7.94	1234	0.04	10.18	1718	0.02
Hexyl 2-methylbutyrate	7.97	1236	0.01	6.10	1396	0.01
Carvone	8.01	1238	0.15	9.58*	1667	0.48
Carvotanacetone	8.09	1244	0.03	9.07	1625	0.11
Piperitone	8.16	1249	0.10	9.45	1657	0.13
3,5-Dimethoxytoluene	8.38	1264	0.06	10.94	1783	0.06
Unknown [m/z 109, 41 (22), 81 (14), 43 (11)... 152 (4)]	8.45	1268	0.04			
Decanol	8.60	1278	0.02	10.29*	1727	0.05
Bornyl acetate	8.66	1282	0.27	7.87*	1530	0.34
para-Cymen-7-ol	8.80	1291	0.04	13.72	2038	0.03
trans-Pinocarvyl acetate	8.89	1298	0.02	8.69	1594	0.01
Thymol	8.97	1303	0.02	14.68	2133	0.02
Carvacrol	9.11	1312	0.05	14.90*	2155	0.05
Bicycloelemene	9.40	1333	0.03	6.72*	1442	0.08
Unknown [m/z 133, 105 (45), 91 (38), 119 (36)... 150 (3)]	9.54	1342	0.02			
α-Cubebene	9.60*	1347	0.22	6.48	1424	0.18
α-Terpinyl acetate	9.60*	1347	[0.22]	9.32	1646	0.03
Cyclosativene I	9.77	1359	0.04	6.61	1434	0.02

Cyclosativene II	9.80	1361	0.05	6.64*	1436	[0.23]
α-Ylangene	9.88	1367	0.06	6.72*	1442	[0.08]
α-Copaene	9.95	1372	0.70	6.84*	1451	[0.77]
β-Bourbonene	10.06	1380	0.33	7.16	1475	0.33
1,5-diepi-β-Bourbonene	10.09	1382	0.05	7.04	1466	0.04
β-Cubebene	10.16	1386	0.09	7.45	1497	0.10
β-Elemene	10.20	1389	1.07	8.08*†	1546	3.68
Isocaryophyllene	10.37	1401	0.05	7.82	1526	0.05
α-Gurjunene	10.41	1404	0.16	7.29	1485	0.24
β-Caryophyllene	10.54*	1413	2.56	8.08*†	1546	[3.68]
cis-α-Bergamotene	10.54*	1413	[2.56]	7.87*	1530	[0.34]
β-Copaene	10.67	1423	0.06	8.03	1542	0.06
trans-α-Bergamotene	10.80	1433	0.13	8.08*†	1546	[3.68]
6,9-Guaiadiene	10.88	1439	0.10	8.26	1560	0.17
Unknown [m/z 91, 161 (92), 105 (85), 119 (63), 133 (53), 79 (49), 204 (46)]	10.91	1441	0.04	8.44	1575	0.03
trans-Muurola-3,5-diene	10.95	1444	0.06	8.55	1583	0.10
α-Humulene	10.99	1447	0.50	8.92*	1613	[0.64]
allo-Aromadendrene	11.08	1454	0.19	8.65	1591	0.24
cis-Muurola-4(15),5-diene	11.12	1457	0.03	8.98	1618	0.02
trans-Cadina-1(6),4-diene	11.28	1469	0.05	8.90	1611	0.04
γ-Muurolene	11.33	1472	0.31	9.16	1633	0.32
Germacrene D	11.37	1475	0.41	9.42*†	1654	[0.79]
β-Selinene	11.43	1480	0.47	9.50*	1661	0.47
δ-Selinene	11.50*	1485	0.15	9.30	1644	0.06
trans-Muurola-4(15),5-diene	11.50*	1485	[0.15]	9.50*	1661	[0.47]
Bicyclogermacrene	11.56*	1489	0.53	9.68*	1676	0.22
epi-Cubebol	11.56*	1489	[0.53]	11.59	1840	0.16
α-Selinene	11.56*	1489	[0.53]	9.58*	1667	[0.48]
α-Muurolene	11.65	1496	0.17	9.68*	1676	[0.22]
Germacrene A	11.67	1498	0.05	10.00	1702	0.05
δ-Amorphene	11.71	1501	0.02	9.54	1664	0.05
γ-Cadinene	11.81†	1509	0.61	10.02	1704	0.34
Cubebol	11.84†	1510	[0.61]	12.15	1890	0.29
δ-Cadinene	11.95	1519	0.77	10.06	1707	0.66
trans-Cadina-1,4-diene	12.05	1527	0.04	10.29*	1727	[0.05]
α-Cadinene	12.12	1532	0.04	10.44*	1739	[0.19]
α-Calacorene	12.17	1536	0.02	11.74	1854	0.03
α-Elemol	12.27	1544	0.03	13.62	2029	0.04
Germacrene B	12.32	1548	0.08	10.68	1760	0.08
Elemicin	12.43	1557	0.02	15.04*	2170	0.03
Palustrol	12.48	1560	0.03	11.88	1866	0.03

Unknown [m/z 152, 109 (61), 43 (21), 137 (16), 151 (16)... 222 (6)]	12.52	1564	0.05			
Spathulenol	12.61*	1571	0.12	13.97	2062	0.11
Germacrene D-4-ol	12.61*	1571	[0.12]	13.26	1994	0.07
Caryophyllene oxide isomer	12.65*	1574	0.64	12.27	1901	0.06
Caryophyllene oxide	12.65*	1574	[0.64]	12.35	1908	0.58
10-epi-Liguloxide	12.65*	1574	[0.64]	10.81	1771	0.03
Viridiflorol	12.79*	1585	0.87	13.56	2023	0.85
Salvial-4(14)-en-1-one	12.79*	1585	[0.87]	12.62	1934	0.02
Copaborneol	12.95	1598	0.09	14.48†	2112	[0.31]
Humulene epoxide II	12.98	1600	0.11	12.93*	1963	0.14
10-epi-Cubenol	13.07*	1608	0.15	13.29	1997	0.04
Unknown [m/z 161, 189 (76), 204 (66), 105 (60), 119 (46), 107 (41), 59 (38)...222 (3)]	13.07*	1608	[0.15]	13.89	2055	0.10
1-epi-Cubenol	13.24	1622	0.05	13.35	2002	0.05
τ-Cadinol	13.41*	1636	0.24	14.46†	2111	0.31
τ-Muurolol	13.41*	1636	[0.24]	14.62	2127	0.02
α-Muurolol	13.48	1641	0.04	14.76	2141	0.04
β-Eudesmol	13.50	1643	0.05	14.95	2161	0.04
α-Eudesmol	13.55	1647	0.03	14.90*	2155	[0.05]
α-Cadinol	13.58	1649	0.03	15.04*	2170	[0.03]
Dihydroeudesmol	13.62	1653	0.02	14.59	2123	0.02
(3*Z*)-Caryophylla-3,8(13)-dien-5β-ol	13.79	1666	0.04	16.36	2308	0.04
Shyobunol	13.98	1682	0.01	15.87	2256	0.10
α-Phellandrene dimer II	15.21	1787	0.06	12.12	1888	0.06
α-Phellandrene dimer III	15.39	1803	0.01	12.75	1946	0.03
α-Phellandrene dimer IV	15.62	1824	0.01	12.93*	1963	[0.14]
Unknown [m/z 43, 81 (45), 137 (39), 71 (39), 93 (33), 95 (32)...]	16.50	1904	0.01			
(3*E*)-Cembrene A	16.98	1949	0.14	15.18	2184	0.14
Cembrene C	17.47	1996	0.04			
Cembrenol	18.78	2126	0.06	19.64	2685	0.06
Serratol	18.91*	2140	0.55	19.16	2627	0.47
Incensole	18.91*	2140	[0.55]	20.16	2751	0.09
Total identified		**97.77%**			**97.22%**	
Total reported		**98.12%**			**97.52%**	

*: 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

628 Boulevard du Saguenay, Saguenay (Qc) G7J 1H4 | www.phytochemia.com