Date : 2026-07-22

Certificate of Analysis - GC Profiling

Sample Identification

Internal code : 26F02-PTH04
Customer Identification : Eucalyptus Radiata - Australia - E40113
Type : Essential Oil
Source : *Eucalyptus radiata*
Customer : Plant Therapy

Checked an 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Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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. The compliance status of the sample is provided to facilitate the reading of the report. The client remains ultimately responsible for reviewing the results presented within this report and to establish compliance of the tested batch against relevant quality criteria.

This report is an update of the version first issued on 2026-06-04 to make a modification in the sample identification section.

Méthode certifiée ISO 17025:2017 Certified method

Laboratoire PhytoChemia

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

Gas Chromatographic Analysis

Method : PC-MAT-014 - Analysis of the composition of an essential oil or other volatile liquide by FAST GC-FID
ISO
Results : See analysis summary (next page)
Analyst : Jean-Christophe Fortin, M. Sc.
Date : 2026-06-03

Physicochemical data

Refractive index : 1.4633 ± 0.0003 (20 °C)
Method : PC-MAT-016 - Measure of the refractive index of a liquid.
Analyst : Cindy Caron B. Sc.
Date : 2026-06-03

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
2-Methyl-3-buten-2-ol	0.01	Aliphatic alcohol
(2*E*)-Hexenal	0.01	Aliphatic aldehyde
(3*Z*)-Hexenol	0.04	Aliphatic alcohol
Hexanol	0.01	Aliphatic alcohol
α-Thujene	0.18	Monoterpene
α-Pinene	2.26	Monoterpene
Camphene	0.02	Monoterpene
α-Fenchene	0.01	Monoterpene
Sabinene	2.02	Monoterpene
β-Pinene	0.63	Monoterpene
trans-*para*-Menthane	0.01	Monoterpene
Myrcene	1.16	Monoterpene
α-Phellandrene	0.28	Monoterpene
Pseudolimonene	0.04	Monoterpene
α-Terpinene	0.12	Monoterpene
para-Cymene	0.19	Monoterpene
1,8-Cineole	70.97	Monoterpenic ether
Limonene	6.48	Monoterpene
(*Z*)-β-Ocimene	0.01	Monoterpene
(*E*)-β-Ocimene	0.06	Monoterpene
γ-Terpinene	0.11	Monoterpene
cis-Sabinene hydrate	0.03	Monoterpenic alcohol
cis-Linalool oxide (fur.)	0.01	Monoterpenic alcohol
trans-Linalool oxide (fur.)	0.02	Monoterpenic alcohol
Terpinolene	0.03	Monoterpene
para-Cymenene	tr	Monoterpene
trans-Sabinene hydrate	0.03	Monoterpenic alcohol
Linalool	0.48	Monoterpenic alcohol
cis-*para*-Menth-2-en-1-ol	0.08	Monoterpenic alcohol
trans-Pinocarveol	0.01	Monoterpenic alcohol
trans-*para*-Menth-2-en-1-ol	0.06	Monoterpenic alcohol
Isopulegol	0.02	Monoterpenic alcohol
Citronellal	0.01	Monoterpenic aldehyde
Borneol	0.01	Monoterpenic alcohol
δ-Terpineol	0.10	Monoterpenic alcohol
Terpinen-4-ol	0.88	Monoterpenic alcohol
Cryptone	0.02	Normonoterpenic ketone
α-Terpineol	10.96	Monoterpenic alcohol
cis-α-Phellandrene epoxide (iPr vs Me)	0.01	Monoterpenic ether
trans-Piperitol	0.04	Monoterpenic alcohol

trans-Carveol	0.01	Monoterpenic alcohol
exo-2-Hydroxycineole	0.01	Monoterpenic alcohol
Nerol	0.02	Monoterpenic alcohol
Citronellol	0.02	Monoterpenic alcohol
Neral	0.22	Monoterpenic aldehyde
Piperitone	0.04	Monoterpenic ketone
Geraniol	0.79	Monoterpenic alcohol
Geranial	0.26	Monoterpenic aldehyde
cis-Ascaridole glycol	0.01	Monoterpenic alcohol
Unknown	0.01	Oxygenated monoterpene
Unknown	0.02	Monoterpenic alcohol
Unknown	0.01	Unknown
α-Terpinyl acetate	0.32	Monoterpenic ester
Geranyl acetate	0.01	Monoterpenic ester
Unknown	0.01	Sesquiterpene
β-Caryophyllene	0.05	Sesquiterpene
Aromadendrene	0.01	Sesquiterpene
α-Humulene	0.01	Sesquiterpene
allo-Aromadendrene	0.01	Sesquiterpene
Viridiflorene	0.01	Sesquiterpene
Bicyclogermacrene	0.03	Sesquiterpene
α-Elemol	0.01	Sesquiterpenic alcohol
Spathulenol	0.01	Sesquiterpenic alcohol
Globulol	tr	Sesquiterpenic alcohol
γ-Eudesmol	0.01	Sesquiterpenic alcohol
Isospathulenol	0.02	Sesquiterpenic alcohol
β-Eudesmol	0.01	Sesquiterpenic alcohol
α-Eudesmol	0.01	Sesquiterpenic alcohol
Consolidated total	**99.33**	

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

Note: no correction factor was applied

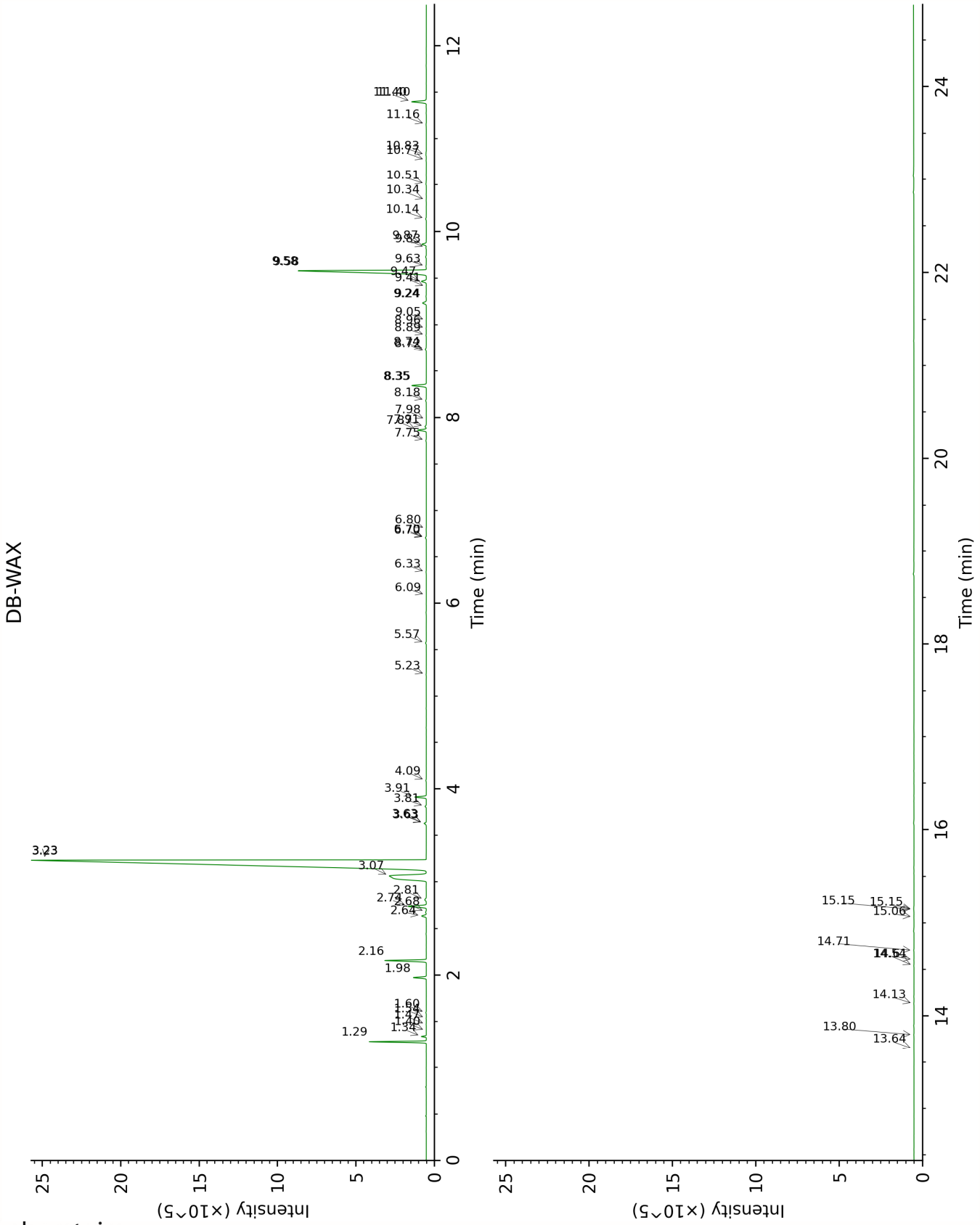
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

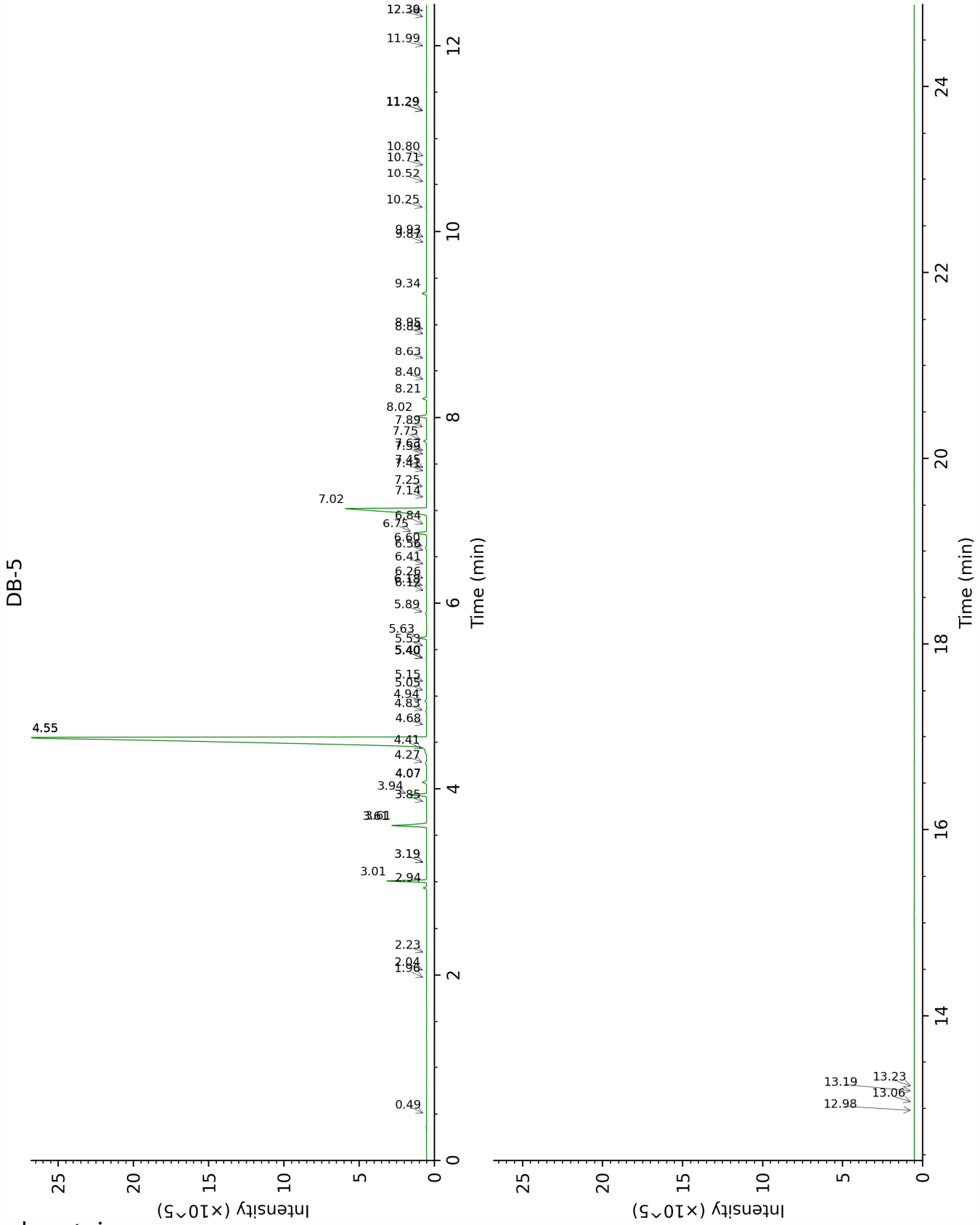
Unknowns: Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

Bracketed value ([xx]): A bracketed percent value indicate that two or more compound percentage could not be solved due to coelution.

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-WAX
Time (min)
Intensity (×10^5)
11.40
11.16
10.83
10.77
10.51
10.34
10.14
9.87
9.63
9.58
9.47
9.41
9.24
9.05
8.89
8.35
8.18
7.98
7.75
6.80
6.33
6.09
5.57
5.23
4.09
3.91
3.81
3.63
3.23
3.07
2.81
2.68
2.64
2.16
1.98
1.60
1.29
15.15
15.06
14.71
14.13
13.80
13.64


DB-5
12.30
11.99
11.29
10.80
10.71
10.52
10.25
9.93
9.87
9.34
8.95
8.85
8.63
8.40
8.21
8.02
7.89
7.75
7.41
7.25
7.14
7.02
6.84
6.75
6.60
6.56
6.41
6.26
6.18
5.89
5.63
5.53
5.40
5.15
5.05
4.94
4.85
4.68
4.55
4.41
4.27
4.07
3.94
3.85
3.61
3.19
3.01
2.94
2.23
2.04
1.96
0.49
Time (min)
Intensity (×10^5)
13.19
13.23
13.06
12.98
Time (min)
Intensity (×10^5)

FULL ANALYSIS DATA

	Column DB-WAX			Column DB-5		
2-Methyl-3-buten-2-ol	1.47	1017.2	tr	0.49	602.7	0.01
(2*E*)-Hexenal	3.24*	1173.5	[70.53]	1.96	848.1	0.01
(3*Z*)-Hexenol	5.57	1344.6	0.04	2.04	854.8	0.04
Hexanol	5.23	1319.7	0.01	2.23	871.4	0.01
α-Thujene	1.34	1000.6	0.18	2.94	926.0	0.18
α-Pinene	1.29	991.4	2.22	3.01	931.0	2.26
Camphene	1.60	1029.8	0.02	3.20*	943.4	[0.02]
α-Fenchene	1.54	1023.7	0.01	3.20*	943.4	[0.02]
Sabinene	2.16	1084.8	2.02	3.61*	971.2	[2.69]
β-Pinene	1.98	1066.8	0.63	3.61*	971.2	[2.69]
trans-para-Menthane	1.40	1010.3	tr	3.85	987.9	0.01
Myrcene	2.74	1135.1	1.15	3.94	993.5	1.16
α-Phellandrene	2.64	1127.1	0.28	4.07*	1002.6	[0.33]
Pseudolimonene	2.68	1130.3	0.04	4.07*	1002.6	[0.33]
α-Terpinene	2.81	1140.6	0.12	4.27	1015.5	0.12
para-Cymene	3.91	1224.8	0.60	4.41	1024.4	0.19
1,8-Cineole	3.24*	1173.5	[70.53]	4.55*	1033.3	[77.46]
Limonene	3.07	1160.4	6.48	4.55*	1033.3	[77.46]
(*Z*)-β-Ocimene	3.63*	1204.1	[0.13]	4.68	1041.4	0.01
(*E*)-β-Ocimene	3.81	1217.6	0.06	4.83	1051.1	0.06
γ-Terpinene	3.63*	1204.1	[0.13]	4.94	1058.3	0.11
cis-Sabinene hydrate	6.70*	1428.2	[0.05]	5.05	1065.3	0.03
cis-Linalool oxide (fur.)	6.34	1400.6	0.02	5.15	1071.5	0.01
trans-Linalool oxide (fur.)	6.70*	1428.2	[0.05]	5.40*	1087.4	[0.05]
Terpinolene	4.09	1237.5	0.03	5.40*	1087.4	[0.05]
para-Cymenene	6.09	1382.5	tr	5.40*	1087.4	[0.05]
trans-Sabinene hydrate	7.76	1508.0	0.03	5.53	1095.9	0.03
Linalool	7.87	1516.6	0.47	5.63	1102.1	0.48
cis-para-Menth-2-en-1-ol	7.90	1519.6	0.08	5.89	1119.2	0.08
trans-Pinocarveol	8.96	1603.3	0.01	6.12	1134.1	0.01
trans-para-Menth-2-en-1-ol	8.74	1585.7	0.06	6.18	1138.0	0.06
Isopulegol	7.98	1525.4	tr	6.26	1143.0	0.02
Citronellal	6.80	1435.3	0.01	6.41	1152.8	0.01
Borneol	9.58*	1654.0	[10.83]	6.56	1162.5	0.01
δ-Terpineol	9.24*	1625.4	[0.26]	6.60	1165.3	0.10
Terpinen-4-ol	8.35*	1554.5	[0.86]	6.76	1175.4	0.88

Cryptone	8.89	1597.7	0.02	6.84	1181.0	0.02
α-Terpineol	9.58*	1654.0	[10.83]	7.02	1193.0	10.96
cis-α-Phellandrene epoxide (iPr vs Me)	10.77	1753.9	0.02	7.14	1200.3	0.01
trans-Piperitol	10.14	1699.8	0.04	7.25	1207.5	0.04
trans-Carveol	11.16	1787.2	0.02	7.41	1219.0	0.01
exo-2-Hydroxycineole	11.40*	1808.1	[0.91]	7.45	1221.6	0.01
Nerol	10.83	1758.9	0.03	7.59	1231.2	0.02
Citronellol	10.51	1731.4	0.03	7.64	1234.1	0.02
Neral	9.24*	1625.4	[0.26]	7.75	1241.9	0.22
Piperitone	9.63	1657.9	0.03	7.89	1251.6	0.04
Geraniol	11.40*	1808.1	[0.91]	8.02	1260.1	0.79
Geranial	9.86	1677.4	0.27	8.20	1273.1	0.26
cis-Ascaridole glycol	14.54	2101.3	0.01	8.40	1286.3	0.01
Unknown RODA I [m/z 59, 94 (99), 79 (68), 43 (32), 97 (17)... 137 (8)...]				8.63	1302.1	0.01
Unknown MEAL I [m/z 97, 112 (92), 83 (62), 43 (44), 41 (25)... 170? (4)]	14.71	2117.5	0.02	8.89	1317.1	0.02
Unknown PRME VII [m/z 69, 41 (58), 114 (29), 43 (25), 83 (24), 123 (20)...]				8.95	1320.9	0.01
α-Terpinyl acetate	9.47	1644.6	0.31	9.34	1349.0	0.32
Geranyl acetate	10.34	1716.5	0.01	9.87	1386.6	0.01
Unknown EUGL IV [m/z 93, 122 (98), 161 (98), 107 (86), 95 (46), 105 (72)... 204 (34)]				9.93	1390.9	0.01
β-Caryophyllene	8.18	1541.7	0.04	10.25	1414.1	0.05
Aromadendrene	8.35*	1554.5	[0.86]	10.52	1434.6	0.01
α-Humulene	9.05	1610.2	0.01	10.71	1448.5	0.01
allo-Aromadendrene	8.72	1584.3	0.01	10.80	1455.7	0.01
Viridiflorene	9.41	1639.6	0.01	11.29*	1492.1	[0.03]
Bicyclogermacrene	9.83	1674.3	0.03	11.29*	1492.1	[0.03]
α-Elemol	13.80	2028.8	0.01	11.99	1546.6	0.01
Spathulenol	14.13	2061.4	0.01	12.30	1571.5	0.01
Globulol	13.64	2013.8	0.01	12.39	1578.0	tr

γ-Eudesmol	14.61	2107.7	0.01	12.98	1625.8	0.01
Isospathulenol	15.15*	2162.2	[0.04]	13.06	1632.8	0.02
β-Eudesmol	15.15*	2162.2	[0.04]	13.19	1643.1	0.01
α-Eudesmol	15.06	2153.9	0.01	13.23	1646.8	0.01
Total reported		99.14%			99.39%	

*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, only the first one is 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