

Date : 2025-07-24

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 25F23-PTH03

Customer Identification : Lemon Myrtle - LP0110R

Type : Essential Oil

Source : *Backhousia citriodora*

Customer : Plant Therapy

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Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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.

This report is an update from the first version issued on 2025-06-26 to correct the customer identification.

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 : Anne Retailaud

Date : 2025-06-26

PHYSICOCHEMICAL DATA

Refractive index : 1.4881 ± 0.0003 (20 °C)

Method : PC-MAT-016 - Measure of the refractive index of a liquid.

Analyst : Cindy Caron B. Sc.

Date : 2025-06-23

CONCLUSION

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

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
(3Z)-Hexenol	0.02	Aliphatic alcohol
Hexanol	0.01	Aliphatic alcohol
Unknown	0.01	Unknown
6-Methyl-5-hepten-2-one	0.12	Aliphatic ketone
Dehydro-1,8-cineole	0.04	Monoterpenic ether
Myrcene	0.07	Monoterpene
Octan-3-ol	0.01	Aliphatic alcohol
Limonene	0.01	Monoterpene
Seudenone?	0.01	Aliphatic ketone
(E)- β -Ocimene	0.01	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	0.02	Monoterpenic alcohol
Rosefuran	0.01	Monoterpenic ether
Linalool	0.15	Monoterpenic alcohol
<i>cis</i> -Chrysanthemal?	0.02	Monoterpenic aldehyde
α -Cyclocitral	0.01	Monoterpenic aldehyde
<i>trans-para</i> -Mentha-2,8-dien-1-ol	0.03	Monoterpenic alcohol
<i>cis-para</i> -Mentha-2,8-dien-1-ol	0.07	Monoterpenic alcohol
<i>trans-para</i> -Menth-2-en-1-ol	0.02	Monoterpenic alcohol
Isopulegol	0.02	Monoterpenic alcohol
exo-Isocitral	0.13	Monoterpenic aldehyde
Citronellal	0.27	Monoterpenic aldehyde
Borneol	0.08	Monoterpenic alcohol
α -Phellandren-8-ol	0.08	Monoterpenic alcohol
Isoneral	0.58	Monoterpenic aldehyde
Rosefuran oxide	0.03	Monoterpenic ether
Terpinen-4-ol	0.18	Monoterpenic alcohol
Unknown	0.37	Oxygenated monoterpene
<i>para</i> -Cymen-8-ol	0.03	Monoterpenic alcohol
Isogeranial	1.22	Monoterpenic aldehyde
α -Terpineol	0.82	Monoterpenic alcohol
β -Phellandren-8-ol	0.04	Monoterpenic alcohol
<i>trans</i> -Isopiperitenol	0.07	Monoterpenic alcohol
Unknown	0.17	Oxygenated monoterpene
<i>cis</i> -Isopiperitenol	0.03	Monoterpenic alcohol
Unknown	0.04	Oxygenated monoterpene
Citronellol	0.01	Monoterpenic alcohol
Nerol	0.68	Monoterpenic alcohol
Neral	40.62	Monoterpenic aldehyde
Piperitone	0.07	Monoterpenic ketone

(E)-Isogeraniol?	0.07	Monoterpenic alcohol
Geraniol	1.02	Monoterpenic alcohol
Geranial	48.90	Monoterpenic aldehyde
Unknown	0.01	Oxygenated monoterpene
Bornyl acetate	0.05	Monoterpenic ester
Neric acid	0.03	Monoterpenic acid
Unknown	0.13	Unknown
α -Terpinyl acetate	0.06	Monoterpenic ester
Unknown	0.04	Unknown
Geranic acid	0.13	Aliphatic acid
Unknown	0.13	Unknown
α -Copaene	0.16	Sesquiterpene
Geranyl acetate	0.04	Monoterpenic ester
β -Elemene	0.23	Sesquiterpene
β -Caryophyllene	1.37	Sesquiterpene
<i>trans</i> - α -Bergamotene	0.02	Sesquiterpene
α -Humulene	0.10	Sesquiterpene
allo-Aromadendrene	0.02	Sesquiterpene
(E)- β -Farnesene	0.04	Sesquiterpene
Selina-4,11-diene	0.02	Sesquiterpene
Germacrene D	0.03	Sesquiterpene
Bicyclogermacrene	0.06	Sesquiterpene
Viridiflorene	0.03	Sesquiterpene
α -Murolene	0.01	Sesquiterpene
γ -Cadinene	0.01	Sesquiterpene
(3E,6E)- α -Farnesene	0.01	Sesquiterpene
δ -Cadinene	0.02	Sesquiterpene
Spathulenol	0.03	Sesquiterpenic alcohol
Caryophyllene oxide isomer	0.03	Sesquiterpenic ether
Caryophyllene oxide	0.08	Sesquiterpenic ether
Humulene epoxide II	0.01	Sesquiterpenic ether
Isospathulenol	0.01	Sesquiterpenic alcohol
Unknown	0.01	Unknown
Unknown	0.02	Unknown
Unknown	0.02	Unknown
Unknown	0.03	Unknown
Unknown	0.01	Unknown
Consolidated total	99.15	

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

Note: no correction factor was applied

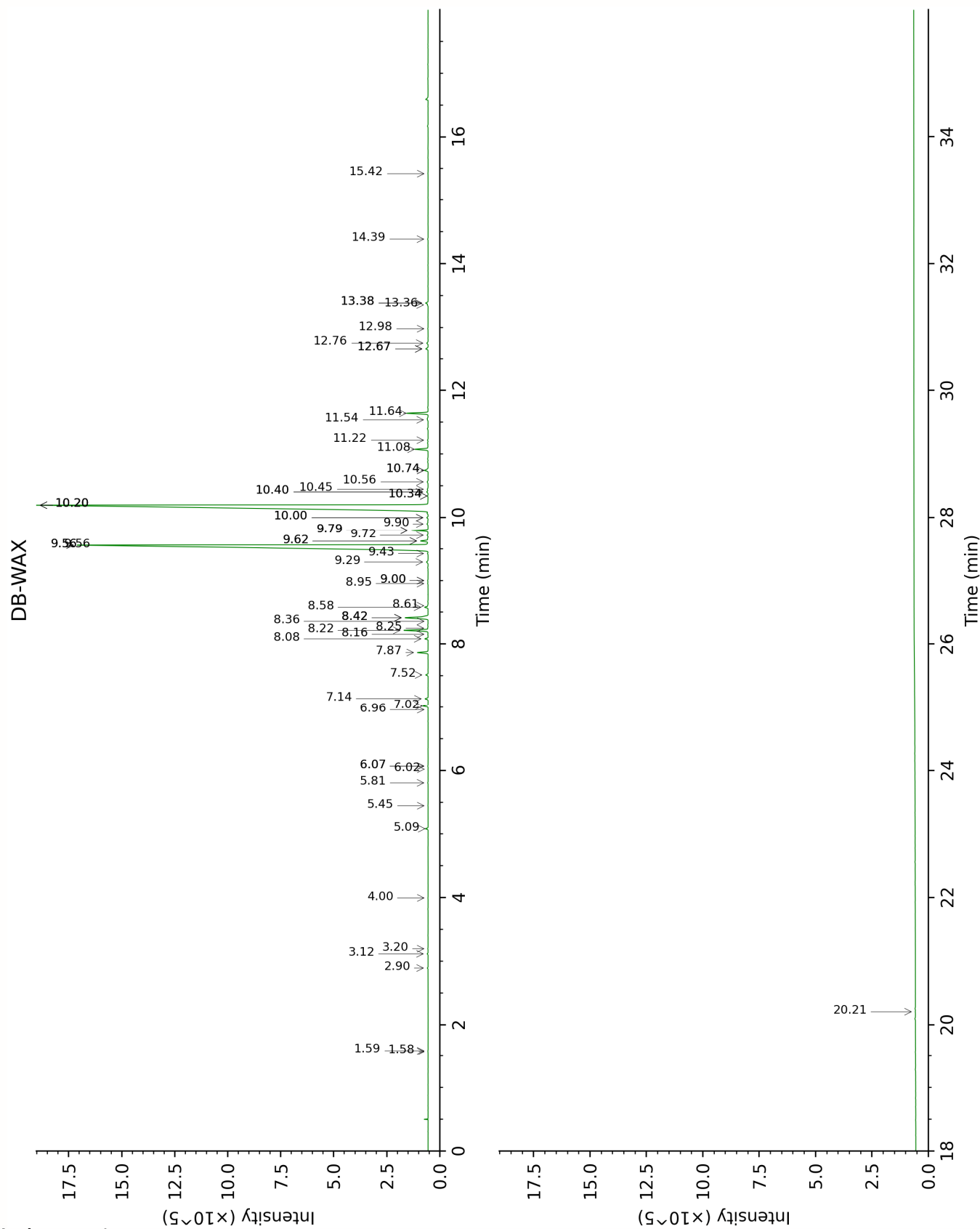
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

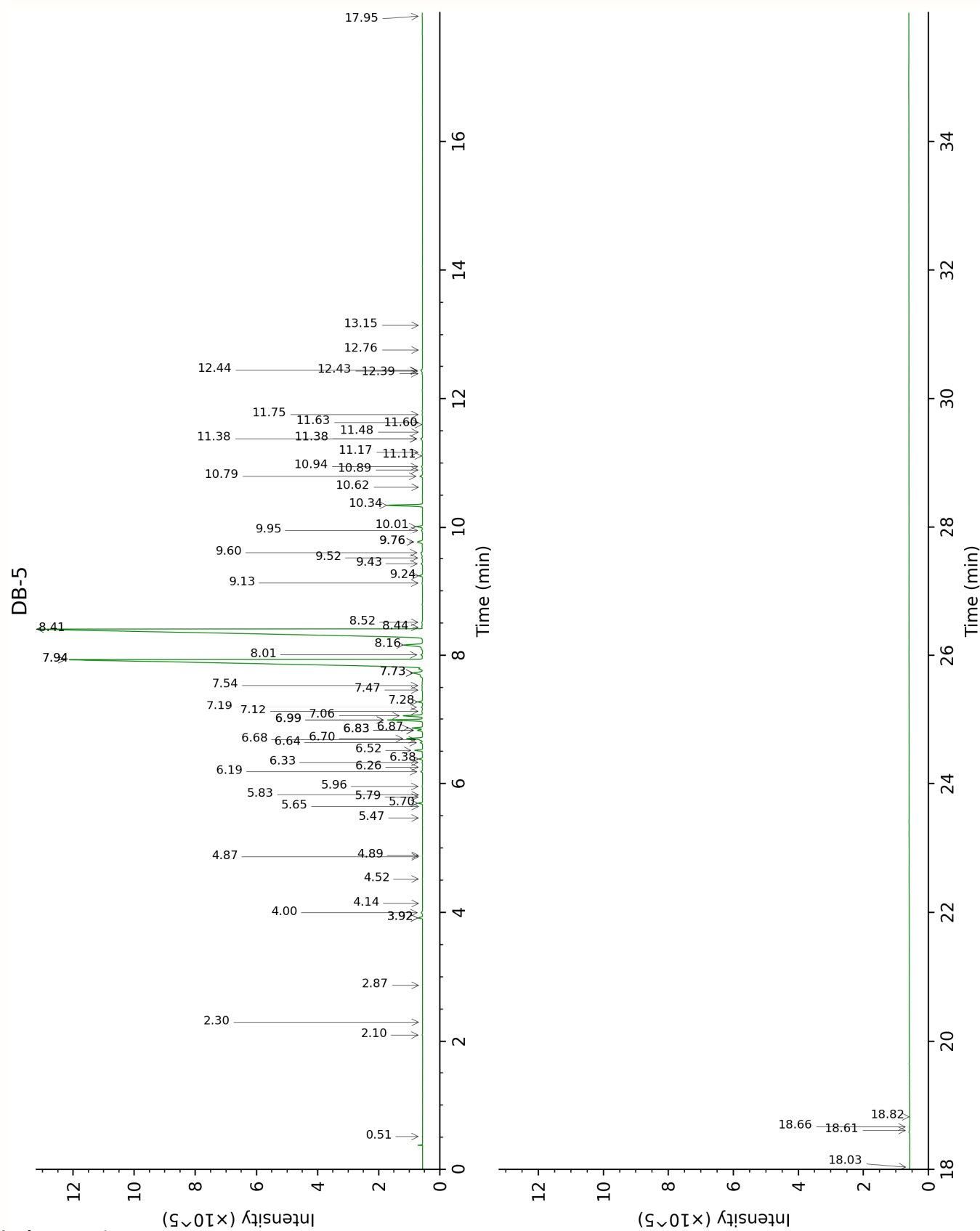
Unknowns: Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is

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.





FULL ANALYSIS DATA

2-Methyl-3-buten-2-ol	Column DB-WAX			Column DB-5		
	1.59	1015.0	0.01	0.51	607.6	0.01
(3Z)-Hexenol	5.81	1348.9	0.02	2.10	856.0	0.02
Hexanol	5.45	1323.0	0.01	2.30	872.8	0.01
Unknown HYPE V [m/z 67, 109 (89), 124 (85), 41 (41), 81 (35), 55 (24)...]	1.58	1013.7	0.01	2.87	917.5	0.01
6-Methyl-5-hepten-2-one	5.09	1301.0	0.12	3.92*	987.4	[0.16]
Dehydro-1,8-cineole	3.12	1152.2	0.04	3.92*	987.4	[0.16]
Myrcene	2.90	1134.6	0.03	4.00	993.0	0.07
Octan-3-ol	6.07*	1367.9	[0.02]	4.14	1002.6	0.01
Limonene	3.20	1158.5	0.01	4.52	1026.7	0.01
Seudenone?	8.36	1538.7	0.01	4.87	1048.6	0.01
(E)- β -Ocimene	4.00	1220.3	tr	4.89	1050.0	0.01
trans-Linalool oxide (fur.)	6.96	1433.0	0.01	5.47	1086.8	0.02
Rosefuran	6.02	1364.4	0.01	5.65	1098.1	0.01
Linalool	8.08	1517.3	0.15	5.70	1101.3	0.15
cis-Chrysanthemal?	6.07*	1367.9	[0.02]	5.79	1107.5	0.02
α -Cyclocitral				5.83	1109.7	0.01
trans-para-Mentha-2,8-dien-1-ol	8.95	1584.7	0.03	5.96	1118.1	0.03
cis-para-Mentha-2,8-dien-1-ol	9.56*	1633.2	[40.63]	6.19	1133.0	0.07
trans-para-Menth-2-en-1-ol	9.00*	1588.4	[0.03]	6.26	1137.5	0.02
Isopulegol	8.16	1522.9	0.02	6.33	1142.3	0.02
exo-Isocitral	7.52	1474.3	0.12	6.38	1145.8	0.13
Citronellal	7.02	1437.4	0.26	6.52	1154.5	0.27
Borneol	9.79*	1652.4	[0.83]	6.64	1162.2	0.08
α -Phellandren-8-ol	10.20*	1685.0	[49.07]	6.68	1165.1	0.08
Isoneral	7.87	1500.6	0.54	6.70	1166.4	0.58
Rosefuran oxide	8.60	1557.7	0.03	6.83*	1174.6	[0.20]
Terpinen-4-ol	8.58	1555.8	0.18	6.83*	1174.6	[0.20]
Unknown CYFL V [m/z 84, 83 (74), 137 (56), 41 (47), 93 (43), 108 (40)... 152 (2)]	9.62*	1638.6	[0.40]	6.86	1177.0	0.37

<i>para</i> -Cymen-8-ol	11.54	1798.6	0.03	6.99*	1185.0	[1.29]
Isogeranial	8.22	1527.7	1.22	6.99*	1185.0	[1.29]
α -Terpineol	9.79*	1652.4	[0.83]	7.06	1189.4	0.82
β -Phellandren-8-ol	10.74*	1731.0	[0.23]	7.12	1193.8	0.04
<i>trans</i> -Isopiperitenol	10.40*	1702.2	[0.08]	7.19	1198.3	0.07
Unknown CYFL VI [m/z 84, 41 (83), 83 (79), 91 (76), 93 (67), 119 (64), 137 (63), 109 (54), 108 (54)... 152 (4)]	10.20*	1685.0	[49.07]	7.28	1204.1	0.17
<i>cis</i> -Isopiperitenol	10.34*	1696.9	[0.03]	7.47	1216.5	0.03
Unknown COCI IX [m/z 69, 55 (65), 43 (47), 41 (44), 83 (42), 75 (37), 125 (36)... 154 (1)]				7.54	1221.2	0.04
Citronellol	10.74*	1731.0	[0.23]	7.73*†	1234.5	[0.59]
Nerol	11.08	1759.1	0.68	7.73*†	1234.5	[0.59]
Neral	9.56*	1633.2	[40.63]	7.94*	1248.6	[40.69]
Piperitone	9.90	1660.9	0.07	7.94*	1248.6	[40.69]
(<i>E</i>)-Isogeraniol?	11.22	1771.3	0.03	8.01	1253.7	0.07
Geraniol	11.64	1807.7	1.10	8.16	1264.2	1.02
Geranial	10.20*	1685.0	[49.07]	8.41	1280.9	48.90
Unknown CYFL VII [m/z 43, 69 (77), 41 (70), 109 (54)... 152 (6)]	12.98	1927.7	0.02	8.44	1282.8	0.01
Bornyl acetate	8.25	1530.3	0.02	8.52	1288.2	0.05
Neric acid				9.13	1327.1	0.03
Unknown CYFL VIII [m/z 82, 59 (44), 41 (43), 95 (31), 43 (29), 81 (24)...]	12.67*	1898.5	[0.13]	9.24	1335.2	0.13
α -Terpinyl acetate	9.72	1646.0	0.05	9.43	1348.4	0.06
Unknown LICU I [m/z 110, 95 (98), 109 (40), 43 (35), 111 (32)... 153 (13)...]	13.36	1962.1	0.04	9.52	1354.8	0.04
Geranic acid				9.60	1360.6	0.13
Unknown ZIOF XI [m/z 81, 59 (94), 41 (74), 85 (40), 43	13.38*	1964.8	[0.14]	9.76*	1372.5	[0.29]

(55)...						
α -Copaene	7.14	1446.3	0.16	9.76*	1372.5	[0.29]
Geranyl acetate	10.56	1715.7	0.06	9.95	1385.9	0.04
β -Elemene	8.42*	1543.0	[1.60]	10.01	1390.1	0.23
β -Caryophyllene	8.42*	1543.0	[1.60]	10.34	1414.2	1.37
<i>trans</i> - α - Bergamotene	8.42*	1543.0	[1.60]	10.62	1435.2	0.02
α -Humulene	9.29	1611.7	0.12	10.79	1448.0	0.10
allo- Aromadendrene	9.00*	1588.4	[0.03]	10.89	1455.2	0.02
(<i>E</i>)- β -Farnesene	9.56*	1633.2	[40.63]	10.94	1459.2	0.04
Selina-4,11-diene	9.43	1622.5	0.03	11.11	1471.6	0.02
Germacrene D	9.79*	1652.4	[0.83]	11.17	1475.9	0.03
Bicyclogermacrene	10.00*	1669.1	[0.07]	11.38*	1491.5	[0.09]
Viridiflorene	9.62*	1638.6	[0.40]	11.38*	1491.5	[0.09]
α -Murolene	10.00*	1669.1	[0.07]	11.48	1499.2	0.01
γ -Cadinene	10.34*	1696.9	[0.03]	11.60	1508.2	0.01
(3 <i>E</i> ,6 <i>E</i>)- α - Farnesene	10.45	1705.8	0.06	11.63	1510.7	0.01
δ -Cadinene	10.40*	1702.2	[0.08]	11.75	1520.5	0.02
Spathulenol	14.39	2060.1	0.02	12.39	1570.6	0.03
Caryophyllene oxide isomer	12.67*	1898.5	[0.13]	12.43	1573.8	0.03
Caryophyllene oxide	12.76	1906.8	0.08	12.44	1574.8	0.08
Humulene epoxide II	13.38*	1964.8	[0.14]	12.76	1600.4	0.01
Isospathulenol	15.42	2162.7	0.01	13.15	1631.8	0.01
Unknown CYFL IX [m/z 93, 69 (95), 135 (76), 107 (53), 41 (53), 109 (50)... 235 (10)...]				17.95	2067.1	0.01
Unknown COCI XXXVI [m/z 69, 81 (56), 83 (52), 41 (39), 95 (42), 55 (27)...]				18.03	2075.1	0.02
Unknown LICU II [m/z 69, 41 (38), 151 (36), 123 (34), 82 (24), 43 (23), 109 (21)...]	20.21	2694.5	0.01	18.61	2133.4	0.02
Unknown COCI LII [m/z 69, 41 (75), 95				18.66	2139.0	0.03

(53), 55 (47), 82 (40), 81 (38)...						
Unknown COCI LIV [m/z 69, 41 (77), 95 (55), 55 (50), 82 (46), 109 (42)...				18.82	2155.3	0.01
Total reported		98.68%			99.18%	

*: 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