

Date : 2024-12-20

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 24L09-PTH02

Customer Identification : Organic Frankincense Carterii - Somalia - F00111R

Type : Essential Oil

Source : *Boswellia carteri*

Customer : Plant Therapy

Checked and approved by:

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

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GAS CHROMATOGRAPHIC ANALYSIS

Method : PC-MAT-014 - Analysis of the composition of an essential oil or other volatile liquide by FAST GC-FID



Results : See analysis summary (next page)

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

Date : 2024-12-18

PHYSICOCHEMICAL DATA

Refractive index : 1.4759 ± 0.0003 (20 °C)

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

Analyst : Cindy Caron B. Sc.

Date : 2024-12-10

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	tr	Aliphatic alcohol
(E)-2-Methyl-1,3-pentadiene	tr	Alkene
3-Methyl-2-butanone	tr	Aliphatic ketone
Toluene	0.06	Simple phenolic
Unknown	0.01	Alkene
Unknown	0.01	Unknown
Hashishene	0.12	Monoterpene
Tricyclene	0.06	Monoterpene
α-Thujene	5.38	Monoterpene
α-Pinene	34.23	Monoterpene
α-Fenchene	0.01	Monoterpene
Unknown	0.24	Monoterpene
Camphene	0.73	Monoterpene
Thuja-2,4(10)-diene	0.33	Monoterpene
3,7,7-Trimethylcyclohepta-1,3,5-triene	0.06	Monoterpene
Sabinene	3.53	Monoterpene
β-Pinene	1.19	Monoterpene
Dehydro-1,8-cineole	0.07	Monoterpenic ether
6-Methyl-5-hepten-2-one	0.02	Aliphatic ketone
Myrcene	4.90	Monoterpene
6-Methyl-5-hepten-2-ol	0.01	Aliphatic alcohol
Octanal	0.06	Aliphatic aldehyde
α-Phellandrene	1.43	Monoterpene
Pseudolimonene	0.03	Monoterpene
ortho-Methylanisole	0.09	Simple phenolic
Δ3-Carene	0.43	Monoterpene
Unknown	0.01	Monoterpene
α-Terpinene	0.29	Monoterpene
meta-Cymene	0.04	Monoterpene
para-Cymene	4.32	Monoterpene
1,8-Cineole	0.15	Monoterpenic ether
Limonene	14.13	Monoterpene
β-Phellandrene	0.51	Monoterpene
ortho-Cymene	0.02	Monoterpene
(Z)-β-Ocimene	0.09	Monoterpene
Unknown	0.05	Unknown
(E)-β-Ocimene	0.04	Monoterpene
γ-Terpinene	0.47	Monoterpene
cis-Sabinene hydrate	0.05	Monoterpenic alcohol
Unknown	0.05	Oxygenated monoterpene

<i>cis</i> -Linalool oxide (fur.)	0.02	Monoterpenic alcohol
<i>meta</i> -Cymenene	0.07	Monoterpane
<i>para</i> -Cymenene	0.10	Monoterpane
Terpinolene	0.14	Monoterpane
6,7-Epoxy-myrcene	0.05	Monoterpenic ether
<i>trans</i> -Sabinene hydrate	0.05	Monoterpenic alcohol
Perillene	0.02	Monoterpenic ether
α -Thujone	0.03	Monoterpenic ketone
Verbenol analog?	0.08	Monoterpenic alcohol
Linalool	0.15	Monoterpenic alcohol
Unknown	0.03	Monoterpenic alcohol
Amyl isovalerate	0.07	Aliphatic ester
β -Thujone	0.25	Monoterpenic ketone
Unknown	0.02	Oxygenated monoterpenes
<i>cis</i> - <i>para</i> -Menth-2-en-1-ol	0.04	Monoterpenic alcohol
<i>trans</i> - <i>para</i> -Mentha-2,8-dien-1-ol	0.09	Monoterpenic alcohol
Myrcenol	0.02	Monoterpenic alcohol
α -Campholenal	0.22	Monoterpenic aldehyde
Unknown	0.07	Unknown
Unknown	0.03	Unknown
<i>cis</i> -Limonene oxide	0.03	Monoterpenic ether
<i>trans</i> -Pinocarveol	0.63	Monoterpenic alcohol
<i>trans</i> -Limonene oxide	0.03	Monoterpenic ether
<i>cis</i> -Verbenol	0.17	Monoterpenic alcohol
<i>trans</i> -Sabinol	0.08	Monoterpenic alcohol
<i>trans</i> -Verbenol	0.64	Monoterpenic alcohol
<i>meta</i> -Mentha-4,6-dien-8-ol	0.27	Monoterpenic alcohol
Sabinaketone	0.07	Normonoterpenic ketone
Pinocamphone	0.06	Monoterpenic ketone
Unknown	0.07	Oxygenated monoterpenes
Pinocarvone	0.08	Monoterpenic ketone
Borneol	0.11	Monoterpenic alcohol
α -Phellandren-8-ol	0.69	Monoterpenic alcohol
Umbellulone	0.12	Monoterpenic ketone
<i>cis</i> -Sabinol	0.07	Monoterpenic alcohol
Terpinen-4-ol	0.90	Monoterpenic alcohol
Thuj-3-en-10-al	0.10	Monoterpenic aldehyde
Cryptone	0.06	Normonoterpenic ketone
<i>para</i> -Cymen-8-ol	0.17	Monoterpenic alcohol
α -Terpineol	0.45	Monoterpenic alcohol
Myrtenal	0.08	Monoterpenic aldehyde
β -Phellandren-8-ol	0.05	Monoterpenic alcohol
Myrtenol	0.26	Monoterpenic alcohol
<i>cis</i> - α -Phellandrene epoxide (iPr vs Me)	0.20	Monoterpenic ether
Verbenone	0.53	Monoterpenic ketone

<i>trans</i> -Piperitol	0.06	Monoterpenic alcohol
Octyl acetate	0.03	Aliphatic ester
<i>trans</i> -Carveol	0.32	Monoterpenic alcohol
<i>cis</i> -Carveol	0.11	Monoterpenic alcohol
Cuminal	0.08	Monoterpenic aldehyde
Carvone	0.24	Monoterpenic ketone
Carvotanacetone	0.06	Monoterpenic ketone
Piperitone	0.03	Monoterpenic ketone
Unknown	0.05	Oxygenated monoterpane
Linalyl acetate	0.02	Monoterpenic ester
3,5-Dimethoxytoluene	0.05	Simple phenolic
Unknown	0.08	Oxygenated monoterpane
Decanol	0.03	Aliphatic alcohol
Bornyl acetate	0.36	Monoterpenic ester
<i>para</i> -Cymen-7-ol	0.06	Monoterpenic alcohol
<i>trans</i> -Pinocarvyl acetate	0.04	Monoterpenic ester
Thymol	0.02	Monoterpenic alcohol
Carvacrol	0.02	Monoterpenic alcohol
Unknown	0.10	Unknown
<i>para</i> -Menth-5-en-1,2-diol isomer III	0.02	Monoterpenic alcohol
Bicycloelemene	0.06	Sesquiterpene
Unknown	0.03	Unknown
α -Cubebene	0.34	Sesquiterpene
α -Terpinyl acetate	0.06	Monoterpenic ester
Cyclosativene I	0.03	Sesquiterpene
Cyclosativene II	0.04	Sesquiterpene
α -Ylangene	0.06	Sesquiterpene
α -Copaene	0.82	Sesquiterpene
β -Bourbonene	0.11	Sesquiterpene
1,5-diepi- β -Bourbonene	0.03	Sesquiterpene
Geranyl acetate	0.02	Monoterpenic ester
β -Cubebene	0.09	Sesquiterpene
β -Elemene	0.83	Sesquiterpene
Isocaryophyllene	0.04	Sesquiterpene
α -Gurjunene	0.09	Sesquiterpene
β -Caryophyllene	2.97	Sesquiterpene
β -Copaene	0.06	Sesquiterpene
<i>trans</i> - α -Bergamotene	0.15	Sesquiterpene
6,9-Guaiadiene	0.02	Sesquiterpene
Unknown	0.04	Sesquiterpene
<i>trans</i> -Muurola-3,5-diene	0.10	Sesquiterpene
α -Humulene	0.81	Sesquiterpene
allo-Aromadendrene	0.18	Sesquiterpene
<i>cis</i> -Muurola-4(15),5-diene	0.05	Sesquiterpene
<i>trans</i> -Cadina-1(6),4-diene	0.12	Sesquiterpene

γ -Murolene	0.43	Sesquiterpene
Germacrene D	0.23	Sesquiterpene
β -Selinene	0.45	Sesquiterpene
<i>trans</i> -Muurola-4(15),5-diene	0.03	Sesquiterpene
δ -Selinene	0.22	Sesquiterpene
α -Selinene	0.33	Sesquiterpene
Bicyclogermacrene	tr	Sesquiterpene
epi-Cubebol	0.17	Sesquiterpenic alcohol
α -Murolene	0.22	Sesquiterpene
δ -Amorphene	0.03	Sesquiterpene
β -Bisabolene	0.03	Sesquiterpene
γ -Cadinene	0.55	Sesquiterpene
Cubebol	0.47	Sesquiterpenic alcohol
δ -Cadinene	1.12	Sesquiterpene
<i>trans</i> -Cadina-1,4-diene	0.10	Sesquiterpene
α -Cadinene	0.05	Sesquiterpene
α -Calacorene	0.05	Sesquiterpene
Isocaryophyllene epoxide B	0.03	Sesquiterpenic ether
α -Elemol	0.07	Sesquiterpenic alcohol
Germacrene B	0.07	Sesquiterpene
Elemicin	0.04	Phenylpropanoid
Palustrol	0.03	Sesquiterpenic alcohol
Unknown	0.08	Oxygenated sesquiterpene
Germacrene D-4-ol	0.09	Sesquiterpenic alcohol
Caryophyllene oxide isomer	0.02	Sesquiterpenic ether
Caryophyllene oxide	0.97	Sesquiterpenic ether
10-epi-Liguloxide	0.06	Sesquiterpenic ether
Viridiflorol	0.19	Sesquiterpenic alcohol
Ledol	0.04	Sesquiterpenic alcohol
Copaborneol	0.12	Sesquiterpenic alcohol
Humulene epoxide II	0.20	Sesquiterpenic ether
Junenol	0.21	Sesquiterpenic alcohol
1,10-diepi-Cubenol	tr	Sesquiterpenic alcohol
1-epi-Cubenol	0.13	Sesquiterpenic alcohol
γ -Eudesmol	0.03	Sesquiterpenic alcohol
τ -Cadinol	0.47	Sesquiterpenic alcohol
Cubenol	0.08	Sesquiterpenic alcohol
τ -Murolol	0.04	Sesquiterpenic alcohol
β -Eudesmol	0.14	Sesquiterpenic alcohol
α -Eudesmol	0.07	Sesquiterpenic alcohol
α -Cadinol	0.05	Sesquiterpenic alcohol
<i>cis</i> -Calamenen-10-ol	0.05	Sesquiterpenic alcohol
(3Z)-Caryophylla-3,8(13)-dien-5 β -ol	0.12	Sesquiterpenic alcohol
Germacr-4(15),5,10(14)-trien-1 α -ol	0.03	Sesquiterpenic alcohol
Shyobunol	0.03	Sesquiterpenic alcohol

α-Phellandrene dimer II	0.08	Diterpene
α-Phellandrene dimer III	0.02	Diterpene
Unknown	0.02	Unknown
(3E)-Cembrene A	0.14	Diterpene
meta-Camphorene	0.03	Diterpene
para-Camphorene	0.02	Diterpene
Cembrene C	0.07	Diterpene
Verticilla-4(20),7,11-triene	0.04	Diterpene
Cembrenol	0.10	Diterpenic alcohol
Serratol	0.66	Diterpenic alcohol
Incensole	0.19	Diterpenic alcohol
Consolidated total	99.02	

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

Note: no correction factor was applied

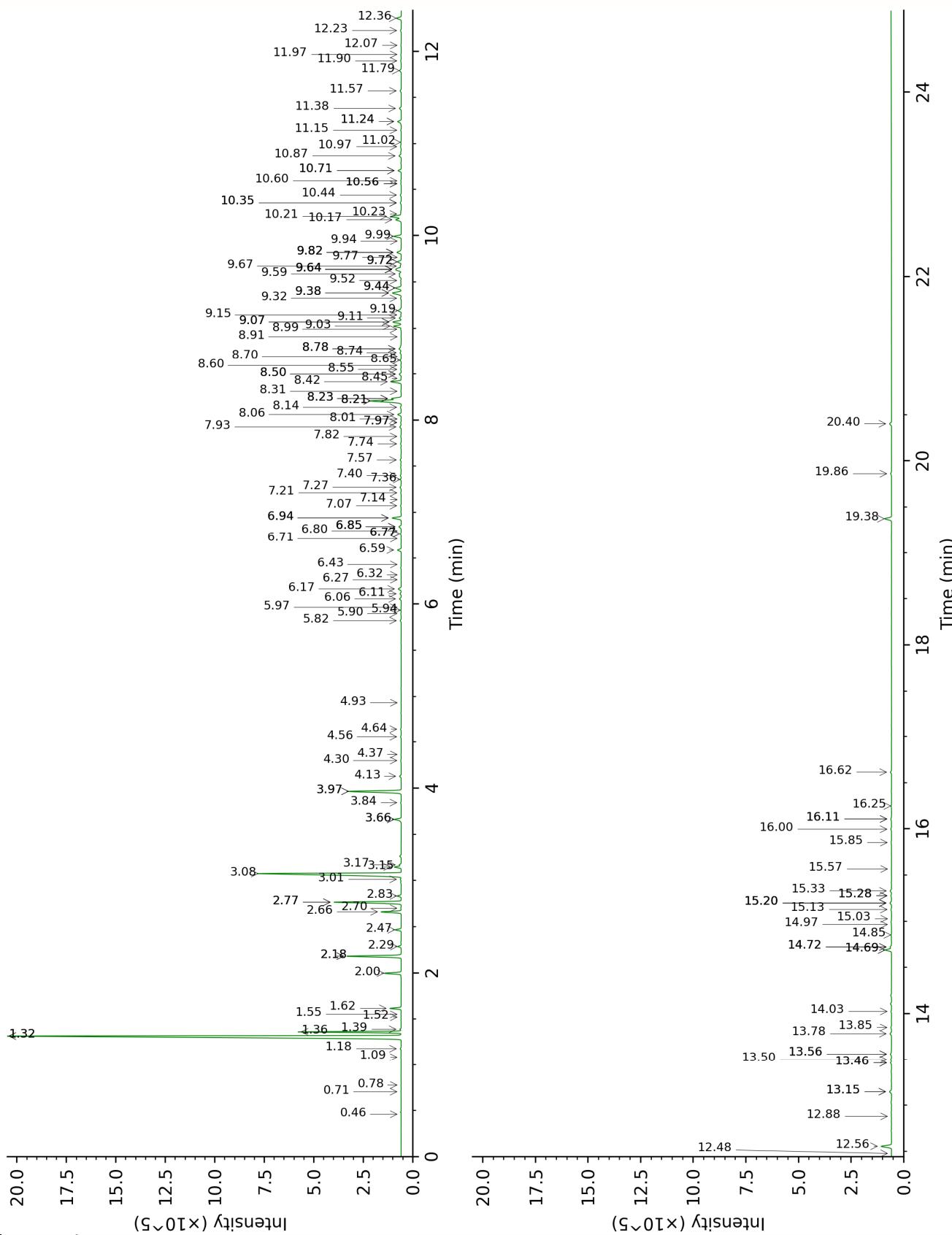
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

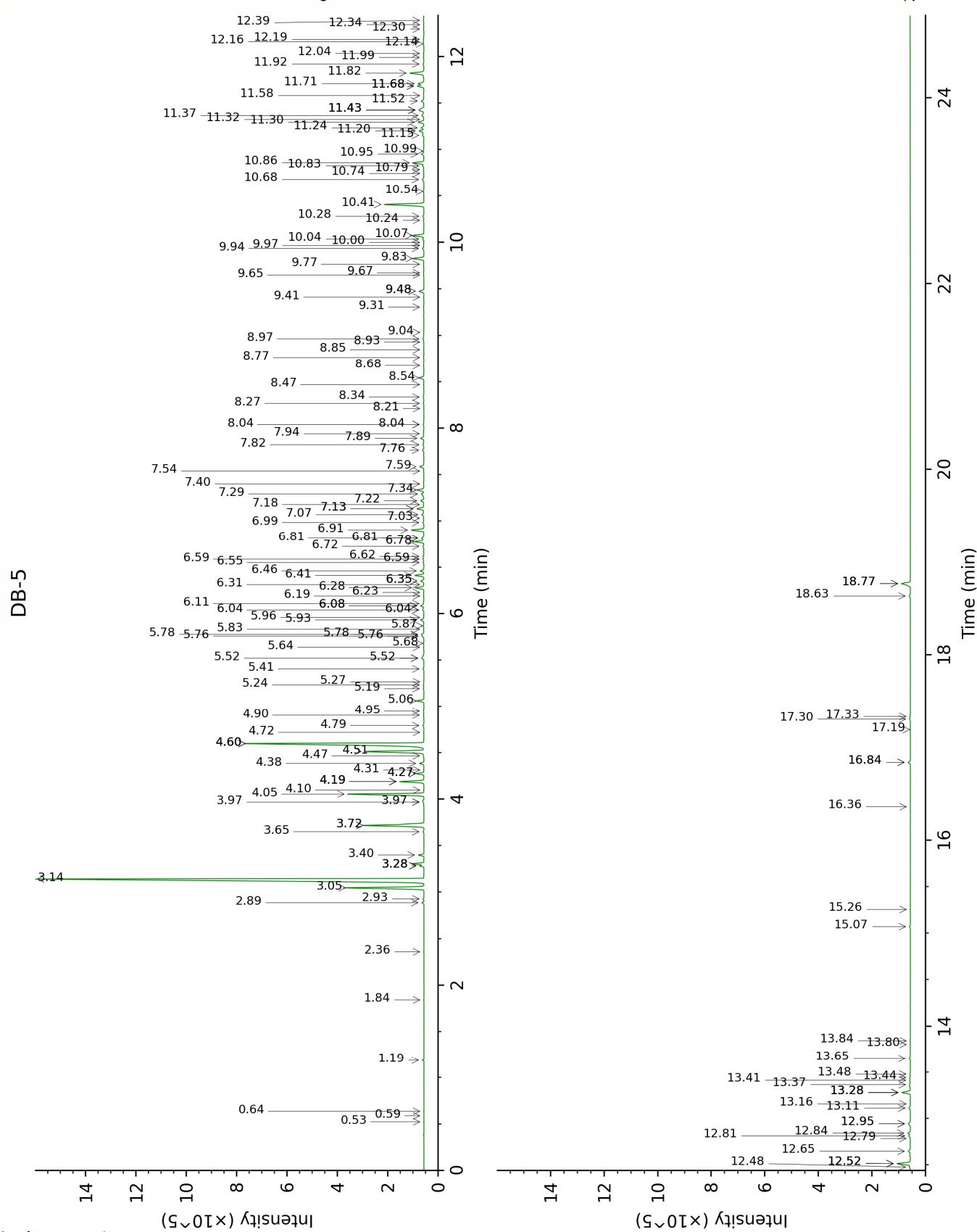
This page was intentionally left blank. The following pages present the complete data of the analysis.

DB-WAX



Laboratoire
PhytoChemia

Plus que des analyses... des conseils



FULL ANALYSIS DATA

2-Methyl-3-butene-2-ol	Column DB-WAX			Column DB-5		
	1.52	1015.3	0.01	0.52	605.4	tr
(E)-2-Methyl-1,3-pentadiene	0.46	758.2	tr	0.59	628.3	tr
3-Methyl-2-butanone	0.78	899.2	0.01	0.64	645.4	tr
Toluene	1.39	1001.8	0.07	1.19	758.4	0.06
Unknown BOCA I [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)]	0.71	875.9	0.01	1.84	831.5	0.01
Unknown BOCA II [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	1.09	952.8	0.02	2.36	874.8	0.01
Hashishene	1.32*	993.0	[34.51]	2.89	915.7	0.12
Tricyclene	1.18	969.1	0.05	2.93	918.4	0.06
α-Thujene	1.36	999.0	5.42	3.05	926.4	5.38
α-Pinene	1.32*	993.0	[34.51]	3.14	932.6	34.23
α-Fenchene	1.55	1018.4	0.01	3.28*†	942.1	[0.23]
Unknown SAOF I [m/z 91, 92 (47), 65 (11)... 134 (1)]	2.29	1094.0	0.24	3.28*†	942.1	[0.23]
Camphene	1.62	1025.1	0.73	3.28*†	942.1	[0.23]
Thuja-2,4(10)-diene	2.18*	1083.2	[3.89]	3.40	949.8	0.33
3,7,7-Trimethylcyclohepta-1,3,5-triene	2.77*	1133.1	[4.91]	3.65	966.4	0.06
Sabinene	2.18*	1083.2	[3.89]	3.72*	970.9	[4.72]
β-Pinene	2.00	1064.3	1.19	3.72*	970.9	[4.72]
Dehydro-1,8-cineole	3.01	1152.9	0.07	3.97*	987.6	[0.04]
6-Methyl-5-hepten-2-one	4.93	1298.3	0.02	3.97*	987.6	[0.04]
Myrcene	2.77*	1133.1	[4.91]	4.05	993.3	4.90
6-Methyl-5-hepten-2-ol	6.77*	1431.0	[0.08]	4.10	996.1	0.01
Octanal	4.30	1251.5	0.06	4.19*	1002.2	[1.58]
α-Phellandrene	2.66	1124.8	1.43	4.19*	1002.2	[1.58]
Pseudolimonene	2.70	1127.9	0.03	4.19*	1002.2	[1.58]
ortho-Methylanisole	5.82	1361.8	0.09	4.27*	1007.6	[0.50]
Δ3-Carene	2.47	1109.2	0.43	4.27*	1007.6	[0.50]
Unknown BOSA III [m/z 117, 132 (88),				4.31	1010.1	0.01

115 (68), 91 (55), 77 (20)]						
α-Terpinene	2.83	1138.5	0.29	4.38	1014.5	0.29
<i>meta</i> -Cymene	3.97*	1226.8	[4.30]	4.47	1019.7	0.04
<i>para</i> -Cymene	3.97*	1226.8	[4.30]	4.51	1022.6	4.32
1,8-Cineole	3.17	1165.4	0.15	4.60*	1027.9	[14.83]
Limonene	3.08	1157.9	14.13	4.60*	1027.9	[14.83]
β-Phellandrene	3.15	1163.6	0.51	4.60*	1027.9	[14.83]
<i>ortho</i> -Cymene	4.37	1256.3	0.02	4.72	1035.5	0.02
(Z)-β-Ocimene	3.66*	1204.4	[0.59]	4.79	1040.1	0.09
Unknown BOFR III [m/z 109, 43 (57), 91 (28), 67 (25), 93 (24), 95 (22), 77 (21), 137 (21), 41 (17), 79 (14)...]	7.14	1458.9	0.03	4.90	1047.2	0.05
(E)-β-Ocimene	3.84	1217.8	0.05	4.95	1049.9	0.04
γ-Terpinene	3.66*	1204.4	[0.59]	5.06	1057.2	0.47
<i>cis</i> -Sabinene hydrate	6.77*	1431.0	[0.08]	5.19	1065.4	0.05
Unknown PIMA I [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	4.64	1276.6	0.05	5.24	1068.0	0.05
<i>cis</i> -Linalool oxide (fur.)	6.32	1397.6	0.03	5.27	1070.0	0.02
<i>meta</i> -Cymenene	6.06	1378.9	0.15	5.41	1078.8	0.07
<i>para</i> -Cymenene	6.11	1382.8	0.10	5.52*	1086.0	[0.28]
Terpinolene	4.13	1238.9	0.14	5.52*	1086.0	[0.28]
6,7-Epoxymyrcene	5.90	1367.4	0.04	5.64	1093.4	0.05
<i>trans</i> -Sabinene hydrate	7.82	1510.3	0.05	5.68	1096.0	0.05
Perillene	5.97	1372.2	0.02	5.76*†	1100.9	[0.12]
α-Thujone	5.94	1370.0	0.03	5.76*†	1100.9	[0.12]
Verbenol analog?	8.14	1534.9	0.08	5.78*†	1102.1	[0.18]
Linalool	7.93	1518.4	0.15	5.78*†	1102.1	[0.18]
Unknown ORMA I [m/z 119, 109 (94), 43 (61), 95 (56), 91 (48), 77 (32), 152 (32), 137 (31), 134 (24)]	8.31	1548.4	0.05	5.83	1105.6	0.03
Amyl isovalerate	4.56	1270.5	0.06	5.87	1108.0	0.07
β-Thujone	6.17	1386.6	0.30	5.93	1112.0	0.25
Unknown BOSE II [m/z 109, 91 (57), 93				5.96	1113.7	0.02

(47), 81 (44), 77 (40)... 154 (1)]					
<i>cis-para-Menth-2-en-1-ol</i>	7.98*	1522.1	[0.06]	6.04*	1118.8 [0.13]
<i>trans-para-Menth-2,8-dien-1-ol</i>	8.78*	1584.7	[0.32]	6.04*	1118.8 [0.13]
Myrcenol	8.70	1578.1	0.02	6.08*	1121.7 [0.24]
α-Campholenal	6.85*	1437.0	[0.23]	6.08*	1121.7 [0.24]
Unknown BOSE III [m/z 111, 43 (22), 55 (14), 41 (12), 110 (11)...]				6.11	1123.2 0.07
Unknown BONE I [m/z 95, 43 (41), 110 (36), 41 (19), 67 (18)... 150 (tr)]				6.19	1128.4 0.03
<i>cis-Limonene oxide</i>	6.27	1393.8	0.02	6.23	1130.9 0.03
<i>trans-Pinocarveol</i>	9.02	1604.0	0.67	6.28	1134.1 0.63
<i>trans-Limonene oxide</i>	6.43	1406.0	0.02	6.31	1136.3 0.03
<i>cis-Verbenol</i>	9.11	1611.1	0.17	6.35*	1138.8 [0.25]
<i>trans-Sabinol</i>	9.64*	1653.7	[0.79]	6.35*	1138.8 [0.25]
<i>trans-Verbenol</i>	9.38*	1633.1	[1.00]	6.41	1142.6 0.64
<i>meta-Mentha-4,6-dien-8-ol</i>	9.19	1617.6	0.33	6.46	1145.7 0.27
Sabinaketone	8.55	1566.8	0.06	6.55	1151.4 0.07
Pinocamphone	7.07	1453.9	0.06	6.59*	1153.8 [0.07]
Unknown BOCA III [m/z 97, 81 (96), 109 (80), 43 (53), 53 (40), 41 (36), 56 (29), 95 (25)... 152 (1)]	7.36	1475.2	0.07	6.59*	1153.8 [0.07]
Pinocarvone	7.74	1504.1	0.07	6.62	1155.6 0.08
Borneol	9.64*	1653.7	[0.79]	6.72	1162.6 0.11
α -Phellandren-8-ol	9.99	1682.7	0.64	6.78	1165.8 0.69
Umbellulone	8.74	1581.4	0.12	6.81*	1168.3 [0.18]
<i>cis-Sabinol</i>	10.71*	1742.9	[0.28]	6.81*	1168.3 [0.18]
Terpinen-4-ol	8.42	1556.4	0.88	6.91	1174.2 0.90
Thuj-3-en-10-al	8.50*	1562.8	[0.19]	6.99	1179.3 0.10
Cryptone	8.99	1601.3	0.06	7.03	1182.3 0.06
<i>para-Cymen-8-ol</i>	11.38	1800.2	0.17	7.07	1184.8 0.17
α -Terpineol	9.64*	1653.7	[0.79]	7.14*	1188.8 [0.53]
Myrtenal	8.50*	1562.8	[0.19]	7.14*	1188.8 [0.53]
β -Phellandren-8-ol	10.56*	1730.2	[0.05]	7.18	1191.8 0.05
Myrtenol	10.71*	1742.9	[0.28]	7.22	1194.4 0.26

<i>cis</i> - α -Phellandrene epoxide (iPr vs Me)	10.87	1756.4	0.23	7.29	1199.0	0.20
Verbenone	9.44*	1637.5	[0.59]	7.34	1201.8	0.53
<i>trans</i> -Piperitol	10.23	1702.5	0.05	7.40	1206.1	0.06
Octyl acetate	6.94*	1444.1	[0.81]	7.54	1215.3	0.03
<i>trans</i> -Carveol	11.24*	1788.0	[0.37]	7.59	1218.5	0.32
<i>cis</i> -Carveol	11.57	1817.1	0.10	7.76	1230.3	0.11
Cuminal	10.35*	1712.6	[0.10]	7.82	1234.3	0.08
Carvone	9.82*	1668.6	[0.46]	7.89	1238.9	0.24
Carvotanacetone	9.32	1628.4	0.07	7.94	1242.2	0.06
Piperitone	9.72*	1660.3	[0.36]	8.04*	1248.9	[0.08]
Unknown BODA V [m/z 109, 119 (84), 91 (81), 134 (55)... 137 (27) ...]	11.15	1780.0	0.05	8.04*	1248.9	[0.08]
Linalyl acetate	7.98*	1522.1	[0.06]	8.21	1260.4	0.02
3,5- Dimethoxytoluene	11.24*	1788.0	[0.37]	8.27	1264.0	0.05
Unknown BOSE VI [m/z 109, 41 (22), 81 (14), 43 (11)... 152 (4)]				8.34	1268.6	0.08
Decanol	10.56*	1730.2	[0.05]	8.47	1277.6	0.03
Bornyl acetate	8.06	1528.8	0.32	8.54	1282.5	0.36
<i>para</i> -Cymen-7-ol	14.03	2042.3	0.06	8.68	1291.4	0.06
<i>trans</i> -Pinocarvyl acetate	8.91	1594.8	0.04	8.77	1297.5	0.04
Thymol	14.97	2134.3	0.02	8.85	1303.1	0.02
Carvacrol	15.20*	2157.5	[0.17]	8.93	1308.9	0.02
Unknown CASA VI [m/z 69, 41 (75), 55 (58), 83 (33), 121 (33) ...]	14.69*	2106.8	[0.57]	8.97	1311.3	0.10
<i>para</i> -Menth-5-en- 1,2-diol isomer III	15.03	2140.5	0.01	9.04	1316.2	0.02
Bicycloelemene	6.85*	1437.0	[0.23]	9.31	1335.3	0.06
Unknown CIAU VI [m/z 133, 105 (45), 91 (38), 119 (36)... 150 (3)]				9.41	1342.8	0.03
α -Cubebene	6.59	1417.7	0.34	9.48*	1347.4	[0.37]
α -Terpinyl acetate	9.52	1644.0	0.06	9.48*	1347.4	[0.37]
Cyclosativene I	6.71	1427.0	0.03	9.65	1359.5	0.03
Cyclosativene II	6.80	1433.4	0.01	9.67	1361.2	0.04
α -Ylangene	6.85*	1437.0	[0.23]	9.77	1367.7	0.06
α -Copaene	6.94*	1444.1	[0.81]	9.83	1372.1	0.82

β -Bourbonene	7.27	1468.8	0.14	9.94	1379.7	0.11
1,5-diepi- β -Bourbonene	7.21	1464.4	0.05	9.97	1381.8	0.03
Geranyl acetate	10.35*	1712.6	[0.10]	10.00	1384.1	0.02
β -Cubebene	7.57	1490.9	0.10	10.04	1386.7	0.09
β -Elemene	8.23*†	1542.2	[0.76]	10.07	1389.5	0.83
Isocaryophyllene	8.01	1525.1	0.03	10.24	1400.9	0.04
α -Gurjunene	7.40	1478.4	0.09	10.28	1404.0	0.09
β -Caryophyllene	8.21†	1540.3	3.06	10.41	1413.4	2.97
β -Copaene	8.21†	1540.3	3.06	10.54	1423.8	0.06
<i>trans</i> - α -Bergamotene	8.23*†	1542.2	[0.76]	10.68	1433.8	0.15
6,9-Guaiadiene	8.45	1559.3	0.03	10.74	1438.7	0.02
Unknown BOCA IV [m/z 91, 161 (92), 105 (85), 119 (63), 133 (53), 79 (49), 204 (46)]	8.60	1570.4	0.04	10.79	1441.8	0.04
<i>trans</i> -Muurola-3,5-diene	8.65	1574.7	0.10	10.83	1444.9	0.10
α -Humulene	9.07*	1607.7	[0.79]	10.86	1447.3	0.81
allo-Aromadendrene	8.78*	1584.7	[0.32]	10.95	1454.3	0.18
<i>cis</i> -Muurola-4(15),5-diene	9.15	1613.8	0.05	10.99	1456.7	0.05
<i>trans</i> -Cadina-1(6),4-diene	9.07*	1607.7	[0.79]	11.16	1469.3	0.12
γ -Muurolene	9.38*	1633.1	[1.00]	11.20	1472.8	0.43
Germacrene D	9.59	1649.7	0.21	11.24	1475.3	0.23
β -Selinene	9.64*	1653.7	[0.79]	11.30	1479.8	0.45
<i>trans</i> -Muurola-4(15),5-diene	9.67	1656.6	0.10	11.32	1482.0	0.03
δ -Selinene	9.44*	1637.5	[0.59]	11.37	1485.1	0.22
α -Selinene	9.72*	1660.3	[0.36]	11.43*	1489.5	[0.58]
Bicyclogermacrene	9.82*	1668.6	[0.46]	11.43*	1489.5	[0.58]
epi-Cubebol	11.79	1836.6	0.17	11.43*	1489.5	[0.58]
α -Muurolene	9.82*	1668.6	[0.46]	11.52	1496.8	0.22
δ -Amorphene	9.77	1664.3	0.02	11.58	1501.1	0.03
β -Bisabolene	9.94	1678.5	0.03	11.68*	1509.0	[0.50]
γ -Cadinene	10.17	1697.3	0.55	11.68*	1509.0	[0.50]
Cubebol	12.36	1886.9	0.45	11.71	1511.0	0.47
δ -Cadinene	10.21	1700.2	1.03	11.82	1519.9	1.12
<i>trans</i> -Cadina-1,4-diene	10.44	1719.8	0.09	11.92	1527.6	0.10
α -Cadinene	10.60	1733.5	0.04	11.99	1533.2	0.05
α -Calacorene	11.90	1845.9	0.08	12.04	1536.6	0.05

Isocaryophyllene epoxide B	11.97	1852.1	0.06	12.14	1544.6	0.03
α-Elemol	13.85	2025.6	0.07	12.16	1546.3	0.07
Germacrene B	10.97	1764.9	0.10	12.19	1548.4	0.07
Elemicin	15.28*	2165.4	[0.07]	12.30	1557.1	0.04
Palustrol	12.07	1860.8	0.05	12.34	1560.9	0.03
Unknown BOCA V [m/z 152, 109 (61), 43 (21), 137 (16), 151 (16)... 222 (6)]				12.39	1564.5	0.08
Germacrene D-4-ol	13.46*	1988.6	[0.10]	12.48	1571.3	0.09
Caryophyllene oxide isomer	12.48	1897.5	0.02	12.52*	1574.3	[1.05]
Caryophyllene oxide	12.56	1904.8	0.97	12.52*	1574.3	[1.05]
10-epi-Liguloxide	11.02	1768.9	0.06	12.52*	1574.3	[1.05]
Viridiflorol	13.78	2019.1	0.15	12.65	1584.8	0.19
Ledol	13.15*	1959.5	[0.21]	12.79	1595.6	0.04
Copaborneol	14.72*	2110.0	[0.14]	12.81	1597.8	0.12
Humulene epoxide II	13.15*	1959.5	[0.21]	12.84	1600.1	0.20
Junenol	13.46*	1988.6	[0.10]	12.94*	1608.3	[0.21]
1,10-diepi-Cubenol	13.56*	1997.8	[0.14]	12.94*	1608.3	[0.21]
1-epi-Cubenol	13.56*	1997.8	[0.14]	13.11	1622.2	0.13
γ-Eudesmol	14.72*	2110.0	[0.14]	13.16	1625.9	0.03
τ-Cadinol	14.69*	2106.8	[0.57]	13.28*	1636.0	[0.68]
Cubenol	13.50	1991.9	0.08	13.28*	1636.0	[0.68]
τ-Muurolol	14.85	2123.1	0.04	13.28*	1636.0	[0.68]
β-Eudesmol	15.20*	2157.5	[0.17]	13.36	1643.0	0.14
α-Eudesmol	15.13	2150.5	0.06	13.41	1647.0	0.07
α-Cadinol	15.28*	2165.4	[0.07]	13.44	1649.4	0.05
cis-Calamenen-10-ol	16.25	2265.2	0.06	13.48	1652.5	0.05
(3Z)-Caryophylla-3,8(13)-dien-5β-ol	16.62	2303.7	0.11	13.65	1666.6	0.12
Germacra-4(15),5,10(14)-trien-1α-ol	15.85	2224.2	0.07	13.80	1679.3	0.03
Shyobunol	16.11*	2250.6	[0.10]	13.84	1682.6	0.03
α-Phellandrene dimer II	12.23	1875.0	0.08	15.07	1788.0	0.08
α-Phellandrene dimer III	12.88	1934.7	0.02	15.26	1804.1	0.02
Unknown BOCA X [m/z 43, 81 (45), 137 (39), 71 (39), 93 (33), 95 (32)...]				16.36	1904.7	0.02
(3E)-Cembrene A	15.33	2170.6	0.14	16.84*	1950.1	[0.18]

<i>meta</i> -Camphorene	15.20*	2157.5	[0.17]	16.84*	1950.1	[0.18]
<i>para</i> -Camphorene	15.57	2194.4	0.02	17.19	1983.5	0.02
Cembrene C	16.00	2239.1	0.08	17.30	1994.2	0.07
Verticilla-4(20),7,11-triene	16.11*	2250.6	[0.10]	17.33	1997.0	0.04
Cembrenol	19.86	2670.9	0.10	18.63	2126.9	0.10
Serratol	19.38	2612.9	0.66	18.76*	2140.8	[0.87]
Incensole	20.40	2736.9	0.19	18.76*	2140.8	[0.87]
Total reported		94.60%			99.09%	

*: 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