

Date : 2023-12-13

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 23L04-PTH01

**Customer Identification :** Frankincense Carterii - Somalia - F30114R

**Type :** Essential Oil

**Source :** *Boswellia carteri*

**Customer :** Plant Therapy

Checked and approved by:

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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

**\*ISO**

**Results :** See analysis summary (next page)

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

**Date :** 2023-12-13

## PHYSICOCHEMICAL DATA

**Refractive index :**  $1.4718 \pm 0.0003$  (20 °C)

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

**Analyst :** Cindy Caron B. Sc.

**Date :** 2023-12-04

## 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	0.01	Alkene
3-Methyl-2-butanone	tr	Aliphatic ketone
Unknown	tr	Unknown
Toluene	0.06	Simple phenolic
Unknown	tr	Alkene
Unknown	0.01	Alkene
Unknown	0.01	Unknown
Unknown	0.02	Unknown
Unknown	0.01	Unknown
Hashishene	0.12	Monoterpene
Tricyclene	0.07	Monoterpene
$\alpha$ -Thujene	3.00	Monoterpene
$\alpha$ -Pinene	47.19	Monoterpene
Camphene	0.91	Monoterpene
$\alpha$ -Fenchene	tr	Monoterpene
Unknown	0.07	Monoterpene
Thuja-2,4(10)-diene	0.21	Monoterpene
3,7,7-Trimethylcyclohepta-1,3,5-triene	0.06	Monoterpene
Sabinene	4.04	Monoterpene
$\beta$ -Pinene	1.53	Monoterpene
Pseudolimonene isomer	0.01	Monoterpene
6-Methyl-5-hepten-2-one	0.01	Aliphatic ketone
Dehydro-1,8-cineole	0.03	Monoterpenic ether
Myrcene	5.90	Monoterpene
6-Methyl-5-hepten-2-ol	0.02	Aliphatic alcohol
2-Carene	0.01	Monoterpene
Pseudolimonene	0.04	Monoterpene
$\alpha$ -Phellandrene	2.68	Monoterpene
Octanal	0.05	Aliphatic aldehyde
<i>ortho</i> -Methylanisole	0.09	Simple phenolic
$\Delta^3$ -Carene	0.85	Monoterpene
Unknown	0.02	Monoterpene
$\alpha$ -Terpinene	0.13	Monoterpene
Carvomenthene	0.04	Aliphatic alcohol
<i>para</i> -Cymene	3.18	Monoterpene
$\beta$ -Phellandrene	0.73	Monoterpene
Limonene	18.11	Monoterpene
1,8-Cineole	0.13	Monoterpenic ether
<i>ortho</i> -Cymene	0.02	Monoterpene

(Z)- $\beta$ -Ocimene	0.13	Monoterpene
Unknown	0.02	Unknown
(E)- $\beta$ -Ocimene	0.10	Monoterpene
Unknown	0.01	Unknown
$\gamma$ -Terpinene	0.21	Monoterpene
<i>cis</i> -Sabinene hydrate	0.02	Monoterpenic alcohol
Unknown	0.01	Oxygenated monoterpene
<i>cis</i> -Linalool oxide (fur.)	0.01	Monoterpenic alcohol
Octanol	0.03	Aliphatic alcohol
<i>para</i> -Cymenene	0.03	Monoterpene
Terpinolene	0.08	Monoterpene
2-Nonanone	0.01	Aliphatic ketone
6,7-Epoxyborneol	0.01	Monoterpenic ether
$\alpha$ -Pinene oxide	0.03	Monoterpenic ether
<i>trans</i> -Sabinene hydrate	0.02	Monoterpenic alcohol
Linalool	0.09	Monoterpenic alcohol
$\alpha$ -Thujone	0.13	Monoterpenic ketone
Unknown	0.02	Monoterpenic alcohol
Verbenol analog?	0.04	Monoterpenic alcohol
$\beta$ -Thujone	0.07	Monoterpenic ketone
<i>cis-para</i> -Menth-2-en-1-ol	0.01	Monoterpenic alcohol
<i>trans-para</i> -Mentha-2,8-dien-1-ol	0.06	Monoterpenic alcohol
Myrcenol	0.02	Monoterpenic alcohol
$\alpha$ -Campholenal	0.11	Monoterpenic aldehyde
Unknown	0.03	Unknown
<i>cis</i> -Limonene oxide	0.03	Monoterpenic ether
allo-Ocimene	0.01	Monoterpene
<i>trans</i> -Limonene oxide	0.03	Monoterpenic ether
<i>trans</i> -Pinocarveol	0.23	Monoterpenic alcohol
<i>trans</i> -Sabinol	0.10	Monoterpenic alcohol
<i>trans</i> -Verbenol	0.28	Monoterpenic alcohol
<i>meta</i> -Mentha-4,6-dien-8-ol	0.07	Monoterpenic alcohol
Unknown	0.01	Oxygenated monoterpene
Sabinaketone	0.02	Normonoterpenic ketone
Pinocamphone	0.01	Monoterpenic ketone
Pinocarvone	0.02	Monoterpenic ketone
Borneol	0.04	Monoterpenic alcohol
$\alpha$ -Phellandren-8-ol	0.13	Monoterpenic alcohol
Umbellulone	0.01	Monoterpenic ketone
<i>cis</i> -Sabinol	0.03	Monoterpenic alcohol
Terpinen-4-ol	0.27	Monoterpenic alcohol
Thuj-3-en-10-al	0.04	Monoterpenic aldehyde
Cryptone	0.02	Normonoterpenic ketone
<i>para</i> -Cymen-8-ol	0.05	Monoterpenic alcohol
<i>trans</i> -Isocarveol	0.01	Monoterpenic alcohol

$\alpha$ -Terpineol	0.19	Monoterpenic alcohol
Myrtenal	0.01	Monoterpenic aldehyde
Myrtenol	0.08	Monoterpenic alcohol
<i>trans</i> -Isopiperitenol	0.03	Monoterpenic alcohol
<i>cis</i> - $\alpha$ -Phellandrene epoxide (iPr vs Me)	0.08	Monoterpenic ether
Verbenone	0.13	Monoterpenic ketone
<i>trans</i> -Piperitol	0.02	Monoterpenic alcohol
Octyl acetate	0.01	Aliphatic ester
<i>trans</i> -Carveol	0.10	Monoterpenic alcohol
<i>exo</i> -2-Hydroxycineole	0.01	Monoterpenic alcohol
<i>cis</i> -Carveol	0.03	Monoterpenic alcohol
Cuminal	0.02	Monoterpenic aldehyde
Hexyl 2-methylbutyrate?	0.01	Aliphatic ester
Carvone	0.07	Monoterpenic ketone
Carvotanacetone	0.01	Monoterpenic ketone
Piperitone	0.05	Monoterpenic ketone
3,5-Dimethoxytoluene	0.02	Simple phenolic
Unknown	0.02	Oxygenated monoterpene
Bornyl acetate	0.16	Monoterpenic ester
<i>para</i> -Cymen-7-ol	0.02	Monoterpenic alcohol
Thymol	0.01	Monoterpenic alcohol
Carvacrol	0.01	Monoterpenic alcohol
Myrtenyl acetate	0.01	Monoterpenic ester
Bicycloelemene	0.01	Sesquiterpene
$\delta$ -Elemene	0.03	Sesquiterpene
Unknown	0.01	Unknown
$\alpha$ -Terpinyl acetate	0.03	Monoterpenic ester
$\alpha$ -Cubebene	0.08	Sesquiterpene
Cyclosativene I	0.01	Sesquiterpene
Cyclosativene II	0.02	Sesquiterpene
$\alpha$ -Ylangene	0.02	Sesquiterpene
$\alpha$ -Copaene	0.48	Sesquiterpene
$\beta$ -Bourbonene	0.04	Sesquiterpene
<i>cis</i> - $\beta$ -Elemene	0.02	Sesquiterpene
$\beta$ -Cubebene	0.04	Sesquiterpene
$\beta$ -Elemene	0.48	Sesquiterpene
Unknown	0.03	Unknown
Isocaryophyllene	0.01	Sesquiterpene
$\alpha$ -Gurjunene	0.05	Sesquiterpene
$\beta$ -Caryophyllene	1.62	Sesquiterpene
$\beta$ -Copaene	0.02	Sesquiterpene
<i>trans</i> - $\alpha$ -Bergamotene	0.06	Sesquiterpene
6,9-Guaiadiene	0.01	Sesquiterpene
Unknown	0.01	Sesquiterpene
<i>trans</i> -Muurola-3,5-diene	0.02	Sesquiterpene

$\alpha$ -Humulene	0.37	Sesquiterpene
allo-Aromadendrene	0.11	Sesquiterpene
cis-Muurolo-4(15),5-diene	0.02	Sesquiterpene
4,5-diepi-Aristolochene	0.01	Sesquiterpene
trans-Cadina-1(6),4-diene	0.02	Sesquiterpene
$\gamma$ -Muurolole	0.11	Sesquiterpene
Germacrene D	0.15	Sesquiterpene
$\beta$ -Selinene	0.17	Sesquiterpene
trans-Muurolo-4(15),5-diene	0.01	Sesquiterpene
$\delta$ -Selinene	0.05	Sesquiterpene
Bicyclogermacrene	0.02	Sesquiterpene
$\alpha$ -Selinene	0.14	Sesquiterpene
epi-Cubebol	0.06	Sesquiterpenic alcohol
$\alpha$ -Muurolole	0.08	Sesquiterpene
Germacrene A	0.03	Sesquiterpene
$\gamma$ -Cadinene	0.16	Sesquiterpene
Cubebol	0.15	Sesquiterpenic alcohol
trans-Calamenene	0.01	Sesquiterpene
$\delta$ -Cadinene	0.31	Sesquiterpene
trans-Cadina-1,4-diene	0.02	Sesquiterpene
$\alpha$ -Cadinene	0.02	Sesquiterpene
$\alpha$ -Calacorene	0.01	Sesquiterpene
$\alpha$ -Elemol	0.01	Sesquiterpenic alcohol
Isocaryophyllene epoxide B	0.01	Sesquiterpenic ether
Germacrene B	0.02	Sesquiterpene
Elemicin	0.01	Phenylpropanoid
Unknown	0.02	Oxygenated sesquiterpene
Germacrene D-4-ol	0.03	Sesquiterpenic alcohol
Caryophyllene oxide isomer	0.03	Sesquiterpenic ether
Caryophyllene oxide	0.22	Sesquiterpenic ether
Viridiflorol	0.04	Sesquiterpenic alcohol
Ledol	0.01	Sesquiterpenic alcohol
Copaborneol	0.01	Sesquiterpenic alcohol
Humulene epoxide II	0.04	Sesquiterpenic ether
10-epi-Cubebol	0.02	Sesquiterpenic alcohol
Unknown	0.03	Sesquiterpenic alcohol
1-epi-Cubebol	0.02	Sesquiterpenic alcohol
$\tau$ -Cadinol	0.09	Sesquiterpenic alcohol
$\tau$ -Muurolol	0.01	Sesquiterpenic alcohol
$\alpha$ -Muurolol	0.01	Sesquiterpenic alcohol
$\beta$ -Eudesmol	0.01	Sesquiterpenic alcohol
$\alpha$ -Cadinol	0.01	Sesquiterpenic alcohol
(3Z)-Caryophylla-3,8(13)-dien-5 $\beta$ -ol	0.02	Sesquiterpenic alcohol
$\alpha$ -Phellandrene dimer II	0.02	Diterpene
$\alpha$ -Phellandrene dimer III	0.01	Diterpene

(3E)-Cembrene A	0.03	Diterpene
meta-Camphorene	0.04	Diterpene
para-Camphorene	0.03	Diterpene
Cembrene C	0.02	Diterpene
Cembrenol	0.01	Diterpenic alcohol
Serratol	0.08	Diterpenic alcohol
Incensole	0.02	Diterpenic alcohol
<b>Consolidated total</b>	<b>99.20</b>	

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

Note: no correction factor was applied

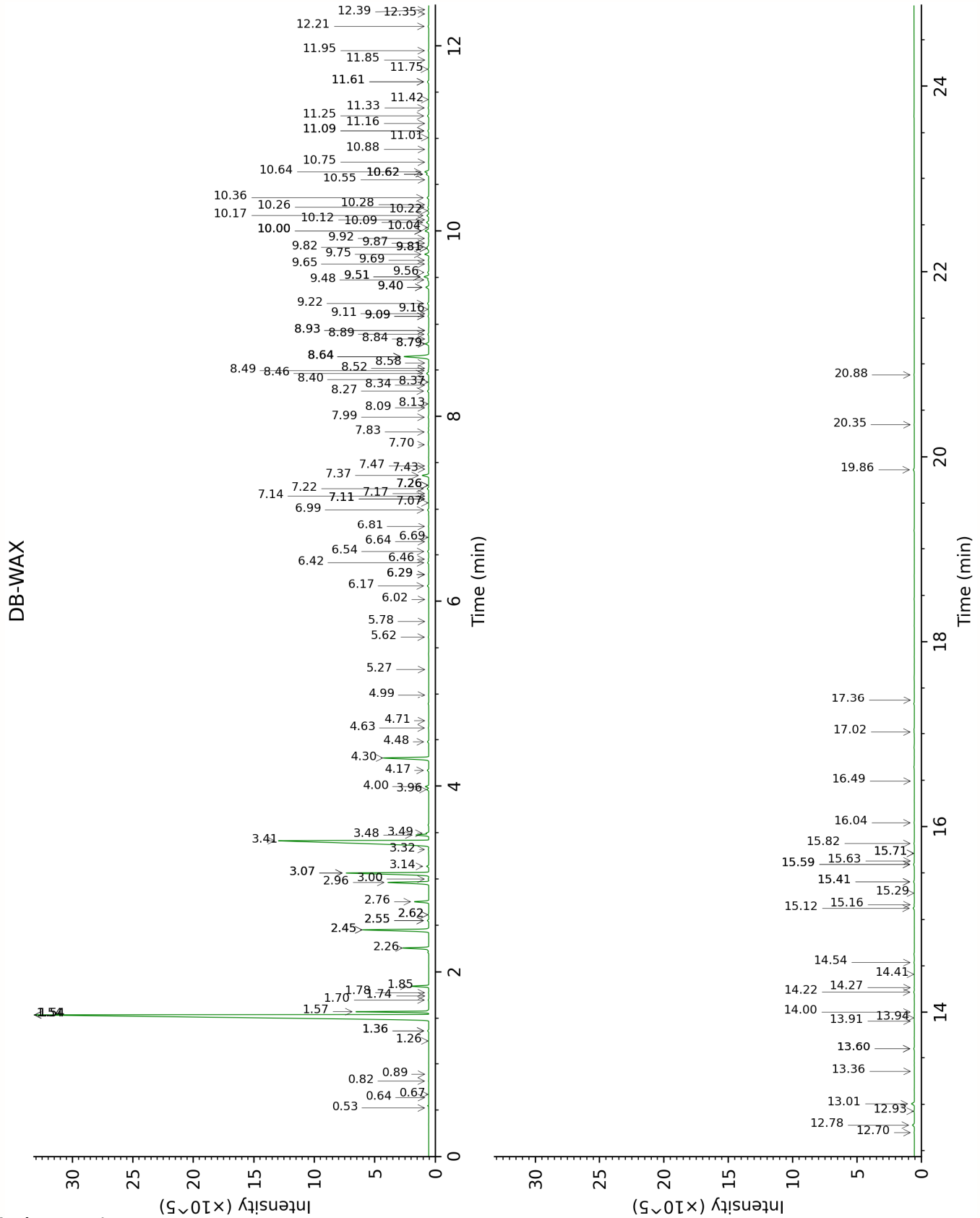
**About "consolidated" data:** The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

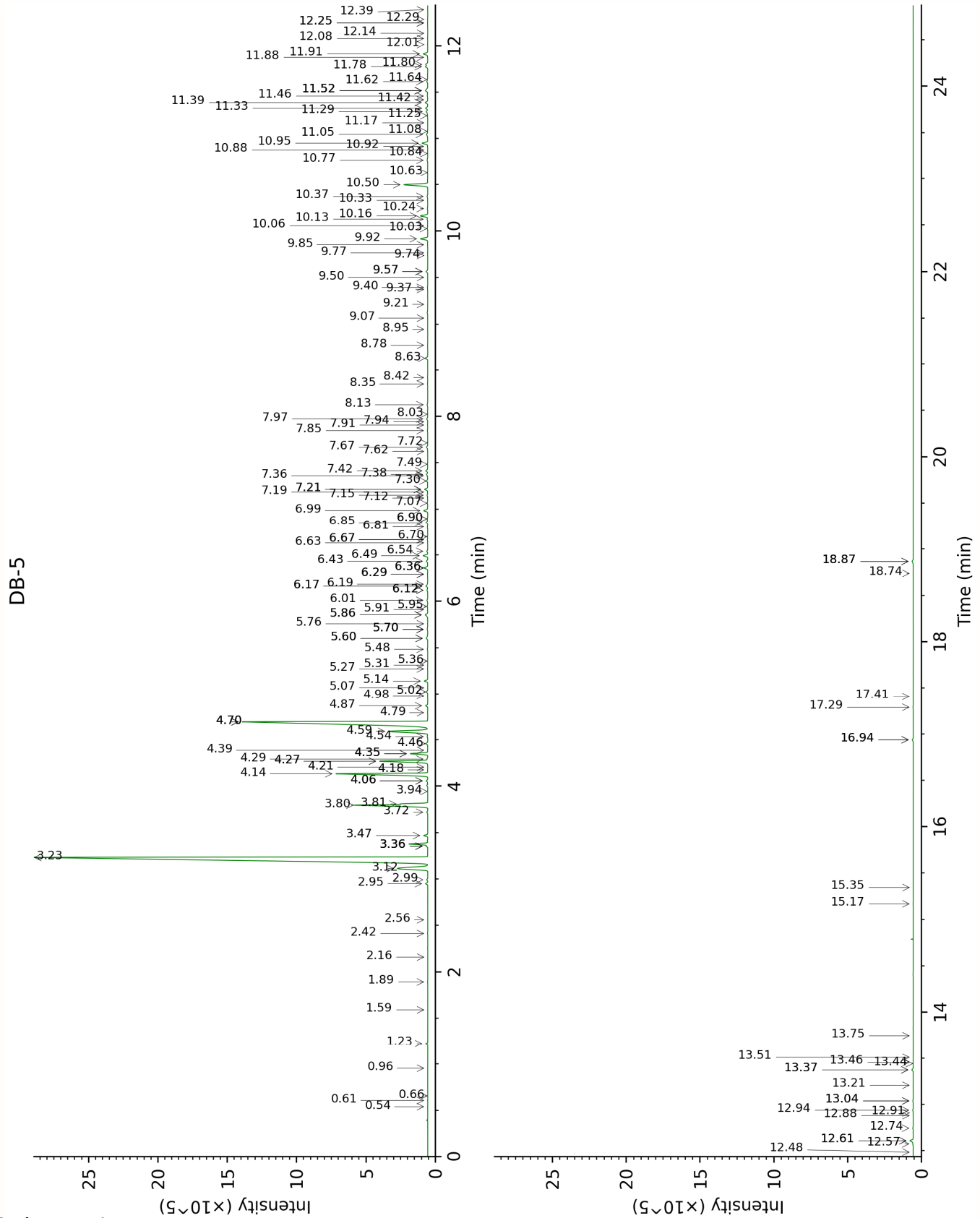
**Unknowns:** Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

**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		
	1.70	1015.0	0.03	0.54	606.6	tr
(E)-2-Methyl-1,3-pentadiene	0.53	760.5	tr	0.61	629.3	0.01
3-Methyl-2-butanone	0.89	902.5	tr	0.66	645.8	tr
Unknown BODA I [m/z 93, 91 (70), 77 (48), 108 (42)]	0.64	820.7	tr	0.96	722.0	tr
Toluene	1.54*	999.9	[47.18]	1.23	759.1	0.06
Unknown BODA II [m/z 109, 67 (33), 41 (16), 81 (13)... 124 (8)]	0.67	832.1	tr	1.59	807.7	tr
Unknown BOCA I [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)]	0.82	879.9	0.01	1.89	832.3	0.01
Unknown PRME II [m/z 109, 43 (28), 124 (28), 41 (14), 55 (11), 79 (9), 81 (8)...]	1.78	1022.5	0.01	2.16	854.3	0.01
Unknown BOCA II [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	1.26	957.7	0.01	2.42	875.2	0.02
Unknown BORI I [m/z 119, 91 (35), 79 (17), 77 (13), 120 (11), 117 (9)...134 (1)]	1.36*	974.0	[0.07]	2.56	887.3	0.01
Hashishene	1.54*	999.9	[47.18]	2.95	916.4	0.12
Tricyclene	1.36*	974.0	[0.07]	2.99	919.1	0.07
$\alpha$ -Thujene	1.57	1003.2	3.03	3.12	927.1	3.00
$\alpha$ -Pinene	1.54*	999.9	[47.18]	3.23	935.0	47.19
Camphene	1.85	1029.0	0.91	3.36*†	943.0	[0.07]
$\alpha$ -Fenchene	1.74	1019.1	tr	3.36*†	943.0	[0.07]
Unknown SAOF I [m/z 91, 92 (47), 65 (11)... 134 (1)]	2.55*	1095.8	[0.08]	3.36*†	943.0	[0.07]
Thuja-2,4(10)-diene 3,7,7-	2.45*	1086.4	[4.32]	3.47	950.5	0.21
Trimethylcyclohepta-1,3,5-triene	3.07*	1135.3	[5.98]	3.72	967.0	0.06
Sabinene	2.45*	1086.4	[4.32]	3.80*†	972.0	[4.70]

β-Pinene	2.26	1067.9	1.53	3.81*†	972.9	[0.87]
Pseudolimonene isomer	2.62*	1101.2	[0.04]	3.94	981.7	0.01
6-Methyl-5-hepten-2-one	5.27	1295.7	0.01	4.06*	989.3	[0.09]
Dehydro-1,8-cineole	3.32	1154.5	0.03	4.06*	989.3	[0.09]
Myrcene	3.07*	1135.3	[5.98]	4.14	994.3	5.90
6-Methyl-5-hepten-2-ol	7.11*	1430.1	[0.02]	4.18	997.0	0.02
2-Carene	2.55*	1095.8	[0.08]	4.21	999.0	0.01
Pseudolimonene	3.00	1130.4	0.04	4.27*	1003.2	[2.76]
α-Phellandrene	2.96	1127.6	2.68	4.27*	1003.2	[2.76]
Octanal	4.63	1250.4	0.04	4.29	1004.7	0.05
ortho-Methylanisole	6.17	1361.6	0.09	4.35*	1008.3	[0.94]
Δ3-Carene	2.76	1111.9	0.85	4.35*	1008.3	[0.94]
Unknown BOSA III [m/z 117, 132 (88), 115 (68), 91 (55), 77 (20)]				4.39	1010.6	0.02
α-Terpinene	3.14	1140.7	0.11	4.46	1015.1	0.13
Carvomenthene	2.62*	1101.2	[0.04]	4.54	1019.8	0.04
para-Cymene	4.30	1227.4	3.18	4.59	1023.4	3.18
β-Phellandrene	3.48	1166.3	0.73	4.70*	1029.8	[19.02]
Limonene	3.41	1161.7	18.11	4.70*	1029.8	[19.02]
1,8-Cineole	3.49	1167.8	0.13	4.70*	1029.8	[19.02]
ortho-Cymene	4.71	1255.9	0.02	4.79	1036.0	0.02
(Z)-β-Ocimene	3.96	1203.2	0.12	4.87	1040.7	0.13
Unknown BOFR III [m/z 109, 43 (57), 91 (28), 67 (25), 93 (24), 95 (22), 77 (21), 137 (21), 41 (17), 79 (14)...]	7.47	1456.4	0.02	4.98	1047.6	0.02
(E)-β-Ocimene	4.17	1217.9	0.10	5.02	1050.3	0.10
Unknown BOFR IV [m/z 109, 45 (67), 41 (40), 67 (39), 81 (33), 79 (27), 95 (24), 91 (23), 82 (21), 55 (21), 93 (20)...]	7.07	1427.0	0.01	5.07	1053.1	0.01
γ-Terpinene	4.00	1205.5	0.21	5.14	1057.7	0.21
cis-Sabinene hydrate	7.11*	1430.1	[0.02]	5.27	1065.9	0.02
Unknown PIMA I [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33),	4.99	1276.1	0.01	5.31	1068.4	0.01

77 (26), 91 (20), 152 (18)]						
<i>cis</i> -Linalool oxide (fur.)	6.69	1399.0	0.01	5.36	1071.1	0.01
Octanol	8.34	1521.7	0.03	5.48	1079.1	0.03
<i>para</i> -Cymenene	6.46	1382.2	0.03	5.60*	1086.4	[0.14]
Terpinolene	4.48	1239.8	0.08	5.60*	1086.4	[0.14]
2-Nonanone	6.02	1351.2	0.01	5.70*	1092.5	[0.06]
6,7-Epoxyterpinolene	6.29*	1370.3	[0.03]	5.70*	1092.5	[0.06]
$\alpha$ -Pinene oxide	5.62	1322.2	0.03	5.70*	1092.5	[0.06]
<i>trans</i> -Sabinene hydrate	8.14	1506.1	0.02	5.76	1096.3	0.02
Linalool	8.27	1516.7	0.09	5.86*	1102.3	[0.21]
$\alpha$ -Thujone	6.29*	1370.3	[0.03]	5.86*	1102.3	[0.21]
Unknown ORMA I [m/z 119, 109 (94), 43 (61), 95 (56), 91 (48), 77 (32), 152 (32), 137 (31), 134 (24)]	8.64*	1545.4	[2.12]	5.91	1105.9	0.02
Verbenol analog?	8.49	1533.8	0.05	5.95	1108.0	0.04
$\beta$ -Thujone	6.54	1388.1	0.08	6.01	1112.3	0.07
<i>cis-para</i> -Menth-2-en-1-ol	8.37	1524.2	0.01	6.12*	1119.1	[0.06]
<i>trans-para</i> -Mentha-2,8-dien-1-ol	9.16	1585.1	0.06	6.12*	1119.1	[0.06]
Myrcenol	9.09*	1579.4	[0.05]	6.16*	1122.0	[0.13]
$\alpha$ -Campholenal	7.22	1438.3	0.11	6.16*	1122.0	[0.13]
Unknown BOSE III [m/z 111, 43 (22), 55 (14), 41 (12), 110 (11)...]				6.19	1123.3	0.03
<i>cis</i> -Limonene oxide	6.64	1395.6	0.03	6.29*	1130.1	[0.03]
allo-Ocimene	5.78	1334.2	0.01	6.29*	1130.1	[0.03]
<i>trans</i> -Limonene oxide	6.81	1407.7	0.03	6.36*	1134.5	[0.26]
<i>trans</i> -Pinocarveol	9.40*	1603.6	[0.23]	6.36*	1134.5	[0.26]
<i>trans</i> -Sabinol	10.00*	1652.4	[0.31]	6.43	1139.0	0.10
<i>trans</i> -Verbenol	9.75	1632.2	0.29	6.49	1142.9	0.28
<i>meta</i> -Mentha-4,6-dien-8-ol	9.51*	1612.7	[0.37]	6.54	1145.9	0.07
Unknown BOSE IV [m/z 109, 81 (39), 41 (38), 95 (24)... 152 (1)]				6.63	1151.7	0.01
Sabinaketone	8.93*	1567.6	[0.02]	6.67*	1153.9	[0.03]
Pinocamphone	7.43	1453.8	0.01	6.67*	1153.9	[0.03]

Pinocarvone	8.09	1502.9	0.02	6.70	1156.0	0.02
Borneol	10.00*	1652.4	[0.31]	6.81	1162.9	0.04
$\alpha$ -Phellandren-8-ol	10.36	1681.1	0.13	6.85	1165.9	0.13
Umbellulone	9.11	1581.5	0.01	6.90*	1168.6	[0.04]
<i>cis</i> -Sabinol	11.08*	1741.8	[0.07]	6.90*	1168.6	[0.04]
Terpinen-4-ol	8.79*	1556.6	[0.26]	6.98	1174.3	0.27
Thuj-3-en-10-al	8.89	1564.5	0.07	7.07	1179.4	0.04
Cryptone	9.40*	1603.6	[0.23]	7.12	1182.9	0.02
<i>para</i> -Cymen-8-ol	11.75	1797.9	0.05	7.15	1184.9	0.05
<i>trans</i> -Isocarveol	11.16	1748.5	0.01	7.19	1187.1	0.01
$\alpha$ -Terpineol	10.00*	1652.4	[0.31]	7.22*	1188.9	[0.20]
Myrtenal	8.84	1560.5	0.01	7.22*	1188.9	[0.20]
Myrtenol	11.08*	1741.8	[0.07]	7.30	1194.7	0.08
<i>trans</i> -Isopiperitenol	10.62*	1702.4	[0.22]	7.36	1198.3	0.03
<i>cis</i> - $\alpha$ -Phellandrene epoxide (iPr vs Me)	11.25	1755.4	0.10	7.38	1199.1	0.08
Verbenone	9.82*†	1637.4	[0.10]	7.42	1201.7	0.13
<i>trans</i> -Piperitol	10.62*	1702.4	[0.22]	7.49	1206.3	0.02
Octyl acetate	7.26*	1441.0	[0.02]	7.62	1215.5	0.01
<i>trans</i> -Carveol	11.61*	1786.4	[0.11]	7.67	1218.5	0.10
<i>exo</i> -2-Hydroxycineole	11.85	1806.6	0.01	7.72	1221.6	0.01
<i>cis</i> -Carveol	11.95	1815.6	0.03	7.85	1230.5	0.03
Cuminal	10.75	1713.4	0.02	7.91	1234.5	0.02
Hexyl 2-methylbutyrate?	6.42	1379.4	0.08	7.94	1236.8	0.01
Carvone	10.22	1669.9	0.08	7.97	1238.9	0.07
Carvotanacetone	9.69	1627.0	0.03	8.02	1242.3	0.01
Piperitone	10.12	1662.1	0.02	8.13	1249.1	0.05
3,5-Dimethoxytoluene	11.61*	1786.4	[0.11]	8.35	1264.0	0.02
Unknown BOSE VI [m/z 109, 41 (22), 81 (14), 43 (11)... 152 (4)]				8.42	1268.6	0.02
Bornyl acetate	8.46	1531.4	0.17	8.63	1282.5	0.16
<i>para</i> -Cymen-7-ol	14.41	2040.4	0.02	8.78	1292.4	0.02
Thymol	15.41*	2137.6	[0.05]	8.95	1303.8	0.01
Carvacrol	15.59*	2156.4	[0.07]	9.07	1312.3	0.01
Myrtenyl acetate	9.82*†	1638.2	[0.14]	9.21	1322.7	0.01
Bicycloelemene	7.26*	1441.0	[0.02]	9.37	1334.0	0.01
$\delta$ -Elemene	7.14	1432.3	0.01	9.40	1335.5	0.03
Unknown CIAU VI [m/z 133, 105 (45), 91 (38), 119 (36)... 150 (3)]				9.50	1343.1	0.01

$\alpha$ -Terpinyl acetate	9.92	1645.9	0.03	9.57*	1347.5	[0.11]
$\alpha$ -Cubebene	6.99	1421.3	0.08	9.57*	1347.5	[0.11]
Cyclosativene I	7.11*	1430.1	[0.02]	9.74	1359.6	0.01
Cyclosativene II	7.17	1434.4	0.02	9.77	1361.6	0.02
$\alpha$ -Ylangene	7.26*	1441.0	[0.02]	9.85	1367.7	0.02
$\alpha$ -Copaene	7.36	1448.8	0.48	9.92	1372.2	0.48
$\beta$ -Bourbonene	7.70	1473.3	0.05	10.03	1379.9	0.04
<i>cis</i> - $\beta$ -Elemene	8.52	1535.6	0.01	10.06	1382.1	0.02
$\beta$ -Cubebene	7.99	1495.2	0.05	10.13	1387.0	0.04
$\beta$ -Elemene	8.64*	1545.4	[2.12]	10.16	1389.6	0.48
Unknown CALU VIII [m/z 71, 100 (92), 111 (79), 69 (46), 109 (45)...]	17.36	2340.3	0.01	10.24	1395.1	0.03
Isocaryophyllene	8.40	1526.3	0.01	10.33	1401.3	0.01
$\alpha$ -Gurjunene	7.83	1483.4	0.05	10.37	1404.2	0.05
$\beta$ -Caryophyllene	8.64*	1545.4	[2.12]	10.50	1413.6	1.62
$\beta$ -Copaene	8.58	1540.1	0.02	10.64	1423.8	0.02
<i>trans</i> - $\alpha$ - Bergamotene	8.64*	1545.4	[2.12]	10.77	1433.7	0.06
6,9-Guaiadiene	8.79*	1556.6	[0.26]	10.84	1439.1	0.01
Unknown BOCA IV [m/z 91, 161 (92), 105 (85), 119 (63), 133 (53), 79 (49), 204 (46)]	8.93*	1567.6	[0.02]	10.88	1441.8	0.01
<i>trans</i> -Muuro-la-3,5- diene	9.09*	1579.4	[0.05]	10.92	1444.7	0.02
$\alpha$ -Humulene	9.51*	1612.7	[0.37]	10.95	1447.4	0.37
allo-Aromadendrene	9.22	1589.9	0.10	11.05	1454.5	0.11
<i>cis</i> -Muuro-la-4(15),5- diene	9.56	1616.4	0.08	11.08	1456.9	0.02
4,5-diepi- Aristolochene	9.65	1623.8	0.03	11.17	1463.7	0.01
<i>trans</i> -Cadina-1(6),4- diene	9.48	1610.1	0.09	11.25	1469.4	0.02
$\gamma$ -Muuro-lene	9.82*†	1637.4	[0.10]	11.29	1472.7	0.11
Germacrene D	10.00*	1652.4	[0.31]	11.33	1475.4	0.15
$\beta$ -Selinene	10.09	1659.8	0.17	11.39	1479.9	0.17
<i>trans</i> -Muuro-la- 4(15),5-diene	10.04	1655.3	0.05	11.42	1482.2	0.01
$\delta$ -Selinene	9.87	1641.9	0.02	11.46	1485.1	0.05
Bicyclogermacrene	10.28	1675.2	0.02	11.52*	1489.5	[0.22]
$\alpha$ -Selinene	10.17	1665.8	0.14	11.52*	1489.5	[0.22]
epi-Cubebol	12.21	1838.7	0.06	11.52*	1489.5	[0.22]

α-Muurolene	10.26	1672.9	0.08	11.62	1496.7	0.08
Germacrene A	10.55	1696.7	0.01	11.64	1498.4	0.03
γ-Cadinene	10.62*	1702.4	[0.22]	11.78	1508.9	0.16
Cubebol	12.78	1888.5	0.15	11.80	1510.8	0.15
trans-Calamenene	11.42	1770.3	0.02	11.88	1516.7	0.01
δ-Cadinene	10.64	1704.6	0.30	11.91	1519.7	0.31
trans-Cadina-1,4-diene	10.88	1725.0	0.02	12.01	1527.5	0.02
α-Cadinene	11.01	1735.6	0.02	12.08	1532.7	0.02
α-Calacorene	12.34	1850.5	0.02	12.14	1537.1	0.01
α-Elemol	14.27	2026.6	0.01	12.25*	1545.8	[0.02]
Isocaryophyllene epoxide B	12.39	1854.7	0.01	12.25*	1545.8	[0.02]
Germacrene B	11.33	1762.7	0.05	12.29	1548.9	0.02
Elemicin	15.71*	2168.3	[0.01]	12.39	1557.2	0.01
Unknown BOCA V [m/z 152, 109 (61), 43 (21), 137 (16), 151 (16)... 222 (6)]				12.48	1564.4	0.02
Germacrene D-4-ol	13.91	1992.2	0.02	12.58	1571.5	0.03
Caryophyllene oxide isomer	12.93	1902.0	0.03	12.61*	1574.1	[0.25]
Caryophyllene oxide	13.01	1909.4	0.22	12.61*	1574.1	[0.25]
Viridiflorol	14.22	2022.0	0.04	12.74	1584.7	0.04
Ledol	13.60*	1964.1	[0.05]	12.88	1595.4	0.01
Copaborneol	15.16	2113.0	0.02	12.91	1597.7	0.01
Humulene epoxide II	13.60*	1964.1	[0.05]	12.94	1600.0	0.04
10-epi-Cubebol	13.94	1995.4	0.02	13.04*	1608.0	[0.05]
Unknown BOCA XV [m/z 161, 189 (76), 204 (66), 105 (60), 119 (46), 107 (41), 59 (38)...222 (3)]	14.54	2052.5	0.03	13.04*	1608.0	[0.05]
1-epi-Cubebol	14.00	2001.4	0.02	13.21	1621.9	0.02
τ-Cadinol	15.12	2109.2	0.09	13.37*	1635.6	[0.10]
τ-Muurolol	15.28	2125.5	0.01	13.37*	1635.6	[0.10]
α-Muurolol	15.41*	2137.6	[0.05]	13.44	1641.2	0.01
β-Eudesmol	15.63	2160.1	0.01	13.46	1642.4	0.01
α-Cadinol	15.71*	2168.3	[0.01]	13.51	1646.9	0.01
(3Z)-Caryophylla-3,8(13)-dien-5β-ol	17.02	2303.3	0.02	13.75	1666.5	0.02
α-Phellandrene dimer II	12.70	1881.4	0.02	15.17	1787.8	0.02
α-Phellandrene dimer III	13.36	1941.6	0.02	15.35	1803.1	0.01



(3E)-Cembrene A	15.82	2178.9	0.03	16.94*	1949.6	[0.07]
<i>meta</i> -Camphorene	15.59*	2156.4	[0.07]	16.94*	1949.6	[0.07]
<i>para</i> -Camphorene	16.04	2201.5	0.02	17.29	1983.0	0.03
Cembrene C	16.49	2248.0	0.01	17.41	1994.3	0.02
Cembrenol	20.35	2680.8	0.01	18.74	2126.6	0.01
Serratol	19.86	2622.8	0.08	18.87*	2139.9	[0.10]
Incensole	20.88	2746.8	0.02	18.87*	2139.9	[0.10]
Total reported		98.87%			99.36%	

\*: 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