

Date : August 30, 2021

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 21H17-ORA08

Customer identification : Juniper - India - 3 years - OIL-SINGLE-12

Type : Essential oil

Source : *Juniperus communis*

Customer : Organic Aromas Inc.

ANALYSIS

Method: PC-MAT-014  - Analysis of the composition of an essential oil or other volatile liquid by FAST GC-FID (in French); identifications validated by GC-MS.

Analyst : Sarah-Eve Tremblay, M. Sc. A., Chimiste

Analysis date : August 26, 2021

Checked and approved by :

Alexis St-Gelais, M. Sc., Chimiste 2013-174

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PHYSICOCHEMICAL DATA

Physical aspect: Faintly yellow liquid

Refractive index: 1.4739 ± 0.0003 (20 °C; method PC-MAT-016)

CONCLUSION

The high proportion of delta-3-carene in this oil is unexpected for juniper berry oil. A large review of literature pertaining to this essential oil reports a maximum of 4.3% in the abundant literature for this species.¹ We recommend caution with this batch.

REFERENCE

- (1) Lawrence, B. M. Juniper Berry Oil. *Perfum. Flavorist* **2017**, 42 (6), 54–58.

ANALYSIS SUMMARY – CONSOLIDATED CONTENTS

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

| Identification | % | Class |
|-----------------------------|-------|------------------------|
| 3-Methylfuran | tr | Furan |
| Toluene | 0.01 | Simple phenolic |
| Unknown | tr | Alkene |
| Cyclofenchene | 0.02 | Monoterpene |
| Santene | tr | Normonoterpene |
| Bornylene | 0.06 | Monoterpene |
| Hashishene | 0.02 | Monoterpene |
| Tricyclene | 0.20 | Monoterpene |
| α -Thujene | 0.53 | Monoterpene |
| α -Pinene | 48.83 | Monoterpene |
| α -Fenchene | 0.58 | Monoterpene |
| Camphene | 0.51 | Monoterpene |
| Thuja-2,4(10)-diene | 0.02 | Monoterpene |
| Unknown | 0.01 | Monoterpene |
| Unknown | tr | Monoterpene |
| meta-Cymene | 0.16 | Monoterpene |
| β -Pinene | 2.62 | Monoterpene |
| Sabinene | 1.31 | Monoterpene |
| Unknown | 0.04 | Monoterpene |
| Myrcene | 1.93 | Monoterpene |
| α -Phellandrene | 0.07 | Monoterpene |
| Pseudolimonene | 0.03 | Monoterpene |
| Δ^3 -Carene | 14.75 | Monoterpene |
| 1,4-Cineole | 0.02 | Monoterpenic ether |
| α -Terpinene | 0.08 | Monoterpene |
| ortho-Cymene | 0.07 | Monoterpene |
| para-Cymene | 2.06 | Monoterpene |
| 1,8-Cineole | 0.08 | Monoterpenic ether |
| Limonene | 8.46 | Monoterpene |
| β -Phellandrene | 0.15 | Monoterpene |
| (Z)- β -Ocimene | 0.01 | Monoterpene |
| (E)- β -Ocimene | 0.02 | Monoterpene |
| γ -Terpinene | 0.32 | Monoterpene |
| cis-Sabinene hydrate | 0.01 | Monoterpenic alcohol |
| Unknown | 0.01 | Oxygenated monoterpene |
| cis-Linalool oxide (fur.) | 0.03 | Monoterpenic alcohol |
| meta-Cymenene | 0.02 | Monoterpene |
| Fenchone | 0.01 | Monoterpenic ketone |
| Isoterpinolene | 0.04 | Monoterpene |
| para-Cymenene | 0.07 | Monoterpene |
| Terpinolene | 0.80 | Monoterpene |
| trans-Linalool oxide (fur.) | 0.02 | Monoterpenic alcohol |
| α -Pinene oxide | 0.16 | Monoterpenic ether |
| 6,7-Epoxyterpinene | 0.02 | Monoterpenic ether |
| trans-Sabinene hydrate | 0.05 | Monoterpenic alcohol |

| | | |
|----------------------------------|------|------------------------|
| Linalool | 0.53 | Monoterpenic alcohol |
| α -Thujone | 0.02 | Monoterpenic ketone |
| Nonanal | 0.01 | Aliphatic aldehyde |
| Verbenol analog? | tr | Monoterpenic alcohol |
| endo-Fenchol | 0.05 | Monoterpenic alcohol |
| <i>cis</i> -para-Menth-2-en-1-ol | 0.03 | Monoterpenic alcohol |
| α -Campholenal | 0.02 | Monoterpenic aldehyde |
| <i>cis</i> -Limonene oxide | 0.06 | Monoterpenic ether |
| <i>trans</i> -Pinocarveol | 0.09 | Monoterpenic alcohol |
| <i>trans</i> -Limonene oxide | 0.03 | Monoterpenic ether |
| <i>cis</i> -Verbenol | 0.12 | Monoterpenic alcohol |
| Camphor | 0.03 | Monoterpenic ketone |
| Camphene hydrate | 0.01 | Monoterpenic alcohol |
| <i>trans</i> -Verbenol | 0.36 | Monoterpenic alcohol |
| Karahanaenone | 0.17 | Monoterpenic ketone |
| Isoborneol | 0.26 | Monoterpenic alcohol |
| Borneol | 0.04 | Monoterpenic alcohol |
| Terpinen-4-ol | 1.09 | Monoterpenic alcohol |
| para-Cymen-8-ol | 0.30 | Monoterpenic alcohol |
| Unknown | 0.01 | Oxygenated monoterpene |
| α -Terpineol | 0.59 | Monoterpenic alcohol |
| Myrtenal | 0.02 | Monoterpenic aldehyde |
| Myrtenol | 0.05 | Monoterpenic alcohol |
| γ -Terpineol | 0.04 | Monoterpenic alcohol |
| <i>trans</i> -Isopiperitenol | 0.01 | Monoterpenic alcohol |
| Verbenone | 0.14 | Monoterpenic ketone |
| Decanal | 0.01 | Aliphatic aldehyde |
| <i>trans</i> -Carveol | 0.07 | Monoterpenic alcohol |
| <i>cis</i> -Carveol | 0.04 | Monoterpenic alcohol |
| Citronellol | 0.07 | Monoterpenic alcohol |
| Unknown | 0.04 | Oxygenated monoterpene |
| Carvone | 0.03 | Monoterpenic ketone |
| Neral | 0.02 | Monoterpenic aldehyde |
| Carvacrol methyl ether | 0.03 | Monoterpenic ether |
| Piperitone | 0.07 | Monoterpenic ketone |
| Geraniol | 0.18 | Monoterpenic alcohol |
| Methyl citronellate | 0.03 | Monoterpenic ester |
| <i>trans</i> -Ascaridole glycol | 0.07 | Monoterpenic alcohol |
| Geranial | 0.03 | Monoterpenic aldehyde |
| Decanol | 0.08 | Aliphatic alcohol |
| Bornyl acetate | 0.37 | Monoterpenic ester |
| 2-Undecanone | 0.18 | Aliphatic ketone |
| Thymol | 0.06 | Monoterpenic alcohol |
| Carvacrol | 0.01 | Monoterpenic alcohol |
| δ -Terpinyl acetate | 0.03 | Monoterpenic ester |
| Myrtenyl acetate | 0.04 | Monoterpenic ester |
| Bicycloelemene analog | tr | Sesquiterpene |
| Bicycloelemene | 0.05 | Sesquiterpene |
| δ -Elemene | 0.02 | Sesquiterpene |
| α -Cubebene | 0.04 | Sesquiterpene |
| α -Terpinyl acetate | 1.19 | Monoterpenic ester |
| Citronellyl acetate | tr | Monoterpenic ester |

| | | |
|--|------|------------------------|
| Neryl acetate | 0.03 | Monoterpenic ester |
| α -Copaene | 0.11 | Sesquiterpene |
| β -Cubebene | 0.04 | Sesquiterpene |
| β -Elemene | 0.03 | Sesquiterpene |
| Longifolene | 0.03 | Sesquiterpene |
| α -Gurjunene | 0.01 | Sesquiterpene |
| α -Cedrene | 0.42 | Sesquiterpene |
| β -Caryophyllene | 0.65 | Sesquiterpene |
| β -Cedrene | 0.15 | Sesquiterpene |
| β -Copaene | 0.05 | Sesquiterpene |
| <i>cis</i> -Thujopsene | 0.01 | Sesquiterpene |
| γ -Elemene | 0.02 | Sesquiterpene |
| <i>trans</i> -Muurolo-3,5-diene | 0.04 | Sesquiterpene |
| α -Humulene | 0.77 | Sesquiterpene |
| allo-Aromadendrene | 0.02 | Sesquiterpene |
| α -Acoradiene | 0.05 | Sesquiterpene |
| (<i>E</i>)- β -Farnesene | 0.04 | Sesquiterpene |
| β -Acoradiene | 0.01 | Sesquiterpene |
| <i>trans</i> -Cadina-1(6),4-diene | 0.01 | Sesquiterpene |
| γ -Muurolole | 0.20 | Sesquiterpene |
| Germacrene D | 0.06 | Sesquiterpene |
| β -Selinene | 0.02 | Sesquiterpene |
| ar-Curcumene | 0.02 | Sesquiterpene |
| γ -Amorphene | 0.01 | Sesquiterpene |
| α -Selinene | 0.12 | Sesquiterpene |
| α -Muurolole | 0.09 | Sesquiterpene |
| Cuparene | 0.05 | Sesquiterpene |
| γ -Cadinene | 0.10 | Sesquiterpene |
| Cubebol | 0.03 | Sesquiterpenic alcohol |
| (3 <i>E</i> ,6 <i>E</i>)- α -Farnesene | 0.03 | Sesquiterpene |
| <i>trans</i> -Calamenene | 0.12 | Sesquiterpene |
| δ -Cadinene | 0.40 | Sesquiterpene |
| <i>trans</i> -Cadina-1,4-diene | 0.02 | Sesquiterpene |
| (<i>E</i>)- γ -Bisabolene | 0.02 | Sesquiterpene |
| α -Cadinene | 0.02 | Sesquiterpene |
| α -Calacorene | 0.03 | Sesquiterpene |
| Germacrene B | 0.07 | Sesquiterpene |
| (<i>E</i>)-Nerolidol | 0.01 | Sesquiterpenic alcohol |
| Caryophyllene oxide | 0.78 | Sesquiterpenic ether |
| Caryophyllene oxide isomer | 0.13 | Sesquiterpenic ether |
| α -Cedrol | 0.66 | Sesquiterpenic alcohol |
| Humulene epoxide I | 0.05 | Sesquiterpenic ether |
| Humulene epoxide II | 0.29 | Sesquiterpenic ether |
| epi-Cedrol | 0.01 | Sesquiterpenic alcohol |
| 10-epi-Cubenol | 0.03 | Sesquiterpenic alcohol |
| Junenol | 0.01 | Sesquiterpenic alcohol |
| Alismol | 0.02 | Sesquiterpenic alcohol |
| β -Acorenol | 0.03 | Sesquiterpenic alcohol |
| τ -Muurolol | 0.02 | Sesquiterpenic alcohol |
| α -Muurolol | 0.01 | Sesquiterpenic alcohol |
| α -Eudesmol | 0.02 | Sesquiterpenic alcohol |
| α -Cadinol | 0.01 | Sesquiterpenic alcohol |

| | | |
|---|---------------|--------------------------|
| Cedrenol analog | 0.02 | Sesquiterpenic alcohol |
| (3Z)-Caryophylla-3,8(13)-dien-5 β -ol | 0.03 | Sesquiterpenic alcohol |
| Germacra-4(15),5,10(14)-trien-1-ol isomer | 0.01 | Sesquiterpenic alcohol |
| Shyobunol | 0.02 | Sesquiterpenic alcohol |
| β -Turmerone | 0.01 | Sesquiterpenic ketone |
| Thujopsenal analog | 0.01 | Sesquiterpenic aldehyde |
| Cedryl acetate | 0.01 | Sesquiterpenic ester |
| Unknown | tr | Oxygenated sesquiterpene |
| meta-Camphorene | 0.07 | Diterpene |
| Trachylobane? | 0.03 | Diterpene |
| para-Camphorene | 0.04 | Diterpene |
| ar-Abietatriene | 0.02 | Diterpene |
| Consolidated total | 97.30% | |

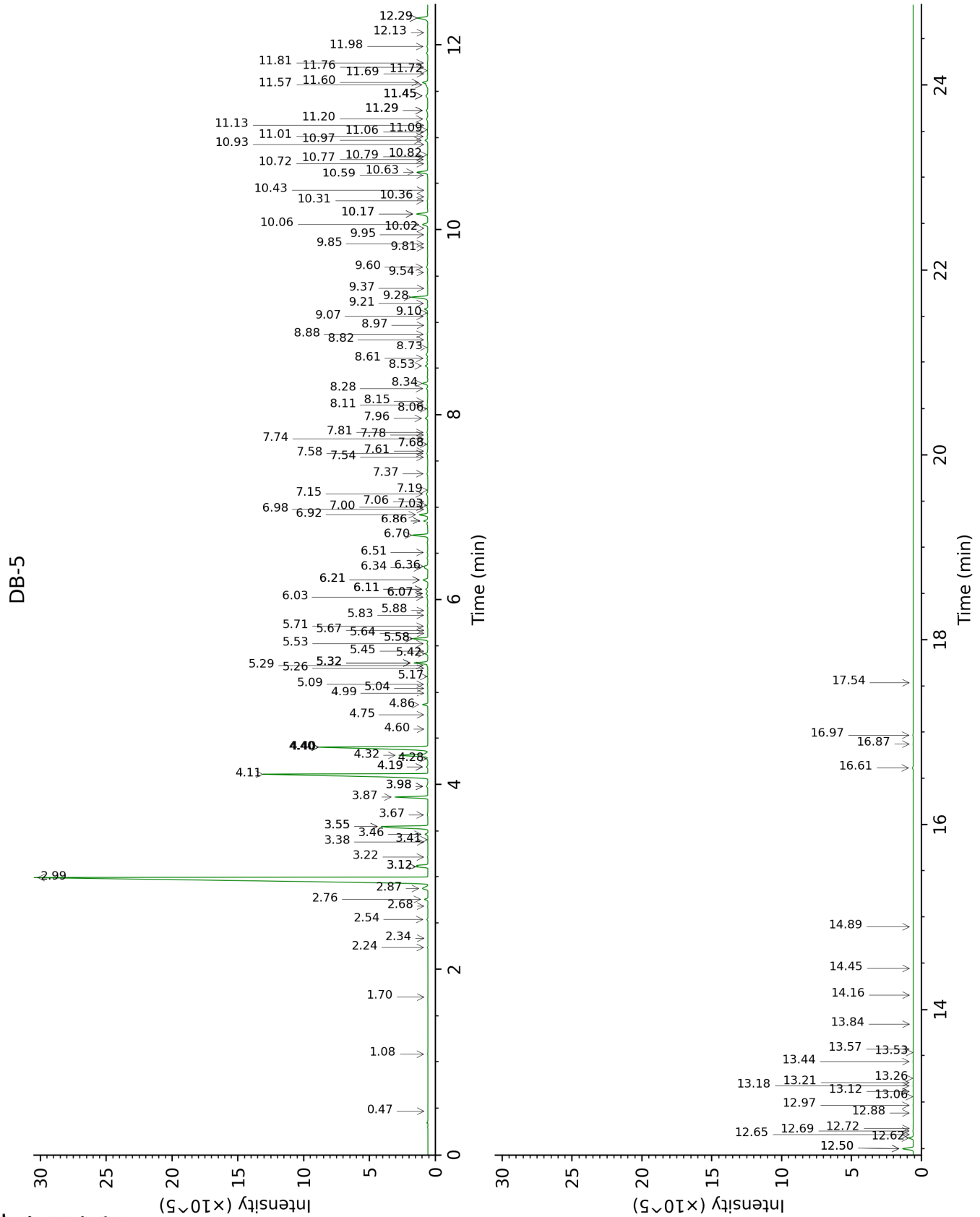
tr: The compound has been detected below 0.005% of total signal.

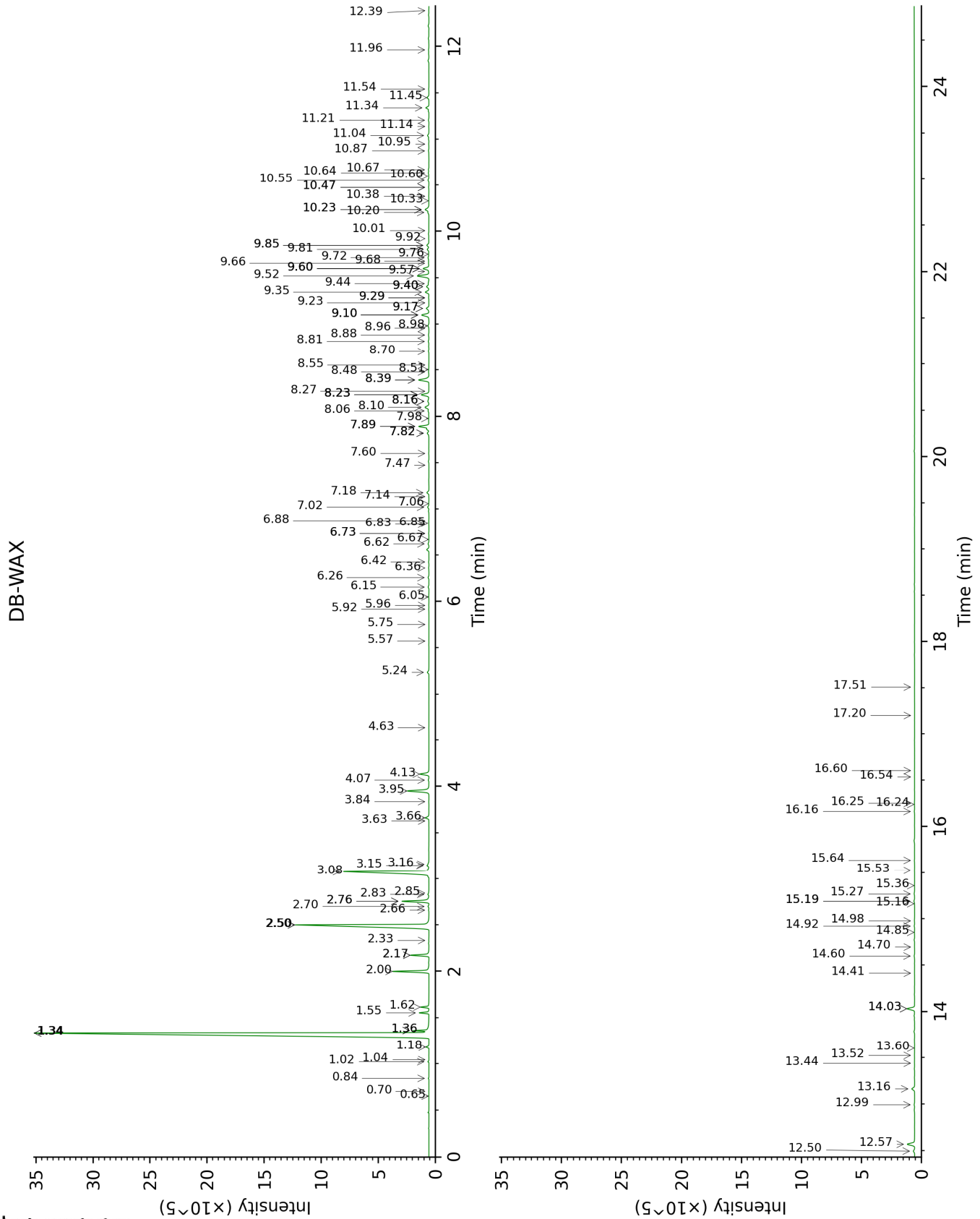
Note: no correction factor was applied

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.

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FULL ANALYSIS DATA

| Identification | Column DB-5 | | | Column DB-WAX | | |
|--|-------------|------|--------|---------------|------|---------|
| | R.T | R.I | % | R.T | R.I | % |
| 3-Methylfuran | 0.47 | 606 | tr | 0.65 | 861 | tr |
| Toluene | 1.08 | 758 | 0.01 | 1.36* | 1001 | 1.01 |
| Unknown [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)] | 1.70 | 832 | tr | 0.70 | 881 | tr |
| Cyclofenchene | 2.24 | 878 | 0.02 | 0.84 | 915 | 0.03 |
| Santene | 2.34 | 886 | tr | 1.04 | 949 | tr |
| Bornylene | 2.54 | 904 | 0.06 | 1.02 | 945 | 0.05 |
| Hashishene | 2.68 | 914 | 0.02 | 1.34* | 998 | 48.56 |
| Tricyclene | 2.76 | 918 | 0.20 | 1.18 | 972 | 0.20 |
| α-Thujene | 2.87 | 926 | 0.53 | 1.36* | 1001 | [1.01] |
| α-Pinene | 2.99 | 934 | 48.83 | 1.34* | 998 | [48.56] |
| α-Fenchene | 3.12*† | 943 | 1.10 | 1.55 | 1020 | 0.58 |
| Camphene | 3.12*† | 943 | [1.10] | 1.62 | 1027 | 0.51 |
| Thuja-2,4(10)- diene | 3.22 | 950 | 0.02 | 2.17* | 1084 | 1.33 |
| Unknown [m/z 121, 93 (86), 79 (71), 67 (62), 55 (49)... 136 (24)] | 3.38 | 961 | 0.01 | | | |
| Unknown [m/z 91, 119 (60), 77 (36), 92 (31), 93 (31)... 134 (23)] | 3.41 | 962 | tr | 2.50* | 1113 | 14.75 |
| meta-Cymene | 3.46 | 966 | 0.16 | 2.76* | 1133 | 2.07 |
| β-Pinene | 3.55* | 972 | 3.94 | 2.00 | 1066 | 2.62 |
| Sabinene | 3.55* | 972 | [3.94] | 2.17* | 1084 | [1.33] |
| Unknown [m/z 93, 79 (73), 67 (49), 95 (42), 91 (41), 121 (38)...] | 3.67 | 980 | 0.04 | 2.33 | 1100 | 0.02 |
| Myrcene | 3.87 | 994 | 1.93 | 2.76* | 1133 | [2.07] |
| α-Phellandrene | 3.98* | 1001 | 0.12 | 2.70 | 1129 | 0.07 |
| Pseudolimonene | 3.98* | 1001 | [0.12] | 2.66 | 1126 | 0.03 |
| Δ3-Carene | 4.11 | 1010 | 14.75 | 2.50* | 1113 | [14.75] |
| 1,4-Cineole | 4.19* | 1015 | 0.09 | 2.84 | 1141 | 0.02 |
| α-Terpinene | 4.19* | 1015 | [0.09] | 2.83 | 1139 | 0.08 |
| ortho-Cymene | 4.28 | 1020 | 0.07 | | | |
| para-Cymene | 4.32 | 1023 | 2.06 | 3.95 | 1228 | 1.99 |
| 1,8-Cineole | 4.40* | 1028 | 8.64 | 3.16 | 1166 | 0.08 |
| Limonene | 4.40* | 1028 | [8.64] | 3.08 | 1159 | 8.46 |
| β-Phellandrene | 4.40* | 1028 | [8.64] | 3.15 | 1165 | 0.15 |
| (Z)-β-Ocimene | 4.60 | 1040 | 0.01 | 3.63 | 1204 | 0.01 |
| (E)-β-Ocimene | 4.75 | 1050 | 0.02 | 3.84 | 1219 | 0.02 |
| γ-Terpinene | 4.86 | 1057 | 0.32 | 3.66 | 1206 | 0.32 |
| cis-Sabinene hydrate | 4.99 | 1065 | 0.01 | 6.73* | 1427 | 0.02 |

| | | | | | | |
|---|-------|------|--------|--------|------|--------|
| Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)] | 5.04 | 1069 | 0.01 | 4.63 | 1279 | 0.01 |
| <i>cis</i> -Linalool oxide (fur.) | 5.09 | 1072 | 0.03 | 6.36 | 1400 | 0.03 |
| meta-Cymenene | 5.17 | 1077 | 0.02 | 6.05 | 1377 | 0.03 |
| Fenchone | 5.26 | 1082 | 0.01 | 5.57 | 1342 | 0.01 |
| Isoterpinolene | 5.29 | 1084 | 0.04 | 4.07 | 1237 | 0.05 |
| para-Cymenene | 5.32* | 1086 | 0.90 | 6.15 | 1385 | 0.07 |
| Terpinolene | 5.32* | 1086 | [0.90] | 4.13 | 1242 | 0.80 |
| <i>trans</i> -Linalool oxide (fur.) | 5.32* | 1086 | [0.90] | 6.73* | 1427 | [0.02] |
| α-Pinene oxide | 5.42 | 1092 | 0.16 | 5.24 | 1318 | 0.16 |
| 6,7-Epoxymyrcene | 5.44 | 1094 | 0.02 | 5.96 | 1370 | 0.02 |
| <i>trans</i> -Sabinene hydrate | 5.53 | 1099 | 0.05 | 7.82* | 1509 | 0.19 |
| Linalool | 5.58* | 1103 | 1.05 | 7.89* | 1515 | 0.95 |
| α-Thujone | 5.58* | 1103 | [1.05] | 5.92 | 1367 | 0.02 |
| Nonanal | 5.64 | 1106 | 0.01 | 5.75 | 1356 | 0.01 |
| Verbenol analog? | 5.67 | 1108 | tr | 8.16* | 1536 | 0.15 |
| endo-Fenchol | 5.71 | 1111 | 0.05 | 8.23* | 1541 | 0.78 |
| <i>cis</i> -para-Menth-2-en-1-ol | 5.83 | 1119 | 0.03 | 7.98 | 1522 | 0.03 |
| α-Campholenal | 5.88 | 1122 | 0.02 | 6.85 | 1436 | 0.01 |
| <i>cis</i> -Limonene oxide | 6.03 | 1131 | 0.06 | 6.26 | 1392 | 0.08 |
| <i>trans</i> -Pinocarveol | 6.07* | 1134 | 0.14 | 8.98 | 1600 | 0.09 |
| <i>trans</i> -Limonene oxide | 6.07* | 1134 | [0.14] | 6.42 | 1404 | 0.03 |
| <i>cis</i> -Verbenol | 6.11* | 1137 | 0.15 | 9.10* | 1609 | 0.77 |
| Camphor | 6.11* | 1137 | [0.15] | 7.06 | 1452 | 0.03 |
| Camphene hydrate | 6.21* | 1143 | 0.37 | 8.27 | 1544 | 0.01 |
| <i>trans</i> -Verbenol | 6.21* | 1143 | [0.37] | 9.35 | 1629 | 0.36 |
| Karahanaenone | 6.34 | 1152 | 0.17 | 7.18 | 1461 | 0.20 |
| Isoborneol | 6.36 | 1153 | 0.26 | 9.17* | 1615 | 0.29 |
| Borneol | 6.51 | 1162 | 0.04 | 9.60*† | 1650 | [0.61] |
| Terpinen-4-ol | 6.70 | 1174 | 1.09 | 8.39* | 1554 | 1.10 |
| para-Cymen-8-ol | 6.86* | 1184 | 0.31 | 11.34 | 1796 | 0.30 |
| Unknown [m/z 93, 59 (85), 81 (36), 92 (35), 43 (34), 121 (20), 136 (16)...] | 6.86* | 1184 | [0.31] | 9.57† | 1647 | 0.61 |
| α-Terpineol | 6.92 | 1189 | 0.59 | 9.60*† | 1650 | [0.61] |
| Myrtenal | 6.98 | 1192 | 0.02 | 8.50 | 1562 | 0.02 |
| Myrtenol | 7.00 | 1194 | 0.05 | 10.67 | 1739 | 0.05 |

| | | | | | | |
|---|--------|------|--------|--------|------|--------|
| γ -Terpineol | 7.02 | 1195 | 0.04 | 9.68 | 1656 | 0.02 |
| <i>trans</i> -Isopiperitenol | 7.06 | 1198 | 0.01 | 10.24* | 1702 | 0.45 |
| Verbenone | 7.15 | 1203 | 0.14 | 9.44 | 1637 | 0.09 |
| Decanal | 7.19 | 1206 | 0.01 | 7.14 | 1458 | 0.01 |
| <i>trans</i> -Carveol | 7.36 | 1218 | 0.07 | 11.20 | 1784 | 0.05 |
| <i>cis</i> -Carveol | 7.54 | 1230 | 0.04 | 11.54 | 1813 | 0.04 |
| Citronellol | 7.58 | 1232 | 0.07 | 10.64 | 1736 | 0.05 |
| Unknown [m/z 137, 152 (28), 43 (25), 91 (24), 109 (23), 119 (19)] | 7.61 | 1234 | 0.04 | 11.14 | 1778 | 0.02 |
| Carvone | 7.68 | 1239 | 0.03 | 9.85* | 1670 | 0.22 |
| Neral | 7.74 | 1243 | 0.02 | 9.28* | 1624 | 0.04 |
| Carvacrol methyl ether | 7.78 | 1246 | 0.03 | 8.48 | 1560 | 0.04 |
| Piperitone | 7.81 | 1248 | 0.07 | 9.72 | 1660 | 0.12 |
| Geraniol | 7.96 | 1258 | 0.18 | 11.45 | 1805 | 0.20 |
| Methyl citronellate | 8.06 | 1265 | 0.03 | 8.06 | 1528 | 0.08 |
| <i>trans</i> -Ascaridole glycol | 8.11 | 1268 | 0.07 | 14.03* | 2042 | 0.73 |
| Geranial | 8.15 | 1270 | 0.03 | 9.92 | 1676 | 0.02 |
| Decanol | 8.28 | 1279 | 0.08 | 10.55 | 1729 | 0.09 |
| Bornyl acetate | 8.34 | 1283 | 0.37 | 8.10 | 1531 | 0.45 |
| 2-Undecanone | 8.53 | 1296 | 0.18 | 8.39* | 1554 | [1.10] |
| Thymol | 8.61 | 1301 | 0.06 | 14.92 | 2129 | 0.04 |
| Carvacrol | 8.73 | 1310 | 0.01 | 15.19* | 2156 | 0.07 |
| δ -Terpinyl acetate | 8.82 | 1316 | 0.03 | 8.96 | 1598 | 0.01 |
| Myrtenyl acetate | 8.88 | 1320 | 0.04 | 9.40* | 1634 | 0.25 |
| Bicycloelemene analog | 8.97 | 1327 | tr | 6.67 | 1423 | 0.01 |
| Bicycloelemene | 9.07 | 1334 | 0.05 | 6.88 | 1438 | 0.02 |
| δ -Elemene | 9.10 | 1336 | 0.02 | 6.83 | 1435 | 0.01 |
| α -Cubebene | 9.21 | 1344 | 0.04 | 6.62 | 1419 | 0.09 |
| α -Terpinyl acetate | 9.28 | 1348 | 1.19 | 9.52 | 1644 | 1.15 |
| Citronellyl acetate | 9.37 | 1355 | tr | 9.28* | 1624 | [0.04] |
| Neryl acetate | 9.54 | 1367 | 0.03 | 10.01 | 1683 | 0.02 |
| α -Copaene | 9.60 | 1371 | 0.11 | 7.02 | 1449 | 0.13 |
| β -Cubebene | 9.81 | 1386 | 0.04 | 7.60 | 1492 | 0.02 |
| β -Elemene | 9.85 | 1389 | 0.03 | 8.23* | 1541 | [0.78] |
| Longifolene | 9.95 | 1396 | 0.03 | 7.82* | 1509 | [0.19] |
| α -Gurjunene | 10.02 | 1401 | 0.01 | 7.48 | 1483 | tr |
| α -Cedrene | 10.06 | 1404 | 0.42 | 7.89* | 1515 | [0.95] |
| β -Caryophyllene | 10.17* | 1412 | 0.90 | 8.23* | 1541 | [0.78] |
| β -Cedrene | 10.17* | 1412 | [0.90] | 8.16* | 1536 | [0.15] |
| β -Copaene | 10.31 | 1423 | 0.05 | 8.23* | 1541 | [0.78] |
| <i>cis</i> -Thujopsene | 10.36 | 1426 | 0.01 | 8.55 | 1566 | 0.01 |
| γ -Elemene | 10.43 | 1431 | 0.02 | 8.88 | 1592 | 0.03 |

| | | | | | | |
|--|--------|------|--------|--------|------|--------|
| <i>trans</i> -Muurolo-3,5-diene | 10.59 | 1444 | 0.04 | 8.70 | 1578 | 0.04 |
| α -Humulene | 10.63 | 1446 | 0.77 | 9.10* | 1609 | [0.77] |
| allo-Aromadendrene | 10.72 | 1453 | 0.02 | 8.82 | 1587 | 0.05 |
| α -Acoradiene | 10.76 | 1456 | 0.05 | 9.17* | 1615 | [0.29] |
| (<i>E</i>)- β -Farnesene | 10.80 | 1459 | 0.04 | 9.40* | 1634 | [0.25] |
| β -Acoradiene | 10.82 | 1460 | 0.01 | 9.23 | 1620 | 0.02 |
| <i>trans</i> -Cadina-1(6),4-diene | 10.93 | 1469 | 0.01 | 9.10* | 1609 | [0.77] |
| γ -Muurolole | 10.97 | 1472 | 0.20 | 9.40* | 1634 | [0.25] |
| Germacrene D | 11.01 | 1475 | 0.06 | 9.60*† | 1650 | [0.61] |
| β -Selinene | 11.06 | 1479 | 0.02 | 9.76 | 1662 | 0.04 |
| α -Curcumene | 11.09 | 1480 | 0.02 | 10.48* | 1722 | 0.03 |
| γ -Amorphene | 11.13 | 1484 | 0.01 | 9.66 | 1654 | 0.04 |
| α -Selinene | 11.20 | 1489 | 0.12 | 9.81 | 1667 | 0.17 |
| α -Muurolole | 11.29* | 1496 | 0.15 | 9.85* | 1670 | [0.22] |
| Cuparene | 11.29* | 1496 | [0.15] | 10.87 | 1756 | 0.05 |
| γ -Cadinene | 11.45* | 1508 | 0.20 | 10.20 | 1699 | 0.10 |
| Cubebol | 11.45* | 1508 | [0.20] | 12.39 | 1889 | 0.03 |
| (3 <i>E</i> ,6 <i>E</i>)- α -Farnesene | 11.45* | 1508 | [0.20] | 10.38 | 1714 | 0.03 |
| <i>trans</i> -Calamenene | 11.57 | 1517 | 0.12 | 11.04 | 1770 | 0.14 |
| δ -Cadinene | 11.60 | 1519 | 0.40 | 10.24* | 1702 | [0.45] |
| <i>trans</i> -Cadina-1,4-diene | 11.69 | 1527 | 0.02 | 10.48* | 1722 | [0.03] |
| (<i>E</i>)- γ -Bisabolene | 11.72 | 1529 | 0.02 | 10.33 | 1710 | 0.02 |
| α -Cadinene | 11.76 | 1532 | 0.02 | 10.60 | 1733 | 0.03 |
| α -Calacorene | 11.81 | 1536 | 0.03 | 11.96 | 1851 | 0.06 |
| Germacrene B | 11.98 | 1550 | 0.07 | 10.95 | 1762 | 0.02 |
| (<i>E</i>)-Nerolidol | 12.13 | 1561 | 0.01 | 13.60 | 2001 | 0.01 |
| Caryophyllene oxide | 12.29* | 1574 | 0.87 | 12.57 | 1905 | 0.78 |
| Caryophyllene oxide isomer | 12.29* | 1574 | [0.87] | 12.50 | 1898 | 0.13 |
| α -Cedrol | 12.50* | 1591 | 0.75 | 14.03* | 2042 | [0.73] |
| Humulene epoxide I | 12.50* | 1591 | [0.75] | 12.99 | 1944 | 0.05 |
| Humulene epoxide II | 12.62 | 1600 | 0.29 | 13.16 | 1960 | 0.30 |
| epi-Cedrol | 12.65 | 1602 | 0.01 | 14.60 | 2097 | 0.05 |
| 10-epi-Cubenol | 12.69 | 1606 | 0.03 | 13.52 | 1993 | 0.03 |
| Junenol | 12.72 | 1608 | 0.01 | 13.44 | 1986 | 0.03 |
| Alismol | 12.88 | 1622 | 0.02 | 15.53 | 2190 | 0.02 |
| β -Acorenol | 12.97 | 1628 | 0.03 | 14.70 | 2107 | 0.01 |
| τ -Muurolol | 13.06 | 1636 | 0.02 | 14.85 | 2122 | 0.03 |
| α -Muurolol | 13.12 | 1641 | 0.01 | 14.98 | 2135 | 0.03 |
| α -Eudesmol | 13.18 | 1646 | 0.02 | 15.16 | 2153 | 0.01 |
| α -Cadinol | 13.21 | 1648 | 0.01 | 15.27 | 2164 | 0.06 |
| Cedrenol analog | 13.26 | 1652 | 0.02 | 16.25 | 2265 | 0.02 |

| | | | | | | |
|---|-------|---------------|------|--------|---------------|--------|
| (3Z)-Caryophylla-3,8(13)-dien-5β-ol | 13.44 | 1667 | 0.03 | 16.60 | 2302 | 0.02 |
| Germacra-4(15),5,10(14)-trien-1-ol isomer | 13.53 | 1675 | 0.01 | 16.54 | 2294 | 0.01 |
| Shyobunol | 13.57 | 1678 | 0.02 | 16.16 | 2256 | 0.03 |
| β-Turmerone | 13.84 | 1701 | 0.01 | 15.36 | 2173 | 0.01 |
| Thujopsenal analog | 14.16 | 1728 | 0.01 | 17.20 | 2366 | 0.01 |
| Cedryl acetate | 14.44 | 1753 | 0.01 | 14.41 | 2079 | 0.02 |
| Unknown [m/z 121, 136 (53), 91 (22), 93 (19), 79 (15), 105 (13)... 220 (3)] | 14.89 | 1792 | tr | | | |
| meta-Camphorene | 16.61 | 1950 | 0.07 | 15.19* | 2156 | [0.07] |
| Trachylobane? | 16.87 | 1974 | 0.03 | 16.24 | 2264 | 0.02 |
| para-Camphorene | 16.97 | 1984 | 0.04 | 15.64 | 2201 | 0.02 |
| ar-Abietatriene | 17.54 | 2040 | 0.02 | 17.51 | 2400 | 0.02 |
| Total identified | | 97.86% | | | 96.74% | |
| Total reported | | 97.97% | | | 97.42% | |

*: 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