

Date : April 08, 2021

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 21C30-PTH02

**Customer identification :** Lime Steam Distilled - West Indies - LL01062011R

**Type :** Essential oil

**Source :** Citrus aurantifolia ct. Distilled

**Customer :** Plant Therapy

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 :** April 08, 2021

Checked and approved by :

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

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#### *P*HYSICO*C*HEMICAL *D*ATA

**Physical aspect:** Clear liquid

**Refractive index:**  $1.4756 \pm 0.0003$  (20 °C; method PC-MAT-016)

#### *C*ONCLUSION

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                  |
|----------------------------------|---------|------------------------|
| 4,5-Dihydrotoluene               | 0.10    | Alkene                 |
| 3-Methylenecyclohexadiene        | 0.02    | Alkene                 |
| Octane                           | tr      | Alkane                 |
| (3Z)-Hexenol                     | tr      | Aliphatic alcohol      |
| Cyclofenchene                    | 0.01    | Monoterpene            |
| Heptanal                         | 0.01    | Aliphatic aldehyde     |
| Nonane                           | 0.02    | Alkane                 |
| Tricyclene                       | 0.02    | Monoterpene            |
| α-Thujene                        | 0.02    | Monoterpene            |
| α-Pinene                         | 1.09    | Monoterpene            |
| β-Fenchene?                      | tr      | Monoterpene            |
| Camphene                         | 0.46    | Monoterpene            |
| α-Fenchene                       | 0.18    | Monoterpene            |
| Thuja-2,4(10)-diene              | tr      | Monoterpene            |
| 1,4-Dimethyl-4-vinylcyclohexene? | 0.01    | Monoterpene            |
| Geranic oxide                    | 0.02    | Monoterpenic ether     |
| Sabinene                         | 0.01    | Monoterpene            |
| β-Pinene                         | 2.35    | Monoterpene            |
| 3-Methyl-3-cyclohexenone         | 0.02    | Aliphatic ketone       |
| 6-Methyl-5-hepten-2-one          | tr      | Aliphatic ketone       |
| trans-Dehydroxylinalool oxide    | 0.01    | Monoterpenic ether     |
| Myrcene                          | 1.19    | Monoterpene            |
| α-Phellandrene                   | 0.33    | Monoterpene            |
| Pseudolimonene                   | 0.04    | Monoterpene            |
| Δ3-Carene                        | 0.02    | Monoterpene            |
| α-Terpinene                      | 2.77    | Monoterpene            |
| 1,4-Cineole                      | 1.69    | Monoterpenic ether     |
| ortho-Cymene                     | 0.01    | Monoterpene            |
| para-Cymene                      | 1.97    | Monoterpene            |
| β-Phellandrene                   | 1.81*   | Monoterpene            |
| 1,8-Cineole                      | [1.81]* | Monoterpenic ether     |
| Limonene                         | 47.57   | Monoterpene            |
| (Z?)-Citroxide                   | 0.02    | Monoterpenic ether     |
| (Z)-β-Ocimene                    | 0.20    | Monoterpene            |
| (E?)-Citroxide                   | 0.24    | Monoterpenic ether     |
| (E)-β-Ocimene                    | 0.43    | Monoterpene            |
| γ-Terpinene                      | 12.45   | Monoterpene            |
| cis-Sabinene hydrate             | tr      | Monoterpenic alcohol   |
| Unknown                          | 0.03    | Oxygenated monoterpene |
| Octanol                          | 0.02    | Aliphatic alcohol      |
| Fenchone                         | 0.17    | Monoterpenic ketone    |
| para-Cymenene                    | 0.22    | Monoterpene            |
| Terpinolene                      | 8.76    | Monoterpene            |
| trans-Sabinene hydrate           | 0.01    | Monoterpenic alcohol   |
| Linalool                         | 0.13    | Monoterpenic alcohol   |

|   |      |                         |
|---|------|-------------------------|
| Nonanal                                 | 0.04 | Aliphatic aldehyde      |
| endo-Fenchol                            | 0.49 | Monoterpenic alcohol    |
| <i>trans</i> -para-Mentha-2,8-dien-1-ol | 0.01 | Monoterpenic alcohol    |
| Myrcenol                                | 0.03 | Monoterpenic alcohol    |
| Limona ketone                           | 0.02 | Normonoterpenic ketone  |
| allo-Ocimene                            | 0.01 | Monoterpene             |
| <i>cis</i> -Limonene oxide              | 0.01 | Monoterpenic ether      |
| 1-Terpineol                             | 0.56 | Monoterpenic alcohol    |
| <i>trans</i> -Limonene oxide            | 0.01 | Monoterpenic ether      |
| Cosmene isomer II                       | 0.03 | Monoterpene             |
| Epoxyterpinolene                        | 0.03 | Monoterpenic ether      |
| <i>cis</i> - $\beta$ -Terpineol         | 0.55 | Monoterpenic alcohol    |
| Unknown                                 | tr   | Unknown                 |
| Isoborneol                              | 0.04 | Monoterpenic alcohol    |
| (Z)-Ocimenol                            | 0.05 | Monoterpenic alcohol    |
| Borneol                                 | 0.37 | Monoterpenic alcohol    |
| <i>trans</i> - $\beta$ -Terpineol       | 0.08 | Monoterpenic alcohol    |
| $\alpha$ -Phellandren-8-ol              | 0.03 | Monoterpenic alcohol    |
| (E)-Ocimenol                            | 0.01 | Monoterpenic alcohol    |
| Terpinen-4-ol                           | 0.43 | Monoterpenic alcohol    |
| 4-Methylacetophenone                    | 0.01 | Simple phenolic         |
| para-Cymen-8-ol                         | 0.06 | Monoterpenic alcohol    |
| $\alpha$ -Terpineol                     | 6.73 | Monoterpenic alcohol    |
| <i>cis</i> -Piperitol                   | tr   | Monoterpenic alcohol    |
| $\gamma$ -Terpineol                     | 0.93 | Monoterpenic alcohol    |
| <i>trans</i> -Piperitol                 | tr   | Monoterpenic alcohol    |
| Decanal                                 | 0.07 | Aliphatic aldehyde      |
| <i>trans</i> -Carveol                   | 0.01 | Monoterpenic alcohol    |
| 2,3-Epoxyneral?                         | tr   | Monoterpenic aldehyde   |
| <i>cis</i> -Carveol                     | tr   | Monoterpenic alcohol    |
| Nerol                                   | tr   | Monoterpenic alcohol    |
| 2,3-Epoxygeranal?                       | 0.01 | Monoterpenic aldehyde   |
| Unknown                                 | 0.02 | Oxygenated monoterpenes |
| Neral                                   | 0.09 | Monoterpenic aldehyde   |
| Geraniol                                | 0.02 | Monoterpenic alcohol    |
| Unknown                                 | 0.01 | Unknown                 |
| <i>trans</i> -Ascaridole glycol         | 0.01 | Monoterpenic alcohol    |
| Geranal                                 | 0.12 | Monoterpenic aldehyde   |
| Unknown                                 | 0.02 | Unknown                 |
| Unknown                                 | 0.01 | Oxygenated monoterpenes |
| <i>cis</i> -Ascaridole glycol           | tr   | Monoterpenic alcohol    |
| Unknown                                 | tr   | Unknown                 |
| Undecanal                               | tr   | Aliphatic aldehyde      |
| Unknown                                 | 0.01 | Monoterpenic alcohol    |
| $\delta$ -Elemene                       | 0.05 | Sesquiterpene           |
| Neryl acetate                           | 0.05 | Monoterpenic ester      |
| $\alpha$ -Copaene                       | tr   | Sesquiterpene           |
| 7-Cubebene                              | tr   | Sesquiterpene           |
| 7-Cubebene epimer?                      | 0.02 | Aliphatic alcohol       |
| $\beta$ -Bourbonene                     | 0.01 | Sesquiterpene           |
| Geranyl acetate                         | 0.06 | Monoterpenic ester      |
| $\beta$ -Elemene                        | 0.04 | Sesquiterpene           |

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|                              |               |                          |
|------------------------------|---------------|--------------------------|
| Isocaryophyllene             | tr            | Sesquiterpene            |
| Dodecanal                    | tr            | Aliphatic aldehyde       |
| cis- $\alpha$ -Bergamotene   | 0.06          | Sesquiterpene            |
| $\beta$ -Caryophyllene       | 0.22          | Sesquiterpene            |
| $\alpha$ -Santalene          | 0.03          | Sesquiterpene            |
| $\gamma$ -Elemene            | 0.03          | Sesquiterpene            |
| trans- $\alpha$ -Bergamotene | 0.49          | Sesquiterpene            |
| $\alpha$ -Humulene           | 0.07          | Sesquiterpene            |
| $\beta$ -Santalene           | 0.02          | Sesquiterpene            |
| (E)- $\beta$ -Farnesene      | 0.05          | Sesquiterpene            |
| Selina-4,11-diene            | 0.09          | Sesquiterpene            |
| $\alpha$ -Amorphene          | 0.04          | Sesquiterpene            |
| $\beta$ -Selinene            | 0.08          | Sesquiterpene            |
| Unknown                      | 0.02          | Sesquiterpene            |
| $\delta$ -Selinene           | 0.10          | Sesquiterpene            |
| Valencene                    | 0.01          | Sesquiterpene            |
| $\alpha$ -Selinene           | 0.06          | Sesquiterpene            |
| (Z)- $\alpha$ -Bisabolene    | 0.02          | Sesquiterpene            |
| $\beta$ -Bisabolene          | 0.89          | Sesquiterpene            |
| (3E,6E)- $\alpha$ -Farnesene | 0.46          | Sesquiterpene            |
| (Z)- $\gamma$ -Bisabolene    | 0.04          | Sesquiterpene            |
| $\delta$ -Cadinene           | 0.03          | Sesquiterpene            |
| Selina-4(15),7(11)-diene     | 0.03          | Sesquiterpene            |
| Unknown                      | 0.16          | Sesquiterpene            |
| (E)- $\alpha$ -Bisabolene    | 0.04          | Sesquiterpene            |
| Germacrene B                 | 0.05          | Sesquiterpene            |
| Caryophyllenyl alcohol       | 0.04          | Sesquiterpenic alcohol   |
| Caryophyllene oxide          | tr            | Sesquiterpenic ether     |
| Globulol                     | tr            | Sesquiterpenic alcohol   |
| Junenol                      | 0.02          | Sesquiterpenic alcohol   |
| 10-epi- $\gamma$ -Eudesmol   | tr            | Sesquiterpenic alcohol   |
| Clovan-2 $\beta$ -ol         | 0.02          | Sesquiterpenic alcohol   |
| $\gamma$ -Eudesmol           | 0.03          | Sesquiterpenic alcohol   |
| $\beta$ -Eudesmol            | 0.01          | Sesquiterpenic alcohol   |
| Unknown                      | 0.01          | Sesquiterpenic alcohol   |
| Unknown                      | 0.01          | Oxygenated sesquiterpene |
| Unknown                      | 0.02          | Oxygenated sesquiterpene |
| (E)-Bisabol-11-ol            | tr            | Sesquiterpenic alcohol   |
| epi- $\alpha$ -Bisabolol     | 0.02          | Sesquiterpenic alcohol   |
| $\alpha$ -Bisabolol          | 0.02          | Sesquiterpenic alcohol   |
| Juniper camphor              | tr            | Sesquiterpenic alcohol   |
| <b>Consolidated total</b>    | <b>98.89%</b> |                          |

\*: Individual compounds concentration could not be found due to overlapping coelutions on columns considered

[xx]: Duplicate percentage due to coelutions, not taken into account in the consolidated total

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.

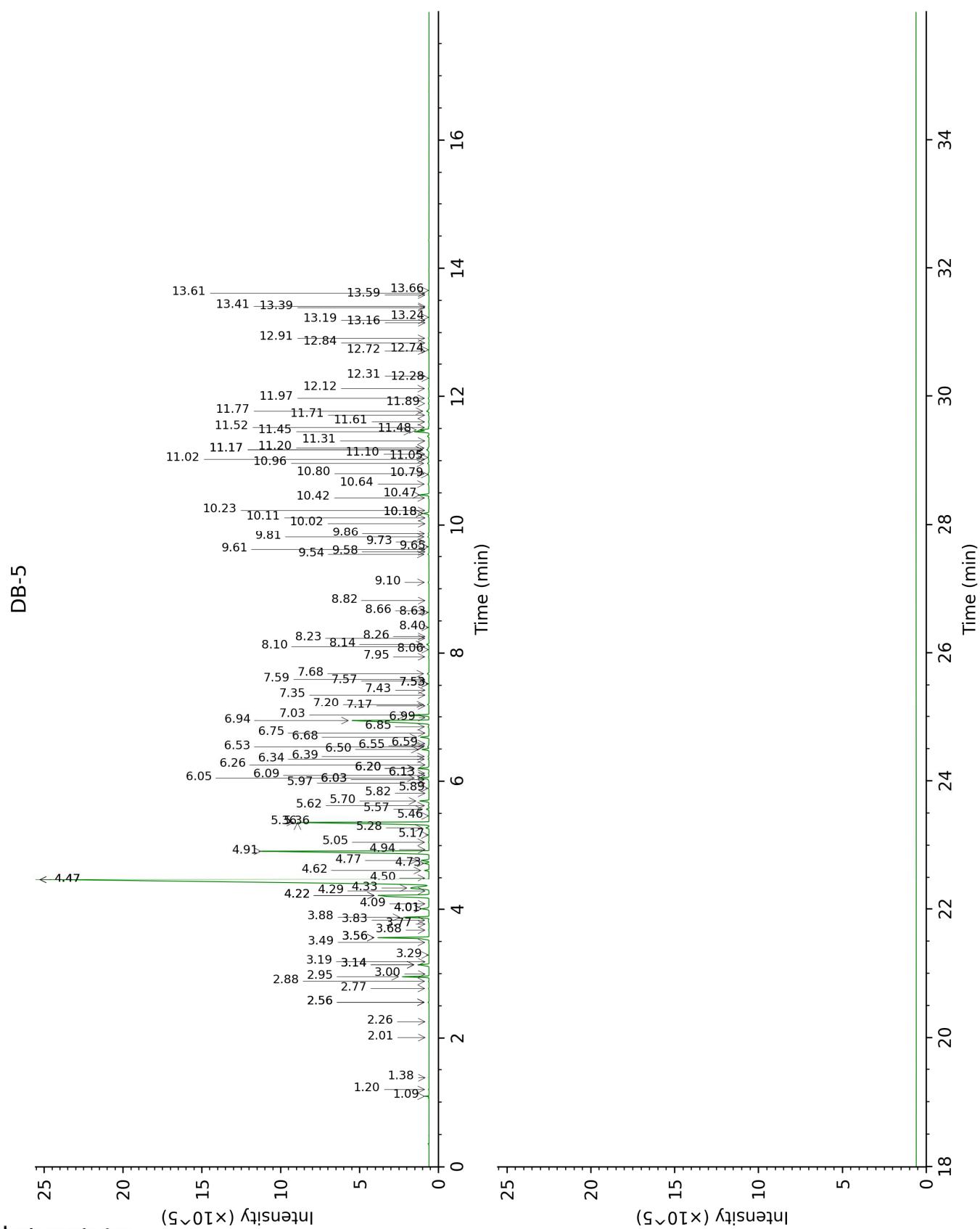
Essential oil, *Citrus aurantifolia* ct. Distilled  
Internal code: 21C30-PTH02

Lime Steam Distilled - West Indies - LL01062011R

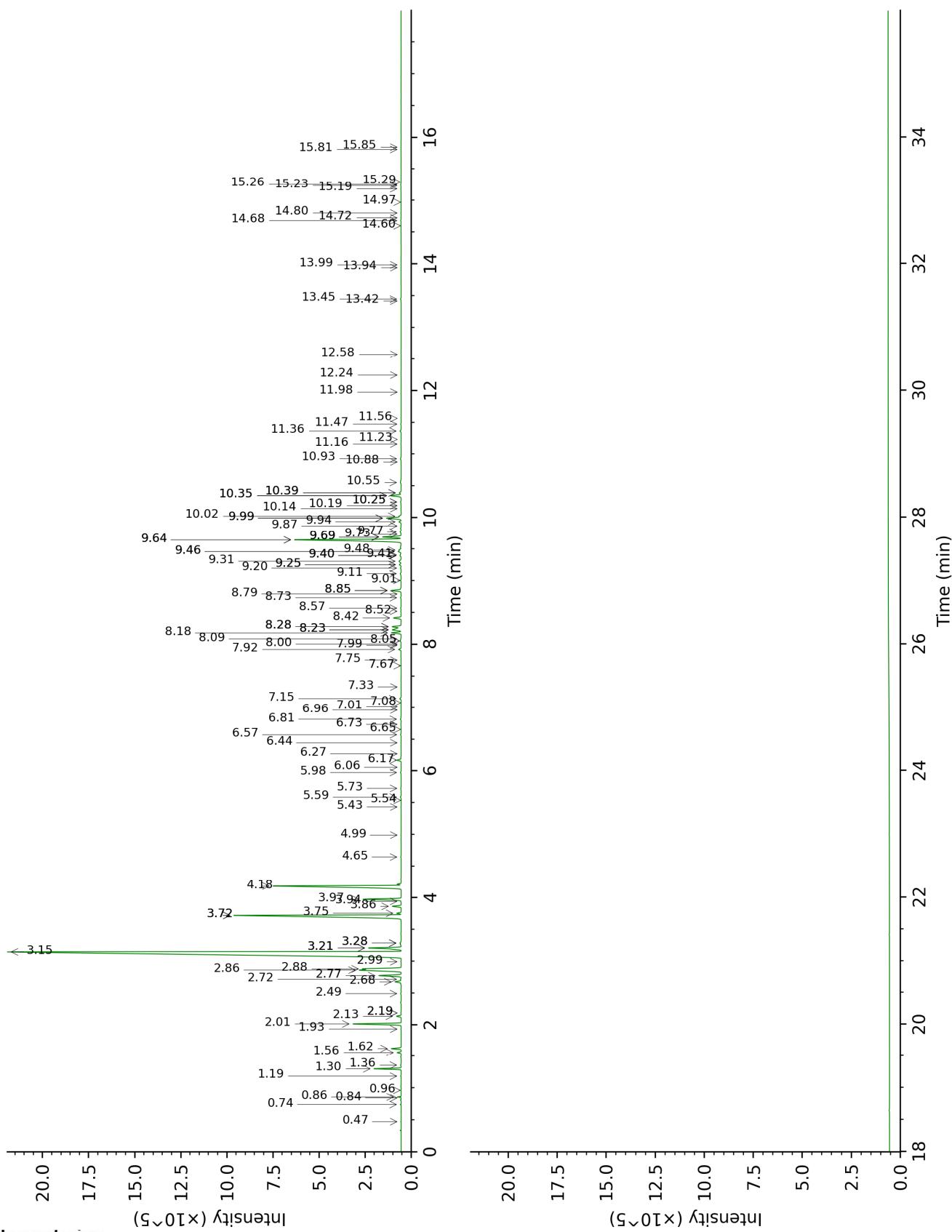
Report prepared for  
Plant Therapy

**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.

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



DB-WAX



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FULL ANALYSIS DATA

| Identification  | Column DB-5 |      |         | Column DB-WAX |      |         |
|---|-------------|------|---------|---------------|------|---------|
|   | R.T         | R.I  | %       | R.T           | R.I  | %       |
| 4,5-Dihydrotoluene  | 1.09        | 759  | 0.10    | 0.86          | 918  | 0.10    |
| 3-Methylenecyclohexadiene   | 1.20        | 774  | 0.02    | 0.96          | 935  | 0.01    |
| Octane  | 1.38        | 802  | tr      | 0.47          | 788  | tr      |
| (3Z)-Hexenol  | 2.01        | 858  | tr      | 5.59          | 1344 | 0.04    |
| Cyclofenchene   | 2.26        | 879  | 0.01    | 0.84          | 915  | tr      |
| Heptanal  | 2.56*       | 905  | 0.03    | 2.99          | 1152 | 0.01    |
| Nonane  | 2.56*       | 905  | [0.03]  | 0.74          | 895  | 0.02    |
| Tricyclene  | 2.77        | 919  | 0.02    | 1.18          | 973  | 0.02    |
| $\alpha$ -Thujene   | 2.88        | 927  | 0.02    | 1.36          | 1002 | 0.03    |
| $\alpha$ -Pinene  | 2.95        | 932  | 1.09    | 1.30          | 993  | 1.09    |
| $\beta$ -Fenchene?  | 3.00        | 934  | tr      |               |      |         |
| Camphene  | 3.14*       | 944  | 0.65    | 1.62          | 1029 | 0.46    |
| $\alpha$ -Fenchene  | 3.14*       | 944  | [0.65]  | 1.56          | 1022 | 0.18    |
| Thuja-2,4(10)-diene   | 3.19        | 947  | tr      | 2.19*         | 1085 | 0.02    |
| 1,4-Dimethyl-4-vinylcyclohexene?  | 3.29        | 954  | 0.01    | 1.93          | 1060 | 0.01    |
| Geranic oxide   | 3.49        | 968  | 0.02    | 2.14          | 1080 | 0.23    |
| Sabinene  | 3.56*       | 973  | 2.56    | 2.19*         | 1085 | [0.02]  |
| $\beta$ -Pinene   | 3.56*       | 973  | [2.56]  | 2.01          | 1068 | 2.35    |
| 3-Methyl-3-cyclohexenone  | 3.68        | 980  | 0.02    | 5.98          | 1372 | 0.04    |
| 6-Methyl-5-hepten-2-one   | 3.77        | 987  | tr      | 4.99          | 1300 | 0.01    |
| trans-Dehydroxylinalool oxide   | 3.83        | 991  | 0.01    | 3.28*         | 1174 | 0.07    |
| Myrcene   | 3.88        | 994  | 1.19    | 2.77          | 1135 | 1.20    |
| $\alpha$ -Phellandrene  | 4.01*       | 1003 | 0.44    | 2.68          | 1127 | 0.33    |
| Pseudolimonene  | 4.01*       | 1003 | [0.44]  | 2.72          | 1130 | 0.04    |
| $\Delta$ 3-Carene   | 4.09        | 1008 | 0.02    | 2.49          | 1112 | 0.03    |
| $\alpha$ -Terpinene   | 4.22*       | 1016 | 4.49    | 2.86          | 1141 | 2.77    |
| 1,4-Cineole   | 4.22*       | 1016 | [4.49]  | 2.88          | 1143 | 1.69    |
| ortho-Cymene  | 4.29        | 1020 | 0.01    | 3.94          | 1224 | 0.01    |
| para-Cymene   | 4.33        | 1023 | 1.97    | 3.97          | 1226 | 1.92    |
| $\beta$ -Phellandrene   | 4.47*       | 1032 | 49.38   | 3.21*         | 1169 | 1.80    |
| 1,8-Cineole   | 4.47*       | 1032 | [49.38] | 3.21*         | 1169 | [1.80]  |
| Limonene  | 4.47*       | 1032 | [49.38] | 3.15          | 1164 | 47.57   |
| (Z?)-Citroxide  | 4.50        | 1034 | 0.02    | 3.28*         | 1174 | [0.07]  |
| (Z)- $\beta$ -Ocimene   | 4.62        | 1041 | 0.20    | 3.72*         | 1208 | 12.69   |
| (E?)-Citroxide  | 4.73        | 1048 | 0.24    | 3.75          | 1210 | 0.20    |
| (E)- $\beta$ -Ocimene   | 4.77        | 1051 | 0.43    | 3.86          | 1218 | 0.43    |
| $\gamma$ -Terpinene   | 4.91        | 1060 | 12.45   | 3.72*         | 1208 | [12.69] |
| cis-Sabinene hydrate  | 4.94        | 1062 | tr      | 6.73          | 1428 | 0.02    |
| Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)] | 5.05        | 1069 | 0.03    | 4.65          | 1275 | 0.02    |
| Octanol   | 5.17        | 1076 | 0.02    | 7.99          | 1523 | 0.01    |
| Fenchone  | 5.28        | 1083 | 0.17    | 5.54          | 1341 | tr      |
| para-Cymenene   | 5.36*       | 1089 | 8.97    | 6.17          | 1387 | 0.22    |

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|   |       |      |        |        |      |        |
|---|-------|------|--------|--------|------|--------|
| Terpinolene   | 5.36* | 1089 | [8.97] | 4.18   | 1241 | 8.76   |
| <i>trans</i> -Sabinene hydrate                                      | 5.46  | 1095 | 0.01   | 7.75   | 1505 | 0.01   |
| Linalool  | 5.57  | 1102 | 0.13   | 7.92   | 1518 | 0.14   |
| Nonanal   | 5.62  | 1105 | 0.04   | 5.73   | 1354 | 0.02   |
| endo-Fenchol  | 5.70  | 1110 | 0.49   | 8.23*† | 1542 | 1.23   |
| <i>trans</i> -para-Mentha-2,8-dien-1-ol                             | 5.82  | 1118 | 0.01   | 8.79   | 1586 | 0.01   |
| Myrcenol  | 5.89  | 1122 | 0.03   | 8.73   | 1582 | 0.03   |
| Limona ketone   | 5.97  | 1128 | 0.02   | 7.66   | 1498 | tr     |
| allo-Ocimene  | 6.03* | 1131 | 0.03   | 5.43   | 1333 | 0.01   |
| <i>cis</i> -Limonene oxide  | 6.03* | 1131 | [0.03] | 6.27   | 1394 | 0.01   |
| 1-Terpineol   | 6.05  | 1133 | 0.56   | 8.18   | 1538 | 0.53   |
| <i>trans</i> -Limonene oxide  | 6.09  | 1135 | 0.01   | 6.44   | 1406 | 0.01   |
| Cosmene isomer II   | 6.13  | 1137 | 0.03   | 6.06   | 1378 | tr     |
| Epoxyterpinolene  | 6.20* | 1142 | 0.59   | 6.57   | 1416 | 0.03   |
| <i>cis</i> - $\beta$ -Terpineol                                     | 6.20* | 1142 | [0.59] | 8.85*  | 1590 | 0.58   |
| Unknown [m/z 109, 124 (45), 119 (41), 43 (35), 91 (28), 95 (25)...] | 6.26  | 1146 | tr     | 6.65   | 1422 | 0.01   |
| Isoborneol  | 6.34  | 1152 | 0.04   | 9.20   | 1619 | 0.04   |
| (Z)-Ocimenol  | 6.39  | 1154 | 0.05   | 9.25*  | 1623 | 0.11   |
| Borneol   | 6.50  | 1161 | 0.37   | 9.64*  | 1655 | 6.93   |
| <i>trans</i> - $\beta$ -Terpineol                                   | 6.53  | 1164 | 0.08   | 9.46*  | 1640 | 0.18   |
| $\alpha$ -Phellandren-8-ol  | 6.55  | 1165 | 0.03   | 9.99*  | 1684 | 0.91   |
| (E)-Ocimenol  | 6.59  | 1167 | 0.01   | 9.48   | 1642 | 0.12   |
| Terpinen-4-ol   | 6.68  | 1173 | 0.43   | 8.42   | 1557 | 0.42   |
| 4-Methylacetophenone  | 6.75  | 1178 | 0.01   | 10.25* | 1705 | 0.04   |
| para-Cymen-8-ol   | 6.85  | 1184 | 0.06   | 11.36  | 1800 | 0.06   |
| $\alpha$ -Terpineol   | 6.94  | 1190 | 6.73   | 9.64*  | 1655 | [6.93] |
| <i>cis</i> -Piperitol   | 6.99  | 1193 | tr     | 9.40*  | 1635 | 0.07   |
| $\gamma$ -Terpineol   | 7.03  | 1196 | 0.93   | 9.69*  | 1659 | 0.96   |
| <i>trans</i> -Piperitol   | 7.17  | 1205 | tr     | 10.19  | 1700 | 0.01   |
| Decanal   | 7.20  | 1207 | 0.07   | 7.15   | 1459 | 0.07   |
| <i>trans</i> -Carveol   | 7.35  | 1217 | 0.01   | 11.23  | 1789 | 0.01   |
| 2,3-Epoxyneral?   | 7.43  | 1222 | tr     |        |      |        |
| <i>cis</i> -Carveol   | 7.53* | 1228 | 0.01   | 11.56  | 1818 | tr     |
| Nerol   | 7.53* | 1228 | [0.01] | 10.88  | 1758 | tr     |
| 2,3-Epoxygeranal?   | 7.57  | 1231 | 0.01   |        |      |        |
| Unknown [m/z 137, 152 (28), 43 (25), 91 (24), 109 (23), 119 (19)]   | 7.59  | 1233 | 0.02   | 11.16  | 1782 | 0.01   |
| Neral   | 7.68  | 1239 | 0.09   | 9.31   | 1627 | 0.17   |
| Geraniol  | 7.95  | 1257 | 0.02   | 11.47  | 1810 | 0.02   |
| Unknown [m/z 43, 128 (61), 79 (60), 127 (52), 58 (50)...]           | 8.06  | 1264 | 0.01   | 11.98  | 1854 | tr     |
| <i>trans</i> -Ascaridole glycol                                     | 8.10  | 1267 | 0.01   | 13.99  | 2041 | 0.01   |
| Geranal   | 8.14  | 1270 | 0.12   | 9.94   | 1679 | 0.12   |
| Unknown [m/z 43, 79 (78), 128 (46), 58 (42), 127 (42)...]           | 8.23  | 1276 | 0.02   |        |      |        |

|  |        |      |        |        |      |        |
|--|--------|------|--------|--------|------|--------|
| Unknown [m/z 95, 67 (45), 41 (42), 110 (42), 43 (41), 59 (36)]               | 8.26   | 1278 | 0.01   | 12.24  | 1878 | 0.01   |
| <i>cis</i> -Ascaridole glycol  | 8.40   | 1287 | tr     | 14.60  | 2100 | 0.01   |
| Unknown [m/z 112, 97 (93), 83 (60), 43 (46), 41 (20), 69 (19)...]            | 8.64   | 1303 | tr     |        |      |        |
| Undecanal  | 8.66   | 1305 | tr     | 8.52   | 1565 | 0.02   |
| Unknown [m/z 97, 112 (92), 83 (62), 43 (44), 41 (25)... 170? (4)]            | 8.82   | 1316 | 0.01   | 14.80  | 2121 | 0.01   |
| δ-Elemene  | 9.10   | 1336 | 0.05   | 6.81   | 1434 | 0.04   |
| Neryl acetate  | 9.54   | 1367 | 0.05   | 10.02  | 1686 | 0.11   |
| α-Copaene  | 9.58   | 1370 | tr     | 7.01   | 1449 | tr     |
| 7-Cubebene   | 9.61   | 1372 | tr     | 6.96   | 1445 | 0.01   |
| 7-Cubebene epimer?   | 9.65   | 1375 | 0.02   | 7.08   | 1454 | tr     |
| β-Bourbonene   | 9.73   | 1380 | 0.01   | 7.33   | 1473 | 0.01   |
| Geranyl acetate  | 9.81   | 1386 | 0.06   | 10.39* | 1717 | 0.11   |
| β-Elemene  | 9.86   | 1390 | 0.04   | 8.28*† | 1546 | [1.23] |
| Isocaryophyllene   | 10.02  | 1401 | tr     | 8.00   | 1524 | tr     |
| Dodecanal  | 10.11  | 1408 | tr     | 9.87   | 1674 | 0.01   |
| <i>cis</i> -α-Bergamotene  | 10.18* | 1413 | 0.33   | 8.06   | 1528 | 0.06   |
| β-Caryophyllene  | 10.18* | 1413 | [0.33] | 8.28*† | 1546 | [1.23] |
| α-Santalene  | 10.23  | 1416 | 0.03   | 8.08   | 1531 | 0.02   |
| γ-Elemene  | 10.42  | 1431 | 0.03   | 8.85*  | 1590 | [0.58] |
| <i>trans</i> -α-Bergamotene  | 10.47  | 1435 | 0.49   | 8.23*† | 1542 | [1.23] |
| α-Humulene   | 10.64  | 1447 | 0.07   | 9.11   | 1612 | 0.07   |
| β-Santalene  | 10.79  | 1458 | 0.02   | 9.00   | 1603 | 0.03   |
| (E)-β-Farnesene  | 10.80  | 1459 | 0.05   | 9.40*  | 1635 | [0.07] |
| Selina-4,11-diene  | 10.96  | 1471 | 0.09   | 9.25*  | 1623 | [0.11] |
| α-Amorphene  | 11.02  | 1476 | 0.04   | 9.41   | 1636 | 0.03   |
| β-Selinene   | 11.05  | 1478 | 0.08   | 9.69*  | 1659 | [0.96] |
| Unknown [m/z 41, 69 (90), 79 (78), 93 (72), 91 (70)...204]                   | 11.10  | 1482 | 0.02   | 8.57   | 1569 | 0.03   |
| δ-Selinene   | 11.17* | 1487 | 0.17   | 9.46*  | 1640 | [0.18] |
| Valencene  | 11.17* | 1487 | [0.17] | 9.74   | 1662 | 0.01   |
| α-Selinene   | 11.20  | 1489 | 0.06   | 9.77   | 1665 | 0.07   |
| (Z)-α-Bisabolene   | 11.31  | 1497 | 0.02   | 10.14  | 1696 | 0.01   |
| β-Bisabolene   | 11.45† | 1508 | 1.33   | 9.99*  | 1684 | [0.91] |
| (3E,6E)-α-Farnesene  | 11.48† | 1510 | [1.33] | 10.35* | 1713 | 0.63   |
| (Z)-γ-Bisabolene   | 11.52  | 1513 | 0.04   | 9.69*  | 1659 | [0.96] |
| δ-Cadinene   | 11.60  | 1520 | 0.03   | 10.25* | 1705 | [0.04] |
| Selina-4(15),7(11)-diene   | 11.71  | 1528 | 0.03   | 10.39* | 1717 | [0.11] |
| Unknown [m/z 189, 204 (92), 161 (65), 133 (51), 105 (51), 91 (51), 119 (45)] | 11.77  | 1533 | 0.16   | 10.35* | 1713 | [0.63] |
| (E)-α-Bisabolene   | 11.89  | 1542 | 0.04   | 10.56  | 1731 | 0.08   |
| Germacrene B   | 11.97  | 1549 | 0.05   | 10.93  | 1763 | 0.05   |
| Caryophyllenyl alcohol   | 12.12  | 1561 | 0.04   | 13.45  | 1989 | 0.04   |
| Caryophyllene oxide  | 12.28  | 1574 | tr     | 12.58  | 1908 | 0.01   |
| Globulol   | 12.32  | 1576 | tr     |        |      |        |

|   |               |      |      |               |      |      |
|---|---------------|------|------|---------------|------|------|
| Junenol   | 12.72         | 1608 | 0.02 | 13.42         | 1986 | 0.01 |
| 10-epi- $\gamma$ -Eudesmol  | 12.74         | 1609 | tr   | 13.94         | 2037 | tr   |
| Clovan-2 $\beta$ -ol  | 12.84         | 1618 | 0.02 |               |      |      |
| $\gamma$ -Eudesmol  | 12.92         | 1624 | 0.03 | 14.68         | 2108 | 0.03 |
| $\beta$ -Eudesmol   | 13.16         | 1644 | 0.01 | 15.24         | 2164 | 0.01 |
| Unknown cadinol analog II [m/z 95, 121 (73), 43 (57), 79 (43), 161 (43), 109 (40)... 204 (35), 222 (2)] | 13.19         | 1647 | 0.01 | 14.97         | 2138 | tr   |
| Unknown [m/z 94, 43 (89), 41 (67), 122 (46), 69 (41)...222]   | 13.24         | 1651 | 0.01 | 14.72         | 2113 | tr   |
| Unknown [m/z 69, 95 (100), 41 (89), 109 (68), 67 (61)...222]  | 13.39         | 1664 | 0.02 | 15.81         | 2223 | 0.01 |
| (E)-Bisabol-11-ol   | 13.41         | 1665 | tr   | 15.18         | 2159 | 0.02 |
| epi- $\alpha$ -Bisabolol  | 13.58         | 1680 | 0.02 | 15.29         | 2170 | 0.01 |
| $\alpha$ -Bisabolol   | 13.61         | 1682 | 0.02 | 15.26         | 2166 | 0.02 |
| Juniper camphor   | 13.66         | 1686 | tr   | 15.85         | 2227 | 0.01 |
| <b>Total identified</b>   | <b>98.99%</b> |      |      | <b>98.79%</b> |      |      |
| <b>Total reported</b>   | <b>99.31%</b> |      |      | <b>98.91%</b> |      |      |

\*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken into account in the consolidated total

t: 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