

**Date :** 2026-01-05

**CERTIFICATE OF ANALYSIS - GC PROFILING**

**SAMPLE IDENTIFICATION**

**Internal code :** 25L10-PTH05

**Customer Identification :** Catnip - Canada - CW0109R

**Type :** Essential Oil

**Source :** *Nepeta cataria*

**Customer :** Plant Therapy

Checked and approved by:

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

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This report is an update from the first version issued on 2025-12-12 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 :** Sylvain Mercier, M. Sc., Chimiste 2014-005

**Date :** 2025-12-11

## *PHYSICOCHEMICAL DATA*

**Refractive index :**  $1.4897 \pm 0.0003$  (20 °C)

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

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

**Date :** 2025-12-11

## *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                |
|--------------------------|------|----------------------|
| Dimethylsulfide          | 0.01 | Aliphatic sulfide    |
| Isobutyral               | 0.01 | Aliphatic aldehyde   |
| Isovaleral               | 0.02 | Aliphatic aldehyde   |
| 2-Methylbutyral          | 0.02 | Aliphatic aldehyde   |
| 3-Pentanone              | 0.01 | Aliphatic ketone     |
| 2-Ethylfuran             | 0.05 | Furan                |
| Senecionitrile           | 0.04 | Aliphatic nitrile    |
| Methyl 2-methylbutyrate  | 0.02 | Aliphatic ester      |
| Hexanal                  | 0.01 | Aliphatic aldehyde   |
| Octane                   | 0.01 | Alkane               |
| Dimethyl sulfoxide       | 0.02 | Aliphatic sulfoxide  |
| (2E)-Hexenal             | 0.13 | Aliphatic aldehyde   |
| (3Z)-Hexenol             | 0.01 | Aliphatic alcohol    |
| Styrene                  | 0.04 | Simple phenolic      |
| (3Z)-Hexenyl formate     | 0.01 | Aliphatic ester      |
| $\alpha$ -Thujene        | 0.02 | Monoterpene          |
| $\alpha$ -Pinene         | 0.08 | Monoterpene          |
| Benzaldehyde             | 0.01 | Simple phenolic      |
| Sabinene                 | 0.06 | Monoterpene          |
| $\beta$ -Pinene          | 0.63 | Monoterpene          |
| 3-Butenyl isothiocyanate | 0.01 | Aliphatic thioester  |
| Octen-3-ol               | 0.02 | Aliphatic alcohol    |
| Octan-3-one              | 0.01 | Aliphatic ketone     |
| 6-Methyl-5-hepten-2-one  | 0.01 | Aliphatic ketone     |
| Myrcene                  | 0.01 | Monoterpene          |
| 2-Pentylfuran            | 0.02 | Furan                |
| $\alpha$ -Phellandrene   | tr   | Monoterpene          |
| Octanal                  | 0.01 | Aliphatic aldehyde   |
| $\alpha$ -Terpinene      | 0.03 | Monoterpene          |
| <i>para</i> -Cymene      | 0.03 | Monoterpene          |
| $\beta$ -Phellandrene    | 0.01 | Monoterpene          |
| 1,8-Cineole              | 0.01 | Monoterpenic ether   |
| Limonene                 | 0.05 | Monoterpene          |
| (Z)- $\beta$ -Ocimene    | 0.08 | Monoterpene          |
| (E)- $\beta$ -Ocimene    | 0.20 | Monoterpene          |
| $\gamma$ -Terpinene      | 0.04 | Monoterpene          |
| Octanol                  | 0.01 | Aliphatic alcohol    |
| Terpinolene              | 0.01 | Monoterpene          |
| Linalool                 | 0.04 | Monoterpenic alcohol |
| Nonanal                  | 0.03 | Aliphatic aldehyde   |

|                                                                                            |       |                        |
|--------------------------------------------------------------------------------------------|-------|------------------------|
| <i>trans</i> -Verbenol                                                                     | 0.01  | Monoterpenic alcohol   |
| Lavandulol                                                                                 | 0.01  | Monoterpenic alcohol   |
| Terpinen-4-ol                                                                              | 0.04  | Monoterpenic alcohol   |
| Dill ether                                                                                 | 0.01  | Monoterpenic ether     |
| $\alpha$ -Terpineol                                                                        | 0.02  | Monoterpenic alcohol   |
| Methyl salicylate                                                                          | 0.05  | Phenolic ester         |
| <i>cis</i> -Dihydrocarvone                                                                 | 0.01  | Monoterpenic ketone    |
| Hexyl butyrate                                                                             | 0.03  | Aliphatic ester        |
| Dihydrocarveol                                                                             | 0.01  | Monoterpenic alcohol   |
| Unknown                                                                                    | 0.70  | Oxygenated monoterpene |
| $\beta$ -Cyclocitral                                                                       | 0.03  | Monoterpenic aldehyde  |
| (3Z)-Hexenyl isovalerate                                                                   | 0.01  | Aliphatic ester        |
| Neral                                                                                      | 0.02  | Monoterpenic aldehyde  |
| Carvone                                                                                    | 0.13  | Monoterpenic ketone    |
| (2E)-Decenal                                                                               | 0.02  | Aliphatic aldehyde     |
| Geranial                                                                                   | 0.02  | Monoterpenic aldehyde  |
| Tridecane                                                                                  | 0.02  | Alkane                 |
| 4 $\alpha$ ,7 $\alpha$ ,7 $\alpha$ -Nepetalactone                                          | 21.44 | Monoterpenic lactone   |
| Eugenol                                                                                    | 0.04  | Phenylpropanoid        |
| Nepetalactone isomer I                                                                     | 0.11  | Unknown                |
| 4 $\alpha$ ,7 $\alpha$ ,7 $\beta$ -Nepetalactone                                           | 56.35 | Monoterpenic lactone   |
| 4 $\alpha$ ,7 $\beta$ ,7 $\alpha$ -Nepetalactone                                           | 1.77  | Monoterpenic lactone   |
| Isocaryophyllene                                                                           | 0.31  | Sesquiterpene          |
| Isodihydronepetalactone                                                                    | 0.11  | Monoterpenic lactone   |
| $\beta$ -Caryophyllene                                                                     | 4.76  | Sesquiterpene          |
| Nepetalactone analog VIII                                                                  | 0.02  | Monoterpenic lactone   |
| Isodihydronepetalactone analog I                                                           | 0.02  | Monoterpenic lactone   |
| Nepetalactone analog I                                                                     | 0.05  | Monoterpenic lactone   |
| Unknown                                                                                    | 0.02  | Unknown                |
| $\alpha$ -Humulene                                                                         | 0.49  | Sesquiterpene          |
| Unknown                                                                                    | 0.01  | Unknown                |
| (E)- $\beta$ -Farnesene                                                                    | 0.23  | Sesquiterpene          |
| Unknown catnip acid I [m/z 96, 87 (87), 81 (78), 109 (55), 41 (43), 55 (37)...]            | 0.13  | Monoterpenic acid      |
| (E)- $\beta$ -Ionone                                                                       | 0.04  | Apocarotenoid          |
| (3Z,6E)- $\alpha$ -Farnesene                                                               | 0.01  | Sesquiterpene          |
| Unknown catnip acid II [m/z 81, 109 (98), 96 (77), 87 (71), 67 (50), 41 (47)]              | 0.42  | Monoterpenic acid      |
| (3E,6E)- $\alpha$ -Farnesene                                                               | 0.04  | Sesquiterpene          |
| (2E?,8Z?)-Matricaria ester                                                                 | 0.01  | Polyene ester          |
| Unknown catnip acid III [m/z 96, 81 (82), 87 (80), 67 (48), 109 (43), 58 (39)... 166 (14)] | 2.75  | Monoterpenic acid      |
| Isocaryophyllene epoxide B                                                                 | 0.04  | Sesquiterpenic ether   |
| (E)-Nerolidol                                                                              | 0.01  | Sesquiterpenic alcohol |
| Nepetalactone analog VII                                                                   | 0.04  | Monoterpenic lactone   |

|                                                                      |      |                      |
|----------------------------------------------------------------------|------|----------------------|
| Caryophyllene oxide                                                  | 0.89 | Sesquiterpenic ether |
| Humulene epoxide I                                                   | 0.02 | Sesquiterpenic ether |
| Humulene epoxide II                                                  | 0.06 | Sesquiterpenic ether |
| Unknown                                                              | 0.03 | Unknown              |
| Unknown                                                              | 0.02 | Unknown              |
| Unknown                                                              | 0.02 | Unknown              |
| Nepetalactone analog II                                              | 0.01 | Monoterpenic lactone |
| Unknown                                                              | 0.02 | Unknown              |
| Unknown                                                              | 0.06 | Unknown              |
| Unknown                                                              | 0.48 | Unknown              |
| Unknown                                                              | 0.10 | Unknown              |
| Unknown                                                              | 0.12 | Unknown              |
| Unknown                                                              | 1.96 | Unknown              |
| Unknown                                                              | 0.34 | Unknown              |
| Unknown                                                              | 0.10 | Unknown              |
| Phytone                                                              | 0.10 | Terpenic ketone      |
| Nepetalactone analog III                                             | 0.09 | Monoterpenic lactone |
| Unknown                                                              | 0.12 | Unknown              |
| Unknown                                                              | 0.07 | Unknown              |
| Unknown                                                              | 0.32 | Unknown              |
| Unknown                                                              | 0.03 | Unknown              |
| Nepetalactone analog IV                                              | 0.01 | Monoterpenic lactone |
| Nepetalactone analog V                                               | 0.06 | Aliphatic lactone    |
| Nepetalactone analog VI                                              | 0.03 | Monoterpenic lactone |
| Unknown                                                              | 0.08 | Unknown              |
| Unknown                                                              | 0.22 | Unknown              |
| Unknown                                                              | 0.02 | Unknown              |
| Unknown                                                              | 0.03 | Unknown              |
| Unknown                                                              | 0.05 | Unknown              |
| Unknown                                                              | 0.02 | Unknown              |
| Unknown                                                              | 0.04 | Unknown              |
| Unknown                                                              | 0.02 | Unknown              |
| Unknown                                                              | 0.04 | Unknown              |
| Unknown                                                              | 0.06 | Unknown              |
| Unknown                                                              | 0.10 | Unknown              |
| Unknown NECA XLIV [m/z 81, 167 (94), 168 (12), 67 (12), 55 (11)...]  | 0.02 | Unknown              |
| Unknown                                                              | 0.01 | Unknown              |
| Unknown NECA XLI [m/z 167, 81 (45), 168 (12), 123 (10), 67 (6)...]   | 0.03 | Unknown              |
| Unknown NECA XXXIX [m/z 81, 167 (76), 110 (13), 82 (11), 41 (10)...] | 0.02 | Unknown              |
| Unknown NECA XXXVIII [m/z 167, 81 (48), 168 (11), 123 (11)...]       | 0.08 | Unknown              |
| Unknown NECA XLII [m/z 167, 81 (53), 168 (12),                       | 0.07 | Unknown              |

|                                                                  |              |         |
|------------------------------------------------------------------|--------------|---------|
| 123 (8)...                                                       |              |         |
| Unknown NECA XL [m/z 167, 81 (52), 168 (12), 123 (11), 67 (8)... | 0.09         | Unknown |
| Unknown NECA XLIII [m/z 167, 81 (45), 168 (11), 123 (9)...       | 0.01         | Unknown |
| <b>Consolidated total</b>                                        | <b>98.25</b> |         |

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

Note: no correction factor was applied

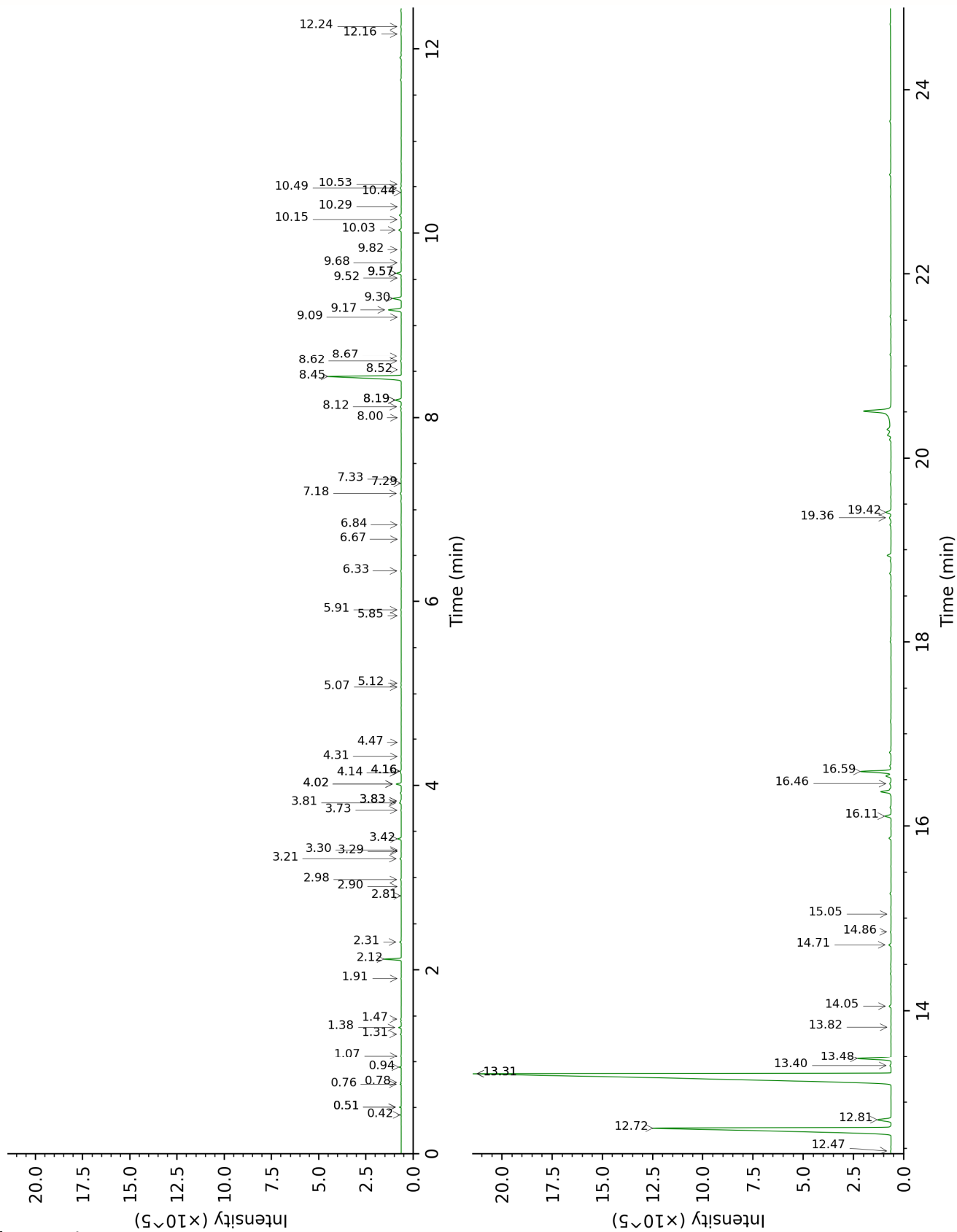
**About "consolidated" data:** The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

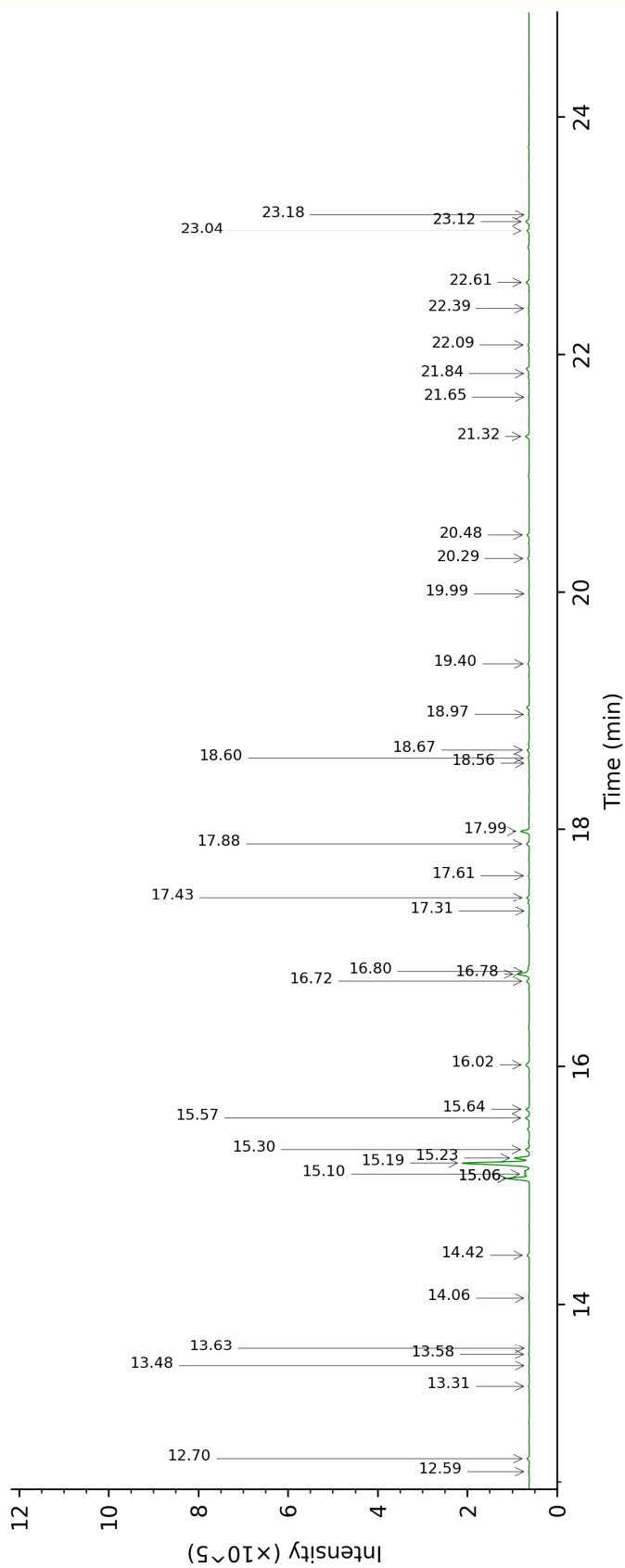
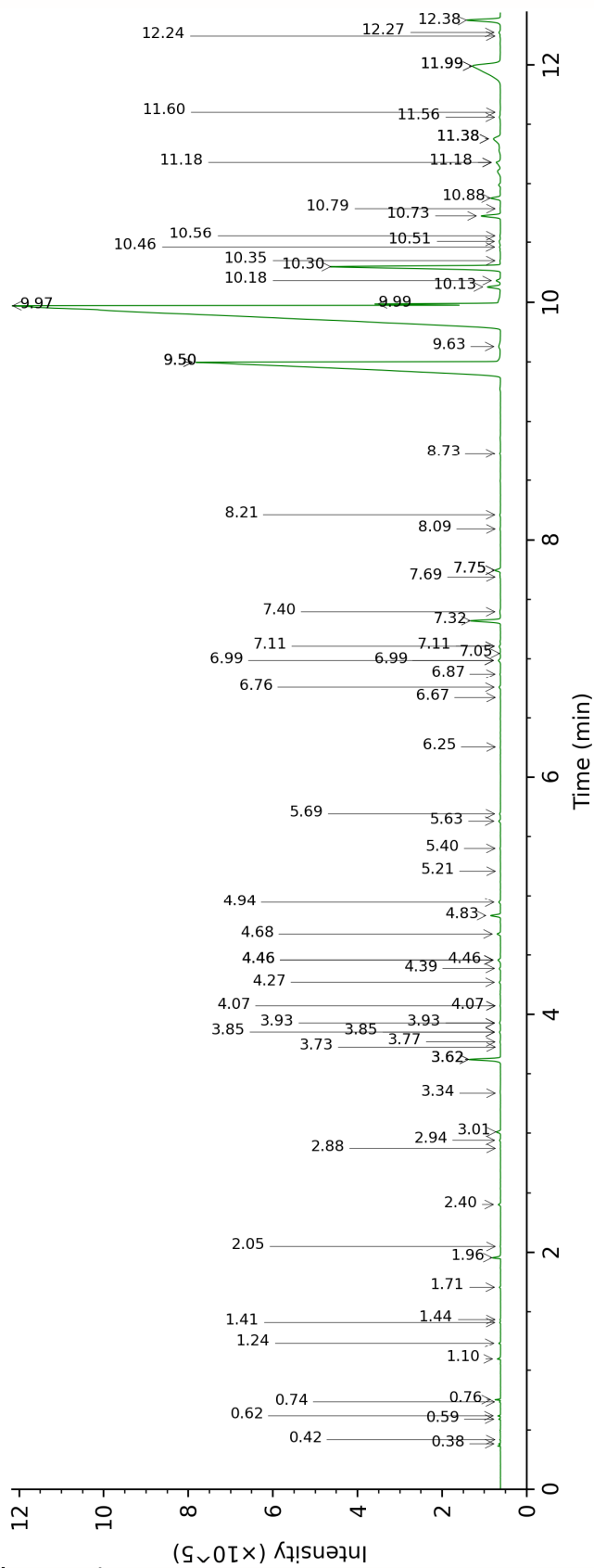
This page was intentionally left blank. The following pages present the complete data of the analysis.

DB-WAX





DB-5



FULL ANALYSIS DATA

| Dimethylsulfide          | Column DB-WAX |        |        | Column DB-5 |        |        |
|--------------------------|---------------|--------|--------|-------------|--------|--------|
|                          | 0.42          | 713.0  | 0.01   | 0.38        | 506.2  | 0.01   |
| Isobutylal               | 0.51*         | 783.6  | [0.03] | 0.42        | 541.2  | 0.01   |
| Isovaleral               | 0.78          | 888.3  | 0.02   | 0.59        | 643.1  | 0.02   |
| 2-Methylbutylal          | 0.76          | 881.3  | 0.02   | 0.62        | 653.5  | 0.02   |
| 3-Pentanone              | 1.07          | 939.5  | 0.01   | 0.74        | 696.3  | 0.01   |
| 2-Ethylfuran             | 0.94          | 919.0  | 0.05   | 0.76        | 703.4  | 0.05   |
| Senecionitrile           | 4.16*†        | 1229.9 | [0.05] | 1.10        | 755.0  | 0.04   |
| Methyl 2-methylbutyrate  | 1.31          | 978.4  | 0.02   | 1.24        | 775.3  | 0.02   |
| Hexanal                  | 1.91          | 1044.7 | 0.01   | 1.41        | 800.7  | 0.01   |
| Octane                   | 0.51*         | 783.6  | [0.03] | 1.44        | 804.3  | 0.01   |
| Dimethyl sulfoxide       | 8.00          | 1508.2 | tr     | 1.71        | 827.6  | 0.02   |
| (2E)-Hexenal             | 3.42          | 1174.6 | 0.14   | 1.96        | 848.6  | 0.13   |
| (3Z)-Hexenol             | 5.85          | 1350.7 | 0.02   | 2.05        | 856.6  | 0.01   |
| Styrene                  | 3.83*†        | 1206.2 | [0.04] | 2.40        | 886.5  | 0.04   |
| (3Z)-Hexenyl formate     | 4.14†         | 1228.6 | 0.02   | 2.88        | 921.9  | 0.01   |
| α-Thujene                | 1.47          | 1001.1 | 0.02   | 2.94        | 926.4  | 0.02   |
| α-Pinene                 | 1.38          | 990.5  | 0.08   | 3.01        | 931.1  | 0.08   |
| Benzaldehyde             | 7.33          | 1458.6 | 0.02   | 3.34        | 952.9  | 0.01   |
| Sabinene                 | 2.30          | 1084.2 | 0.06   | 3.62*       | 972.0  | [0.69] |
| β-Pinene                 | 2.12          | 1065.7 | 0.63   | 3.62*       | 972.0  | [0.69] |
| 3-Butenyl isothiocyanate | 6.68          | 1410.2 | 0.01   | 3.73        | 978.9  | 0.01   |
| Octen-3-ol               | 6.84          | 1422.2 | 0.02   | 3.77        | 981.8  | 0.02   |
| Octan-3-one              | 4.02*         | 1219.7 | [0.22] | 3.85*       | 987.4  | [0.03] |
| 6-Methyl-5-hepten-2-one  | 5.12          | 1298.7 | 0.01   | 3.85*       | 987.4  | [0.03] |
| Myrcene                  | 2.90          | 1133.7 | 0.01   | 3.93*       | 992.5  | [0.03] |
| 2-Pentylfuran            | 3.73          | 1198.8 | 0.02   | 3.93*       | 992.5  | [0.03] |
| α-Phellandrene           | 2.80          | 1125.9 | tr     | 4.07*       | 1002.2 | [0.02] |
| Octanal                  | 4.47          | 1252.9 | 0.01   | 4.07*       | 1002.2 | [0.02] |
| α-Terpinene              | 2.98          | 1139.7 | 0.03   | 4.27        | 1014.8 | 0.03   |
| para-Cymene              | 4.16*†        | 1229.9 | [0.05] | 4.39        | 1022.2 | 0.03   |
| β-Phellandrene           | 3.29          | 1163.8 | 0.01   | 4.46*       | 1026.7 | [0.07] |
| 1,8-Cineole              | 3.30          | 1164.9 | 0.01   | 4.46*       | 1026.7 | [0.07] |
| Limonene                 | 3.21          | 1157.6 | 0.05   | 4.46*       | 1026.7 | [0.07] |
| (Z)-β-Ocimene            | 3.81†         | 1204.7 | 0.07   | 4.68        | 1040.6 | 0.08   |
| (E)-β-Ocimene            | 4.02*         | 1219.7 | [0.22] | 4.83        | 1050.4 | 0.20   |
| γ-Terpinene              | 3.83*†        | 1206.2 | [0.04] | 4.94        | 1057.6 | 0.04   |
| Octanol                  | 8.19*         | 1522.9 | [0.31] | 5.21        | 1074.5 | 0.01   |
| Terpinolene              | 4.31          | 1241.6 | 0.02   | 5.40        | 1086.7 | 0.01   |
| Linalool                 | 8.12          | 1517.3 | 0.04   | 5.63        | 1101.3 | 0.04   |
| Nonanal                  | 5.91          | 1355.3 | 0.02   | 5.69        | 1105.2 | 0.03   |
| trans-Verbenol           | 9.57*         | 1630.4 | [0.23] | 6.26        | 1141.6 | 0.01   |
| Lavandulol               | 9.68          | 1639.5 | 0.02   | 6.67        | 1168.6 | 0.01   |

|                                                                                               |        |        |         |        |        |         |
|-----------------------------------------------------------------------------------------------|--------|--------|---------|--------|--------|---------|
| Terpinen-4-ol                                                                                 | 8.62   | 1555.5 | 0.03    | 6.76   | 1174.3 | 0.04    |
| Dill ether                                                                                    | 7.29   | 1455.4 | 0.01    | 6.87   | 1181.8 | 0.01    |
| $\alpha$ -Terpineol                                                                           | 9.82   | 1650.9 | 0.02    | 6.99*  | 1189.3 | [0.06]  |
| Methyl salicylate                                                                             | 10.49  | 1704.9 | 0.05    | 6.99*  | 1189.3 | [0.06]  |
| <i>cis</i> -Dihydrocarvone                                                                    | 8.52   | 1548.1 | 0.01    | 7.05   | 1193.2 | 0.01    |
| Hexyl butyrate                                                                                | 6.33   | 1385.3 | 0.03    | 7.11*  | 1197.1 | [0.04]  |
| Dihydrocarveol                                                                                | 10.44  | 1700.9 | 0.01    | 7.11*  | 1197.1 | [0.04]  |
| Unknown VAWA X [m/z<br>123, 138 (67), 81 (60), 95<br>(42), 67 (41), 80 (33)]                  | 9.17   | 1598.6 | 0.70    | 7.32   | 1211.3 | 0.70    |
| $\beta$ -Cyclocitral                                                                          | 8.67   | 1559.8 | 0.02    | 7.40   | 1216.4 | 0.03    |
| (3Z)-Hexenyl isovalerate                                                                      | 7.18   | 1447.3 | 0.05    | 7.69   | 1236.4 | 0.01    |
| Neral                                                                                         | 9.52   | 1626.3 | 0.02    | 7.75*  | 1240.2 | [0.13]  |
| Carvone                                                                                       | 10.03  | 1667.9 | 0.13    | 7.75*  | 1240.2 | [0.13]  |
| (2E)-Decenal                                                                                  | 9.09   | 1592.3 | 0.01    | 8.09   | 1263.9 | 0.02    |
| Geranial                                                                                      | 10.15  | 1677.0 | 0.02    | 8.21   | 1272.0 | 0.02    |
| Tridecane                                                                                     | 5.07   | 1297.7 | 0.02    | 8.73   | 1303.5 | 0.02    |
| 4 $\alpha$ ,7 $\alpha$ ,7 $\alpha$ -<br>Nepetalactone                                         | 12.72  | 1897.9 | 21.44   | 9.50*  | 1358.1 | [21.37] |
| Eugenol                                                                                       | 14.86  | 2099.1 | 0.04    | 9.50*  | 1358.1 | [21.37] |
| Nepetalactone isomer I                                                                        |        |        |         | 9.63   | 1367.5 | 0.11    |
| 4 $\alpha$ ,7 $\alpha$ ,7 $\alpha$ $\beta$ -<br>Nepetalactone                                 | 13.31* | 1952.0 | [56.32] | 9.97   | 1391.7 | 56.35   |
| 4 $\alpha$ ,7 $\beta$ ,7 $\alpha$ -<br>Nepetalactone                                          | 13.48  | 1967.4 | 1.74    | 9.99   | 1392.9 | 1.77    |
| Isocaryophyllene                                                                              | 8.19*  | 1522.9 | [0.31]  | 10.13  | 1402.9 | 0.31    |
| Isodihydronepetalactone                                                                       | 14.05  | 2021.4 | 0.11    | 10.18  | 1406.9 | 0.11    |
| $\beta$ -Caryophyllene                                                                        | 8.45   | 1542.6 | 4.86    | 10.30  | 1415.7 | 4.76    |
| Nepetalactone analog<br>VIII                                                                  |        |        |         | 10.35  | 1419.4 | 0.02    |
| Isodihydronepetalactone<br>analog I                                                           |        |        |         | 10.46  | 1428.0 | 0.02    |
| Nepetalactone analog I                                                                        | 12.24  | 1855.6 | 0.03    | 10.51  | 1431.5 | 0.05    |
| Unknown NECA XXXIV<br>[m/z 57, 71 (93), 43 (87),<br>85 (48), 41 (40), 81 (36),<br>55 (30)...] |        |        |         | 10.56  | 1435.1 | 0.02    |
| $\alpha$ -Humulene                                                                            | 9.30   | 1608.6 | 0.43    | 10.73  | 1448.1 | 0.49    |
| Unknown NECA III [m/z<br>57, 71 (92), 43 (69), 85<br>(49), 41 (31), 55 (23)...]               |        |        |         | 10.79  | 1452.7 | 0.01    |
| (E)- $\beta$ -Farnesene                                                                       | 9.57*  | 1630.4 | [0.23]  | 10.88  | 1459.4 | 0.23    |
| Unknown catnip acid I<br>[m/z 96, 87 (87), 81 (78),<br>109 (55), 41 (43), 55                  |        |        |         | 11.18* | 1481.8 | [0.17]  |

|                                                                                                     |        |        |         |        |        |        |
|-----------------------------------------------------------------------------------------------------|--------|--------|---------|--------|--------|--------|
| (37)...                                                                                             |        |        |         |        |        |        |
| (E)- $\beta$ -Ionone                                                                                | 12.47  | 1875.4 | 0.04    | 11.18* | 1481.8 | [0.17] |
| (3Z,6E)- $\alpha$ -Farnesene                                                                        | 10.28  | 1688.1 | 0.01    | 11.38* | 1496.7 | [0.43] |
| Unknown catnip acid II<br>[m/z 81, 109 (98), 96 (77),<br>87 (71), 67 (50), 41 (47)]                 |        |        |         | 11.38* | 1496.7 | [0.43] |
| (3E,6E)- $\alpha$ -Farnesene                                                                        | 10.53  | 1708.5 | 0.02    | 11.56  | 1510.7 | 0.04   |
| (2E?,8Z?)-Matricaria ester                                                                          | 15.05  | 2118.3 | 0.02    | 11.60  | 1514.0 | 0.01   |
| Unknown catnip acid III<br>[m/z 96, 81 (82), 87 (80),<br>67 (48), 109 (43), 58 (39)...<br>166 (14)] |        |        |         | 11.99* | 1544.6 | [2.78] |
| Isocaryophyllene<br>epoxide B                                                                       | 12.16  | 1848.5 | 0.04    | 11.99* | 1544.6 | [2.78] |
| (E)-Nerolidol                                                                                       | 13.82  | 1999.6 | 0.02    | 12.24  | 1564.5 | 0.01   |
| Nepetalactone analog VII                                                                            |        |        |         | 12.27  | 1567.0 | 0.04   |
| Caryophyllene oxide                                                                                 | 12.81  | 1906.2 | 0.89    | 12.38  | 1575.2 | 0.89   |
| Humulene epoxide I                                                                                  | 13.31* | 1952.0 | [56.32] | 12.59  | 1592.0 | 0.02   |
| Humulene epoxide II                                                                                 | 13.40  | 1960.2 | 0.07    | 12.70  | 1600.6 | 0.06   |
| Unknown NECA IV [m/z<br>81, 95 (42), 43 (41), 137<br>(40), 123 (35), 41 (34)...                     |        |        |         | 13.31  | 1650.9 | 0.03   |
| Unknown NECA XXVIII<br>[m/z 81, 43 (86), 109 (82),<br>166 (81), 71 (54), 41<br>(47)...              |        |        |         | 13.48  | 1665.4 | 0.02   |
| Unknown NECA V [m/z<br>81, 43 (84), 166 (84), 109<br>(74), 71 (58), 41 (58)...                      |        |        |         | 13.58  | 1673.4 | 0.02   |
| Nepetalactone analog II                                                                             |        |        |         | 13.63  | 1677.6 | 0.01   |
| Unknown NECA VI [m/z<br>81, 109 (68), 41 (57), 69<br>(53), 167 (36), 67 (31)...                     |        |        |         | 14.06  | 1713.6 | 0.02   |
| Unknown NECA VII [m/z<br>153, 82 (85), 43 (81), 67<br>(69), 81 (46)...                              |        |        |         | 14.42  | 1745.0 | 0.06   |
| Unknown NECA X [m/z<br>81, 96 (74), 43 (57), 87<br>(50), 109 (46), 166 (43)...                      |        |        |         | 15.06* | 1801.2 | [0.58] |
| Unknown NECA IX [m/z<br>82, 81 (67), 67 (64), 55<br>(42), 167 (39), 41 (24), 83<br>(23)...          | 16.46  | 2262.3 | 0.10    | 15.06* | 1801.2 | [0.58] |
| Unknown NECA XI [m/z<br>81, 109 (56), 55 (56), 41                                                   |        |        |         | 15.10  | 1804.4 | 0.12   |

|                                                                                      |       |        |      |       |        |      |
|--------------------------------------------------------------------------------------|-------|--------|------|-------|--------|------|
| (40), 82 (36), 67 (35)...                                                            |       |        |      |       |        |      |
| Unknown NECA XII [m/z 82, 81 (68), 67 (65), 55 (46), 167 (34)...                     | 16.59 | 2276.0 | 1.66 | 15.19 | 1812.8 | 1.96 |
| Unknown NECA XIII [m/z 81, 166 (95), 109 (80), 43 (64), 96 (51), 87 (41)...          | 16.11 | 2225.7 | 0.34 | 15.23 | 1816.6 | 0.34 |
| Unknown NECA XXIX [m/z 81, 166 (64), 109 (60), 43 (55), 55 (45), 96 (43), 41 (42)... |       |        |      | 15.30 | 1823.1 | 0.10 |
| Phytone                                                                              | 14.71 | 2085.1 | 0.12 | 15.57 | 1847.3 | 0.10 |
| Nepetalactone analog III                                                             |       |        |      | 15.64 | 1854.0 | 0.09 |
| Unknown NECA XV [m/z 82, 81 (73), 67 (50), 55 (49), 83 (46), 41 (35)...              |       |        |      | 16.02 | 1888.1 | 0.12 |
| Unknown NECA XVI [m/z 82, 81 (84), 58 (57), 55 (48), 83 (47), 67 (46)...             |       |        |      | 16.72 | 1954.2 | 0.07 |
| Unknown NECA XVII [m/z 82, 81 (65), 83 (47), 55 (42), 67 (41), 167 (38)...           | 19.42 | 2591.1 | 0.32 | 16.78 | 1959.9 | 0.32 |
| Unknown NECA XVIII [m/z 82, 81 (76), 83 (45), 55 (39), 167 (36), 67 (30)...          |       |        |      | 16.80 | 1961.9 | 0.03 |
| Nepetalactone analog IV                                                              |       |        |      | 17.31 | 2010.6 | 0.01 |
| Nepetalactone analog V                                                               |       |        |      | 17.43 | 2022.5 | 0.06 |
| Nepetalactone analog VI                                                              |       |        |      | 17.61 | 2040.9 | 0.03 |
| Unknown NECA XIX [m/z 93, 81 (59), 69 (52), 121 (38), 80 (35), 41 (33)...            |       |        |      | 17.88 | 2067.5 | 0.08 |
| Unknown NECA XX [m/z 93, 69 (55), 81 (52), 80 (41), 121 (35), 41 (28)...             | 19.36 | 2584.0 | 0.13 | 17.99 | 2078.0 | 0.22 |
| Unknown NECA XXI [m/z 81, 69 (68), 41 (64), 55 (57), 67 (51), 43 (42)...             |       |        |      | 18.56 | 2136.2 | 0.02 |
| Unknown NECA XXII [m/z 69, 81 (98), 93 (92), 41 (55), 80 (52), 68 (43)...            |       |        |      | 18.60 | 2140.6 | 0.03 |
| Unknown NECA XXIII [m/z 81, 69 (63), 41 (49), 95 (49), 55 (48), 67 (45)...           |       |        |      | 18.67 | 2147.6 | 0.05 |

|                                                                                                    |       |        |      |
|----------------------------------------------------------------------------------------------------|-------|--------|------|
| Unknown NECA XXIV<br>[m/z 69, 81 (80), 93 (65),<br>41 (49), 80 (42), 121<br>(40)...]               | 18.97 | 2178.7 | 0.02 |
| Unknown NECA XXV<br>[m/z 81, 93 (68), 69 (61),<br>83 (48), 41 (47), 67 (42)...]                    | 19.40 | 2224.2 | 0.04 |
| Unknown NECA XXXI<br>[m/z 81, 43 (86), 44 (67),<br>166 (58), 55 (57), 67<br>(55)...]               | 19.99 | 2287.6 | 0.02 |
| Unknown NECA XXVI<br>[m/z 81, 91 (64), 131 (54),<br>120 (38), 195 (32), 41<br>(31)...]             | 20.29 | 2320.1 | 0.04 |
| Unknown NECA XXVII<br>[m/z 81, 166 (96), 55 (62),<br>69 (52), 109 (51), 41<br>(50)...]             | 20.48 | 2342.2 | 0.06 |
| Unknown NECA XXXII<br>[m/z 81, 167 (96), 166<br>(23), 123 (19), 43 (17), 55<br>(17)...]            | 21.32 | 2436.8 | 0.10 |
| Unknown NECA XLIV<br>[m/z 81, 167 (94), 168<br>(12), 67 (12), 55 (11)...]                          | 21.65 | 2474.9 | 0.02 |
| Unknown NECA XXXIII<br>[m/z 81, 167 (44), 91 (31),<br>131 (29), 93 (27), 105<br>(26), 146 (26)...] | 21.84 | 2497.8 | 0.01 |
| Unknown NECA XLI [m/z<br>167, 81 (45), 168 (12),<br>123 (10), 67 (6)...]                           | 22.08 | 2526.5 | 0.03 |
| Unknown NECA XXXIX<br>[m/z 81, 167 (76), 110<br>(13), 82 (11), 41 (10)...]                         | 22.39 | 2563.1 | 0.02 |
| Unknown NECA XXXVIII<br>[m/z 167, 81 (48), 168<br>(11), 123 (11)...]                               | 22.61 | 2589.4 | 0.08 |
| Unknown NECA XLII [m/z<br>167, 81 (53), 168 (12),<br>123 (8)...]                                   | 23.04 | 2643.3 | 0.07 |
| Unknown NECA XL [m/z<br>167, 81 (52), 168 (12),<br>123 (11), 67 (8)...]                            | 23.12 | 2653.3 | 0.09 |

|                                                                   |        |  |       |        |      |
|-------------------------------------------------------------------|--------|--|-------|--------|------|
| Unknown NECA XLIII<br>[m/z 167, 81 (45), 168<br>(11), 123 (9)...] |        |  | 23.18 | 2660.3 | 0.01 |
| Total reported                                                    | 92.21% |  |       | 98.11% |      |
|                                                                   |        |  |       |        |      |

\*: 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