

Date : 2023-12-08

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 23L01-PTH01

**Customer Identification :** Organic Helichrysum Italicum - France - H90112R

**Type :** Essential Oil

**Source :** *Helichrysum italicum*

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

**Date :** 2023-12-08

## PHYSICOCHEMICAL DATA

**Refractive index :**  $1.4784 \pm 0.0003$  (20 °C)

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

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

**Date :** 2023-12-01

## 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
Isovaleral	tr	Aliphatic aldehyde
2-Methylbutyral	0.02	Aliphatic aldehyde
3-Pentanone	0.03	Aliphatic ketone
2-Ethylfuran	0.01	Furan
2-Methylbutanol	0.01	Aliphatic alcohol
2-Methyl-3-pentanone	0.07	Aliphatic ketone
Unknown	0.01	Unknown
Unknown	0.03	Unknown
Hexanal	0.01	Aliphatic aldehyde
Octane	0.02	Alkane
2-Methyl-2-heptene	0.13	Alkene
4-Methyl-3-hexanone	0.14	Aliphatic ketone
(3Z)-Hexenol	tr	Aliphatic alcohol
Furfuryl alcohol	0.01	Furan
Hexanol	0.01	Aliphatic alcohol
Isoamyl acetate	0.01	Aliphatic ester
Nonane	0.03	Alkane
Bornylene	0.04	Monoterpene
Isobutyl isobutyrate	0.01	Aliphatic ester
$\alpha$ -Thujene	0.01	Monoterpene
$\alpha$ -Pinene	14.18	Monoterpene
$\alpha$ -Fenchene	0.47	Monoterpene
Camphene	0.18	Monoterpene
Thuja-2,4(10)-diene	0.01	Monoterpene
Sabinene	tr	Monoterpene
$\beta$ -Pinene	0.62	Monoterpene
6-Methyl-5-hepten-2-one	0.02	Aliphatic ketone
<i>trans</i> -Dehydroxylinalool oxide	0.04	Monoterpenic ether
Myrcene	0.07	Monoterpene
6-Methyl-5-hepten-2-ol	0.01	Aliphatic alcohol
Unknown	0.03	Monoterpene
$\alpha$ -Phellandrene	0.03	Monoterpene
Isobutyl 2-methylbutyrate	0.03	Aliphatic ester
$\Delta^3$ -Carene	tr	Monoterpene
Isobutyl isovalerate	0.02	Aliphatic ester
(3Z)-Hexenyl acetate	0.02	Aliphatic ester
$\alpha$ -Terpinene	0.21	Monoterpene
<i>para</i> -Methylanisole	0.02	Simple phenolic
<i>para</i> -Cymene	0.21	Monoterpene
1,8-Cineole	0.26	Monoterpenic ether

Limonene	3.45	Monoterpene
(Z)- $\beta$ -Ocimene	0.01	Monoterpene
(E)- $\beta$ -Ocimene	0.05	Monoterpene
Isobutyl angelate	0.18	Aliphatic ester
$\gamma$ -Terpinene	0.56	Monoterpene
Terpinolene	0.19	Monoterpene
<i>para</i> -Cymenene	0.01	Monoterpene
2-Nonanone	0.03	Aliphatic ketone
2,4-Dimethylheptane-3,5-dione	0.07	$\beta$ -Diketone
Linalool	1.07	Monoterpenic alcohol
2-Methylbutyl 2-methylbutyrate	0.05	Aliphatic ester
Isoamyl isovalerate	0.01	Aliphatic ester
Nonanal	0.07	Aliphatic aldehyde
endo-Fenchol	0.06	Monoterpenic alcohol
$\alpha$ -Campholenal	0.02	Monoterpenic aldehyde
<i>trans</i> -Pinocarveol	0.05	Monoterpenic alcohol
<i>trans</i> -Verbenol	0.02	Monoterpenic alcohol
<i>para</i> -Vinylanisole	0.05	Simple phenolic
Isoamyl angelate	0.03	Aliphatic ester
Nerol oxide	0.09	Aliphatic ether
2-Methylbutyl angelate	0.41	Aliphatic ester
Pinocarvone	0.05	Monoterpenic ketone
Borneol	0.05	Monoterpenic alcohol
Unknown	0.01	Aliphatic ester
Terpinen-4-ol	0.30	Monoterpenic alcohol
4,6-Dimethyloctane-3,5-dione epimer I	0.16	$\beta$ -Diketone
4,6-Dimethyloctane-3,5-dione epimer II	0.18	$\beta$ -Diketone
$\alpha$ -Terpineol	0.33	Monoterpenic alcohol
Myrtenol	0.01	Monoterpenic alcohol
2-Methylbutyl tiglate	0.01	Aliphatic ester
Verbenone	tr	Monoterpenic ketone
Unknown	0.02	Unknown
Decanal	0.07	Aliphatic aldehyde
Nerol	1.59	Monoterpenic alcohol
Hexyl 2-methylbutyrate	0.02	Aliphatic ester
Hexyl isovalerate	0.01	Aliphatic ester
3-Methylpentyl angelate	0.01	Aliphatic ester
Unknown	0.05	Aliphatic ester
Linalyl acetate	0.01	Monoterpenic ester
(3Z)-Hexenyl angelate	0.04	Aliphatic ester
Hexyl angelate	0.09	Aliphatic ester
2-Undecanone	0.02	Aliphatic ketone
Tridecane	0.08	Alkane
Hexyl tiglate	0.01	Aliphatic ester
Bicycloelemene	0.01	Sesquiterpene

$\alpha$ -Terpinyl acetate	0.03	Monoterpenic ester
Cyclosativene I	0.03	Sesquiterpene
Cyclosativene II	0.16	Sesquiterpene
Neryl acetate	16.67	Monoterpenic ester
$\alpha$ -Ylangene	0.10	Sesquiterpene
$\alpha$ -Copaene	0.85	Sesquiterpene
Italicene isomer	0.57	Sesquiterpene
Geranyl acetate	0.05	Monoterpenic ester
Sativene	0.01	Sesquiterpene
Hexyl hexanoate	0.03	Aliphatic ester
Isoitalicene	0.11	Sesquiterpene
Italicene	2.13	Sesquiterpene
Isocaryophyllene	0.08	Sesquiterpene
$\alpha$ -Gurjunene	0.05	Sesquiterpene
$\alpha$ -Cedrene	0.04	Sesquiterpene
<i>cis</i> - $\alpha$ -Bergamotene	0.96	Sesquiterpene
$\beta$ -Caryophyllene	4.36	Sesquiterpene
$\beta$ -Copaene	0.04	Sesquiterpene
<i>trans</i> - $\alpha$ -Bergamotene	0.94	Sesquiterpene
Italidione I (4,6,9-Trimethyldec-8-ene-3,5-dione)	1.97	$\beta$ -Diketone
Unknown	0.04	Sesquiterpene
Cadina-4,11-diene	0.05	Sesquiterpene
$\alpha$ -Humulene	0.20	Sesquiterpene
$\alpha$ -Acoradiene	0.27	Sesquiterpene
Neryl propionate	2.11	Monoterpenic ester
( <i>E</i> )- $\beta$ -Farnesene	0.40	Sesquiterpene
4,5-diepi-Aristolochene	0.29	Sesquiterpene
Unknown	0.23	Sesquiterpene
Selina-4,11-diene	2.40	Sesquiterpene
$\alpha$ -Amorphene	0.16	Sesquiterpene
<i>trans</i> -Cadina-1(6),4-diene	0.07	Sesquiterpene
$\gamma$ -Curcumene	9.67	Sesquiterpene
$\beta$ -Selinene	8.95	Sesquiterpene
Italidione II isomer I (2,4,6,9-Tetramethyldec-8-ene-3,5-dione)	1.70	$\beta$ -Diketone
<i>ar</i> -Curcumene	1.73	Sesquiterpene
Valencene	0.23	Sesquiterpene
$\alpha$ -Selinene	6.16	Sesquiterpene
Italidione II isomer II (5,7,10-Trimethylundec-9-ene-4,6-dione)	1.49	$\beta$ -Diketone
Italidione II analog	0.56	$\beta$ -Diketone
$\delta$ -Amorphene	0.35	Sesquiterpene
$\beta$ -Bisabolene	0.10	Sesquiterpene
10-epi-Italicene ether	0.06	Sesquiterpenic ether

7-epi- $\alpha$ -Selinene	0.15	Sesquiterpene
$\beta$ -Curcumene	0.40	Sesquiterpene
$\gamma$ -Cadinene	0.17	Sesquiterpene
Sesquicineole	0.02	Sesquiterpenic ether
<i>trans</i> -Calamenene	0.04	Sesquiterpene
$\delta$ -Cadinene	0.41	Sesquiterpene
<i>trans</i> -Cadina-1,4-diene	0.09	Sesquiterpene
Italicene ether	0.09	Sesquiterpenic ether
( <i>E</i> )- $\gamma$ -Bisabolene	0.07	Sesquiterpene
$\alpha$ -Cadinene	0.04	Sesquiterpene
Selina-3,7(11)-diene	0.05	Sesquiterpene
( <i>E</i> )- $\alpha$ -Bisabolene	0.10	Sesquiterpene
( <i>E</i> )-Nerolidol	0.06	Sesquiterpenic alcohol
Italidione III isomer I	0.31	$\beta$ -Diketone
Italidione III isomer II	0.49	$\beta$ -Diketone
Italidione III isomer III	0.21	$\beta$ -Diketone
Guaiol	0.13	Sesquiterpenic alcohol
Copaborneol	0.13	Sesquiterpenic alcohol
Eudesm-5-en-11-ol	0.52	Sesquiterpenic alcohol
Unknown	0.19	Oxygenated sesquiterpene
Unknown	0.08	Oxygenated sesquiterpene
Unknown	0.04	Unknown
Neryl angelate?	0.07	Monoterpenic ester
Eudesmol analog?	0.26	Sesquiterpenic alcohol
Caryophylladienol I	0.01	Sesquiterpenic alcohol
$\gamma$ -Eudesmol	0.04	Sesquiterpenic alcohol
$\tau$ -Cadinol	0.04	Sesquiterpenic alcohol
$\tau$ -Muurolol	0.02	Sesquiterpenic alcohol
$\beta$ -Eudesmol	0.08	Sesquiterpenic alcohol
Selin-11-en-4 $\alpha$ -ol	0.30	Sesquiterpenic alcohol
$\alpha$ -Eudesmol	0.06	Sesquiterpenic alcohol
Bulnesol	0.03	Sesquiterpenic alcohol
$\beta$ -Bisabolol	0.08	Sesquiterpenic alcohol
epi- $\alpha$ -Bisabolol	0.01	Sesquiterpenic alcohol
$\alpha$ -Bisabolol	0.01	Sesquiterpenic alcohol
Neryl 4-methylvalerate?	0.10	Monoterpenic ester
Geranyl 4-methylvalerate?	0.03	Monoterpenic ester
Unknown	0.14	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Geranyl hexanoate	0.01	Monoterpenic ester
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
<i>trans</i> -Bisabola-1(6),10-diene-2,3-diol	0.04	Sesquiterpenic alcohol

Unknown	0.02	Unknown
<b>Consolidated total</b>	<b>98.27</b>	

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

Note: no correction factor was applied

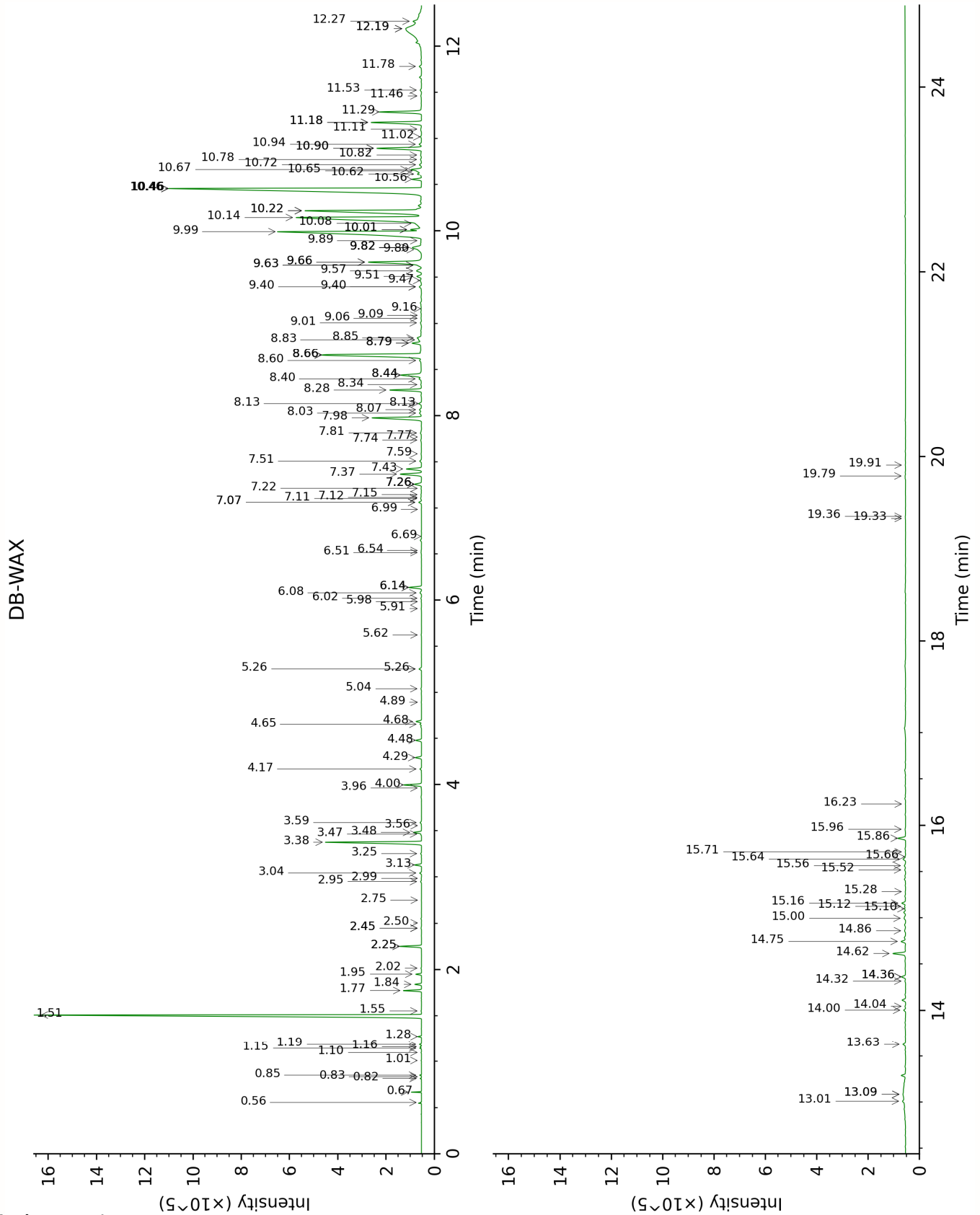
**About "consolidated" data:** The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

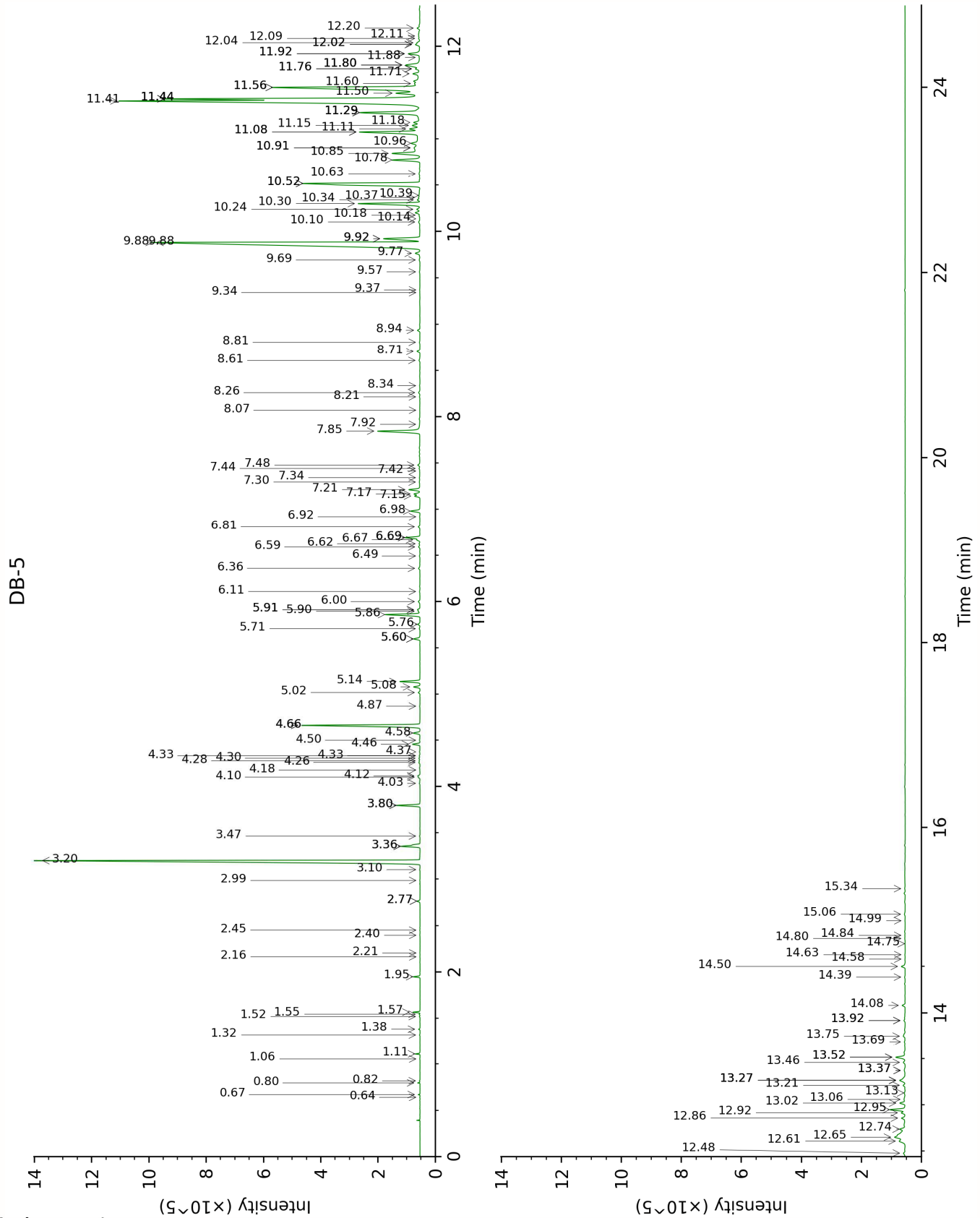
**Unknowns:** Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

**Bracketed value ([xx]):** A bracketed percent value indicate that two or more compound percentage could not be solved due to coelution.

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FULL ANALYSIS DATA

Isovaleral	Column DB-WAX			Column DB-5		
	0.84	886.3	tr	0.64	640.7	tr
2-Methylbutyral	0.82	880.2	0.02	0.67	650.8	0.02
3-Pentanone	1.14	940.9	0.03	0.80	693.1	0.03
2-Ethylfuran	1.01	920.7	0.01	0.82	700.7	0.01
2-Methylbutanol	3.56	1172.5	0.01	1.06	735.7	0.01
2-Methyl-3-pentanone	1.28	960.7	0.08	1.11	743.3	0.07
Unknown HEIT III [m/z 73, 41 (54), 87 (50), 56 (47), 54 (29), 55 (25), 100 (23)... 115? (6)]	1.10	933.9	0.01	1.32	772.3	0.01
Unknown HEIT II [m/z 73, 87 (52), 41 (45), 56 (42), 100 (29)...]	1.16	943.4	0.02	1.38	780.9	0.03
Hexanal	2.02	1045.1	0.02	1.52	799.7	0.01
Octane	0.56	783.3	0.01	1.55	803.1	0.02
2-Methyl-2-heptene	0.67	831.0	0.13	1.57	805.8	0.13
4-Methyl-3-hexanone	1.95	1039.0	0.14	1.95	837.1	0.14
(3Z)-Hexenol	5.98	1348.5	0.01	2.16	854.6	tr
Furfuryl alcohol	9.16	1585.3	0.02	2.21	858.0	0.01
Hexanol	5.62	1322.8	0.01	2.40	873.7	0.01
Isoamyl acetate	2.50	1091.2	tr	2.45	878.2	0.01
Nonane	0.85	892.1	0.03	2.76*	903.9	[0.08]
Bornylene	1.19	947.3	0.04	2.76*	903.9	[0.08]
Isobutyl isobutyrate	2.25*	1067.4	[0.62]	2.99	918.7	0.01
α-Thujene	1.55	1001.5	0.01	3.10	926.4	0.01
α-Pinene	1.51	995.9	14.18	3.20	932.8	14.18
α-Fenchene	1.78	1022.3	0.47	3.36*	943.0	[0.65]
Camphene	1.84	1028.6	0.18	3.36*	943.0	[0.65]
Thuja-2,4(10)-diene	2.45*	1085.9	[0.02]	3.47	950.2	0.01
Sabinene	2.45*	1085.9	[0.02]	3.80*	972.0	[0.62]
β-Pinene	2.25*	1067.4	[0.62]	3.80*	972.0	[0.62]
6-Methyl-5-hepten-2-one	5.26*	1295.1	[0.09]	4.03	987.6	0.02
trans-Dehydroxylinalool oxide	3.59	1175.0	0.05	4.10	992.0	0.04

Myrcene	3.04	1133.7	0.06	4.12	992.9	0.07
6-Methyl-5-hepten-2-ol	7.12	1430.6	0.01	4.18	997.0	0.01
Unknown HEIT I [m/z = 123, 43 (16), 152 (14), 124 (9), 137 (6)]	2.95	1126.6	0.03	4.26	1002.4	0.03
$\alpha$ -Phellandrene	2.99	1129.3	0.01	4.28	1003.6	0.03
Isobutyl 2-methylbutyrate	3.25	1149.6	0.03	4.30	1005.4	0.03
$\Delta$ 3-Carene	2.75	1111.4	tr	4.33*	1007.1	[0.02]
Isobutyl isovalerate	3.47	1165.6	0.02	4.33*	1007.1	[0.02]
(3Z)-Hexenyl acetate	5.04	1279.9	0.02	4.37	1009.7	0.02
$\alpha$ -Terpinene	3.13	1140.3	0.21	4.46	1014.8	0.21
<i>para</i> -Methylanisole	6.51	1386.4	0.02	4.50	1017.5	0.02
<i>para</i> -Cymene	4.29	1226.4	0.20	4.58	1022.4	0.21
1,8-Cineole	3.48	1167.0	0.26	4.66*	1027.5	[3.72]
Limonene	3.38	1158.9	3.45	4.66*	1027.5	[3.72]
(Z)- $\beta$ -Ocimene	3.96	1203.1	0.01	4.87	1040.4	0.01
(E)- $\beta$ -Ocimene	4.17	1217.7	0.05	5.02	1050.1	0.05
Isobutyl angelate	4.68	1254.2	0.18	5.08	1053.9	0.18
$\gamma$ -Terpinene	4.00	1205.5	0.59	5.14	1057.6	0.56
Terpinolene	4.48	1239.7	0.19	5.60*	1086.2	[0.20]
<i>para</i> -Cymenene	6.54	1388.0	0.01	5.60*	1086.2	[0.20]
2-Nonanone	6.02	1351.2	0.02	5.71	1093.1	0.03
2,4-Dimethylheptane-3,5-dione	7.74	1476.4	0.04	5.76	1096.1	0.07
Linalool	8.28	1517.1	1.07	5.86	1102.6	1.07
2-Methylbutyl 2-methylbutyrate	4.65	1252.0	0.05	5.90	1104.9	0.05
Isoamyl isovalerate	4.89	1268.9	0.01	5.91*	1105.9	[0.08]
Nonanal	6.08	1355.3	0.07	5.91*	1105.9	[0.08]
endo-Fenchol	8.60	1541.7	0.06	6.00	1111.5	0.06
$\alpha$ -Campholenal	7.22	1437.8	0.02	6.11	1118.4	0.02
<i>trans</i> -Pinocarveol	9.40*	1603.7	[0.10]	6.36	1134.4	0.05
<i>trans</i> -Verbenol	9.80	1636.0	0.15	6.49	1142.9	0.02
<i>para</i> -Vinylanisole	9.63*	1622.5	[0.11]	6.59	1149.1	0.05
Isoamyl angelate	6.14*	1359.6	[0.44]	6.62	1151.3	0.03
Nerol oxide	7.06*	1426.7	[0.10]	6.67	1154.0	0.09
2-Methylbutyl	6.14*	1359.6	[0.44]	6.69*	1155.5	[0.46]

angelate						
Pinocarvone	8.13*	1505.8	[0.11]	6.69*	1155.5	[0.46]
Borneol	10.01*	1653.4	[0.39]	6.81	1163.0	0.05
Unknown HEIT IV [m/z 83, 100 (34), 55 (33), 43 (21), 84 (21)...]	5.91	1343.2	0.01	6.92	1170.3	0.01
Terpinen-4-ol	8.79*†	1556.8	[0.34]	6.98	1174.2	0.30
4,6- Dimethyloctane- 3,5-dione epimer I	8.83*†	1559.4	[0.08]	7.15	1184.5	0.16
4,6- Dimethyloctane- 3,5-dione epimer II	8.85	1561.1	0.18	7.17	1186.0	0.18
α-Terpineol	10.01*	1653.4	[0.39]	7.22	1188.9	0.33
Myrtenol	11.10	1743.5	0.06	7.30	1194.1	0.01
2-Methylbutyl tiglate	7.15	1432.8	0.03	7.34	1197.2	0.01
Verbenone	9.82*	1637.8	[0.55]	7.42	1201.7	tr
Unknown PIMA 7 [m/z 95, 93 (32), 121 (24), 79 (22), 91 (21), 105 (16)... 154 (2)]	11.18*	1749.6	[2.03]	7.44	1203.5	0.02
Decanal	7.51	1459.6	0.07	7.48	1205.9	0.07
Nerol	11.29	1759.2	1.60	7.85	1230.3	1.59
Hexyl 2- methylbutyrate	6.69	1398.9	0.01	7.92	1235.2	0.02
Hexyl isovalerate	6.99	1421.0	tr	8.07	1245.4	0.01
3-Methylpentyl angelate	7.59	1465.4	0.02	8.22	1255.0	0.01
Unknown HEIT VI [m/z 83, 55 (29), 57 (24), 100 (21), 104 (13)...]	7.11	1429.7	0.03	8.26	1258.1	0.05
Linalyl acetate	8.34	1521.6	0.02	8.34	1263.0	0.01
(3Z)-Hexenyl angelate	8.44*	1529.6	[0.93]	8.61	1281.3	0.04
Hexyl angelate	8.07	1500.7	0.10	8.71	1287.8	0.09
2-Undecanone	8.79*†	1556.8	[0.34]	8.81	1294.7	0.02
Tridecane	5.26*	1295.1	[0.09]	8.94	1303.4	0.08
Hexyl tiglate	9.09	1579.8	0.01	9.34	1331.8	0.01
Bicycloelemene	7.26*	1441.1	[0.27]	9.37	1333.8	0.01
α-Terpinyl acetate	9.90	1643.8	0.02	9.57	1347.5	0.03

Cyclosativene I	7.06*	1426.7	[0.10]	9.69	1356.5	0.03
Cyclosativene II	7.26*	1441.1	[0.27]	9.77	1361.6	0.16
Neryl acetate	10.46*	1689.1	[16.93]	9.88*	1369.8	[16.78]
$\alpha$ -Ylangene	7.26*	1441.1	[0.27]	9.88*	1369.8	[16.78]
$\alpha$ -Copaene	7.37	1449.2	0.85	9.92*	1372.6	[1.42]
Italicene isomer	7.43	1453.3	0.57	9.92*	1372.6	[1.42]
Geranyl acetate	10.78	1715.8	0.04	10.10	1385.2	0.05
Sativene	7.77	1478.8	0.01	10.14	1387.6	0.01
Hexyl hexanoate	9.06	1577.4	0.03	10.18	1390.4	0.03
Isoitalicene	8.03	1497.9	0.10	10.24	1394.8	0.11
Italicene	7.98	1494.2	2.13	10.30	1399.1	2.13
Isocaryophyllene	8.40	1526.4	0.09	10.34	1402.0	0.08
$\alpha$ -Gurjunene	7.81	1482.0	0.05	10.36	1403.8	0.05
$\alpha$ -Cedrene	8.13*	1505.8	[0.11]	10.39	1405.4	0.04
<i>cis</i> - $\alpha$ - Bergamotene	8.44*	1529.6	[0.93]	10.52*	1414.9	[5.32]
$\beta$ -Caryophyllene	8.66*	1546.3	[5.35]	10.52*	1414.9	[5.32]
$\beta$ -Copaene	8.66*	1546.3	[5.35]	10.63	1423.1	0.04
<i>trans</i> - $\alpha$ - Bergamotene	8.66*	1546.3	[5.35]	10.78	1434.3	0.94
Italidione I (4,6,9- Trimethyldec-8- ene-3,5-dione)	12.19*†	1836.8	[3.73]	10.85*†	1439.5	[1.17]
Unknown BOCA IV [m/z 91, 161 (92), 105 (85), 119 (63), 133 (53), 79 (49), 204 (46)]	9.01	1573.6	0.04	10.91*†	1444.0	[0.50]
Cadina-4,11-diene	9.40*	1603.7	[0.10]	10.91*†	1444.0	[0.50]
$\alpha$ -Humulene	9.51	1612.8	0.20	10.96*†	1447.7	[0.60]
$\alpha$ -Acoradiene	9.57	1617.6	0.27	11.08*	1456.7	[2.38]
Neryl propionate	11.18*	1749.6	[2.03]	11.08*	1456.7	[2.38]
( <i>E</i> )- $\beta$ -Farnesene	9.82*	1637.8	[0.55]	11.11	1459.1	0.40
4,5-diepi- Aristolochene	9.63*	1622.5	[0.11]	11.15	1462.0	0.29
Unknown CEDE VI [m/z 119, 91 (85), 93 (77), 105 (76), 79 (61), 134 (60), 94 (49), 204 (46)]	9.66*	1625.2	[2.63]	11.18	1464.3	0.23
Selina-4,11-diene	9.66*	1625.2	[2.63]	11.29*	1472.3	[2.63]
$\alpha$ -Amorphene	9.82*	1637.8	[0.55]	11.29*	1472.3	[2.63]
<i>trans</i> -Cadina- 1(6),4-diene	9.47	1609.2	0.07	11.29*	1472.3	[2.63]
$\gamma$ -Curcumene	9.99	1651.6	9.67	11.41*†	1481.6	[13.77]

β-Selinene	10.14	1663.9	8.95	11.44*†	1483.3	[7.98]
Italidione II isomer I (2,4,6,9-Tetramethyldec-8-ene-3,5-dione)	12.27*†	1843.9	[0.99]	11.44*†	1483.3	[7.98]
ar-Curcumene	10.90*	1726.1	[1.81]	11.44*†	1483.3	[7.98]
Valencene	10.08	1658.8	0.23	11.50*†	1487.8	[0.96]
α-Selinene	10.22*	1669.9	[6.50]	11.56*†	1492.5	[6.91]
Italidione II isomer II (5,7,10-Trimethylundec-9-ene-4,6-dione)	12.19*†	1836.8	[3.73]	11.56*†	1492.5	[6.91]
Italidione II analog	13.01*†	1909.9	[0.49]	11.60†	1495.5	0.23
δ-Amorphene	10.22*	1669.9	[6.50]	11.71	1503.4	0.35
β-Bisabolene	10.46*	1689.1	[16.93]	11.76*	1507.5	[0.15]
10-epi-Italicene ether	11.53	1779.1	0.06	11.76*	1507.5	[0.15]
7-epi-α-Selinene	10.65	1705.5	0.15	11.80*	1510.7	[0.72]
β-Curcumene	10.46*	1689.1	[16.93]	11.80*	1510.7	[0.72]
γ-Cadinene	10.62	1702.5	0.17	11.80*	1510.7	[0.72]
Sesquicineole	10.56	1697.2	0.32	11.88	1517.1	0.02
trans-Calamenene	11.46	1773.8	0.04	11.92*	1520.2	[0.45]
δ-Cadinene	10.67	1706.7	0.41	11.92*	1520.2	[0.45]
trans-Cadina-1,4-diene	10.90*	1726.1	[1.81]	12.02*	1528.0	[0.18]
Italicene ether	11.78	1800.9	0.09	12.02*	1528.0	[0.18]
(E)-γ-Bisabolene	10.72	1711.0	0.08	12.04	1529.5	0.07
α-Cadinene	11.02	1736.5	0.04	12.09	1533.1	0.04
Selina-3,7(11)-diene	10.82	1719.9	0.04	12.11	1535.2	0.05
(E)-α-Bisabolene	10.94	1729.7	0.09	12.20	1541.8	0.10
(E)-Nerolidol	14.00	2001.4	0.07	12.48	1564.0	0.06
Italidione III isomer I	13.09*†	1916.7	[0.72]	12.61	1574.2	0.31
Italidione III isomer II	13.09*†	1916.7	[0.72]	12.65	1577.6	0.49
Italidione III isomer III				12.74	1584.4	0.21
Guaiol	14.36*	2036.0	[0.15]	12.86	1593.7	0.13
Copaborneol	15.16	2113.0	0.15	12.92	1598.2	0.13
Eudesm-5-en-11-ol	14.62	2060.1	0.50	12.95	1600.8	0.52
Unknown MIAL II [m/z 43, 81 (97),	14.75	2072.6	0.17	13.02	1606.5	0.19

135 (71), 95 (62), 204 (61), 71 (59), 207 (56)... 222 (3)]						
Unknown MECA V [m/z 179, 161 (66), 119 (44), 95 (38), 105 (35)... 204 (24), 222 (1)]	14.86	2083.6	0.06	13.06	1609.8	0.08
Unknown HEIT VIII [m/z 182, 109 (58), 69 (50), 41 (42), 43 (40), 139 (31)... 235 (17), 250 (1)...]	14.32	2031.5	0.03	13.13	1615.5	0.04
Neryl angelate?				13.21	1622.3	0.07
Eudesmol analog?				13.27*	1626.7	[0.31]
Caryophylladienol I	16.23	2221.0	0.01	13.27*	1626.7	[0.31]
γ-Eudesmol	15.12	2109.5	0.04	13.27*	1626.7	[0.31]
τ-Cadinol	15.10	2107.0	0.04	13.37*	1635.5	[0.06]
τ-Muurolol	15.28	2125.4	0.02	13.37*	1635.5	[0.06]
β-Eudesmol	15.64	2160.6	0.11	13.46	1642.8	0.08
Selin-11-en-4α-ol	15.86	2183.0	0.30	13.52*	1647.4	[0.37]
α-Eudesmol	15.56	2153.5	0.06	13.52*	1647.4	[0.37]
Bulnesol	15.52	2148.9	0.04	13.69	1661.6	0.03
β-Bisabolol	15.00	2096.7	0.09	13.75	1666.7	0.08
epi-α-Bisabolol	15.71	2168.4	0.01	13.92*	1680.6	[0.04]
α-Bisabolol	15.66	2163.1	0.01	13.92*	1680.6	[0.04]
Neryl 4- methylvalerate?	13.63	1966.6	0.11	14.08	1694.0	0.10
Geranyl 4- methylvalerate?	14.04	2005.4	0.02	14.39	1719.9	0.03
Unknown HEIT X [m/z 43, 69 (32), 198 (29), 41 (27), 93 (26)... 202 (20)...]				14.50	1729.9	0.14
Unknown HEIT XI [m/z 82, 125 (40), 41 (35), 69 (31), 67 (27)... 236? (t)]	15.96	2192.7	0.04	14.58	1736.8	0.01
Geranyl hexanoate	14.36*	2036.0	[0.15]	14.63	1740.9	0.01
Unknown HEIT XII [m/z 109, 127 (46), 138 (45), 81 (27),	19.36	2563.2	0.01	14.75	1751.1	0.01



123 (25)... 220? (2)] Unknown HEIT XIII [m/z 136, 121 (74), 135 (55), 218 (36), 148 (33), 40 (42)... 236? (1)]				14.80	1756.0	0.02
Unknown HEIT XIV [m/z 109, 138 (71), 82 (42), 123 (41), 127 (38)...]	19.33	2560.5	0.01	14.84	1758.9	0.01
Unknown HEIT XVII [m/z 109, 138 (75), 123 (45), 127 (42), 81 (30)...]	19.91	2628.4	0.01	14.99	1772.6	0.01
<i>trans</i> -Bisabola- 1(6),10-diene-2,3- diol	19.79	2614.4	0.02	15.06	1778.6	0.04
Unknown HEIT XIX [m/z 43, 82 (69), 41 (66), 93 (62), 96 (55), 55 (49), 67 (45), 154 (44)...]				15.34	1802.5	0.02
Total reported	97.17%			98.01%		

\*: 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