

Date : mai 31, 2021

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 21E21-PTH02

Customer identification : Blue Yarrow ORGANIC - Bulgaria - Y50105208R

Type : Essential oil

Source : *Achillea millefolium*

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 : mai 31, 2021

Checked and approved by :

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

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PHYSICOCHEMICAL DATA

Physical aspect: Blue liquid

Refractive index: 1.4941 ± 0.0003 (20 °C; method PC-MAT-016)

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	tr	Aliphatic aldehyde
Valeral	tr	Aliphatic aldehyde
2-Ethylfuran	0.02	Furan
Toluene	tr	Simple phenolic
Octene	0.03	Alkene
Hexanal	0.02	Aliphatic aldehyde
Octane	0.02	Alkane
5,5-Dimethyl-2-ethyl-1,3-cyclopentadiene?	tr	Normonoterpene
(2E)-Hexenal	0.01	Aliphatic aldehyde
(3Z)-Hexenol	0.01	Aliphatic alcohol
Hexanol	0.01	Aliphatic alcohol
Unknown	tr	Unknown
3-Acetyl-3-methylcyclopentene	0.01	Aliphatic ketone
Nonene	0.01	Alkene
Santolinatriene	0.18	Monoterpene
Hashishene	0.01	Monoterpene
Tricyclene	0.02	Monoterpene
α -Thujene	0.39	Monoterpene
Artemisiatriene	tr	Monoterpene
α -Pinene	2.20	Monoterpene
Unknown	0.03	Simple phenolic
Unknown	0.01	Monoterpene
α -Fenchene	tr	Monoterpene
Camphene	0.23	Monoterpene
Thuja-2,4(10)-diene	0.01	Monoterpene
Benzaldehyde	0.01	Simple phenolic
6-Methyl-2-heptanone	0.01	Aliphatic ketone
Sabinene	19.77	Monoterpene
β -Pinene	13.97	Monoterpene
Octen-3-ol	0.01	Aliphatic alcohol
6-Methyl-5-hepten-2-one	0.03	Aliphatic ketone
Dehydro-1,8-cineole	tr	Monoterpenic ether
Myrcene	0.54	Monoterpene
2-Pentylfuran	0.05	Furan
Unknown	0.01	Monoterpene
Yomogi alcohol isomer	0.01	Monoterpenic alcohol
α -Phellandrene	0.03	Monoterpene
Pseudolimonene	tr	Monoterpene
Yomogi alcohol	0.17	Monoterpenic alcohol
Δ^3 -Carene	0.01	Monoterpene
α -Terpinene	0.37	Monoterpene
para-Cymene	0.37	Monoterpene
β -Phellandrene	3.18*	Monoterpene
Limonene	0.71	Monoterpene

1,8-Cineole	[3.18]*	Monoterpenic ether
(Z)- β -Ocimene	0.17	Monoterpene
(E)- β -Ocimene	0.43	Monoterpene
γ -Terpinene	0.60	Monoterpene
Artemisia ketone	4.57	Monoterpenic ketone
<i>cis</i> -Sabinene hydrate	0.16	Monoterpenic alcohol
Unknown	tr	Aliphatic ester
<i>cis</i> -Linalool oxide (fur.)	tr	Monoterpenic alcohol
Fenchone	tr	Monoterpenic ketone
Terpinolene	0.19	Monoterpene
para-Cymenene	0.01	Monoterpene
Artemisia alcohol	0.18	Monoterpenic alcohol
<i>trans</i> -Sabinene hydrate	0.09	Monoterpenic alcohol
Linalool	0.30	Monoterpenic alcohol
Nonanal	0.14	Aliphatic aldehyde
2-Methylbutyl 2-methylbutyrate	0.01	Aliphatic ester
Isoamyl isovalerate	0.01	Aliphatic ester
endo-Fenchol	0.02	Monoterpenic alcohol
<i>cis</i> -para-Menth-2-en-1-ol	0.05	Monoterpenic alcohol
Chrysanthenone	0.01	Monoterpenic ketone
4-Hydroxy-4-methylcyclohex-2-enone	0.01	Aliphatic alcohol
Unknown	0.02	Unknown
<i>trans</i> -Pinocarveol	0.08	Monoterpenic alcohol
Camphor	0.38	Monoterpenic ketone
Unknown	0.01	Unknown
Isoborneol	0.03	Monoterpenic alcohol
Nerol oxide	0.04	Aliphatic ether
Pinocarvone	0.10	Monoterpenic ketone
<i>cis</i> -Chrysanthenol	0.11	Monoterpenic alcohol
Borneol	0.22	Monoterpenic alcohol
Unknown	0.02	Unknown
Lavandulol	0.15	Monoterpenic alcohol
Artemisyl acetate	0.02	Monoterpenic ester
Terpinen-4-ol	1.93	Monoterpenic alcohol
Menthol	0.28	Monoterpenic alcohol
Thuj-3-en-10-al	0.01	Monoterpenic aldehyde
para-Cymen-8-ol	tr	Monoterpenic alcohol
α -Terpineol	0.29	Monoterpenic alcohol
Myrtenal	0.06	Monoterpenic aldehyde
Myrtenol	0.06	Monoterpenic alcohol
Safranal	0.02	Monoterpenic aldehyde
Unknown	0.04	Unknown
<i>trans</i> -Piperitol	0.03	Monoterpenic alcohol
Decanal	0.01	Aliphatic aldehyde
Fragranol	tr	Monoterpenic alcohol
β -Cyclocitral	0.01	Monoterpenic aldehyde
<i>trans</i> -Carveol	0.04	Monoterpenic alcohol
Nerol	0.01	Monoterpenic alcohol
<i>trans</i> -Chrysanthenyl acetate	0.07	Monoterpenic ester
Cuminal	0.04	Monoterpenic aldehyde
Neral	0.02	Monoterpenic aldehyde
Piperitone	0.01	Monoterpenic ketone

<i>cis</i> -Chrysanthenyl acetate	0.22	Monoterpenic ester
Geraniol	0.03	Monoterpenic alcohol
Linalyl acetate	0.03	Monoterpenic ester
Chavicol	0.01	Phenylpropanoid
Vitispirane ?	0.01	Terpenic ether
4-Thujen-2 α -yl acetate	0.74	Monoterpenic ester
Bornyl acetate	0.43	Monoterpenic ester
<i>trans</i> -Chrysanthemyl acetate	0.25	Monoterpenic ester
Lavandulyl acetate	0.02	Monoterpenic ester
<i>trans</i> -Pinocarvyl acetate	0.41	Monoterpenic ester
Thymol	0.07	Monoterpenic alcohol
(2 <i>E</i> ,4 <i>E</i>)-Decadienal	0.04	Aliphatic aldehyde
1,4-para-Menthadien-7-ol	0.02	Monoterpenic alcohol
Bicycloelemene	0.01	Sesquiterpene
<i>trans</i> -Carvyl acetate	0.02	Monoterpenic ester
α -Terpinyl acetate	0.10	Monoterpenic ester
Unknown	0.01	Monoterpenic ester
Cyclosativene II	0.03	Sesquiterpene
Neryl acetate	0.05	Monoterpenic ester
α -Copaene	0.10	Sesquiterpene
1,5-diepi- β -Bourbonene	0.06	Sesquiterpene
<i>cis</i> - β -Elemene	0.13	Sesquiterpene
β -Bourbonene	0.51	Sesquiterpene
Lavandulyl propionate	tr	Monoterpenic ester
Geranyl acetate	0.08	Monoterpenic ester
β -Elemene	0.05	Sesquiterpene
(<i>Z</i>)-Jasmone	0.02	Jasmonate
Methyleugenol	0.02	Phenylpropanoid
α -Gurjunene	0.02	Sesquiterpene
β -Caryophyllene	10.76	Sesquiterpene
β -Copaene	0.12	Sesquiterpene
<i>trans</i> - α -Bergamotene	0.06	Sesquiterpene
Isogermacrene D	0.07	Sesquiterpene
Sesquisabinene A	0.25	Sesquiterpene
α -Himachalene	0.01	Sesquiterpene
α -Humulene	1.35	Sesquiterpene
allo-Aromadendrene	0.01	Sesquiterpene
<i>cis</i> -Muurolo-4(15),5-diene	0.06	Sesquiterpene
(<i>E</i>)- β -Farnesene	0.54	Sesquiterpene
<i>trans</i> -Cadina-1(6),4-diene	0.06	Sesquiterpene
γ -Muurolole	0.02	Sesquiterpene
Germacrene D	10.31	Sesquiterpene
ar-Curcumene	0.18	Sesquiterpene
β -Selinene	0.08	Sesquiterpene
(<i>E</i>)- β -Ionone epoxide?	0.02	Ionone or analog
Bicyclogermacrene	0.50	Sesquiterpene
α -Muurolole	0.67	Sesquiterpene
β -Bisabolene	0.06	Sesquiterpene
γ -Cadinene	0.16	Sesquiterpene
Cubebol	0.02	Sesquiterpenic alcohol
(3 <i>E</i> ,6 <i>E</i>)- α -Farnesene	0.08	Sesquiterpene
β -Curcumene	0.01	Sesquiterpene

Matricaria ester isomer II	0.06	Polyne ester
δ-Cadinene	0.06	Sesquiterpene
β-Sesquiphellandrene	0.19	Sesquiterpene
Matricaria ester isomer I	0.29	Polyne ester
<i>trans</i> -Cadin-1,4-diene	0.01	Sesquiterpene
α-Cadinene	0.02	Sesquiterpene
α-Calacorene	tr	Sesquiterpene
Isocaryophyllene epoxide B	0.09	Sesquiterpenic ether
α-Elemol	0.02	Sesquiterpenic alcohol
Unknown	0.02	Oxygenated sesquiterpene
(<i>E</i>)-Nerolidol	0.41	Sesquiterpenic alcohol
Spathulenol	0.11	Sesquiterpenic alcohol
Caryophyllene oxide isomer	0.12	Sesquiterpenic ether
Caryophyllene oxide	1.93	Sesquiterpenic ether
Unknown	0.02	Oxygenated sesquiterpene
Viridiflorol	0.05	Sesquiterpenic alcohol
Copaborneol	0.01	Sesquiterpenic alcohol
Fokienol	0.01	Terpenic alcohol
Humulene epoxide II	0.11	Sesquiterpenic ether
Junenol	0.02	Sesquiterpenic alcohol
10-epi-γ-Eudesmol	0.02	Sesquiterpenic alcohol
1-epi-Cubenol	0.07	Sesquiterpenic alcohol
<i>cis</i> -Cadin-4-en-7-ol	tr	Sesquiterpenic alcohol
Caryophylladienol I	0.02	Sesquiterpenic alcohol
Caryophylladienol II	0.08	Sesquiterpenic alcohol
τ-Cadinol	0.06	Sesquiterpenic alcohol
τ-Muurolol	0.04	Sesquiterpenic alcohol
β-Eudesmol	0.41	Sesquiterpenic alcohol
α-Eudesmol	0.08	Sesquiterpenic alcohol
α-Cadinol	0.01	Sesquiterpenic alcohol
7-epi-α-Eudesmol	0.09	Sesquiterpenic alcohol
Unknown	0.31	Oxygenated sesquiterpene
(3 <i>Z</i>)-Caryophylla-3,8(13)-dien-5β-ol	tr	Sesquiterpenic alcohol
Eudesma-4(15),7-dien-1β-ol	0.02	Sesquiterpenic alcohol
Germacra-4(15),5,10(14)-trien-1α-ol	0.02	Sesquiterpenic alcohol
α-Bisabolol	0.02	Sesquiterpenic alcohol
Unknown	0.07	Oxygenated sesquiterpene
Chamazulene	8.68	Azulene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Phytone	0.18	Terpenic ketone
Palmitoleic acid	0.14	Aliphatic acid
Palmitic acid	0.02	Aliphatic acid
Heneicosane	0.01	Alkane
Phytol	0.05	Diterpenic alcohol
Unknown	0.11	Unknown
Tricosane	0.05	Alkane
Tetracosane	0.01	Alkane
Pentacosane	0.05	Alkane
Consolidated total	96.69%	

*: 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

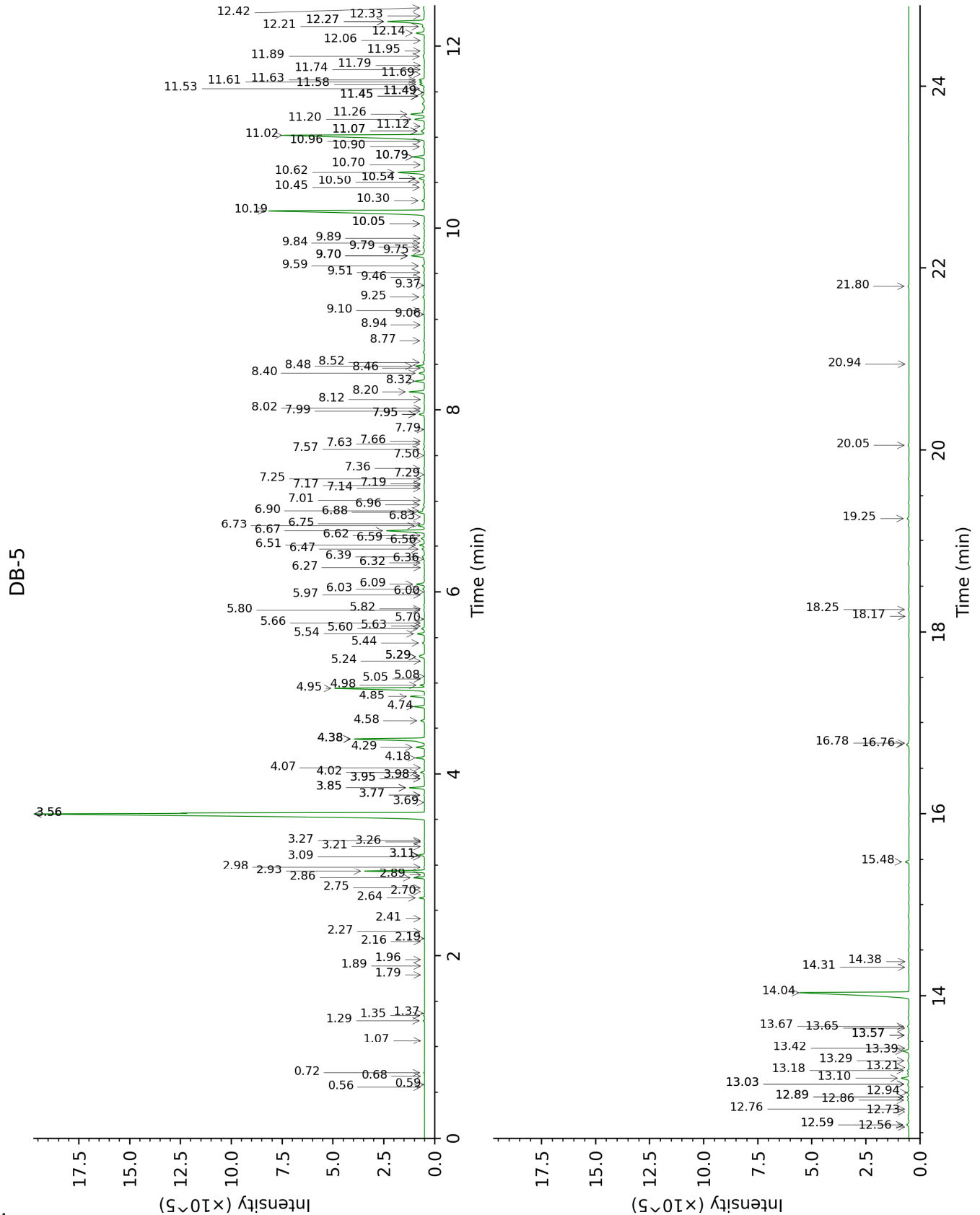
tr: The compound has been detected below 0.005% of total signal.

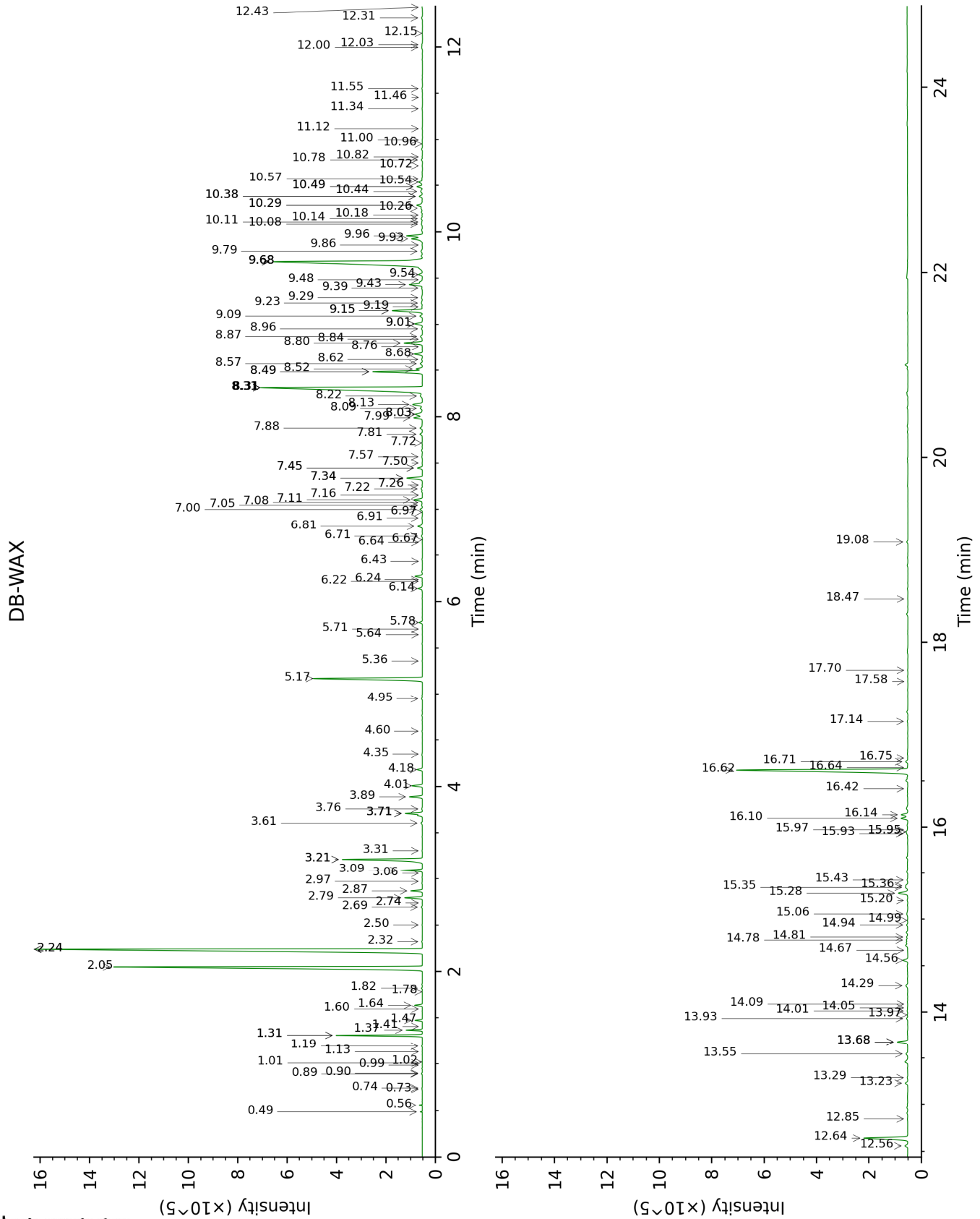
Note: no correction factor was applied

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.

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.





FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
Isovaleral	0.56	642	tr	0.74	888	0.01
2-Methylbutyral	0.59	652	tr	0.73	882	tr
Valeral	0.68	686	tr	1.02	939	tr
2-Ethylfuran	0.72	701	0.02	0.89	917	0.02
Toluene	1.07	756	tr	1.41	1001	tr
Octene	1.29	790	0.03	0.56	816	0.03
Hexanal	1.35	798	0.02	1.82	1044	0.02
Octane	1.37	802	0.02	0.49	781	0.02
5,5-Dimethyl-2-ethyl-1,3-cyclopentadiene?	1.79	839	tr	1.01	938	tr
(2E)-Hexenal	1.89	847	0.01	3.31	1174	0.01
(3Z)-Hexenol	1.96	853	0.01	5.70	1349	0.01
Hexanol	2.16	870	0.01	5.36	1324	0.01
Unknown [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	2.19	873	tr	1.13	959	tr
3-Acetyl-3-methylcyclopentene	2.27	880	0.01	0.99	934	tr
Nonene	2.41	892	0.01	0.90	918	0.01
Santolinatriene	2.64	910	0.18	1.47	1008	0.18
Hashishene	2.70	914	0.01	1.31*	990	2.19
Tricyclene	2.74	917	0.02	1.19	969	0.02
α-Thujene	2.86	924	0.39	1.37	997	0.38
Artemisiatriene	2.89	927	tr	1.78	1040	0.01
α-Pinene	2.93	929	2.20	1.31*	990	[2.19]
Unknown [m/z 122, 121 (36), 107 (33), 79 (27), 93 (25), 77 (25), 43 (20)]	2.98	933	0.03	3.76	1209	0.03
Unknown [m/z 91, 92 (47), 65 (11)... 134 (1)]	3.09	940	0.01	2.32	1095	0.02
α-Fenchene	3.11*	942	0.23	1.60	1021	tr
Camphene	3.11*	942	[0.23]	1.64	1025	0.23
Thuja-2,4(10)-diene	3.21	948	0.01	2.24*	1087	19.79
Benzaldehyde	3.26	952	0.01	7.26	1463	0.01
6-Methyl-2-heptanone	3.27	953	0.01	3.71*	1206	0.74
Sabinene	3.56*	972	34.12	2.24*	1087	[19.79]
β-Pinene	3.56*	972	[34.12]	2.05	1067	13.97
Octen-3-ol	3.69	981	0.01	6.64	1417	0.01
6-Methyl-5-hepten-2-one	3.77*	986	0.03	4.95	1297	0.03
Dehydro-1,8-cineole	3.77*	986	[0.03]	3.06	1154	tr
Myrcene	3.85*	992	0.62	2.80	1133	0.54
2-Pentylfuran	3.85*	992	[0.62]	3.61	1198	0.05

Unknown [m/z 93, 91 (46), 80 (44), 79 (42), 77 (33), 92 (20)... 136 (4)]	3.95*	998	0.02	2.97	1147	0.01
Yomogi alcohol isomer	3.95*	998	[0.02]			
α-Phellandrene	3.98*	1000	0.04	2.69	1125	0.03
Pseudolimonene	3.98*	1000	[0.04]	2.74	1128	tr
Yomogi alcohol	4.02	1003	0.17	6.14	1380	0.17
Δ3-Carene	4.07	1006	0.01	2.50	1109	0.01
α-Terpinene	4.18	1013	0.37	2.87	1139	0.36
para-Cymene	4.29	1021	0.37	4.01	1228	0.36
β-Phellandrene	4.38*	1026	3.90	3.21*	1166	3.19
Limonene	4.38*	1026	[3.90]	3.09	1157	0.71
1,8-Cineole	4.38*	1026	[3.90]	3.21*	1166	[3.19]
(Z)-β-Ocimene	4.58	1039	0.17	3.71*	1206	[0.74]
(E)-β-Ocimene	4.74	1049	0.43	3.89	1219	0.44
γ-Terpinene	4.85	1056	0.60	3.71*	1206	[0.74]
Artemisia ketone	4.95	1062	4.57	5.17	1310	4.56
cis-Sabinene hydrate	4.98	1064	0.16	6.81	1430	0.19
Unknown [m/z 82, 67 (74), 71 (60), 43 (39), 41 (38), 83 (19), 55 (18)... 150 (1)]	5.05	1069	tr	7.72	1497	0.01
cis-Linalool oxide (fur.)	5.08	1071	tr	6.44	1402	tr
Fenchone	5.24	1081	tr	5.64	1344	0.01
Terpinolene	5.29*	1084	0.38	4.18	1240	0.19
para-Cymenene	5.29*	1084	[0.38]	6.24	1387	0.01
Artemisia alcohol	5.29*	1084	[0.38]	7.45*	1477	0.19
trans-Sabinene hydrate	5.44	1094	0.09	7.88	1509	0.09
Linalool	5.54	1100	0.30	7.99	1518	0.32
Nonanal	5.60	1104	0.14	5.78	1354	0.12
2-Methylbutyl 2-methylbutyrate	5.63	1106	0.01	4.35	1253	0.01
Isoamyl isovalerate	5.66	1108	0.01	4.60	1271	0.01
endo-Fenchol	5.70	1111	0.02	8.31*	1543	10.79
cis-para-Menth-2-en-1-ol	5.80	1117	0.05	8.03*	1521	0.39
Chrysanthenone	5.82	1118	0.01	7.08	1449	0.01
4-Hydroxy-4-methylcyclohex-2-enone	5.97	1128	0.01	13.97	2028	0.01
Unknown [m/z 81, 41 (84), 69 (57), 79 (42), 80 (27), 135 (27), 91 (20), 53 (16)...]	6.00	1130	0.02	7.05	1447	0.04
trans-Pinocarveol	6.03	1132	0.08	9.09†	1604	[1.76]
Camphor	6.09	1136	0.38	7.10	1451	0.35

Unknown [m/z 137, 67 (13), 95 (13), 81 (13)... 152 (6)]	6.27	1147	0.01	6.67	1419	tr
Isoborneol	6.32	1151	0.03	9.29	1620	0.05
Nerol oxide	6.36	1153	0.04	6.71	1422	0.04
Pinocarpone	6.39	1155	0.10	7.81	1504	0.10
<i>cis</i> -Chrysanthenol	6.47	1161	0.11	10.29*	1700	0.26
Borneol	6.51	1164	0.22	9.68*	1651	11.10
Unknown [m/z 109, 108 (48), 67 (41), 81 (40), 41 (28)...]	6.56	1166	0.02	7.34*	1469	0.64
Lavandulol	6.59	1168	0.15	9.54	1640	0.15
Artemisyl acetate	6.62	1170	0.02	6.22	1386	0.01
Terpinen-4-ol	6.67	1174	1.93	8.49*	1556	1.95
Menthol	6.73	1177	0.28	9.01*†	1597	1.76
Thuj-3-en-10-al	6.75	1179	0.01	8.62	1566	0.03
para-Cymen-8-ol	6.83	1184	tr	11.46	1799	tr
α-Terpineol	6.88	1187	0.29	9.68*	1651	[11.10]
Myrtenal	6.90	1188	0.06	8.57	1563	0.10
Myrtenol	6.96	1193	0.06	10.78	1742	0.04
Safranal	7.01	1196	0.02	8.76	1578	0.01
Unknown [m/z 95, 93 (32), 121 (24), 79 (22), 91 (21), 105 (16)... 154 (2)]	7.14	1204	0.04	10.82	1745	0.01
<i>trans</i> -Piperitol	7.17	1207	0.03	10.26	1698	0.08
Decanal	7.19	1208	0.01	7.16	1455	tr
Fragranol	7.25	1212	tr	10.96	1757	0.01
β-Cyclocitral	7.29	1215	0.01	8.52	1558	0.24
<i>trans</i> -Carveol	7.36	1219	0.04	11.34	1789	0.04
Nerol	7.50	1229	0.01	11.00	1760	0.02
<i>trans</i> -Chrysanthenyl acetate	7.57	1234	0.07	7.57	1486	0.02
Cuminal	7.63	1238	0.04	10.49*	1717	0.23
Neral	7.66	1240	0.02	9.40	1628	0.03
Piperitone	7.79	1249	0.01	9.86	1665	0.02
<i>cis</i> -Chrysanthenyl acetate	7.95*	1260	0.25	8.03*	1521	[0.39]
Geraniol	7.95*	1260	[0.25]	11.55	1808	0.03
Linalyl acetate	7.99	1262	0.03	8.09	1526	0.10
Chavicol	8.02	1264	0.01	16.42	2271	0.02
Vitispirane ?	8.12	1271	0.01	7.50	1481	0.01
4-Thujen-2α-yl acetate	8.20	1277	0.74	8.80	1580	0.74
Bornyl acetate	8.32	1285	0.43	8.13	1529	0.43
<i>trans</i> -Chrysanthemyl acetate	8.40	1291	0.25	8.49*	1556	[1.95]
Lavandulyl acetate	8.46	1295	0.02	8.68	1571	0.32
<i>trans</i> -Pinocarvyl acetate	8.48	1296	0.41	9.01*†	1597	[1.76]
Thymol	8.52	1299	0.07	15.06	2133	0.07

(2E,4E)-Decadienal	8.77	1312	0.04	11.12	1770	0.02
1,4-para-Menthadien-7-ol	8.94	1324	0.02	13.68*	2000	0.41
Bicycloelemene	9.06	1333	0.01	6.97	1441	tr
<i>trans</i> -Carvyl acetate	9.10	1336	0.02	10.11	1685	0.02
α -Terpinyl acetate	9.25	1346	0.10	9.68*	1651	[11.10]
Unknown [m/z 121, 93 (57), 43 (46), 79 (18), 136 (17)...]	9.37	1355	0.01			
Cyclosativene II	9.46	1361	0.03	6.91	1437	0.03
Neryl acetate	9.51	1365	0.05	10.08	1684	0.04
α -Copaene	9.59	1370	0.10	7.00	1444	0.10
1,5-diepi- β -Bourbonene	9.70*	1378	0.70	7.22	1460	0.06
<i>cis</i> - β -Elemene	9.70*	1378	[0.70]	8.22	1536	0.13
β -Bourbonene	9.70*	1378	[0.70]	7.34*	1469	[0.64]
Lavandulyl propionate	9.75	1382	tr			
Geranyl acetate	9.79	1385	0.08	10.44	1713	0.11
β -Elemene	9.84	1388	0.05	8.31*	1543	[10.79]
(<i>Z</i>)-Jasmone	9.89	1392	0.02	12.31	1875	0.05
Methyleugenol	10.05*	1403	0.05	13.29	1964	0.02
α -Gurjunene	10.05*	1403	[0.05]	7.45*	1477	[0.19]
β -Caryophyllene	10.19	1414	10.76	8.31*	1543	[10.79]
β -Copaene	10.30	1422	0.12	8.31*	1543	[10.79]
<i>trans</i> - α -Bergamotene	10.45	1433	0.06	8.31*	1543	[10.79]
Isogermacrene D	10.50	1437	0.07	8.87	1586	0.09
Sesquisabinene A	10.54*	1440	0.26	9.15*†	1608	[1.76]
α -Himachalene	10.54*	1440	[0.26]	8.84	1584	0.01
α -Humulene	10.62	1446	1.35	9.15*†	1608	[1.76]
allo-Aromadendrene	10.70	1452	0.01	8.96	1592	0.03
<i>cis</i> -Muuro-la-4(15),5-diene	10.79*	1458	0.56	9.23	1615	0.06
(<i>E</i>)- β -Farnesene	10.79*	1458	[0.56]	9.43	1631	0.54
<i>trans</i> -Cadina-1(6),4-diene	10.90	1467	0.06	9.19	1612	0.03
γ -Muuro-lene	10.96	1471	0.02	9.48	1635	0.01
Germacrene D	11.02†	1476	10.57	9.68*	1651	[11.10]
ar-Curcumene	11.07*†	1479	[10.57]	10.54	1722	0.18
β -Selinene	11.07*†	1479	[10.57]	9.79	1660	0.08
(<i>E</i>)- β -Ionone epoxide?	11.12	1483	0.02	12.85	1923	0.02
Bicyclogermacrene	11.20	1489	0.50	9.96	1673	0.65
α -Muuro-lene	11.26	1493	0.67	9.93	1671	0.53
β -Bisabolene	11.45*†	1508	0.33	10.14	1688	0.06
γ -Cadinene	11.45*†	1508	[0.33]	10.29*	1700	[0.26]
Cubebol	11.45*†	1508	[0.33]	12.43	1885	0.02
(3E,6E)- α -Farnesene	11.49*†	1511	[0.33]	10.38*	1708	0.14
β -Curcumene	11.49*†	1511	[0.33]	10.18	1691	0.01

Matricaria ester isomer II	11.53	1515	0.06			
δ-Cadinene	11.58†	1518	0.72	10.38*	1708	[0.14]
β-Sesquiphellandrene	11.61†	1520	[0.72]	10.49*	1717	[0.23]
Matricaria ester isomer I	11.63†	1522	[0.72]	16.14	2242	0.29
<i>trans</i> -Cadina-1,4-diene	11.69	1527	0.01	10.57	1724	0.03
α-Cadinene	11.74	1531	0.02	10.72	1737	0.02
α-Calacorene	11.79	1535	tr	12.02	1849	0.03
Isocaryophyllene epoxide B	11.89	1543	0.09	12.00	1847	0.05
α-Elemol	11.95	1547	0.02	14.01	2032	0.02
Unknown [m/z 138, 96 (100), 95 (85), 109 (74), 110 (60), 105 (57)... 220 (10)]	12.06	1556	0.02	12.15	1860	0.02
(<i>E</i>)-Nerolidol	12.14	1563	0.41	13.68*	2000	[0.41]
Spathulenol	12.22	1568	0.11	14.29	2058	0.10
Caryophyllene oxide isomer	12.27*	1573	2.10	12.56	1897	0.12
Caryophyllene oxide	12.27*	1573	[2.10]	12.64	1904	1.93
Unknown [m/z 109, 43 (95), 81 (81), 93 (76), 69 (75), 95 (74), 107 (71)... 204 (22), 220 (6)]	12.33	1578	0.02			
Viridiflorol	12.42	1585	0.05	13.93	2024	0.05
Copaborneol	12.56	1596	0.01	14.81	2109	0.05
Fokienol	12.59*	1598	0.12	14.99	2127	0.01
Humulene epoxide II	12.59*	1598	[0.12]	13.23	1958	0.11
Junenol	12.73	1609	0.02	13.55	1987	0.08
10-epi-γ-Eudesmol	12.76	1612	0.02	14.05	2035	0.01
1-epi-Cubenol	12.86	1620	0.07	13.68*	2000	[0.41]
<i>cis</i> -Cadin-4-en-7-ol	12.89*	1623	0.08	14.09	2039	tr
Caryophylladienol I	12.89*	1623	[0.08]	15.95*	2223	0.10
Caryophylladienol II	12.94	1626	0.08	15.95*	2223	[0.10]
τ-Cadinol	13.03*	1634	0.08	14.78	2106	0.06
τ-Muurolol	13.03*	1634	[0.08]	14.94	2122	0.04
β-Eudesmol	13.10	1640	0.41	15.28	2156	0.43
α-Eudesmol	13.18	1646	0.08	15.20	2148	0.03
α-Cadinol	13.21	1649	0.01	15.43	2170	0.03
7-epi-α-Eudesmol	13.28	1655	0.09	15.36	2164	0.08
Unknown [m/z 205, 93 (93), 43 (58), 79 (510), 91 (48), 119 (45)... 220 (3)]	13.39	1664	0.31	16.10	2238	0.29
(3 <i>Z</i>)-Caryophylla-3,8(13)-dien-5β-ol	13.42	1666	tr	16.75	2306	tr

Eudesma-4(15),7-dien-1 β -ol	13.57*	1679	0.05	15.93	2221	0.02
Germacra-4(15),5,10(14)-trien-1 α -ol	13.57*	1679	[0.05]	15.97	2226	0.02
α -Bisabolol	13.65	1685	0.02	15.35	2162	0.10
Unknown [m/z 43, 108 (62), 93 (51), 41 (42), 109 (37), 69 (36)...]	13.67	1687	0.07	16.71	2302	0.08
Chamazulene	14.04	1718	8.68	16.62	2292	8.79
Unknown [m/z 107, 93 (54), 105 (54), 91 (53), 119 (53), 109 (39)...220 (13)]	14.32	1742	0.02	17.14	2348	0.03
Unknown [m/z 119, 93 (88), 91 (68), 79 (65), 43 (52), 107 (49)...220 (2)]	14.38	1748	0.01	17.70	2409	0.01
Phytone	15.48	1846	0.18	14.56	2084	0.20
Palmitoleic acid	16.76	1965	0.14			
Palmitic acid	16.78	1967	0.02			
Heneicosane	18.17	2104	0.01	14.67	2095	0.01
Phytol	18.25	2112	0.05	19.08	2564	0.05
Unknown [m/z 95, 81 (69), 55 (50), 93 (43), 69 (39), 107 (39)...]	19.25	2217	0.11			
Tricosane	20.05	2303	0.05	16.64	2295	0.01
Tetracosane	20.94	2403	0.01	17.58	2396	0.01
Pentacosane	21.80	2504	0.05	18.47	2494	0.01
Total identified		96.62%			95.82%	
Total reported		97.32%			96.37%	

*: 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