

Date : avril 27, 2021

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 21D20-PTH07


Customer identification : Frankincense Carteri - Somalia - F301102010R

Type : Essential oil

Source : *Boswellia carteri*

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 : avril 27, 2021

Checked and approved by :

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

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PHYSICOCHEMICAL DATA

Physical aspect: Light yellow liquid

Refractive index: 1.4754 ± 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
2-Methyl-3-buten-2-ol	0.01	Aliphatic alcohol
(E)-2-Methyl-1,3-pentadiene	tr	Alkene
Isovaleral	tr	Aliphatic aldehyde
3-Methyl-2-butanone	tr	Aliphatic ketone
Unknown	tr	Unknown
Toluene	0.05	Simple phenolic
Unknown	tr	Unknown
Unknown	0.01	Alkene
Unknown	tr	Unknown
Unknown	0.01	Unknown
Unknown	tr	Unknown
Hashishene	0.12	Monoterpene
Tricyclene	0.03	Monoterpene
α -Thujene	8.75	Monoterpene
α -Pinene	31.25	Monoterpene
Unknown	0.25	Monoterpene
Camphene	0.43	Monoterpene
α -Fenchene	tr	Monoterpene
Thuja-2,4(10)-diene	0.23	Monoterpene
meta-Cymene	0.06	Monoterpene
Sabinene	5.08	Monoterpene
β -Pinene	3.03	Monoterpene
Pseudolimonene isomer	0.03	Monoterpene
6-Methyl-5-hepten-2-one	tr	Aliphatic ketone
Menthatriene isomer 0	0.07	Monoterpene
Dehydro-1,8-cineole	0.05	Monoterpenic ether
Myrcene	3.54	Monoterpene
6-Methyl-5-hepten-2-ol	0.01	Aliphatic alcohol
α -Phellandrene	2.00	Monoterpene
Pseudolimonene	0.05	Monoterpene
Octanal	0.01	Aliphatic aldehyde
Δ^3 -Carene	1.16	Monoterpene
ortho-Methylanisole	0.04	Simple phenolic
α -Terpinene	0.39	Monoterpene
ortho-Cymene	0.05	Monoterpene
para-Cymene	4.09	Monoterpene
Limonene	14.23	Monoterpene
1,8-Cineole	0.31	Monoterpenic ether
β -Phellandrene	0.48	Monoterpene
Cymene analog	0.01	Monoterpene
(Z)- β -Ocimene	0.11	Monoterpene
Unknown	0.02	Unknown
(E)- β -Ocimene	0.05	Monoterpene
Unknown	tr	Unknown
γ -Terpinene	0.70	Monoterpene

<i>cis</i> -Sabinene hydrate	0.01	Monoterpenic alcohol
Unknown	0.07	Oxygenated monoterpene
<i>cis</i> -Linalool oxide (fur.)	0.01	Monoterpenic alcohol
Octanol	0.03	Aliphatic alcohol
Unknown	0.01	Oxygenated monoterpene
α -Pinene oxide analog	0.01	Monoterpenic ether
Isoterpinolene	0.01	Monoterpene
para-Cymenene	0.23	Monoterpene
Terpinolene	0.02	Monoterpene
6,7-Epoxymyrcene	0.01	Monoterpenic ether
<i>trans</i> -Sabinene hydrate	0.01	Monoterpenic alcohol
Rosefuran	0.01	Monoterpenic ether
Linalool	0.08	Monoterpenic alcohol
Perillene	0.03	Monoterpenic ether
Unknown	0.01	Monoterpenic alcohol
Verbenol analog?	tr	Monoterpenic alcohol
β -Thujone	0.13	Monoterpenic ketone
Unknown	0.01	Oxygenated monoterpene
<i>cis</i> -para-Menth-2-en-1-ol	0.02	Monoterpenic alcohol
α -Campholenal	0.09	Monoterpenic aldehyde
<i>cis</i> -Limonene oxide	0.01	Monoterpenic ether
allo-Ocimene	0.02	Monoterpene
<i>trans</i> -Pinocarveol	0.30	Monoterpenic alcohol
<i>trans</i> -Limonene oxide	0.01	Monoterpenic ether
<i>cis</i> -Verbenol	0.01	Monoterpenic alcohol
<i>trans</i> -Sabinol	0.10	Monoterpenic alcohol
<i>trans</i> -Verbenol	0.14	Monoterpenic alcohol
meta-Mentha-4,6-dien-8-ol	0.17	Monoterpenic alcohol
Unknown	0.04	Oxygenated monoterpene
Pinocamphone	0.01	Monoterpenic ketone
Sabinaketone	0.03	Normonoterpenic ketone
Pinocarvone	0.02	Monoterpenic ketone
Borneol	0.03	Monoterpenic alcohol
α -Phellandren-8-ol	0.47	Monoterpenic alcohol
<i>cis</i> -Sabinol	0.13	Monoterpenic alcohol
Umbellulone	0.02	Monoterpenic ketone
Terpinen-4-ol	0.76	Monoterpenic alcohol
meta-Cymen-8-ol	0.01	Monoterpenic alcohol
Thuj-3-en-10-al	0.01	Monoterpenic aldehyde
para-Cymen-8-ol	0.10	Monoterpenic alcohol
α -Terpineol	0.38	Monoterpenic alcohol
<i>cis</i> -Piperitol	0.14	Monoterpenic alcohol
<i>cis</i> - α -Phellandrene epoxide (IPP vs Me)	0.18	Monoterpenic ether
Myrtenol	0.02	Monoterpenic alcohol
Verbenone	0.27	Monoterpenic ketone
<i>trans</i> -Piperitol	0.03	Monoterpenic alcohol
Octyl acetate	0.14	Aliphatic ester
<i>trans</i> -Carveol	0.16	Monoterpenic alcohol
<i>cis</i> -Carveol	0.06	Monoterpenic alcohol
Methyl decyl ether	0.03	Aliphatic ether
Cuminal	0.02	Monoterpenic aldehyde
Hexyl 2-methylbutyrate	tr	Aliphatic ester

Carvone	0.10	Monoterpenic ketone
Carvotanacetone	0.07	Monoterpenic ketone
Piperitone	0.06	Monoterpenic ketone
3,5-Dimethoxytoluene	0.05	Simple phenolic
Unknown	0.06	Oxygenated monoterpene
Bornyl acetate	0.20	Monoterpenic ester
para-Cymen-7-ol	tr	Monoterpenic alcohol
Carvacrol	0.09	Monoterpenic alcohol
Thymol	0.02	Monoterpenic alcohol
Unknown	0.02	Unknown
Unknown	tr	Monoterpenic alcohol
Bicycloelemene	0.01	Sesquiterpene
Unknown	0.01	Unknown
α -Cubebene	0.21	Sesquiterpene
α -Terpinyl acetate	0.01	Monoterpenic ester
Cyclosativene II	0.02	Sesquiterpene
α -Ylangene	0.03	Sesquiterpene
α -Copaene	0.69	Sesquiterpene
β -Bourbonene	0.13	Sesquiterpene
β -Cubebene	0.06	Sesquiterpene
β -Elemene	0.52	Sesquiterpene
Isocaryophyllene	0.03	Sesquiterpene
α -Gurjunene	0.09	Sesquiterpene
β -Caryophyllene	3.67	Sesquiterpene
β -Copaene	0.05	Sesquiterpene
γ -Elemene	0.02	Sesquiterpene
<i>trans</i> - α -Bergamotene	0.11	Sesquiterpene
6,9-Guaiadiene	0.02	Sesquiterpene
<i>trans</i> -Muuroala-3,5-diene	0.14	Sesquiterpene
α -Humulene	0.63	Sesquiterpene
allo-Aromadendrene	0.15	Sesquiterpene
<i>cis</i> -Muuroala-4(15),5-diene	0.04	Sesquiterpene
<i>trans</i> -Cadina-1(6),4-diene	0.18	Sesquiterpene
γ -Muurolene	0.39	Sesquiterpene
Germacrene D	0.15	Sesquiterpene
β -Selinene	0.34	Sesquiterpene
<i>trans</i> -Muuroala-4(15),5-diene	0.03	Sesquiterpene
δ -Selinene	0.15	Sesquiterpene
α -Selinene	0.27	Sesquiterpene
Bicyclogermacrene	0.01	Sesquiterpene
Viridiflorene	0.01	Sesquiterpene
epi-Cubebol	0.04	Sesquiterpenic alcohol
α -Muurolene	0.20	Sesquiterpene
δ -Guaiene	0.02	Sesquiterpene
γ -Cadinene	0.55	Sesquiterpene
Cubebol	0.08	Sesquiterpenic alcohol
<i>trans</i> -Calamenene	0.07	Sesquiterpene
δ -Cadinene	1.28	Sesquiterpene
<i>trans</i> -Cadina-1,4-diene	0.09	Sesquiterpene
α -Cadinene	0.05	Sesquiterpene
α -Calacorene	0.06	Sesquiterpene
α -Elemol	0.07	Sesquiterpenic alcohol

Isocaryophyllene epoxide B	0.03	Sesquiterpenic ether
Germacrene B	0.05	Sesquiterpene
Elemicin	0.04	Phenylpropanoid
Palustrol	0.03	Sesquiterpenic alcohol
Unknown	0.02	Oxygenated sesquiterpene
Spathulenol	0.10	Sesquiterpenic alcohol
Germacrene D-4-ol	0.09	Sesquiterpenic alcohol
Caryophyllene oxide isomer	0.01	Sesquiterpenic ether
Caryophyllene oxide	0.55	Sesquiterpenic ether
Viridiflorol	0.26	Sesquiterpenic alcohol
Copaborneol	0.17	Sesquiterpenic alcohol
Humulene epoxide II	0.10	Sesquiterpenic ether
10-epi-Cubenol	0.20	Sesquiterpenic alcohol
1-epi-Cubenol	0.13	Sesquiterpenic alcohol
τ -Muurolol	0.05	Sesquiterpenic alcohol
τ -Cadinol	0.74	Sesquiterpenic alcohol
α -Muurolol	0.15	Sesquiterpenic alcohol
β -Eudesmol	0.07	Sesquiterpenic alcohol
α -Eudesmol	0.06	Sesquiterpenic alcohol
α -Cadinol	0.06	Sesquiterpenic alcohol
Unknown	0.01	Oxygenated sesquiterpene
(3Z)-Caryophylla-3,8(13)-dien-5 β -ol	0.13	Sesquiterpenic alcohol
Cadalene	0.01	Sesquiterpene
Germacra-4(15),5,10(14)-trien-1 α -ol	0.02	Sesquiterpenic alcohol
Shyobunol	0.01	Sesquiterpenic alcohol
α -Phellandrene dimer II	0.13	Diterpene
α -Phellandrene dimer III	0.02	Diterpene
α -Phellandrene dimer IV	0.02	Diterpene
(3E)-Cembrene A	0.24	Diterpene
meta-Camphorene	tr	Diterpene
para-Camphorene	0.02	Diterpene
Cembrene C	0.08	Diterpene
Verticilla-4(20),7,11-triene	0.05	Diterpene
Cembrenol	0.15	Diterpenic alcohol
Serratol	0.81	Diterpenic alcohol
Incensole	0.54	Diterpenic alcohol
Incensyl acetate	0.06	Diterpenic ester
Consolidated total	97.90%	

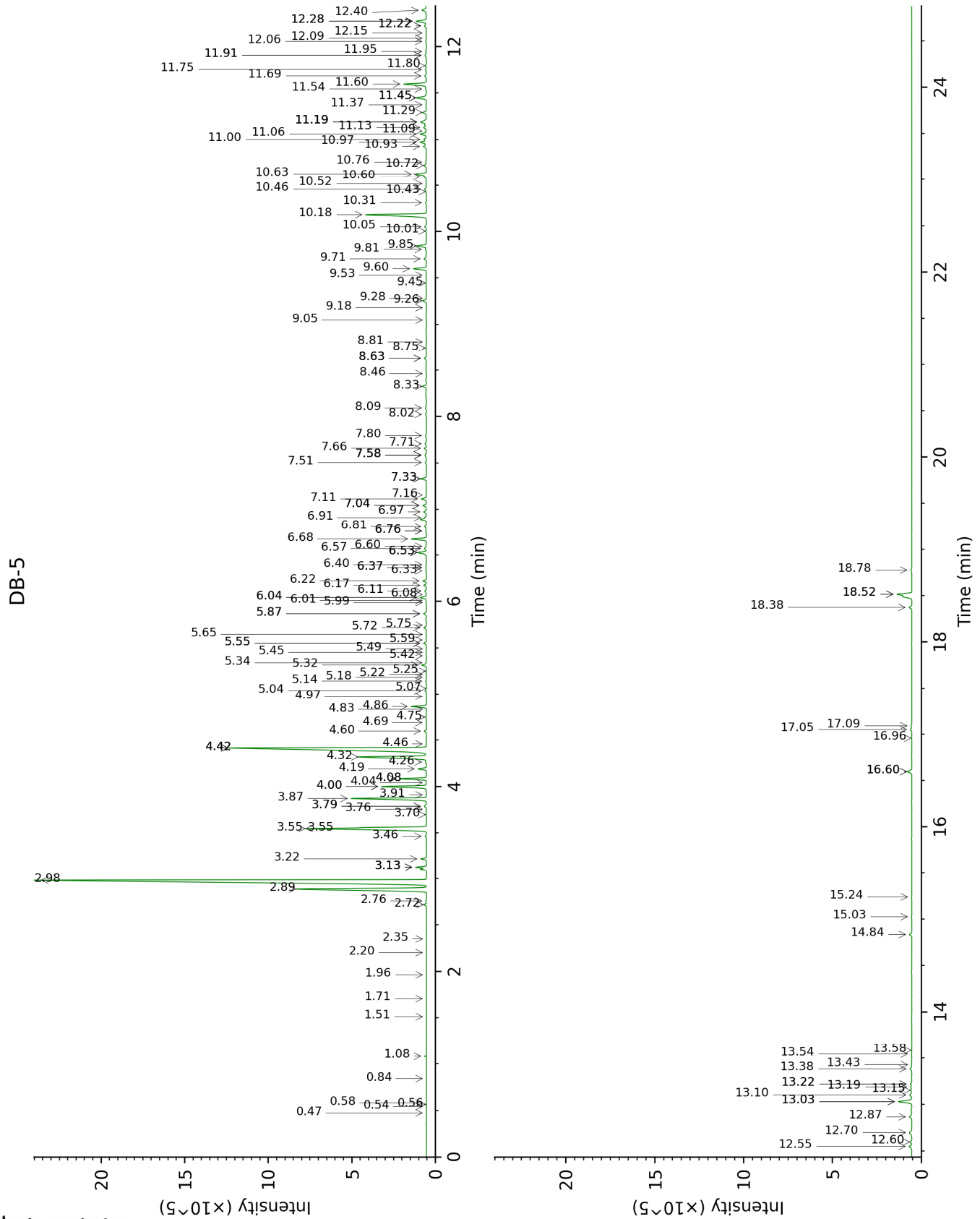
tr: The compound has been detected below 0.005% of total signal.

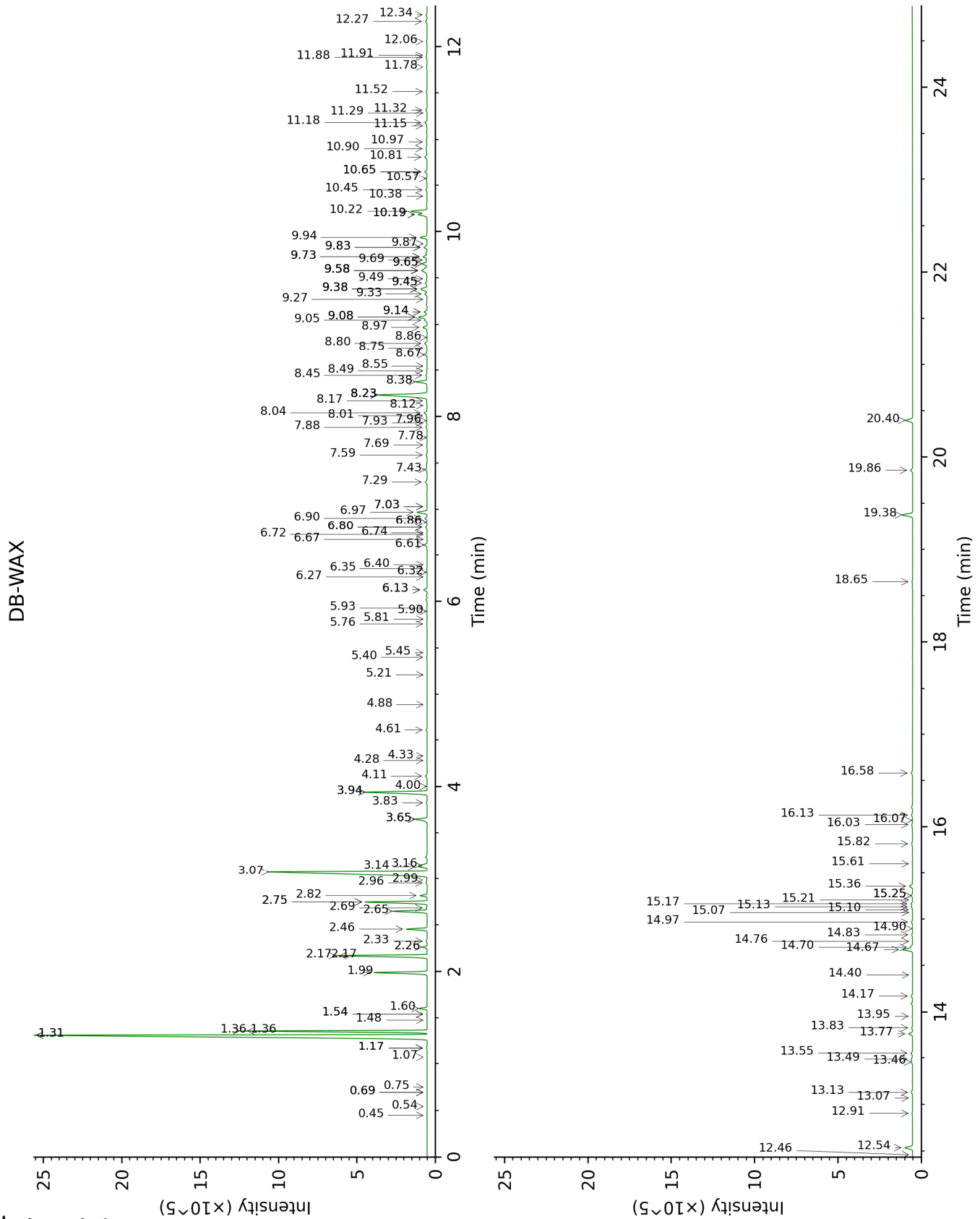
Note: no correction factor was applied

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	%
2-Methyl-3-buten-2-ol	0.47	601	0.01	1.48	1014	0.01
(E)-2-Methyl-1,3-pentadiene	0.54	631	tr	0.45	767	tr
Isovaleral	0.56	639	tr	0.69*	882	0.01
3-Methyl-2-butanone	0.58	646	tr	0.75	901	0.01
Unknown [m/z 93, 91 (70), 77 (48), 108 (42)]	0.84	722	tr	0.54	823	tr
Toluene	1.08	758	0.05	1.36*	1003	8.85
Unknown [m/z 109, 67 (39), 81 (14), 41 (14), 55 (10), 110 (9)... 124 (6)]	1.51	816	tr			
Unknown [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)]	1.71	833	0.01	0.69*	882	[0.01]
Unknown [m/z 109, 43 (28), 124 (28), 41 (14), 55 (11), 79 (9), 81 (8)...]	1.96	855	tr	1.54*	1021	0.02
Unknown [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	2.20	876	0.01	1.07	956	0.01
Unknown [m/z 119, 91 (35), 79 (17), 77 (13), 120 (11), 117 (9)... 134 (1)]	2.35	888	tr	1.17*	972	0.04
Hashishene	2.72	917	0.12	1.31*	997	31.51
Tricyclene	2.76	920	0.03	1.17*	972	[0.04]
α-Thujene	2.89	928	8.75	1.36*	1003	[8.85]
α-Pinene	2.98	935	31.25	1.31*	997	[31.51]
Unknown [m/z 91, 92 (47), 65 (11)... 134 (1)]	3.13*	945	0.68	2.26	1094	0.25
Camphene	3.13*	945	[0.68]	1.60	1027	0.43
α-Fenchene	3.13*	945	[0.68]	1.54*	1021	[0.02]
Thuja-2,4(10)-diene	3.22	951	0.23	2.17*	1085	5.34
meta-Cymene	3.46	967	0.06	2.75*	1134	3.58
Sabinene	3.55*	973	8.11	2.17*	1085	[5.34]

β-Pinene	3.55*	973	[8.11]	1.99	1066	3.03
Pseudolimonene isomer	3.70	983	0.03	2.33	1101	0.06
6-Methyl-5-hepten-2-one	3.76	987	tr	4.88	1298	0.01
Menthatriene isomer 0	3.79*	989	0.13	2.96	1150	0.07
Dehydro-1,8-cineole	3.79*	989	[0.13]	2.99	1153	0.05
Myrcene	3.87	995	3.54	2.75*	1134	[3.58]
6-Methyl-5-hepten-2-ol	3.91	997	0.01	6.74	1430	0.02
α-Phellandrene	4.00*	1004	2.15	2.65	1126	2.00
Pseudolimonene	4.00*	1004	[2.15]	2.68	1129	0.05
Octanal	4.04	1006	0.01	4.28	1253	0.01
Δ ³ -Carene	4.08*	1009	1.20	2.46	1111	1.16
ortho-Methylanisole	4.08*	1009	[1.20]	5.76	1358	0.04
α-Terpinene	4.19	1016	0.39	2.82	1140	0.39
ortho-Cymene	4.26	1020	0.05	3.94*	1227	4.04
para-Cymene	4.32	1024	4.09	3.94*	1227	[4.04]
Limonene	4.42*	1030	14.97	3.07	1160	14.23
1,8-Cineole	4.42*	1030	[14.97]	3.16	1167	0.31
β-Phellandrene	4.42*	1030	[14.97]	3.14	1165	0.48
Cymene analog	4.46	1033	0.01	4.33	1256	0.01
(Z)-β-Ocimene	4.60	1041	0.11	3.65*	1206	0.85
Unknown [m/z 109, 43 (57), 91 (28), 67 (25), 93 (24), 95 (22), 77 (21), 137 (21), 41 (17), 79 (14)...]	4.69	1047	0.02			
(E)-β-Ocimene	4.75	1051	0.05	3.82	1219	0.04
Unknown [m/z 109, 45 (67), 41 (40), 67 (39), 81 (33), 79 (27), 95 (24), 91 (23), 82 (21), 55 (21), 93 (20)...]	4.83	1056	tr	6.72	1429	0.01
γ-Terpinene	4.86	1058	0.70	3.65*	1206	[0.85]
cis-Sabinene hydrate	4.98	1065	0.01	6.67	1425	0.01
Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	5.04	1069	0.07	4.61	1277	0.06
cis-Linalool oxide (fur.)	5.06	1071	0.01	6.35	1402	0.03
Octanol	5.14	1076	0.03	8.01	1527	0.03
Unknown [m/z 43, 94 (63), 109 (61),	5.18	1078	0.01	7.03*	1452	0.03

59 (55), 79 (51)...152 (2)]						
α -Pinene oxide analog	5.22	1080	0.01	5.21	1319	tr
Isoterpinolene	5.25	1083	0.01	4.00	1232	0.01
para-Cymenene	5.32	1087	0.23	6.13*	1385	0.23
Terpinolene	5.34	1088	0.02	4.11	1240	0.10
6,7-Epoxy-myrcene	5.42	1093	0.01	5.90	1368	0.01
<i>trans</i> -Sabinene hydrate	5.45	1096	0.01	7.78	1508	0.01
Rosefuran	5.49	1098	0.01	5.81	1362	tr
Linalool	5.55*	1102	0.13	7.88	1517	0.08
Perillene	5.55*	1102	[0.13]	5.93	1371	0.03
Unknown [m/z 119, 109 (94), 43 (61), 95 (56), 91 (48), 77 (32), 152 (32), 137 (31), 134 (24)]	5.59	1104	0.01	8.23*	1544	4.23
Verbenol analog?	5.65	1108	tr	8.12	1535	0.01
β -Thujone	5.72	1113	0.13	6.13*	1385	[0.23]
Unknown [m/z 109, 91 (57), 93 (47), 81 (44), 77 (40)... 154 (1)]	5.75	1114	0.01			
<i>cis</i> -para-Menth-2-en-1-ol	5.87*	1122	0.15	7.93	1520	0.02
α -Campholenal	5.87*	1122	[0.15]	6.80*	1435	0.11
<i>cis</i> -Limonene oxide	5.99	1130	0.01	6.27	1395	tr
allo-Ocimene	6.01	1131	0.02	5.45	1336	0.01
<i>trans</i> -Pinocarveol	6.04*	1133	0.31	8.97	1602	0.30
<i>trans</i> -Limonene oxide	6.04*	1133	[0.31]	6.40	1405	0.01
<i>cis</i> -Verbenol	6.08	1136	0.01	9.05	1608	0.16
<i>trans</i> -Sabinol	6.11	1138	0.10	9.58*	1652	0.67
<i>trans</i> -Verbenol	6.18	1142	0.14	9.33	1631	0.16
meta-Mentha-4,6-dien-8-ol	6.22	1145	0.17	9.14*	1615	0.20
Unknown [m/z 109, 81 (39), 41 (38), 95 (24)... 152 (1)]	6.33	1152	0.04			
Pinocamphone	6.37*	1154	0.04	7.03*	1452	[0.03]
Sabinaketone	6.37*	1154	[0.04]	8.49	1564	0.03
Pinocarvone	6.40	1156	0.02	7.69	1502	0.02
Borneol	6.53*	1165	0.51	9.58*	1652	[0.67]
α -Phellandren-8-ol	6.53*	1165	[0.51]	9.94	1681	0.47
<i>cis</i> -Sabinol	6.57	1167	0.13	10.65*	1741	0.16
Umbellulone	6.60	1169	0.02	8.75	1584	0.02
Terpinen-4-ol	6.68	1174	0.76	8.38	1555	0.78
meta-Cymen-8-ol	6.76*	1180	0.05	11.29	1795	0.01

Thuj-3-en-10-al	6.76*	1180	[0.05]	8.55	1568	0.01
para-Cymen-8-ol	6.81	1183	0.10	11.32	1798	0.09
α -Terpineol	6.91	1189	0.38	9.58*	1652	[0.67]
cis-Piperitol	6.97	1193	0.14	9.38*	1635	0.61
cis- α -Phellandrene epoxide (IPP vs Me)	7.04*	1198	0.20	10.81	1754	0.18
Myrtenol	7.04*	1198	[0.20]	10.65*	1741	[0.16]
Verbenone	7.11	1202	0.27	9.38*	1635	[0.61]
trans-Piperitol	7.16	1205	0.03	10.18*	1701	0.67
Octyl acetate	7.33*	1217	0.31	6.90	1443	0.14
trans-Carveol	7.33*	1217	[0.31]	11.18	1786	0.16
cis-Carveol	7.51	1228	0.06	11.52	1815	0.06
Methyl decyl ether	7.58*	1234	0.12	5.40	1332	0.03
Cuminal	7.58*	1234	[0.12]	10.38	1718	0.02
Hexyl 2-methylbutyrate	7.58*	1234	[0.12]	6.32	1399	tr
Carvone	7.66	1239	0.10	9.83*	1672	0.24
Carvotanacetone	7.71	1242	0.07	9.27	1626	0.02
Piperitone	7.80	1248	0.06	9.69	1661	0.06
3,5-Dimethoxytoluene	8.02	1263	0.05	11.15	1783	0.04
Unknown [m/z 109, 41 (22), 81 (14), 43 (11)... 152 (4)]	8.09	1268	0.06			
Bornyl acetate	8.33	1284	0.20	8.04	1529	0.22
para-Cymen-7-ol	8.46	1293	tr	13.95	2040	0.02
Carvacrol	8.63*	1304	0.11	15.13	2156	0.09
Thymol	8.63*	1304	[0.11]	14.90	2133	0.02
Unknown [m/z 69, 41 (75), 55 (58), 83 (33), 121 (33)...]	8.75	1312	0.02			
Unknown [m/z 97, 112 (92), 83 (62), 43 (44), 41 (25)... 170? (4)]	8.81	1317	tr	14.76	2119	tr
Bicycloelemene	9.05	1334	0.01	6.86*	1440	0.04
Unknown [m/z 133, 105 (45), 91 (38), 119 (36)... 150 (3)]	9.18	1343	0.01			
α -Cubebene	9.26	1348	0.21	6.61	1421	0.18
α -Terpinyl acetate	9.28	1350	0.01	9.49	1644	0.03
Cyclosativene II	9.45	1362	0.02	6.80*	1435	[0.11]
α -Ylangene	9.53	1368	0.03	6.86*	1440	[0.04]
α -Copaene	9.60	1373	0.69	6.97	1448	0.72
β -Bourbonene	9.71	1380	0.13	7.30	1472	0.16
β -Cubebene	9.81	1388	0.06	7.59	1494	0.07
β -Elemene	9.85	1390	0.52	8.23*	1544	[4.23]
Isocaryophyllene	10.01	1401	0.03	7.96	1522	0.03
α -Gurjunene	10.05	1405	0.09	7.43	1482	0.15

β-Caryophyllene	10.18	1414	3.67	8.23*	1544	[4.23]
β-Copaene	10.31	1424	0.05	8.17	1539	0.05
γ-Elemene	10.43	1433	0.02	8.86	1593	0.01
<i>trans</i> -α-Bergamotene	10.46	1435	0.11	8.23*	1544	[4.23]
6,9-Guaiadiene	10.52	1440	0.02	8.45	1561	0.12
<i>trans</i> -Muuroala-3,5-diene	10.60	1445	0.14	8.67	1578	0.19
α-Humulene	10.63	1448	0.63	9.08*	1610	0.70
allo-Aromadendrene	10.72	1454	0.15	8.80	1588	0.21
<i>cis</i> -Muuroala-4(15),5-diene	10.76	1457	0.04	9.14*	1615	[0.20]
<i>trans</i> -Cadina-1(6),4-diene	10.93	1470	0.18	9.08*	1610	[0.70]
γ-Muurolene	10.97	1473	0.39	9.38*	1635	[0.61]
Germacrene D	11.00	1476	0.15	9.58*	1652	[0.67]
β-Selinene	11.06	1480	0.34	9.66*	1658	0.36
<i>trans</i> -Muuroala-4(15),5-diene	11.09	1482	0.03	9.66*	1658	[0.36]
δ-Selinene	11.13	1485	0.15	9.45*	1641	0.16
α-Selinene	11.19*	1490	0.41	9.73*	1664	0.30
Bicyclogermacrene	11.19*	1490	[0.41]	9.87	1675	0.01
Viridiflorene	11.19*	1490	[0.41]	9.45*	1641	[0.16]
epi-Cubebol	11.19*	1490	[0.41]	11.78	1839	0.04
α-Muurolene	11.29	1497	0.20	9.83*	1672	[0.24]
δ-Guaiene	11.37	1503	0.02	9.73*	1664	[0.30]
γ-Cadinene	11.45*	1509	0.62	10.18*	1701	[0.67]
Cubebol	11.45*	1509	[0.62]	12.34	1889	0.08
<i>trans</i> -Calamenene	11.54	1517	0.07	10.98	1768	0.06
δ-Cadinene	11.60	1521	1.28	10.22	1704	1.19
<i>trans</i> -Cadina-1,4-diene	11.69	1528	0.09	10.45	1724	0.09
α-Cadinene	11.75	1533	0.05	10.57	1734	0.05
α-Calacorene	11.80	1536	0.06	11.88	1848	0.07
α-Elemol	11.91*	1545	0.10	13.83	2028	0.07
Isocaryophyllene epoxide B	11.91*	1545	[0.10]	11.91	1850	0.03
Germacrene B	11.95	1548	0.05	10.90	1762	0.17
Elemicin	12.06	1557	0.04	15.25*	2168	0.09
Palustrol	12.09	1560	0.03	12.06	1864	0.04
Unknown [m/z 152, 109 (61), 43 (21), 137 (16), 151 (16)... 222 (6)]	12.15	1564	0.02			
Spathulenol	12.22*	1570	0.12	14.17	2061	0.10
Germacrene D-4-ol	12.22*	1570	[0.12]	13.46	1992	0.09
Caryophyllene oxide isomer	12.28*	1574	0.63	12.46	1900	0.01
Caryophyllene oxide	12.28*	1574	[0.63]	12.54	1907	0.55
Viridiflorol	12.40	1584	0.26	13.77	2022	0.27

Copaborneol	12.55	1596	0.17	14.70	2112	0.12
Humulene epoxide II	12.60	1600	0.10	13.13	1962	0.11
10-epi-Cubenol	12.70	1608	0.20	13.49	1995	0.11
1-epi-Cubenol	12.87	1622	0.13	13.55	2001	0.14
τ -Muurolol	13.03*	1635	0.82	14.83	2126	0.05
τ -Cadinol	13.03*	1635	[0.82]	14.67	2110	0.74
α -Muurolol	13.10	1641	0.15	14.97	2140	0.09
β -Eudesmol	13.15	1645	0.07	15.17	2160	0.12
α -Eudesmol	13.19	1648	0.06	15.10	2153	0.02
α -Cadinol	13.22*	1651	0.08	15.25*	2168	[0.09]
Unknown [m/z 161, 59 (67), 95 (45), 93 (40), 105 (40), 149 (39), 81 (39), 43 (38), 204 (37)... 220 (5)]	13.22*	1651	[0.08]	14.40	2083	0.01
(3Z)-Caryophylla-3,8(13)-dien-5 β -ol	13.38	1664	0.13	16.58	2306	0.12
Cadalene	13.43	1668	0.01	15.07	2150	0.01
Germacra-4(15),5,10(14)-trien-1 α -ol	13.54	1678	0.02	15.82	2226	0.09
Shyobunol	13.58	1681	0.01	16.07	2253	0.02
α -Phellandrene dimer II	14.84	1789	0.13	12.27	1883	0.13
α -Phellandrene dimer III	15.03	1805	0.02	12.91	1941	0.04
α -Phellandrene dimer IV	15.24	1825	0.02	13.07	1956	0.02
(3E)-Cembrene A	16.60*	1950	0.28	15.36	2179	0.24
meta-Camphorene	16.60*	1950	[0.28]	15.21	2164	tr
para-Camphorene	16.96	1985	0.02	15.60	2204	0.01
Cembrene C	17.05	1994	0.08	16.03	2248	0.06
Verticilla-4(20),7,11-triene	17.09	1997	0.05	16.13	2259	0.09
Cembrenol	18.38	2126	0.15	19.86	2680	0.15
Serratol	18.52*	2140	1.38	19.38	2622	0.81
Incensole	18.52*	2140	[1.38]	20.40	2746	0.54
Incensyl acetate	18.78	2167	0.06	18.65	2537	0.06
Total identified		98.00%			97.66%	
Total reported		98.31%			98.01%	

*: 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