

Date : January 31, 2022

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 22A25-PTH01

Customer identification : Spruce, Black - Canada - SA51082010R

Type : Essential oil

Source : *Picea mariana*

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

Analysis date : January 26, 2022

Checked and approved by :

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

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PHYSICOCHEMICAL DATA

Physical aspect: Clear liquid

Refractive index: 1.4703 ± 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
3-Methylfuran	tr	Furan
Isovaleral	tr	Aliphatic aldehyde
2-Ethylfuran	tr	Furan
Toluene	0.01	Simple phenolic
Hexanal	0.01	Aliphatic aldehyde
Unknown	tr	Alkene
(2E)-Hexenal	0.01	Aliphatic aldehyde
(3Z)-Hexenol	0.02	Aliphatic alcohol
Hexanol	0.02	Aliphatic alcohol
Santene	1.22	Normonoterpene
Styrene	tr	Simple phenolic
Unknown	0.03	Normonoterpene
Bornylene	0.02	Monoterpene
Unknown	0.01	Unknown
Tricyclene	1.60	Monoterpene
α -Thujene	0.14	Monoterpene
α -Pinene	20.83	Monoterpene
Unknown	0.03	Unknown
Camphene	11.23	Monoterpene
α -Fenchene	0.17	Monoterpene
Thuja-2,4(10)-diene	0.02	Monoterpene
3,7,7-Trimethylcyclohepta-1,3,5-triene	0.03	Monoterpene
Sabinene	0.07	Monoterpene
β -Pinene	11.23	Monoterpene
6-Methyl-5-hepten-2-one	0.01	Aliphatic ketone
Myrcene	1.74	Monoterpene
2-Pentylfuran	0.01	Furan
2-Carene	0.01	Monoterpene
Pseudolimonene	0.01	Monoterpene
α -Phellandrene	0.18	Monoterpene
Δ^3 -Carene	10.10	Monoterpene
α -Terpinene	0.20	Monoterpene
meta-Cymene	0.01	Monoterpene
para-Cymene	0.23	Monoterpene
1,8-Cineole	0.12	Monoterpenic ether
Limonene	6.35	Monoterpene
β -Phellandrene	0.79	Monoterpene
(Z)- β -Ocimene	0.01	Monoterpene
(E)- β -Ocimene	0.01	Monoterpene
γ -Terpinene	0.16	Monoterpene
Unknown	0.03	Oxygenated monoterpene
meta-Cymenene	0.03	Monoterpene
Fenchone	0.02	Monoterpenic ketone
Isoterpinolene	0.03	Monoterpene
γ -Campholenal	0.04	Aliphatic alcohol

para-Cymenene	0.11	Monoterpene
Terpinolene	1.02	Monoterpene
α -Pinene oxide	0.01	Monoterpenic ether
2-Nonanone	0.01	Aliphatic ketone
<i>trans</i> -Sabinene hydrate	0.01	Monoterpenic alcohol
Linalool	0.25	Monoterpenic alcohol
Nonanal	0.02	Aliphatic aldehyde
endo-Fenchol	0.06	Monoterpenic alcohol
<i>cis</i> -para-Menth-2-en-1-ol	0.02	Monoterpenic alcohol
α -Campholenal	0.06	Monoterpenic aldehyde
<i>trans</i> -Pinocarveol	0.08	Monoterpenic alcohol
Camphor	0.05	Monoterpenic ketone
<i>trans</i> -para-Menth-2-en-1-ol	0.01	Monoterpenic alcohol
Camphene hydrate	0.11	Monoterpenic alcohol
Pinocamphone	0.01	Monoterpenic ketone
Citronellal	0.01	Monoterpenic aldehyde
Isoborneol	0.06	Monoterpenic alcohol
Pinocarvone	0.02	Monoterpenic ketone
Borneol	0.91	Monoterpenic alcohol
Unknown	0.02	Unknown
Isopinocamphone	0.03	Monoterpenic ketone
Terpinen-4-ol	0.19	Monoterpenic alcohol
Cryptone	0.01	Normonoterpenic ketone
meta-Cymen-8-ol	0.01	Monoterpenic alcohol
para-Cymen-8-ol	0.03	Monoterpenic alcohol
α -Terpineol	0.81	Monoterpenic alcohol
Myrtenal	0.05	Monoterpenic aldehyde
Myrtenol	0.05	Monoterpenic alcohol
Verbenone	0.03	Monoterpenic ketone
Unknown	0.03	Unknown
endo-Fenchyl acetate	0.13	Monoterpenic ester
<i>trans</i> -Carveol	0.01	Monoterpenic alcohol
Thymol methyl ether	0.05	Monoterpenic ether
Citronellol	0.04	Monoterpenic alcohol
Carvone	0.01	Monoterpenic ketone
Unknown	0.01	Unknown
Piperitone	0.02	Monoterpenic ketone
Geraniol	0.01	Monoterpenic alcohol
Geranial	0.02	Monoterpenic aldehyde
Unknown	0.01	Unknown
Undec-(5Z)-en-2-one	0.02	Aliphatic ketone
Bornyl acetate	24.45	Monoterpenic ester
Isobornyl acetate	0.07	Monoterpenic ester
<i>cis</i> -Verbenyl acetate	0.03	Monoterpenic ester
Unknown	0.08	Unknown
Unknown	0.06	Monoterpenic ester
<i>trans</i> -Pinocarvyl acetate	0.06	Monoterpenic ester
Car-3-en-5-one	0.01	Monoterpenic ketone
Myrtenyl acetate	0.01	Monoterpenic ester
Terpinyl acetate analog	0.04	Monoterpenic ester
exo-2-Hydroxycineole acetate	0.02	Monoterpenic ester
Unknown	0.03	Unknown

α -Cubebene	0.01	Sesquiterpene
α -Terpinyl acetate	0.03	Monoterpenic ester
Citronellyl acetate	0.06	Monoterpenic ester
Longicyclene	0.03	Sesquiterpene
Unknown	0.03	Oxygenated monoterpene
α -Copaene	0.03	Sesquiterpene
β -Bourbonene	0.02	Sesquiterpene
Geranyl acetate	0.22	Monoterpenic ester
β -Elemene	0.05	Sesquiterpene
Longifolene	0.10	Sesquiterpene
β -Caryophyllene	0.14	Sesquiterpene
β -Copaene	0.01	Sesquiterpene
Aromadendrene	0.01	Sesquiterpene
<i>cis</i> -Muurolo-3,5-diene	0.01	Sesquiterpene
<i>trans</i> -Muurolo-3,5-diene	0.02	Sesquiterpene
α -Humulene	0.04	Sesquiterpene
Unknown	0.03	Unknown
(<i>E</i>)- β -Farnesene	0.04	Sesquiterpene
<i>trans</i> -Cadina-1(6),4-diene	0.06	Sesquiterpene
γ -Muurolo-1	0.08	Sesquiterpene
Germacrene D	0.04	Sesquiterpene
β -Selinene	0.03	Sesquiterpene
Dodecanol	0.02	Aliphatic alcohol
<i>trans</i> -Muurolo-4(15),5-diene	0.05	Sesquiterpene
α -Selinene	0.04	Sesquiterpene
α -Muurolo-1	0.17	Sesquiterpene
Cubebol	0.01	Sesquiterpenic alcohol
β -Bisabolene	0.03	Sesquiterpene
γ -Cadinene	0.21	Sesquiterpene
δ -Cadinene	0.74	Sesquiterpene
<i>trans</i> -Calamenene	0.04	Sesquiterpene
<i>trans</i> -Cadina-1,4-diene	0.03	Sesquiterpene
α -Cadinene	0.05	Sesquiterpene
α -Calacorene	0.02	Sesquiterpene
(<i>E</i>)- α -Bisabolene	0.09	Sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
β -Calacorene	0.01	Sesquiterpene
(<i>E</i>)-Nerolidol	0.01	Sesquiterpenic alcohol
Spathulenol	0.01	Sesquiterpenic alcohol
Caryophyllene oxide	0.01	Sesquiterpenic ether
Globulol	0.02	Sesquiterpenic alcohol
Unknown	0.03	Unknown
1- <i>epi</i> -Cubenol	0.02	Sesquiterpenic alcohol
τ -Cadinol	0.09	Sesquiterpenic alcohol
τ -Muurolo-1	0.08	Sesquiterpenic alcohol
α -Muurolo-1	0.03	Sesquiterpenic alcohol
α -Cadinol	0.15	Sesquiterpenic alcohol
Unknown	0.02	Aliphatic ester
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Amorpha-4,9-dien-2-ol	0.02	Sesquiterpenic alcohol
(5 <i>Z</i>)-Tetradecen-14-olide?	0.02	Aliphatic lactone

Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.14	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Hexadecanal	0.01	Aliphatic aldehyde
Manoyl oxide	0.02	Diterpenic ether
Unknown	0.02	Diterpene
(<i>E,E</i>)-Geranylinalool	0.01	Diterpenic alcohol
Manool	0.02	Diterpenic alcohol
7,13-Abietadiene	0.01	Diterpene
(<i>Z</i>)-Abienol	0.03	Diterpenic alcohol
Palustral	0.01	Diterpenic aldehyde
Abietal	0.01	Diterpenic aldehyde
Consolidated total	99.52%	

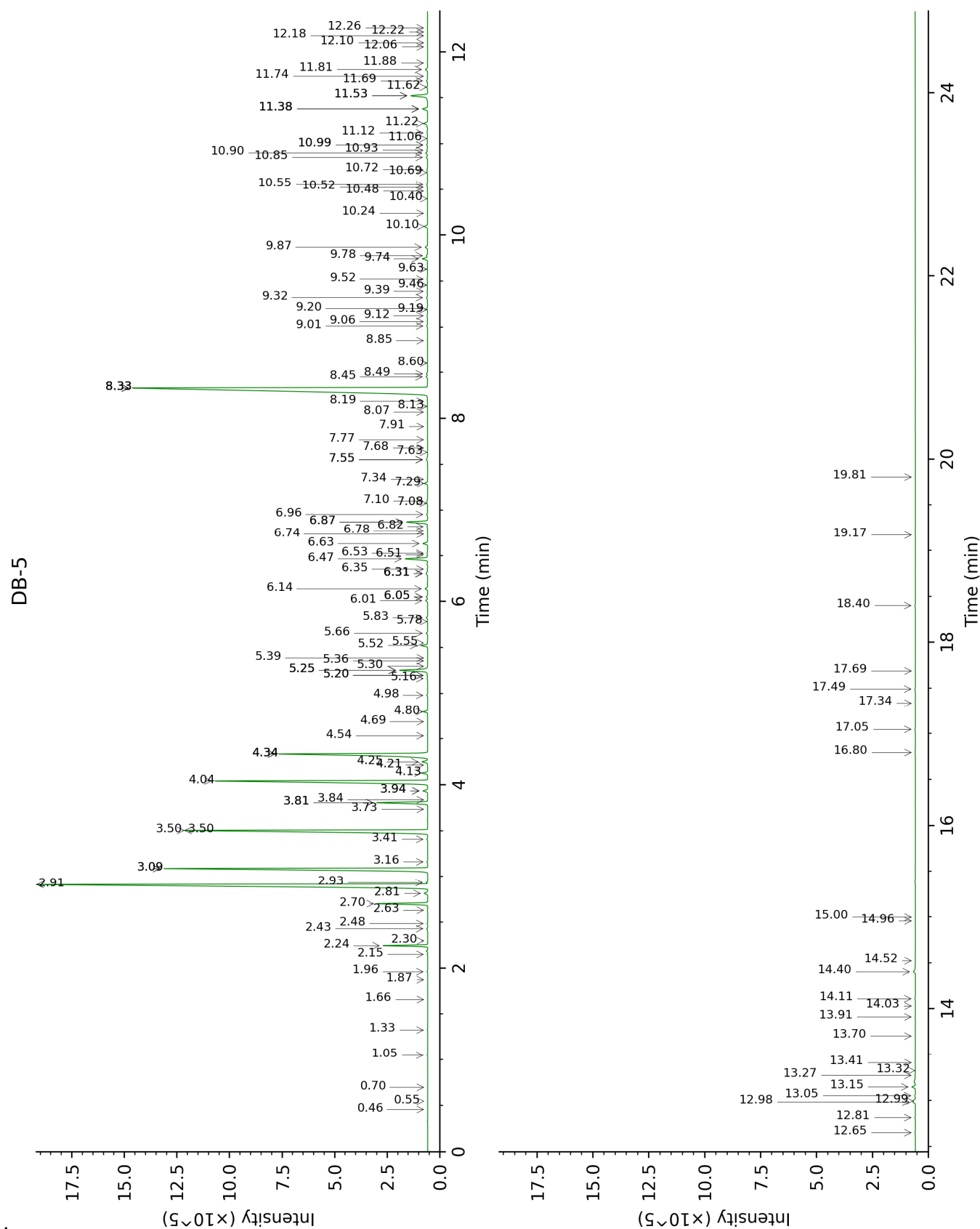
tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied

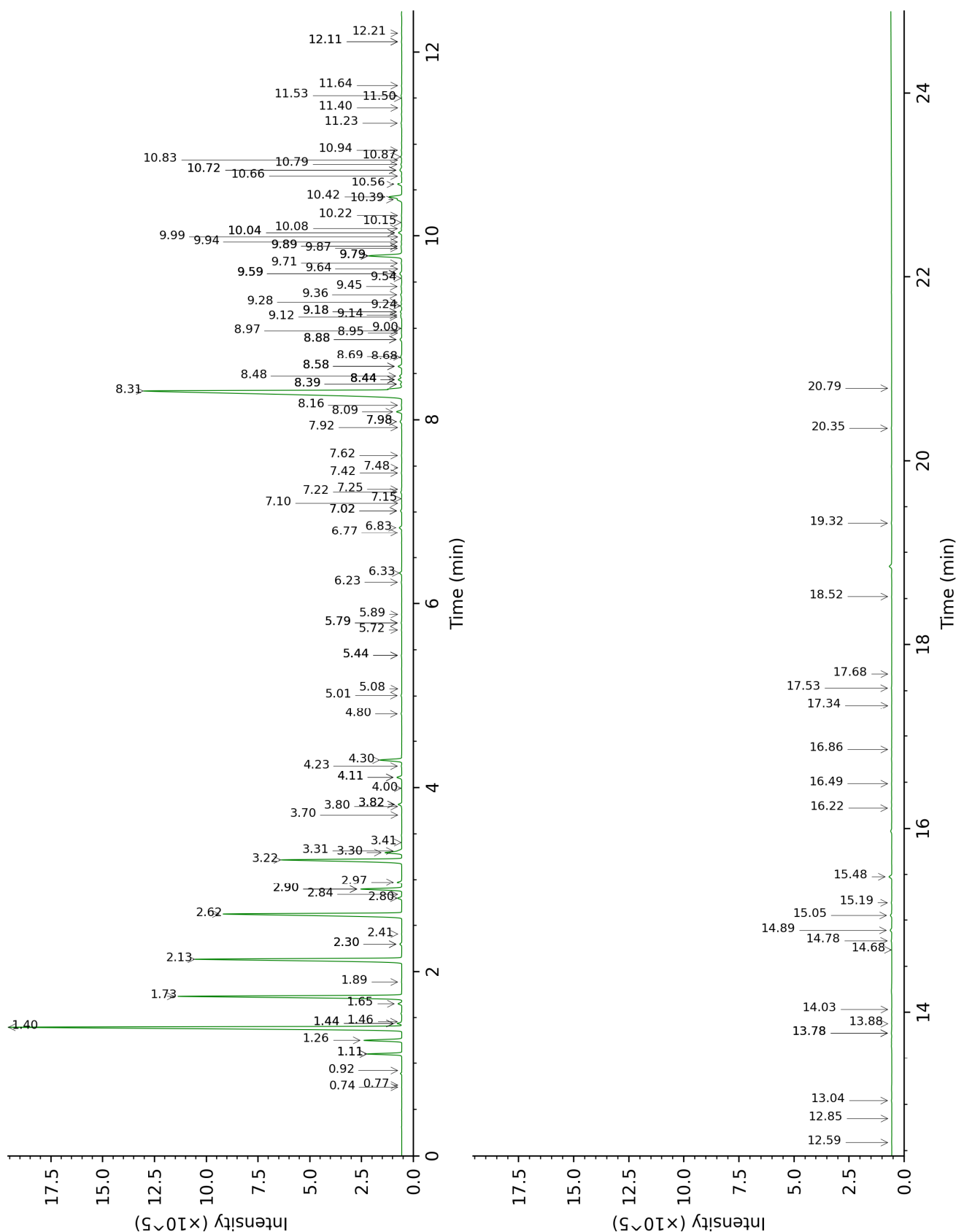
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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



DB-WAX



FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
3-Methylfuran	0.46	605	tr			
Isovaleral	0.55	641	tr	0.76	888	tr
2-Ethylfuran	0.70	700	tr	0.92	918	tr
Toluene	1.05	757	0.01	1.46	1001	0.01
Hexanal	1.33	800	0.01	1.89	1043	0.01
Unknown [m/z 109, 67 (32), 81 (14), 41 (12), 124 (10)]	1.66	831	tr	0.74	880	tr
(2E)-Hexenal	1.87	850	0.01	3.41	1174	0.01
(3Z)-Hexenol	1.96	858	0.02	5.79*	1347	0.03
Hexanol	2.15	874	0.02	5.44*	1321	0.03
Santene	2.24	882	1.22	1.11*	948	1.24
Styrene	2.30	887	tr	3.80	1204	0.01
Unknown [m/z 79, 93 (66), 94 (52), 91 (39), 77 (37), 122 (31)]	2.43	898	0.03	1.44*	999	0.18
Bornylene	2.48	903	0.02	1.11*	948	[1.24]
Unknown [m/z 43, 59 (71), 44 (40), 85 (30), 41 (28), 45 (27)...]	2.63	913	0.01			
Tricyclene	2.70	918	1.60	1.26	971	1.60
α -Thujene	2.81	926	0.14	1.44*	999	[0.18]
α -Pinene	2.91	932	20.83	1.40	994	20.73
Unknown [m/z 43, 73 (38), 85 (29), 72 (28), 57 (26)...]	2.93	934	0.03			
Camphene	3.09*	945	11.46	1.73	1028	11.23
α -Fenchene	3.09*	945	[11.46]	1.65	1020	0.17
Thuja-2,4(10)-diene	3.16	950	0.02	2.30*	1084	0.09
3,7,7-Trimethylcyclohepta-1,3,5-triene	3.41	966	0.03	2.90*	1133	1.77
Sabinene	3.50*	973	11.35	2.30*	1084	[0.09]
β -Pinene	3.50*	973	[11.35]	2.13	1068	11.23
6-Methyl-5-hepten-2-one	3.74	988	0.01	5.08	1300	0.01
Myrcene	3.81*	993	1.76	2.90*	1133	[1.77]
2-Pentylfuran	3.81*	993	[1.76]	3.70	1198	0.01
2-Carene	3.84	996	0.01	2.41	1095	0.01
Pseudolimonene	3.94*	1002	0.19	2.84	1129	0.01
α -Phellandrene	3.94*	1002	[0.19]	2.80	1126	0.18
Δ 3-Carene	4.04	1009	10.10	2.62	1112	10.03
α -Terpinene	4.13	1014	0.20	2.97	1140	0.21
meta-Cymene	4.22	1020	0.01	4.11*	1228	0.24
para-Cymene	4.25	1022	0.23	4.11*	1228	[0.24]
1,8-Cineole	4.34*	1028	7.26	3.32	1167	0.12
Limonene	4.34*	1028	[7.26]	3.22	1159	6.35
β -Phellandrene	4.34*	1028	[7.26]	3.30	1165	0.79

(Z)-β-Ocimene	4.54	1040	0.01	3.82*	1206	0.17
(E)-β-Ocimene	4.69	1050	0.01	4.00	1219	0.01
γ-Terpinene	4.80	1057	0.16	3.82*	1206	[0.17]
Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	4.98	1068	0.03	4.80	1279	0.03
meta-Cymenene	5.16	1080	0.03	6.23	1378	0.03
Fenchone	5.20*	1082	0.03	5.72	1341	0.02
Isoterpinolene	5.20*	1082	[0.03]	4.23	1237	0.03
γ-Campholenal	5.25*	1086	1.19	5.01	1294	0.04
para-Cymenene	5.25*	1086	[1.19]	6.33	1386	0.11
Terpinolene	5.25*	1086	[1.19]	4.30	1242	1.02
α-Pinene oxide	5.30	1089	0.01	5.44*	1321	[0.03]
2-Nonanone	5.36	1092	0.01	5.79*	1347	[0.03]
trans-Sabinene hydrate	5.39	1094	0.01	7.98*	1508	0.11
Linalool	5.52	1103	0.25	8.09	1516	0.25
Nonanal	5.55	1105	0.02	5.89	1353	0.01
endo-Fenchol	5.66	1111	0.06	8.44*	1544	0.19
cis-para-Menth-2-en-1-ol	5.78	1120	0.02	8.16	1522	0.03
α-Campholenal	5.82	1122	0.06	7.02*	1436	0.06
trans-Pinocarveol	6.01	1134	0.08	9.18*	1601	0.08
Camphor	6.05*	1137	0.06	7.22	1451	0.05
trans-para-Menth-2-en-1-ol	6.05*	1137	[0.06]	8.97	1585	0.01
Camphene hydrate	6.14	1142	0.11	8.48	1546	0.11
Pinocamphone	6.31*	1153	0.09	7.25	1453	0.01
Citronellal	6.31*	1153	[0.09]	7.02*	1436	[0.06]
Isoborneol	6.31*	1153	[0.09]	9.36	1616	0.06
Pinocarvone	6.35	1156	0.02	7.92	1503	0.02
Borneol	6.47	1164	0.91	9.79*	1650	1.81
Unknown [m/z 109, 108 (48), 67 (41), 81 (40), 41 (28)...]	6.51	1166	0.02	7.42	1466	0.02
Isopinocampheol	6.53	1167	0.03	7.62	1480	0.02
Terpinen-4-ol	6.63	1174	0.19	8.58*	1555	0.19
Cryptone	6.74	1181	0.01	9.18*	1601	[0.08]
meta-Cymen-8-ol	6.78	1183	0.01	11.50	1794	0.01
para-Cymen-8-ol	6.82	1186	0.03	11.53	1796	0.04
α-Terpineol	6.87*	1190	0.86	9.79*	1650	[1.81]
Myrtenal	6.87*	1190	[0.86]	8.69	1563	0.05
Myrtenol	6.96	1195	0.05	10.87	1740	0.05
Verbenone	7.08	1203	0.03	9.59*	1635	0.13
Unknown [m/z 95, 93 (32), 121 (24), 79 (22), 91 (21), 105 (16)... 154 (2)]	7.10	1204	0.03	10.94	1746	0.02
endo-Fenchyl acetate	7.29	1217	0.13	6.83	1422	0.13
trans-Carveol	7.34	1220	0.01	11.40	1785	0.02

Thymol methyl ether	7.55*	1234	0.08	8.44*	1544	[0.19]
Citronellol	7.55*	1234	[0.08]	10.72*	1728	0.13
Carvone	7.63	1240	0.01	9.99	1667	0.01
Unknown [m/z 41, 44 (99), 69 (73), 108 (50), 93 (44), 119 (37)...]	7.68	1243	0.01			
Piperitone	7.77	1249	0.02	9.89*	1659	0.04
Geraniol	7.91	1259	0.01	11.64	1806	0.02
Geranial	8.07	1269	0.02	10.15	1680	0.03
Unknown [m/z 43, 119 (72), 81 (66), 54 (48), 41 (47), 58 (44)...]	8.13	1274	0.01			
Undec-(5Z)-en-2-one	8.19	1277	0.02	8.95	1583	0.02
Bornyl acetate	8.33*	1287	24.48	8.31	1534	24.45
Isobornyl acetate	8.33*	1287	[24.48]	8.39*	1540	0.08
cis-Verbenyl acetate	8.33*	1287	[24.48]	8.68	1563	0.03
Unknown [m/z 119, 43 (87), 91 (78), 92 (70), 134 (50)...]	8.33*	1287	[24.48]	8.88*	1578	0.10
Unknown [m/z 107, 43 (76), 150 (42), 91 (28), 108 (23)]	8.45	1295	0.06	9.14	1598	0.05
trans-Pinocarvyl acetate	8.49	1297	0.06	9.12	1597	0.04
Car-3-en-5-one	8.60	1305	0.01	12.11*	1848	0.02
Myrtenyl acetate	8.85	1323	0.01	9.64	1639	0.01
Terpinyl acetate analog	9.01	1334	0.04	9.59*	1635	[0.13]
exo-2-Hydroxycineole acetate	9.06	1338	0.02	10.08	1674	0.03
Unknown [m/z 133, 105 (45), 91 (38), 119 (36)... 150 (3)]	9.12	1342	0.03			
α-Cubebene	9.19	1347	0.01	6.77	1418	0.02
α-Terpinyl acetate	9.20	1348	0.03	9.71	1644	0.04
Citronellyl acetate	9.32	1356	0.06	9.45	1624	0.04
Longicyclene	9.39	1361	0.03	7.10	1442	0.01
Unknown [m/z 93, 121 (68), 43 (67), 67 (44), 136 (36), 107 (34)... 180 (4)]	9.46	1366	0.03	10.04*	1671	0.18
α-Copaene	9.52	1370	0.03	7.15	1446	0.02
β-Bourbonene	9.63	1378	0.02	7.48	1471	0.01
Geranyl acetate	9.74	1386	0.22	10.56	1714	0.21
β-Elementene	9.78	1388	0.05	8.44*	1544	[0.19]
Longifolene	9.87	1395	0.10	7.98*	1508	[0.11]
β-Caryophyllene	10.10	1411	0.14	8.44*	1544	[0.19]
β-Copaene	10.24	1422	0.01	8.39*	1540	[0.08]
Aromadendrene	10.40	1434	0.01	8.58*	1555	[0.19]

<i>cis</i> -Muurolo-3,5-diene	10.48	1440	0.01	9.00	1587	0.01
<i>trans</i> -Muurolo-3,5-diene	10.52	1443	0.02	8.88*	1578	[0.10]
α -Humulene	10.55	1445	0.04	9.24	1607	0.05
Unknown [m/z 95, 43 (94), 79 (93), 91 (71), 93 (65), 177 (54), 41 (52)...]	10.69	1455	0.03	10.83	1737	0.02
(<i>E</i>)- β -Farnesene	10.72	1458	0.04	9.54	1631	0.02
<i>trans</i> -Cadina-1(6),4-diene	10.85	1468	0.06	9.28	1610	0.04
γ -Muurolo-3,5-diene	10.90	1471	0.08	9.59*	1635	[0.13]
Germacrene D	10.93	1474	0.04	9.79*	1650	[1.81]
β -Selinene	10.99*	1478	0.04	9.87	1657	0.03
Dodecanol	10.99*	1478	[0.04]	13.04	1932	0.02
<i>trans</i> -Muurolo-4(15),5-diene	11.06	1483	0.05	9.89*	1659	[0.04]
α -Selinene	11.12	1488	0.04	9.94	1663	0.03
α -Muurolo-3,5-diene	11.22	1495	0.17	10.04*	1671	[0.18]
Cubebol	11.38*	1507	0.23	12.59	1890	0.01
β -Bisabolene	11.38*	1507	[0.23]	10.22	1686	0.03
γ -Cadinene	11.38*	1507	[0.23]	10.40	1700	0.21
δ -Cadinene	11.52*	1519	0.79	10.42	1702	0.74
<i>trans</i> -Calamenene	11.52*	1519	[0.79]	11.23	1771	0.04
<i>trans</i> -Cadina-1,4-diene	11.62	1526	0.03	10.66	1722	0.02
α -Cadinene	11.69	1532	0.05	10.78	1733	0.05
α -Calacorene	11.74	1535	0.02	12.11*	1848	[0.02]
(<i>E</i>)- α -Bisabolene	11.81	1541	0.09	10.72*	1728	[0.13]
Unknown [m/z 95, 81 (70), 109 (68), 93 (59), 67 (53), 41 (49), 139 (40)... 220 (3)]	11.88	1547	0.01	12.20	1856	0.02
β -Calacorene	12.06	1560	0.01			
(<i>E</i>)-Nerolidol	12.10	1564	0.01	13.78*	2000	0.04
Spathulenol	12.18	1570	0.01			
Caryophyllene oxide	12.22	1573	0.01	12.85	1914	0.01
Globulol	12.26	1577	0.02	13.88	2010	0.01
Unknown [m/z 108, 43 (56), 109 (33), 93 (26), 119 (24)... 212 (2)]	12.65	1608	0.03	14.78	2096	0.04
1- <i>epi</i> -Cubenol	12.81	1621	0.02	13.78*	2000	[0.04]
τ -Cadinol	12.98†	1635	0.17	14.89	2108	0.09
τ -Muurolo-3,5-diene	12.99†	1636	[0.17]	15.05	2124	0.08
α -Muurolo-3,5-diene	13.05	1641	0.03	15.19	2138	0.03
α -Cadinol	13.15	1648	0.15	15.48	2167	0.15
Unknown [m/z 79, 43 (66), 67 (59), 80 (56), 41 (41), 81 (37), 55 (29)...]	13.27	1659	0.02	14.03	2025	0.01

Unknown [m/z 159, 177 (59), 135 (57), 91 (47), 105 (47)... 220? (25)]	13.32	1663	0.01			
Unknown [m/z 177, 159 (98), 93 (94), 136 (84), 121 (68), 135 (65), 91 (57)... 220 (23)]	13.41	1670	0.01			
Amorpha-4,9-dien-2-ol	13.70	1695	0.02	16.86	2310	0.01
(5Z)-Tetradecen-14-olide?	13.91	1712	0.02			
Unknown [m/z 159, 220 (92), 93 (88), 177 (63), 91 (57), 107 (55)]	14.03	1723	0.01	17.68	2399	0.01
Unknown [m/z 159, 132 (79), 135 (37), 91 (35), 177 (33)... 220 (16)]	14.11	1730	0.02	17.53	2382	0.02
Unknown [m/z 81, 43 (83), 123 (65), 71 (48), 97 (41), 109 (38)... 236? (t)]	14.40	1755	0.14			
Unknown [m/z 43, 147 (93), 159 (76), 187 (76), 81 (64), 93 (56), 121 (56), 220 (51)]	14.52	1766	0.01			
Unknown [m/z 43, 162 (93), 119 (77), 159 (65), 93 (65), 147 (57)...220 (28)]	14.96	1803	0.01			
Hexadecanal	15.00	1807	0.01	14.68	2087	0.01
Manoyl oxide	16.80	1974	0.02	16.49	2270	0.01
Unknown [m/z 257, 258 (20), 91 (19), 272 (18)]	17.05	1998	0.02	16.22	2243	0.02
(E,E)-Geranyllinalool	17.34	2026	0.01	18.52	2493	0.01
Manool	17.49	2042	0.02	19.32	2585	0.03
7,13-Abietadiene	17.69	2061	0.01	17.34	2361	0.01
(Z)-Abienol	18.40	2133	0.03	20.35	2709	0.02
Palustral	19.17	2214	0.01	20.79	2762	0.01
Abietal	19.81	2282	0.01			
Total identified		98.84%			98.59%	
Total reported		99.45%			98.86%	

*: 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

