

Date : March 06, 2018

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 18B20-PLG19-1-CC

Customer identification : Ginger

Type : Essential oil

Source : *Zingiber officinale*

Customer : Plant Guru

ANALYSIS

Method: PC-PA-014-17J19 - Analysis of the composition of an essential oil, or other volatile liquid, by FAST GC-FID (in French); identifications validated by GC-MS.

Analyst : Sylvain Mercier, M. Sc., Chimiste

Analysis date : February 28, 2018

Checked and approved by :

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

Note: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.

This report is digitally signed, it is only considered valid if the digital signature is intact.

PHYSICOCHEMICAL DATA

Physical aspect: Light yellow liquid

Refractive index: 1.4870 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method.

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
2-Methyl-3-buten-2-ol	0.04	0.04	Aliphatic alcohol
Toluene	0.03	0.03	Simple phenolic
Hexanal	0.04	0.04	Aliphatic aldehyde
Unknown	0.01	0.01	Unknown
Hexanol	0.01	0.01*	Aliphatic alcohol
2-Heptanone	0.05	0.05	Aliphatic ketone
2-Heptanol	0.04	0.04	Aliphatic alcohol
Tricyclene	0.26	0.26	Monoterpene
α -Thujene	0.01	0.01	Monoterpene
α -Pinene	3.23	3.30*	Monoterpene
Camphene	13.02*	13.29	Monoterpene
β -Citronellene	[13.02]*	[3.30]*	Monoterpene
α -Fenchene	[13.02]*	0.02	Monoterpene
Thuja-2,4(10)-diene	tr	0.05*	Monoterpene
Unknown	0.03		Unknown
Unknown	0.04	0.04	Monoterpene
Sabinene	0.40*	[0.05]*	Monoterpene
β -Pinene	[0.40]*	0.37	Monoterpene
6-Methyl-5-hepten-2-one	2.64	2.72*	Aliphatic ketone
Myrcene	1.14	1.15	Monoterpene
6-Methyl-5-hepten-2-ol	0.15	0.27*	Aliphatic alcohol
Unknown	0.10*	0.01	Unknown
Pseudolimonene	[0.10]*	0.08	Monoterpene
Octanal	0.03	0.02	Aliphatic aldehyde
Δ^3 -Carene	0.08	0.06	Monoterpene
Unknown	0.02		Unknown
para-Cymene	0.09	0.11	Monoterpene
Limonene	5.12*	1.62	Monoterpene
1,8-Cineole	[5.12]*	3.65*	Monoterpenic ether
β -Phellandrene	[5.12]*	[3.65]*	Monoterpene
(Z)- β -Ocimene	tr	0.03	Monoterpene
2-Heptyl acetate	0.01	0.02	Aliphatic ester
(E)- β -Ocimene	0.01	tr	Monoterpene
2,6-Dimethyl-5-heptenal (melonal)	0.02	0.02	Aliphatic aldehyde
cis-Sabinene hydrate	tr	0.01	Monoterpenic alcohol
cis-Linalool oxide (fur.)	0.01	0.02	Monoterpenic alcohol
Octanol	0.01	0.01	Aliphatic alcohol
para-Cymenene	0.23*	0.02	Monoterpene
trans-Linalool oxide (fur.)	[0.23]*	[0.27]*	Monoterpenic alcohol
2-Nonanone	0.26*	0.01	Aliphatic ketone
α -Pinene oxide	[0.26]*	[0.01]*	Monoterpenic ether
Unknown	[0.26]	0.30*	Oxygenated monoterpene
Rosefuran	0.05	0.05	Monoterpenic ether
Perillene	0.07	0.08	Monoterpenic ether
Linalool	0.62	0.68	Monoterpenic alcohol
2-Nonanol	0.01	0.02	Aliphatic alcohol
1-Methyl-4-(1-methylpropyl)benzene	0.03	[2.72]*	Terpene derivative
endo-Fenchol	0.02	0.31*	Monoterpenic alcohol

Bornyl methyl ether	0.05	0.03	Monoterpenic ether
(E)-4,8-Dimethylnona-1,3,7-triene	0.02	0.02	Terpene derivative
Camphor	0.19	0.19	Monoterpenic ketone
trans-para-Menth-2-en-1-ol	0.01	0.01	Monoterpenic alcohol
Camphene hydrate	0.12*	0.09	Monoterpenic alcohol
exo-Isocitral	[0.12]*	0.01	Monoterpenic aldehyde
Epoxyterpinolene	[0.12]*	0.01	Monoterpenic ether
Citronellal	0.08*	0.04*	Monoterpenic aldehyde
Isoborneol	[0.08]*	0.36*	Monoterpenic alcohol
Borneol	1.71*	2.58*	Monoterpenic alcohol
Isoneral	[1.71]*	0.06	Monoterpenic aldehyde
Unknown	0.11		Oxygenated monoterpene
Terpinen-4-ol	0.19	0.17	Monoterpenic alcohol
Cryptone	0.04*	0.02	Normonoterpenic ketone
4-Methylacetophenone	[0.04]*	3.72*	Simple phenolic
α-Terpineol	0.10	[2.58]*	Monoterpenic alcohol
para-Cymen-8-ol	0.67*	0.10	Monoterpenic alcohol
Isogeranial	[0.67]*	0.45*	Monoterpenic aldehyde
Myrtenol	0.04*	0.03	Monoterpenic alcohol
Myrtenal	[0.04]*	[0.30]*	Monoterpenic aldehyde
trans-Piperitol	0.02*	0.20*	Monoterpenic alcohol
Decanal	[0.02]*	0.01	Aliphatic aldehyde
Nerol	0.11	0.13	Monoterpenic alcohol
Citronellol	0.48	[16.18]*	Monoterpenic alcohol
Neral	4.90	4.91*	Monoterpenic aldehyde
Unknown	0.15	0.14*	Unknown
Geraniol	2.08*	2.01	Monoterpenic alcohol
(2E)-Decenal	[2.08]*	0.02	Aliphatic aldehyde
Geranial	7.86	23.79*	Monoterpenic aldehyde
Citronellyl formate	0.06*	0.03	Monoterpenic ester
(E)-4,8-Dimethylnona-3,8-dien-2-one	[0.06]*	0.03	Terpenic ketone
Bornyl acetate	0.49	[0.45]*	Monoterpenic ester
Cuminol	0.03	0.03	Monoterpenic alcohol
Geranyl formate	0.10	0.12	Monoterpenic ester
2-Undecanol	0.01	0.08	Aliphatic alcohol
3-Oxo-para-menth-1-en-7-al	0.03		Monoterpenic ketone
δ-Elemene isomer	0.01	0.01	Sesquiterpene
Neric acid	0.07	0.05	Monoterpenic acid
Citronellyl acetate	0.11	0.11	Monoterpenic ester
Cyclosativene I	0.13*	0.04	Sesquiterpene
8-Hydroxy-iso-menthol	[0.13]*	0.40*	Monoterpenic alcohol
Unknown	0.06*		Unknown
Cyclosativene II	[0.06]*	[0.04]*	Sesquiterpene
Neryl acetate	0.02	[23.79]*	Monoterpenic ester
α-Copaene	0.56	0.20	Sesquiterpene
Geranic acid	[0.56]	0.31	Aliphatic acid
Unknown	0.04		Unknown
Geranyl acetate	1.07*	0.77	Monoterpenic ester
7-epi-Sesquithujene	[1.07]*	0.04	Sesquiterpene
β-Cubebene	[1.07]*	0.04	Sesquiterpene
β-Elemene	0.41	0.59*	Sesquiterpene
Vanillin	0.02	0.02	Simple phenolic

Sesquithujene	0.19	0.28	Sesquiterpene
β-Caryophyllene	0.08	[0.59]*	Sesquiterpene
β-Copaene	0.24	[0.31]*	Sesquiterpene
Unknown	0.09		Unknown
<i>trans</i> -α-Bergamotene	0.11*	[0.59]*	Sesquiterpene
(<i>Z</i>)-β-Farnesene?	[0.11]*	0.01	Sesquiterpene
γ-Elemene	[0.11]*	0.02	Sesquiterpene
Nerylacetone	0.01	0.01	Terpenic ketone
Sesquisabinene A	0.05	0.10	Sesquiterpene
Unknown	0.06		Unknown
α-Humulene	0.06*	0.03	Sesquiterpene
Unknown	[0.06]*		Sesquiterpene
Unknown	0.02		Sesquiterpene
Sesquisabinene B	0.53*	[0.36]*	Sesquiterpene
allo-Aromadendrene	[0.53]*	0.18	Sesquiterpene
(<i>E</i>)-β-Farnesene	0.23	0.23	Sesquiterpene
Selina-4,11-diene	0.11	[4.91]*	Sesquiterpene
γ-Murolene	0.17	0.22	Sesquiterpene
Germacrene D	0.08	[2.58]*	Sesquiterpene
ar-Curcumene	10.03*	[16.18]*	Sesquiterpene
β-Selinene	[10.03]*	1.29*	Sesquiterpene
γ-Curcumene	[10.03]*	0.08	Sesquiterpene
Unknown	12.62*	0.13*	Sesquiterpene
Bicyclosesquiphellandrene?	[12.62]*	[1.29]*	Sesquiterpene
α-Zingiberene	[12.62]*	[23.79]*	Sesquiterpene
α-Murolene	[12.62]*	[0.13]*	Sesquiterpene
β-Bisabolene	8.19	[23.79]*	Sesquiterpene
(3 <i>E</i> ,6 <i>E</i>)-α-Farnesene	[8.19]*	[3.72]*	Sesquiterpene
γ-Cadinene	[8.19]*	0.04	Sesquiterpene
<i>trans</i> -Calamenene	0.17*	0.04	Sesquiterpene
δ-Cadinene	[0.17]*	[0.20]*	Sesquiterpene
β-Sesquiphellandrene	6.10	16.18	Sesquiterpene
Unknown	0.24*		Oxygenated sesquiterpene
(<i>E</i>)-γ-Bisabolene	[0.24]*	0.01	Sesquiterpene
Unknown	0.07	0.06	Oxygenated sesquiterpene
α-Elemol	0.22	0.24	Sesquiterpenic alcohol
Germacrene B	0.12	[0.14]*	Sesquiterpene
<i>cis</i> -Sesquisabinene hydrate	0.20*	0.18	Sesquiterpenic alcohol
Unknown	[0.20]*	0.04	Oxygenated sesquiterpene
(<i>E</i>)-Nerolidol	0.23*	0.28*	Sesquiterpenic alcohol
β-Calacorene	[0.23]*	tr	Sesquiterpene
1'-Hydroxyeugenol	0.20*	0.04	Phenylpropanoid
ar-Turmerol	[0.20]*	0.03	Sesquiterpenic alcohol
<i>trans</i> -Sesquisabinene hydrate	0.29	0.31	Sesquiterpenic alcohol
Unknown	0.04	[0.28]*	Oxygenated sesquiterpene
Junenol	0.07	0.05	Sesquiterpenic alcohol
10-epi-γ-Eudesmol	0.71*	0.02	Sesquiterpenic alcohol
<i>cis</i> -Zingiberenol	[0.71]*	0.57	Sesquiterpenic alcohol
Unknown	0.17	0.14	Oxygenated sesquiterpene
γ-Eudesmol	0.29*	0.04	Sesquiterpenic alcohol
<i>trans</i> -Zingiberenol	[0.29]*	[0.40]*	Sesquiterpenic alcohol
β-Eudesmol	0.33	0.30	Sesquiterpenic alcohol

α -Eudesmol	0.17	0.20	Sesquiterpenic alcohol
(3E,5E)-7-Hydroxyfarnesene	0.09	0.06	Sesquiterpenic alcohol
α -Bisabolol	0.22*	0.10	Sesquiterpenic alcohol
Zingerone methyl ether	[0.22]*	0.02	Simple phenolic
4-(1,5-Dimethylhex-4-enyl)cyclohex-2-enone	[0.22]*	0.17	Norsesquiterpenic ketone
Unknown	0.39	0.33	Oxygenated sesquiterpene
Unknown	0.34	0.34	Oxygenated sesquiterpene
α -Curcumen-15-al	0.20		Sesquiterpenic aldehyde
Unknown	0.12	0.09	Oxygenated sesquiterpene
Oplopanone	0.03	0.03	Sesquiterpenic alcohol
Xanthorrhizol?	0.03		Sesquiterpenic alcohol
Unknown	0.57	0.56	Oxygenated sesquiterpene
Unknown	0.26	0.22	Oxygenated sesquiterpene
Palmitic acid	0.05	0.04	Aliphatic acid
1-(4'-Hydroxy-3'-methoxyphenyl)-7-tetradecen-3-one?	0.22		Gingerol derivative
Total identified	92.32%	92.34%	

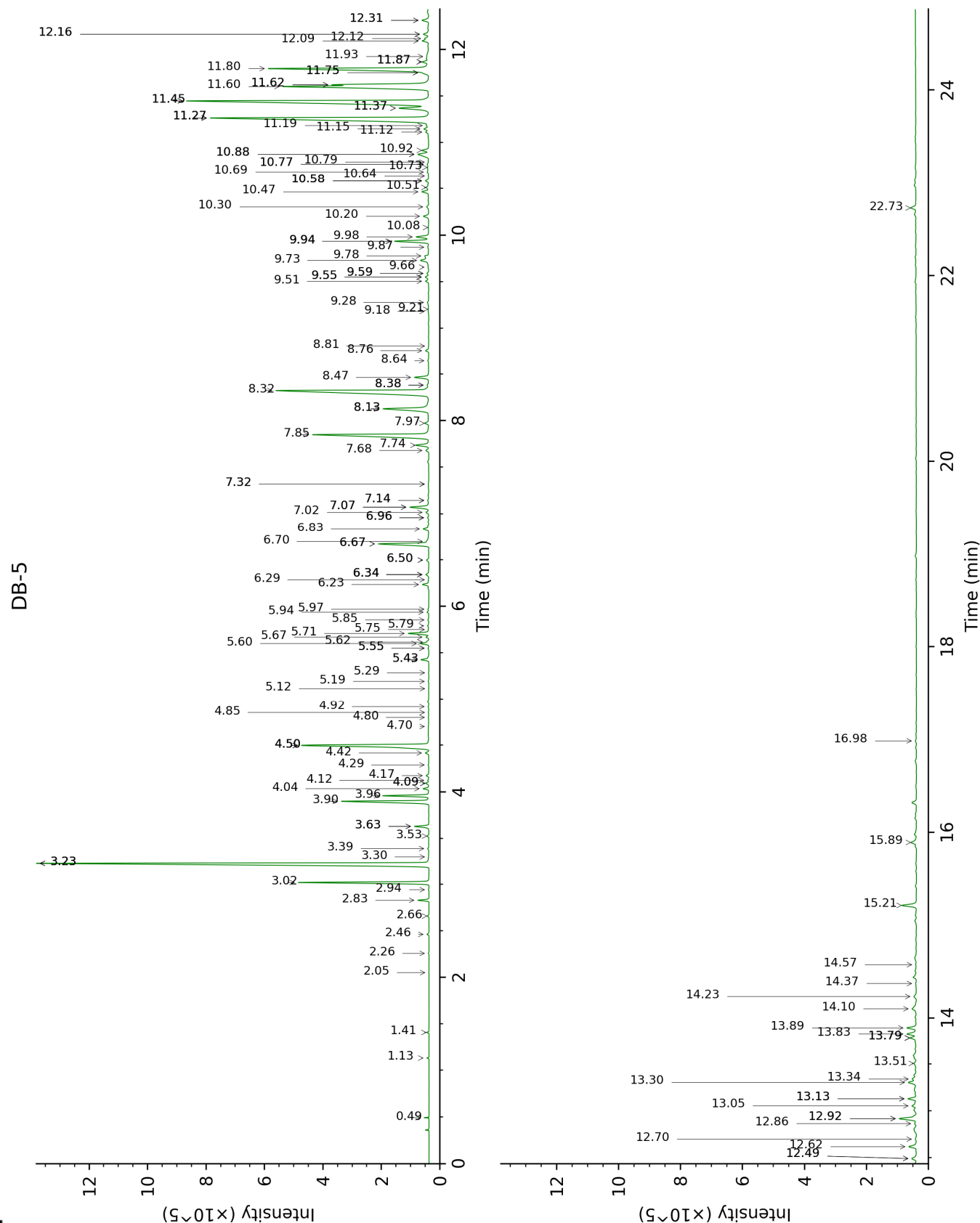
*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

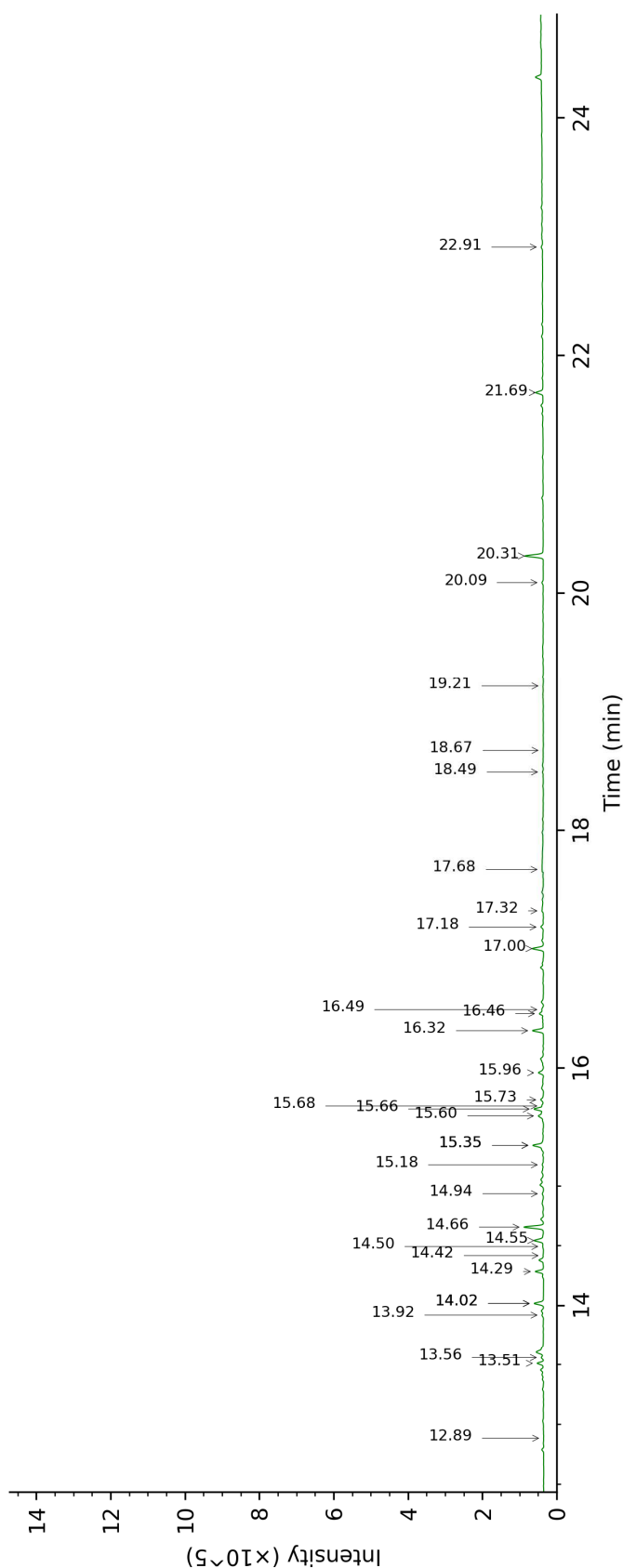
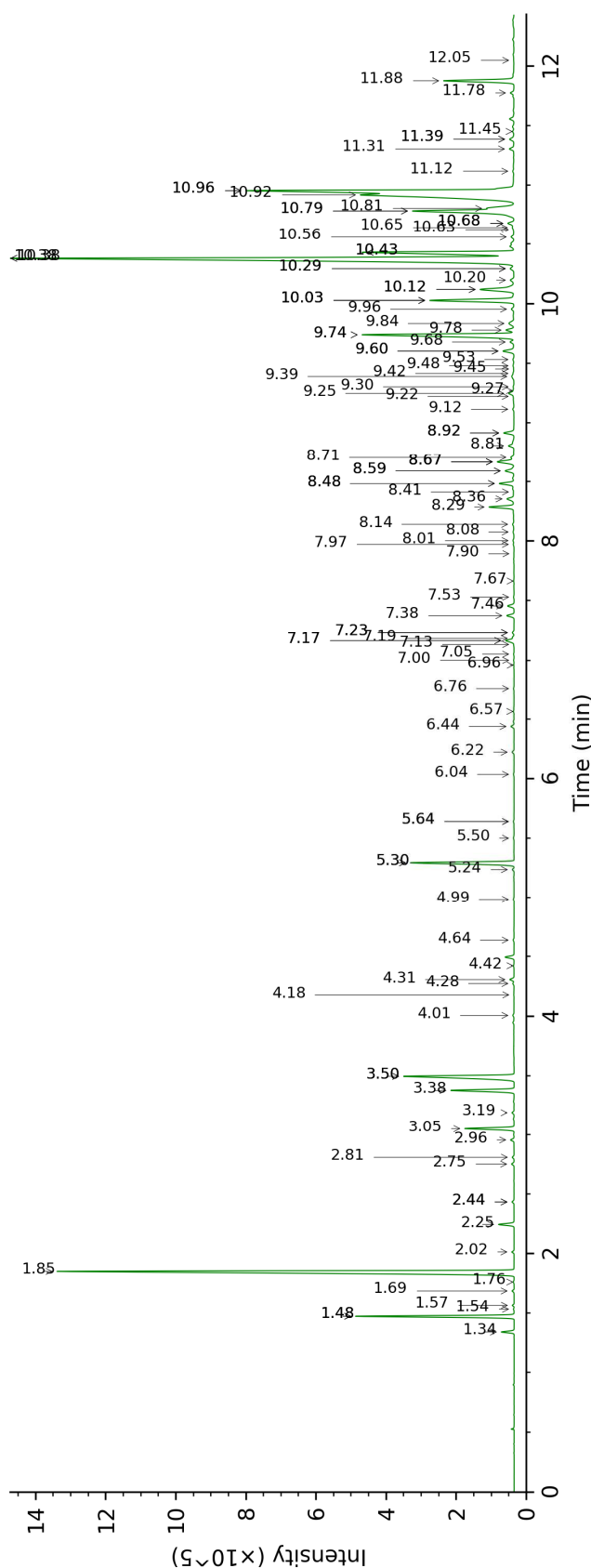
tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied

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	%
2-Methyl-3-buten-2-ol	0.49	605	0.04	1.69	1016	0.04
Toluene	1.13	753	0.03	1.57	1004	0.03
Hexanal	1.41	794	0.04	2.02	1047	0.04
Unknown [m/z 43, 72 (40), 57 (15)... 98 (4)]	2.05	851	0.01	6.96	1417	0.01
Hexanol	2.26	868	0.01	5.64*	1322	0.01
2-Heptanone	2.46	886	0.05	3.19	1145	0.05
2-Heptanol	2.66	902	0.04	5.24	1293	0.04
Tricyclene	2.83	913	0.26	1.34	974	0.26
α -Thujene	2.94	920	0.01	1.54	1001	0.01
α -Pinene	3.02	926	3.23	1.48*	995	3.30
Camphene	3.23*	940	13.02	1.85	1032	13.29
β -Citronellene	3.23*	940	[13.02]	1.48*	995	[3.30]
α -Fenchene	3.23*	940	[13.02]	1.76	1023	0.02
Thuja-2,4(10)-diene	3.30	944	tr	2.44*	1086	0.05
Unknown [m/z 55, 70 (27), 43 (25), 83 (22), 84 (20)...]	3.39	950	0.03			
Unknown [m/z 91, 119 (60), 77 (36), 92 (31), 93 (31)... 134 (23)]	3.53	959	0.04	2.81	1116	0.04
Sabinene	3.63*	966	0.40	2.44*	1086	[0.05]
β -Pinene	3.63*	966	[0.40]	2.25	1069	0.37
6-Methyl-5-hepten-2-one	3.90	984	2.64	5.30*	1298	2.72
Myrcene	3.96	988	1.14	3.05	1134	1.15
6-Methyl-5-hepten-2-ol	4.04	993	0.15	7.17*	1432	0.27
Unknown [m/z 79, 108 (79), 52 (43), 80 (42), 77 (27)]	4.09*	997	0.10	7.90	1486	0.01
Pseudolimonene	4.09*	997	[0.10]	2.96	1127	0.08
Octanal	4.12	999	0.03	4.64	1251	0.02
Δ 3-Carene	4.18	1002	0.08	2.75	1112	0.06
Unknown [m/z 54, 82 (75), 110 (68), 68 (28)]	4.29	1010	0.02			
para-Cymene	4.42	1018	0.09	4.31	1227	0.11
Limonene	4.50*	1023	5.12	3.38	1159	1.62
1,8-Cineole	4.50*	1023	[5.12]	3.50*	1168	3.65
β -Phellandrene	4.50*	1023	[5.12]	3.50*	1168	[3.65]
(Z)- β -Ocimene	4.70	1036	tr	4.01	1206	0.03
2-Heptyl acetate	4.80	1042	0.01	4.42	1236	0.02
(E)- β -Ocimene	4.85	1045	0.01	4.18	1218	tr
2,6-Dimethyl-5-heptenal (melonal)	4.92	1049	0.02	5.50	1312	0.02
cis-Sabinene hydrate	5.12	1061	tr	7.14	1430	0.01
cis-Linalool oxide (fur.)	5.19	1066	0.01	6.76	1402	0.02
Octanol	5.29	1072	0.01	8.41	1525	0.01
para-Cymenene	5.43*	1081	0.23	6.56	1388	0.02
trans-Linalool oxide (fur.)	5.43*	1081	[0.23]	7.17*	1432	[0.27]
2-Nonanone	5.55*†	1089	0.26	6.04	1350	0.01
α -Pinene oxide	5.55*†	1089	[0.26]	5.64*	1322	[0.01]

Unknown [m/z 96, 109 (55), 79 (41), 67 (38), 41 (36)... 150 (3)]	5.60†	1092	[0.26]	8.92*	1564	0.30
Rosefuran	5.62	1093	0.05	6.22	1364	0.05
Perillene	5.67	1096	0.07	6.44	1379	0.08
Linalool	5.71	1099	0.62	8.29	1516	0.68
2-Nonanol	5.75	1101	0.01	7.97	1492	0.02
1-Methyl-4-(1-methylpropyl)benzene	5.79	1104	0.03	5.30*	1298	[2.72]
endo-Fenchol	5.85	1108	0.02	8.59*	1539	0.31
Bornyl methyl ether	5.94	1113	0.05	4.28	1225	0.03
(E)-4,8-Dimethylnona-1,3,7-triene	5.97	1115	0.02	4.99	1276	0.02
Camphor	6.23	1132	0.19	7.46	1454	0.19
trans-para-Menth-2-en-1-ol	6.29	1135	0.01	9.22	1588	0.01
Camphene hydrate	6.34*	1139	0.12	8.70	1548	0.09
exo-Isocitral	6.34*	1139	[0.12]	7.67	1469	0.01
Epoxyterpinolene	6.34*	1139	[0.12]	7.00	1420	0.01
Citronellal	6.50*	1149	0.08	7.23*	1437	0.04
Isoborneol	6.50*	1149	[0.08]	9.60*	1618	0.36
Borneol	6.67*	1160	1.71	10.03*	1652	2.58
Isoneral	6.67*	1160	[1.71]	8.14	1504	0.06
Unknown [m/z 109, 79 (18), 81 (15), 91 (12), 77 (10)... 152 (3)]	6.70	1162	0.11			
Terpinen-4-ol	6.83	1170	0.19	8.81	1556	0.17
Cryptone	6.96*	1178	0.04	9.42	1603	0.02
4-Methylacetophenone	6.96*	1178	[0.04]	10.79*	1714	3.72
α-Terpineol	7.02	1182	0.10	10.03*	1652	[2.58]
para-Cymen-8-ol	7.07*	1186	0.67	11.78	1798	0.10
Isogeranial	7.07*	1186	[0.67]	8.48*	1531	0.45
Myrtenol	7.14*	1190	0.04	11.12	1742	0.03
Myrtenal	7.14*	1190	[0.04]	8.92*	1564	[0.30]
trans-Piperitol	7.32*	1201	0.02	10.68*	1706	0.20
Decanal	7.32*	1201	[0.02]	7.53	1459	0.01
Nerol	7.68	1226	0.11	11.31	1758	0.13
Citronellol	7.74	1229	0.48	10.96*†	1729	[16.18]
Neral	7.85	1237	4.90	9.74*	1629	4.91
Unknown [m/z 43, 97 (69), 107 (46), 41 (28), 55 (21), 109 (20)...]	7.97	1245	0.15	11.39*	1765	0.14
Geraniol	8.13*	1255	2.08	11.88	1807	2.01
(2E)-Decenal	8.13*	1255	[2.08]	9.30	1594	0.02
Geranial	8.32	1268	7.86	10.38*†	1681	23.79
Citronellyl formate	8.38*	1272	0.06	9.12	1579	0.03
(E)-4,8-Dimethylnona-3,8-dien-2-one	8.38*	1272	[0.06]	9.48	1608	0.03
Bornyl acetate	8.47	1278	0.49	8.48*	1531	[0.45]
Cuminol	8.64	1290	0.03	14.50	2046	0.03
Geranyl formate	8.76	1298	0.10	10.20	1666	0.12
2-Undecanol	8.81	1301	0.01	10.56	1695	0.08
3-Oxo-para-menth-1-en-7-	9.18	1327	0.03			

al						
δ-Elemene isomer	9.21	1329	0.01	7.05	1424	0.01
Neric acid	9.28	1334	0.07	17.32	2333	0.05
Citronellyl acetate	9.51	1350	0.11	9.68	1624	0.11
Cyclosativene I	9.55*	1353	0.13	7.19	1434	0.04
8-Hydroxy-iso-menthol	9.55*	1353	[0.13]	15.34*	2129	0.40
Unknown [m/z 95, 110 (87), 43 (58), 139 (52)...]	9.59*	1356	0.06			
Cyclosativene II	9.59*	1356	[0.06]	7.23*	1437	[0.04]
Neryl acetate	9.66	1360	0.02	10.43*†	1685	[23.79]
α-Copaene	9.73†	1366	0.56	7.38	1448	0.20
Geranic acid	9.78†	1369	[0.56]	17.68	2371	0.31
Unknown [m/z 139, 69 (63), 83 (53), 43 (49), 41 (39)...]	9.87	1376	0.04			
Geranyl acetate	9.94*	1380	1.07	10.81	1716	0.77
7-epi-Sesquithujene	9.94*	1380	[1.07]	8.08	1500	0.04
β-Cubebene	9.94*	1380	[1.07]	8.01	1494	0.04
β-Elemene	9.98	1383	0.41	8.67*	1545	0.59
Vanillin	10.08	1390	0.02	18.67	2482	0.02
Sesquithujene	10.20	1399	0.19	8.36	1521	0.28
β-Caryophyllene	10.30	1406	0.08	8.67*	1545	[0.59]
β-Copaene	10.47	1418	0.24	8.59*	1539	[0.31]
Unknown [m/z 43, 83 (81), 126 (64), 41 (53), 55 (43)...]	10.51	1422	0.09			
trans-α-Bergamotene	10.58*	1427	0.11	8.67*	1545	[0.59]
(Z)-β-Farnesene?	10.58*	1427	[0.11]	9.45	1606	0.01
γ-Elemene	10.58*	1427	[0.11]	9.27	1591	0.02
Nerylacetone	10.64	1432	0.01	12.05	1822	0.01
Sesquisabinene A	10.68	1435	0.05	9.39	1601	0.10
Unknown [m/z 41, 97 (78), 69 (77), 43 (71), 125 (67), 55 (56)... 168 (39)]	10.74	1438	0.06			
α-Humulene	10.77*	1441	0.06	9.53	1612	0.03
Unknown [m/z 139, 69 (60), 41 (51), 43 (47), 119 (41)... 204 (1)]	10.77*	1441	[0.06]			
Unknown [m/z 139, 69 (43), 91 (42), 41 (36), 81 (36), 43 (36)... 204 (5)]	10.79	1443	0.02			
Sesquisabinene B	10.88*	1449	0.53	9.60*	1618	[0.36]
allo-Aromadendrene	10.88*	1449	[0.53]	9.25	1590	0.18
(E)-β-Farnesene	10.92	1452	0.23	9.78	1632	0.23
Selina-4,11-diene	11.12	1467	0.11	9.74*	1629	[4.91]
γ-Murolene	11.15	1469	0.17	9.84	1637	0.22
Germacrene D	11.18	1472	0.08	10.03*	1652	[2.58]
ar-Curcumene	11.27*	1478	10.03	10.96*†	1729	[16.18]
β-Selinene	11.27*	1478	[10.03]	10.12*	1660	1.29
γ-Curcumene	11.27*	1478	[10.03]	9.96	1646	0.08
Unknown [m/z 161, 91 (100), 105 (93), 79 (89), 93 (89), 107 (79)... 204 (34)]	11.37*†	1486	12.62	10.30*	1674	0.13
Bicyclosesquiphellandrene?	11.37*†	1486	[12.62]	10.12*	1660	[1.29]

α -Zingiberene	11.45*†	1491	[12.62]	10.38*†	1681	[23.79]
α -Muurolene	11.45*†	1491	[12.62]	10.30*	1674	[0.13]
β -Bisabolene	11.60†	1503	8.19	10.43*†	1685	[23.79]
(3E,6E)- α -Farnesene	11.62*†	1505	[8.19]	10.79*	1714	[3.72]
γ -Cadinene	11.62*†	1505	[8.19]	10.65	1702	0.04
<i>trans</i> -Calamenene	11.75*	1515	0.17	11.45	1770	0.04
δ -Cadinene	11.75*	1515	[0.17]	10.68*	1706	[0.20]
β -Sesquiphellandrene	11.80	1518	6.10	10.92†	1726	16.18
Unknown [m/z 69, 41 (80), 82 (63), 43 (57), 98 (54)... 220 (t)]	11.87*	1524	0.24			
(E)- γ -Bisabolene	11.87*	1524	[0.24]	10.63	1701	0.01
Unknown [m/z 177, 159 (67), 41 (43), 91 (43), 43 (41)... 220 (t)]	11.93	1528	0.07	13.56	1958	0.06
α -Elemol	12.09	1541	0.22	14.29	2026	0.24
Germacrene B	12.12	1543	0.12	11.39*	1765	[0.14]
<i>cis</i> -Sesquisabinene hydrate	12.16*	1547	0.20	13.51	1953	0.18
Unknown [m/z 69, 41 (79), 82 (63), 43 (57), 98 (54)... 220 (1)]	12.16*	1547	[0.20]	14.94	2089	0.04
(E)-Nerolidol	12.31*	1559	0.23	14.02*	2000	0.28
β -Calacorene	12.31*	1559	[0.23]	12.89	1896	tr
1'-Hydroxyeugenol	12.49*	1572	0.20	20.09	2648	0.04
ar-Turmerol	12.49*	1572	[0.20]	15.68	2163	0.03
<i>trans</i> -Sesquisabinene hydrate	12.62	1582	0.29	14.55	2051	0.31
Unknown [m/z 132, 118 (89), 145 (85), 119 (79), 117 (60)...]	12.70	1589	0.04	14.02*	2000	[0.28]
Junenol	12.86	1602	0.07	13.92	1991	0.05
10-epi- γ -Eudesmol	12.92*	1606	0.71	14.42	2039	0.02
<i>cis</i> -Zingiberenol	12.92*	1606	[0.71]	14.66	2062	0.57
Unknown [m/z 119, 85 (92), 105 (37), 120 (36), 91 (28)... 218 (6)]	13.05	1617	0.17	16.46	2242	0.14
γ -Eudesmol	13.13*	1624	0.29	15.18	2113	0.04
<i>trans</i> -Zingiberenol	13.13*	1624	[0.29]	15.34*	2129	[0.40]
β -Eudesmol	13.30	1638	0.33	15.66	2160	0.30
α -Eudesmol	13.34	1641	0.17	15.60	2154	0.20
(3E,5E)-7-Hydroxyfarnesene	13.51	1655	0.09	16.49	2246	0.06
α -Bisabolol	13.79*	1678	0.22	15.74	2168	0.10
Zingerone methyl ether	13.79*	1678	[0.22]	19.22	2545	0.02
4-(1,5-Dimethylhex-4- enyl)cyclohex-2-enone	13.79*	1678	[0.22]	15.96	2191	0.17
Unknown [m/z 137, 119 (70), 84 (69), 41 (68), 69 (53), 55 (45), 109 (38)... 222 (2)]	13.83	1681	0.39	16.32	2227	0.33
Unknown [m/z 69, 41 (59), 118 (33), 43 (32), 55 (31)... 234? (t)]	13.89	1686	0.34	17.00	2299	0.34
ar-Curcumen-15-al	14.10	1704	0.20			

Unknown [m/z 119, 91 (31), 105 (29), 41 (25), 133 (23), 158 (21)...]	14.23	1715	0.12	17.18	2319	0.09
Oplopanone	14.37	1727	0.03	18.49	2462	0.03
Xanthorizzhol?	14.57	1744	0.03			
Unknown [m/z 69, 43 (95), 41 (84), 109 (78), 95 (54), 93 (49)... 177 (36), 220 (2)...]	15.21	1800	0.57	20.31	2674	0.56
Unknown [m/z 109, 69 (58), 43 (56), 41 (42), 135 (37), 55 (27)... 220 (5)]	15.89	1861	0.26	21.69	2846	0.22
Palmitic acid	16.98	1963	0.05	22.91	3006	0.04
1-(4'-Hydroxy-3'-methoxyphenyl)-7-tetradecen-3-one?	22.73	2583	0.22			
Total identified	92.32%			92.34%		
Total reported	95.06%			94.18%		

*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified 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