

GC/MS BATCH NUMBER: C90113

ESSENTIAL OIL: CHAMOMILE ROMAN
BOTANICAL NAME: CHAMAMELUM NOBILE
ORIGIN: USA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CHAMOMILE ROMAN OIL	%
α-PINENE	10.3
METHALLYL ANGELATE	9.9
ISOBUTYL ANGELATE	8.7
2-METHYLBUTYL ANGELATE	7.3
3-METHYLPENTYL ANGELATE	7.2
ISOAMYL ANGELATE	4.1
2-METHYLBUTYL 2-METHYLBUTYRATE	3.7
ISOAMYL ISOBUTYRATE	3.2
PINOCARVONE	3.0
TIGLYL ANGELATE	2.7
ISOBUTYL BUTYRATE	2.7
trans-PINOCARVEOL	2.5
β-PINENE	2.2
3-METHYLPENTYL METHACRYLATE	2.2
2-METHYLBUTYL ISOBUTYRATE	1.9
ISOBUTYL ISOBUTYRATE	1.7
METHALLYL METHACRYLATE	1.7
GERMACRENE D	1.6

ISOBUTYL METHACRYLATE	1.6
2-METHYLBUTYL METHACRYLATE + ISOAMYL METHACRYLATE	1.6
TIGLYL METHACRYLATE	1.2

Comments from Robert Tisserand: Light, apple-fruity odor profile. Constituents are in expected amounts for English Chamomile.

Date : May 11, 2018

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 18E01-PTH2-1-CC

Customer identification : Chamomile Roman - USA - C9011378R

Type : Essential oil

Source : *Chamaemelum nobile*

Customer : Plant Therapy


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 : Sarah-Eve Tremblay, M. Sc. A., Chimiste

Analysis date : May 10, 2018

Checked and approved by :



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

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PHYSICOCHEMICAL DATA

Physical aspect: Light blue liquid

Refractive index: 1.4443 ± 0.0003 (20 °C)

CONCLUSION

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

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Ethanol	0.12	0.12	Aliphatic alcohol
Methacrolein	tr	tr	Aliphatic aldehyde
Isobutanol	0.01	0.02	Aliphatic alcohol
Methallyl alcohol	0.01	0.01*	Aliphatic alcohol
3-Methyl-2-butanone	tr	tr	Aliphatic ketone
2-Methylbutyral	0.01	0.01	Aliphatic aldehyde
3-Methyl-3-buten-2-one	tr	tr	Aliphatic ketone
3-Methyl-2-butanol?	tr		Aliphatic alcohol
2-Ethylfuran	0.01	0.01	Furan
Isoamyl alcohol	0.01	[0.01]*	Aliphatic alcohol
2-Methylbutanol	0.03	0.03	Aliphatic alcohol
(2Z)-Pentenol	0.01		Aliphatic alcohol
Toluene	0.01	tr	Simple phenolic
Isobutyl acetate	0.02	0.02	Aliphatic ester
Methyl isovalerate	0.01*	10.29*	Aliphatic ester
Methyl 2-methylbutyrate	[0.01]*	0.01	Aliphatic ester
Ethyl methacrylate	tr	tr	Aliphatic ester
Octene	0.05	0.04	Alkene
Hexanal	0.01	0.01	Aliphatic aldehyde
Methyl angelate	0.03	0.07	Aliphatic ester
3-Methylpentanol	0.02	tr	Aliphatic alcohol
Ethyl 2-methylbutyrate	0.06	0.05	Aliphatic ester
7-Methyloctene	0.01	0.02	Alkene
Propyl isobutyrate	0.07	0.07	Aliphatic ester
Isobutyl propionate	0.02	0.02	Aliphatic ester
Hexanol	tr	0.12*	Aliphatic alcohol
Isoamyl acetate	0.06	0.06	Aliphatic ester
2-Methylbutyl acetate	0.07	0.12*	Aliphatic ester
Propyl methacrylate	0.09	0.09	Aliphatic ester
Nonene	0.02	0.01	Alkene
Ethyl angelate	0.05	0.04	Aliphatic ester
Isobutyl isobutyrate	1.75*	3.95*	Aliphatic ester
Tricyclene	[1.75]*	0.01	Monoterpene
Tiglyl acetate?	0.73*	0.47	Aliphatic ester
α -Thujene	[0.73]*	0.02	Monoterpene
α -Pinene	10.30	[10.29]*	Monoterpene
Methallyl isobutyrate	0.92	1.74*	Aliphatic ester
Isobutyl methacrylate	1.58	1.60	Aliphatic ester
Camphene	0.47	0.47	Monoterpene
Propyl 2-methylbutyrate	0.07	0.08*	Aliphatic ester
Thuja-2,4(10)-diene	0.04	[0.12]*	Monoterpene
Propyl isovalerate	0.01	0.02	Aliphatic ester
Isobutyl butyrate	4.47*	2.71	Aliphatic ester
Methallyl methacrylate	[4.47]*	1.73	Aliphatic ester
(2E)-Heptenal	[4.47]*	0.02	Aliphatic aldehyde
Butyl isobutyrate	[4.47]*	0.04	Aliphatic ester
Benzaldehyde	[4.47]*	6.97*	Simple phenolic
Sabinene	2.30*	[0.12]*	Monoterpene

β-Pinene	[2.30]*	[3.95]*	Monoterpene
2-Methylbutyl propionate	0.05*		Aliphatic ester
Isoamyl propionate	[0.05]*	1.57*	Aliphatic ester
Butyl methacrylate	0.11	0.08	Aliphatic ester
Octen-3-ol	0.15*	0.03	Aliphatic alcohol
3-Methylpentyl acetate	[0.15]*	0.17	Aliphatic ester
Octan-3-one	[0.15]*	0.25*	Aliphatic ketone
2-Pentylfuran	0.13*	0.02	Furan
Myrcene	[0.13]*	0.09	Monoterpene
Propyl angelate	0.80	0.83	Aliphatic ester
Isobutyl 2-methylbutyrate	0.82	[1.74]*	Aliphatic ester
Δ3-Carene	0.15*	[0.08]*	Monoterpene
Isobutyl isovalerate	[0.15]*	0.17*	Aliphatic ester
(3Z)-Hexenyl acetate	[0.15]*	0.01	Aliphatic ester
Isoamyl isobutyrate	3.20	5.02*	Aliphatic ester
2-Methylbutyl isobutyrate	1.91	[5.02]*	Aliphatic ester
Methallyl 2-methylbutyrate	0.47*	0.35	Aliphatic ester
para-Cymene	[0.47]*	0.12	Monoterpene
Methallyl isovalerate?	1.72*	0.09	Aliphatic ester
3-Methyl-3-butenyl isobutyrate?	[1.72]*	tr	Aliphatic ester
Limonene	[1.72]*	[1.57]*	Monoterpene
1,8-Cineole	[1.72]*	[0.17]*	Monoterpenic ether
Propyl tiglate	0.02	0.01	Aliphatic ester
Unknown	0.95		Unknown
2-Methylbutyl methacrylate	1.55*	2.53*	Aliphatic ester
Isoamyl methacrylate	[1.55]*	[2.53]*	Aliphatic ester
(E)-β-Ocimene	0.02	[0.25]*	Monoterpene
Isobutyl angelate	8.65	7.28	Aliphatic ester
γ-Terpinene	0.03	0.02	Monoterpene
Prenyl isobutyrate	1.41*	1.40*	Aliphatic ester
Tiglyl isobutyrate?	[1.41]*	[1.40]*	Aliphatic ester
Unknown	0.04	0.03	Unknown
Methallyl angelate	9.86	9.97	Aliphatic ester
Isobutyl senecioate	0.12	0.09	Aliphatic ester
3-Methylpentyl propionate?	0.04	0.18	Aliphatic ester
para-Cymenene	0.01	tr	Monoterpene
Tiglyl methacrylate	1.18	8.81*	Aliphatic ester
Isobutyl tiglate	0.52*	[0.12]*	Aliphatic ester
Butyl angelate	[0.52]*	0.40	Aliphatic ester
α-Pinene oxide	[0.52]*	[0.12]*	Monoterpenic ether
2-Methylbutyl isovalerate?	0.05	0.20*	Aliphatic ester
Isoamyl 2-methylbutyrate	0.19*	4.96*	Aliphatic ester
Linalool	[0.19]*	0.06	Monoterpenic alcohol
2-Methylbutyl 2-methylbutyrate	3.71	[4.96]*	Aliphatic ester
Amyl isovalerate	0.40*	[0.20]*	Aliphatic ester
Methallyl tiglate	[0.40]*	0.15	Aliphatic ester
3-Methylpentyl isobutyrate	0.93	0.91	Aliphatic ester
α-Campholenal	0.07	0.14	Monoterpenic aldehyde
trans-Pinocarveol	2.48	2.45	Monoterpenic alcohol
trans-Verbenol	0.02	0.04	Monoterpenic alcohol
Camphene hydrate	0.14	0.15	Monoterpenic alcohol
3-Methylpentyl methacrylate	2.20	1.94	Aliphatic ester

Isoamyl angelate	4.07	4.01	Aliphatic ester
Pinocarvone	10.31*	2.99*	Monoterpenic ketone
2-Methylbutyl angelate	[10.31]*	[8.81]*	Aliphatic ester
Unknown	0.01	tr	Oxygenated monoterpene
Borneol	0.12	1.72*	Monoterpenic alcohol
Angelyl angelate?	0.45	0.46	Aliphatic ester
Isopinocampone	0.25	0.29	Monoterpenic ketone
Terpinen-4-ol	0.05	0.06	Monoterpenic alcohol
Isobutyl 3-hydroxy-2-methylenebutyrate	0.02	0.02	Aliphatic ester
para-Cymen-8-ol	0.01	0.01	Monoterpenic alcohol
trans-Isocarveol	0.50*	0.01	Monoterpenic alcohol
α-Terpineol	[0.50]*	[1.72]*	Monoterpenic alcohol
Myrtenal	0.20*	0.01	Monoterpenic aldehyde
Amyl angelate	[0.20]*	0.08	Aliphatic ester
Myrtenol	[0.20]*	0.20	Monoterpenic alcohol
Tiglyl angelate	2.83*	2.72	Aliphatic ester
2-Methylbutyl tiglate	[2.83]*	0.16*	Aliphatic ester
Verbenone	0.05	0.06	Monoterpenic ketone
3-Methylpentyl 2-methylbutyrate?	0.43	0.30*	Aliphatic ester
3-Methylpentyl isovalerate?	0.07	[0.30]*	Aliphatic ester
trans-Carveol	0.01	0.01	Monoterpenic alcohol
4-Methylhexyl isobutyrate	0.02		Aliphatic ester
Carvone	0.05	0.06	Monoterpenic ketone
2-Hydroxy-2-methylbut-3-enyl angelate	0.22	0.22	Aliphatic ester
3-Methylpentyl angelate	7.16	[6.97]*	Aliphatic ester
Linalyl acetate	0.02	0.01	Monoterpenic ester
(3Z)-Hexenyl angelate	0.07*	0.03	Aliphatic ester
2-Methylbutyl 3-hydroxy-2-methylenebutyrate	[0.07]*	0.09*	Aliphatic ester
Isoamyl 3-hydroxy-2-methylenebutyrate	0.04	[0.09]*	Aliphatic ester
Hexyl angelate	0.06	[2.99]*	Aliphatic ester
trans-Pinocarvyl acetate	0.03	0.04	Monoterpenic ester
3-Methylpentyl tiglate	0.08	0.04	Aliphatic ester
Benzyl isobutyrate	0.04*	0.02	Phenolic ester
(2E,4E)-Decadienal	[0.04]*	0.02	Aliphatic aldehyde
Silphiperfol-5-ene	0.08*	0.05	Sesquiterpene
Unknown	[0.08]*	0.04	Unknown
7-epi-Silphiperfol-5-ene	0.02	0.02	Sesquiterpene
Cyclosativene II	0.03*	0.01	Sesquiterpene
Cyclosativene I	[0.03]*	[0.16]*	Sesquiterpene
α-Copaene	0.04	0.03	Sesquiterpene
Isobutyl phenylacetate	0.08*	0.01	Phenolic ester
β-Elemene	[0.08]*	0.13*	Sesquiterpene
4-Methylpentyl 3-hydroxy-2-methylenebutyrate	0.01	0.01	Aliphatic ester
Phenylethyl isobutyrate	0.01	tr	Phenolic ester
β-Caryophyllene	0.12	[0.13]*	Sesquiterpene
Myrtenyl propionate?	0.01		Monoterpenic ester
Benzyl angelate	0.05	0.04	Phenolic ester

(E)-β-Farnesene	0.04	0.07	Sesquiterpene
Myrtenyl isobutyrate	0.02	0.03	Monoterpenic ester
Germacrene D	1.61	[1.72]*	Sesquiterpene
α-Curcumene	0.08*	0.02	Sesquiterpene
β-Selinene	[0.08]*	0.01	Sesquiterpene
Bicyclogermacrene	0.11*	0.02	Sesquiterpene
cis-Eudesma-6,11-diene	[0.11]*	[1.72]*	Sesquiterpene
(3Z,6E)-α-Farnesene	0.03	0.05	Sesquiterpene
(3E,6E)-α-Farnesene	0.26	0.27*	Sesquiterpene
Unknown	0.04*		Oxygenated sesquiterpene
δ-Cadinene	[0.04]*	[0.27]*	Sesquiterpene
Unknown	0.01		Sesquiterpene
Spathulenol	0.01	0.01	Sesquiterpenic alcohol
Caryophyllene oxide	0.06*	0.06	Sesquiterpenic ether
Caryophyllene oxide isomer	[0.06]*	0.02	Sesquiterpenic ether
Phenylethyl tiglate	tr	0.02	Phenolic ester
Copaborneol	0.14	0.13	Sesquiterpenic alcohol
Chamazulene	0.03	0.02	Azulene
Neophytadiene	0.07	0.01	Diterpene
Phytone	0.06	0.05	Terpenic ketone
Total identified	96.70%	96.29%	

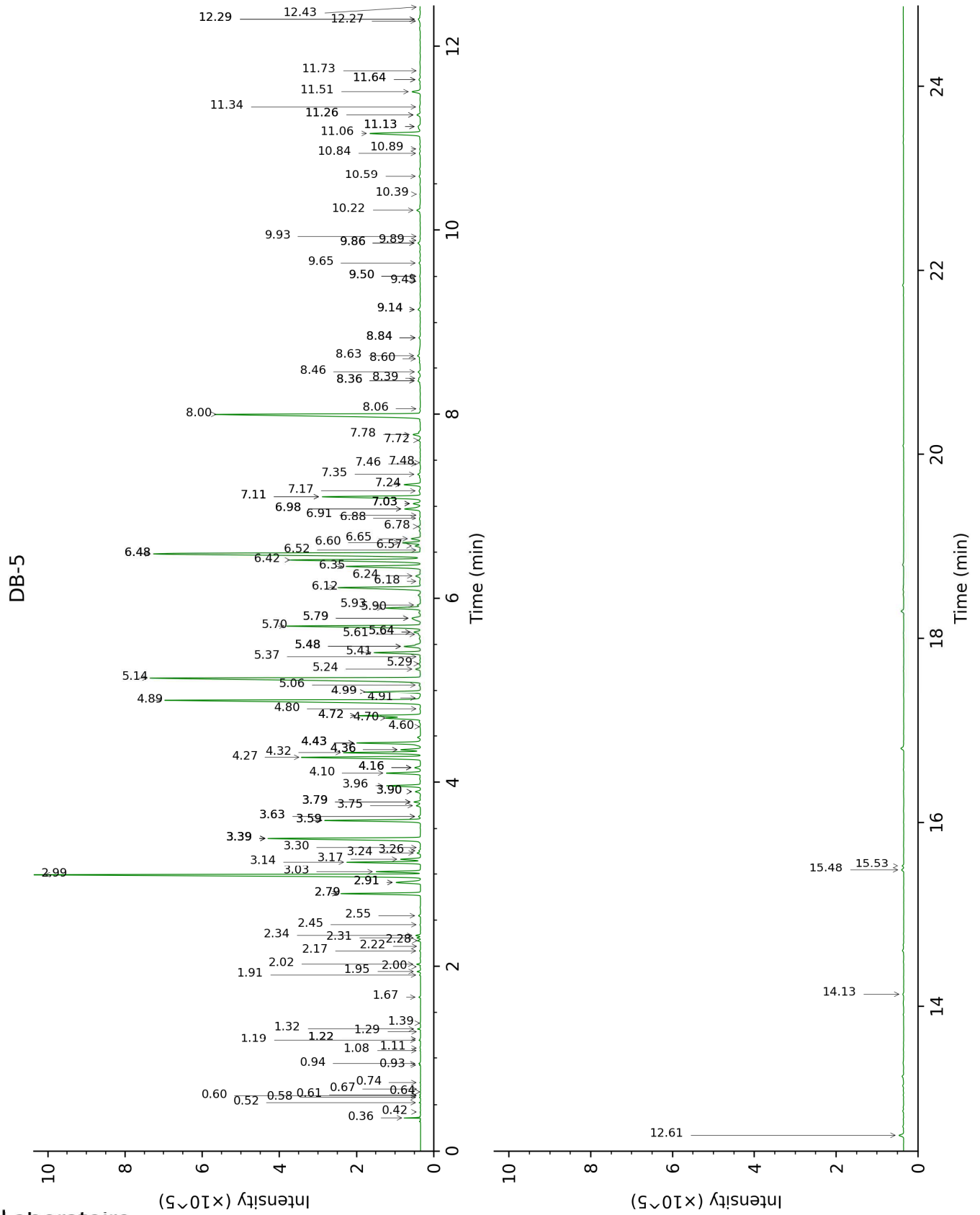
*: Two or more compounds are coeluting on this column

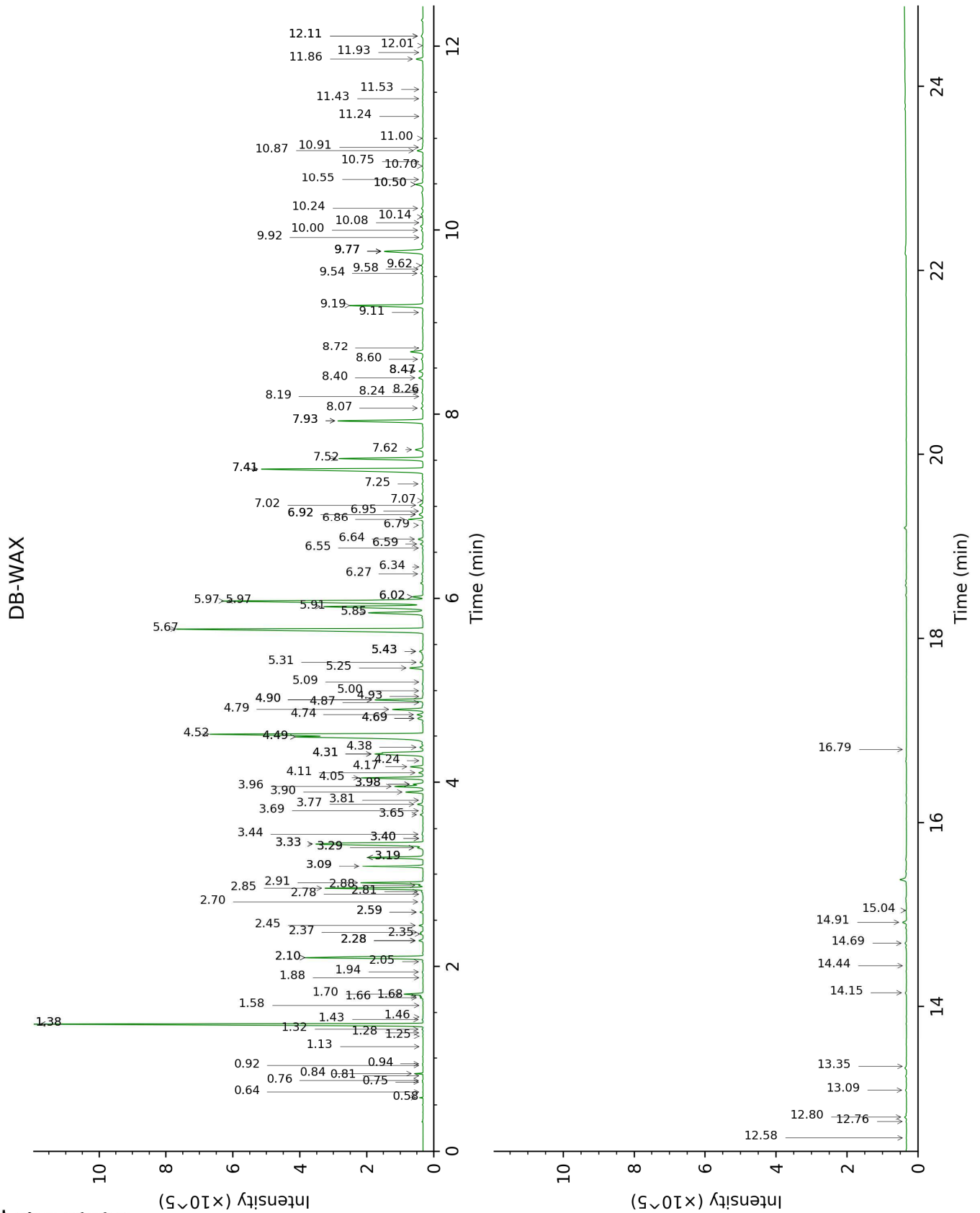
[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

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

Note: no correction factor was applied

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FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
Ethanol	0.36	496	0.12	0.84	904	0.12
Methacrolein	0.42	549	tr	0.64	838	tr
Isobutanol	0.52	617	0.01	2.05	1063	0.02
Methallyl alcohol	0.58	637	0.01	3.40*	1175	0.01
3-Methyl-2-butanone	0.60	643	tr	0.81	900	tr
2-Methylbutyral	0.61	646	0.01	0.75	878	0.01
3-Methyl-3-buten-2-one	0.64	658	tr	1.13	952	tr
3-Methyl-2-butanol?	0.67	668	tr			
2-Ethylfuran	0.74	693	0.01	0.92	919	0.01
Isoamyl alcohol	0.93	725	0.01	3.40*	1175	[0.01]
2-Methylbutanol	0.94	728	0.03	3.44	1178	0.03
(2Z)-Pentenol	1.08	748	0.01			
Toluene	1.11	752	0.01	1.46	1004	tr
Isobutyl acetate	1.19	765	0.02	1.32	985	0.02
Methyl isovalerate	1.22*	768	0.01	1.38*	994	10.29
Methyl 2-methylbutyrate	1.22*	768	[0.01]	1.28	978	0.01
Ethyl methacrylate	1.29	780	tr	1.58	1016	tr
Octene	1.32	784	0.05	0.58	816	0.04
Hexanal	1.39	794	0.01	1.88	1046	0.01
Methyl angelate	1.67	821	0.03	2.35	1093	0.07
3-Methylpentanol	1.91	841	0.02	5.10	1297	tr
Ethyl 2-methylbutyrate	1.95	845	0.06	1.66	1024	0.05
7-Methyloctene	2.00	849	0.01	0.76	885	0.02
Propyl isobutyrate	2.02	851	0.07	1.68	1026	0.07
Isobutyl propionate	2.17	864	0.02	1.94	1052	0.02
Hexanol	2.22	868	tr	5.43*	1322	0.12
Isoamyl acetate	2.28	873	0.06	2.37	1094	0.06
2-Methylbutyl acetate	2.31	876	0.07	2.28*	1086	0.12
Propyl methacrylate	2.34	878	0.09	2.45	1101	0.09
Nonene	2.45	888	0.02	0.94	922	0.01
Ethyl angelate	2.55	896	0.05	2.81	1130	0.04
Isobutyl isobutyrate	2.79*	914	1.75	2.10*	1067	3.95
Tricyclene	2.79*	914	[1.75]	1.25	972	0.01
Tiglyl acetate?	2.91*	922	0.73	3.90	1212	0.47
α-Thujene	2.91*	922	[0.73]	1.43	1001	0.02
α-Pinene	2.99	927	10.30	1.38*	994	[10.29]
Methallyl isobutyrate	3.03	930	0.92	3.09*	1151	1.74
Isobutyl	3.14	937	1.58	2.91	1137	1.60

methacrylate						
Camphene	3.17	939	0.47	1.70	1028	0.47
Propyl 2-methylbutyrate	3.24	944	0.07	2.59*	1112	0.08
Thuja-2,4(10)-diene	3.26	945	0.04	2.28*	1086	[0.12]
Propyl isovalerate	3.30	948	0.01	2.78	1128	0.02
Isobutyl butyrate	3.39*	954	4.47	2.85	1133	2.71
Methallyl methacrylate	3.39*	954	[4.47]	4.05	1223	1.73
(2E)-Heptenal	3.39*	954	[4.47]	5.00	1290	0.02
Butyl isobutyrate	3.39*	954	[4.47]	2.70	1121	0.04
Benzaldehyde	3.39*	954	[4.47]	7.41*	1466	6.97
Sabinene	3.59*	968	2.30	2.28*	1086	[0.12]
β-Pinene	3.59*	968	[2.30]	2.10*	1067	[3.95]
2-Methylbutyl propionate	3.63*	970	0.05			
Isoamyl propionate	3.63*	970	[0.05]	3.19*	1159	1.57
Butyl methacrylate	3.75	978	0.11	3.65	1194	0.08
Octen-3-ol	3.79*	981	0.15	6.79	1420	0.03
3-Methylpentyl acetate	3.79*	981	[0.15]	3.76	1203	0.17
Octan-3-one	3.79*	981	[0.15]	3.98*	1218	0.25
2-Pentylfuran	3.90*	988	0.13	3.69	1198	0.02
Myrcene	3.90*	988	[0.13]	2.88	1135	0.09
Propyl angelate	3.96	993	0.80	3.96	1216	0.83
Isobutyl 2-methylbutyrate	4.10	1002	0.82	3.09*	1151	[1.74]
Δ ³ -Carene	4.16*	1006	0.15	2.59*	1112	[0.08]
Isobutyl isovalerate	4.16*	1006	[0.15]	3.30*	1167	0.17
(3Z)-Hexenyl acetate	4.16*	1006	[0.15]	4.87	1280	0.01
Isoamyl isobutyrate	4.27	1013	3.20	3.34*	1170	5.02
2-Methylbutyl isobutyrate	4.32	1016	1.91	3.34*	1170	[5.02]
Methallyl 2-methylbutyrate	4.36*	1018	0.47	4.17	1232	0.35
para-Cymene	4.36*	1018	[0.47]	4.11	1227	0.12
Methallyl isovalerate?	4.43*†	1023	1.72	4.38	1246	0.09
3-Methyl-3-butenyl isobutyrate?	4.43*†	1023	[1.72]	4.24	1236	tr
Limonene	4.43*†	1023	[1.72]	3.19*	1159	[1.57]
1,8-Cineole	4.43*†	1023	[1.72]	3.30*	1167	[0.17]
Propyl tiglate	4.60	1034	0.02	4.93	1285	0.01
Unknown [m/z 43, 41 (84), 71 (62), 69 (59), 68 (51), 67	4.70	1040	0.95			

(48), 93 (41)...156 (4)]						
2-Methylbutyl methacrylate	4.72*	1041	1.55	4.31*	1241	2.53
Isoamyl methacrylate	4.72*	1041	[1.55]	4.31*	1241	[2.53]
(E)-β-Ocimene	4.80	1046	0.02	3.98*	1218	[0.25]
Isobutyl angelate	4.89	1052	8.65	4.52	1256	7.28
γ-Terpinene	4.91	1054	0.03	3.81	1206	0.02
Prenyl isobutyrate	4.99*	1058	1.41	4.90*	1283	1.40
Tiglyl isobutyrate?	4.99*	1058	[1.41]	4.90*	1283	[1.40]
Unknown [m/z 71, 43 (28), 41 (21), 57 (19), 98 (11)... 116 (4), 129 (1), 156 (t)]	5.06	1063	0.04	6.95	1432	0.03
Methallyl angelate	5.14	1068	9.86	5.67	1339	9.97
Isobutyl senecioate	5.24	1074	0.12	5.31	1313	0.09
3-Methylpentyl propionate?	5.29	1077	0.04	4.74	1271	0.18
para-Cymenene	5.37	1082	0.01	6.34	1387	tr
Tiglyl methacrylate	5.41	1085	1.18	5.97*	1361	8.81
Isobutyl tiglate	5.48*	1089	0.52	5.43*	1322	[0.12]
Butyl angelate	5.48*	1089	[0.52]	5.25	1309	0.40
α-Pinene oxide	5.48*	1089	[0.52]	5.43*	1322	[0.12]
2-Methylbutyl isovalerate?	5.61	1098	0.05	4.69*	1268	0.20
Isoamyl 2-methylbutyrate	5.64*	1099	0.19	4.49*	1254	4.96
Linalool	5.64*	1099	[0.19]	8.07	1516	0.06
2-Methylbutyl 2-methylbutyrate	5.70	1103	3.71	4.49*	1254	[4.96]
Amyl isovalerate	5.79*	1109	0.40	4.69*	1268	[0.20]
Methallyl tiglate	5.79*	1109	[0.40]	6.64	1409	0.15
3-Methylpentyl isobutyrate	5.90	1116	0.93	4.79	1275	0.91
α-Campholenal	5.93	1118	0.07	7.02	1437	0.14
trans-Pinocarveol	6.12	1130	2.48	9.19	1603	2.45
trans-Verbenol	6.18	1134	0.02	9.58	1635	0.04
Camphene hydrate	6.24	1138	0.14	8.40	1541	0.15
3-Methylpentyl methacrylate	6.35	1145	2.20	5.85	1352	1.94
Isoamyl angelate	6.42	1149	4.07	5.91	1357	4.01
Pinocavone	6.48*	1154	10.31	7.93*	1505	2.99
2-Methylbutyl angelate	6.48*	1154	[10.31]	5.97*	1361	[8.81]
Unknown [m/z 96, 95 (72), 67 (45), 41 (42), 55 (32), 70 (27)... 152 (t)]	6.52	1156	0.01	10.08	1676	tr
Borneol	6.57	1159	0.12	9.77*	1650	1.72
Angelyl angelate?	6.60	1161	0.45	6.86	1426	0.46

Isopinocampnone	6.65	1164	0.25	7.62	1482	0.29
Terpinen-4-ol	6.78	1173	0.05	8.60	1557	0.06
Isobutyl 3-hydroxy-2-methylenebutyrate	6.88	1179	0.02	10.91	1744	0.02
para-Cymen-8-ol	6.91	1181	0.01	11.53	1798	0.01
trans-Isocarveol	6.98*	1185	0.50	11.00	1753	0.01
α-Terpineol	6.98*	1185	[0.50]	9.77*	1650	[1.72]
Myrtenal	7.03*	1189	0.20	8.72	1566	0.01
Amyl angelate	7.03*	1189	[0.20]	6.59	1406	0.08
Myrtenol	7.03*	1189	[0.20]	10.87	1741	0.20
Tiglyl angelate	7.11*	1194	2.83	7.52	1475	2.72
2-Methylbutyl tiglate	7.11*	1194	[2.83]	6.92*	1430	0.16
Verbenone	7.17	1198	0.05	9.62	1638	0.06
3-Methylpentyl 2-methylbutyrate?	7.24	1202	0.43	6.02*	1364	0.30
3-Methylpentyl isovalerate?	7.35	1210	0.07	6.02*	1364	[0.30]
trans-Carveol	7.46	1217	0.01	11.43	1789	0.01
4-Methylhexyl isobutyrate	7.48	1218	0.02			
Carvone	7.72	1235	0.05	10.00	1669	0.06
2-Hydroxy-2-methylbut-3-enyl angelate	7.78	1239	0.22	11.86	1827	0.22
3-Methylpentyl angelate	8.00	1254	7.16	7.41*	1466	[6.97]
Linalyl acetate	8.06	1258	0.02	8.19	1526	0.01
(3Z)-Hexenyl angelate	8.36*	1278	0.07	8.26	1531	0.03
2-Methylbutyl 3-hydroxy-2-methylenebutyrate	8.36*	1278	[0.07]	12.11*	1849	0.09
Isoamyl 3-hydroxy-2-methylenebutyrate	8.39	1280	0.04	12.11*	1849	[0.09]
Hexyl angelate	8.46	1284	0.06	7.93*	1505	[2.99]
trans-Pinocarvyl acetate	8.60	1294	0.03	9.11	1597	0.04
3-Methylpentyl tiglate	8.64	1296	0.08	8.24	1529	0.04
Benzyl isobutyrate	8.84*	1310	0.04	10.75	1731	0.02
(2E,4E)-Decadienal	8.84*	1310	[0.04]	11.24	1773	0.02
Silphiperfol-5-ene	9.14*	1332	0.08	6.27	1382	0.05
Unknown [m/z 83, 55 (79), 82 (26), 43 (25), 45 (18), 69 (15)...166 (8)]	9.14*	1332	[0.08]	14.15	2037	0.04
7-epi-Silphiperfol-5-ene	9.45	1354	0.02	6.55	1402	0.02
Cyclosativene II	9.50*	1357	0.03	7.07	1441	0.01

Cyclosativene I	9.50*	1357	[0.03]	6.92*	1430	[0.16]
α-Copaene	9.65	1368	0.04	7.25	1454	0.03
Isobutyl phenylacetate	9.86*	1383	0.08	11.93	1833	0.01
β-Elemene	9.86*	1383	[0.08]	8.47*	1547	0.13
4-Methylpentyl 3-hydroxy-2-methylenebutyrate	9.89	1385	0.01	13.35	1961	0.01
Phenylethyl isobutyrate	9.93	1388	0.01	12.01	1840	tr
β-Caryophyllene	10.22	1408	0.12	8.47*	1547	[0.13]
Myrtenyl propionate?	10.39	1421	0.01			
Benzyl angelate	10.58	1436	0.05	13.09	1938	0.04
(E)-β-Farnesene	10.84	1455	0.04	9.54	1631	0.07
Myrtenyl isobutyrate	10.89	1459	0.02	10.55	1714	0.03
Germacrene D	11.06	1471	1.61	9.77*	1650	[1.72]
ar-Curcumene	11.13*	1477	0.08	10.70	1727	0.02
β-Selinene	11.13*	1477	[0.08]	9.92	1662	0.01
Bicyclogermacrene	11.26*	1486	0.11	10.14	1680	0.02
cis-Eudesma-6,11-diene	11.26*	1486	[0.11]	9.77*	1650	[1.72]
(3Z,6E)-α-Farnesene	11.34	1493	0.03	10.24	1688	0.05
(3E,6E)-α-Farnesene	11.51	1505	0.26	10.50*	1710	0.27
Unknown [m/z 95, 124 (75), 109 (75), 43 (73), 137 (67), 81 (67), 149 (48)...222 (25)]	11.64*	1515	0.04			
δ-Cadinene	11.64*	1515	[0.04]	10.50*	1710	[0.27]
Unknown [m/z 103, 174 (89), 159 (57), 77 (38), 115 (34), 143 (31)...204 (1)]	11.74	1523	0.01			
Spathulenol	12.27	1565	0.01	14.44	2065	0.01
Caryophyllene oxide	12.29*	1567	0.06	12.80	1911	0.06
Caryophyllene oxide isomer	12.29*	1567	[0.06]	12.76	1906	0.02
Phenylethyl tiglate	12.43	1578	tr	15.04	2124	0.02
Copaborneol	12.61	1592	0.14	14.91	2111	0.13
Chamazulene	14.13	1719	0.03	16.79	2304	0.02
Neophytadiene	15.48	1837	0.07	12.58	1890	0.01
Phytone	15.53	1842	0.06	14.69	2089	0.05
Total identified		96.70%			96.29%	
Total reported		97.71%			96.37%	

*: 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