

Date : September 27, 2022

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 22I21-PTH01

**Customer identification :** Helichrysum Italicum ORGANIC - Bulgaria - H90111R

**Type :** Essential oil

**Source :** *Helichrysum italicum*

**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 :** Sylvain Mercier, M. Sc., Chimiste 2014-005

**Analysis date :** September 22, 2022

Checked and approved by :

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

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#### PYHSICOCHEMICAL DATA

**Physical aspect:** Light yellow liquid

**Refractive index:**  $1.4789 \pm 0.0003$  (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	tr	Aliphatic alcohol
2-Methylbutyral	0.01	Aliphatic aldehyde
3-Pentanone	0.02	Aliphatic ketone
2-Ethylfuran	0.01	Furan
2-Methyl-3-pentanone	0.05	Aliphatic ketone
Unknown	0.01	Unknown
Unknown	0.02	Unknown
Hexanal	0.01	Aliphatic aldehyde
Octane	0.01	Alkane
2-Methyl-2-heptene	0.08	Alkene
4-Methyl-3-hexanone	0.10	Aliphatic ketone
Hexanol	0.01	Aliphatic alcohol
Bornylene	0.06	Monoterpene
Tricyclene	0.01	Monoterpene
$\alpha$ -Thujene	0.02	Monoterpene
$\alpha$ -Pinene	15.39	Monoterpene
Camphepane	0.17	Monoterpene
$\alpha$ -Fenchene	0.41	Monoterpene
Thuja-2,4(10)-diene	0.01	Monoterpene
$\beta$ -Pinene	0.53	Monoterpene
Sabinene	0.01	Monoterpene
6-Methyl-5-hepten-2-one	0.01	Aliphatic ketone
Myrcene	0.07	Monoterpene
2-Pentylfuran	tr	Furan
trans-Dehydroxylinalool oxide	0.02	Monoterpenic ether
6-Methyl-5-hepten-2-ol	0.01	Aliphatic alcohol
2-Carene	0.02	Monoterpene
Unknown	0.03	Monoterpene
$\alpha$ -Phellandrene	0.02	Monoterpene
Isobutyl 2-methylbutyrate	0.04	Aliphatic ester
$\Delta^3$ -Carene	0.01	Monoterpene
(3Z)-Hexenyl acetate	0.02	Aliphatic ester
$\alpha$ -Terpinene	0.15	Monoterpene
para-Methylanisole	0.01	Simple phenolic
para-Cymene	0.20	Monoterpene
1,8-Cineole	0.30	Monoterpenic ether
Limonene	3.50	Monoterpene
(Z)- $\beta$ -Ocimene	0.03	Monoterpene
(E)- $\beta$ -Ocimene	0.06	Monoterpene
Isobutyl angelate	0.31	Aliphatic ester
$\gamma$ -Terpinene	0.44	Monoterpene
Octanol	0.01	Aliphatic alcohol
para-Cymenene	0.01	Monoterpene
Terpinolene	0.16	Monoterpene
2-Nonanone	0.03	Aliphatic ketone

2,4-Dimethylheptane-3,5-dione	0.05	β-Diketone
Linalool	0.81	Monoterpenic alcohol
Nonanal	0.05	Aliphatic aldehyde
Isoamyl isovalerate	0.01	Aliphatic ester
2-Methylbutyl 2-methylbutyrate	0.09	Aliphatic ester
endo-Fenchol	0.06	Monoterpenic alcohol
α-Campholenal	0.02	Monoterpenic aldehyde
trans-Pinocarveol	0.04	Monoterpenic alcohol
trans-Verbenol	0.03	Monoterpenic alcohol
para-Vinylanisole	0.04	Simple phenolic
Isoamyl angelate	0.04	Aliphatic ester
Nerol oxide	0.06	Aliphatic ether
2-Methylbutyl angelate	0.80	Aliphatic ester
Pinocarvone	0.01	Monoterpenic ketone
Borneol	0.05	Monoterpenic alcohol
Unknown	0.01	Aliphatic ester
Terpinen-4-ol	0.21	Monoterpenic alcohol
4,6-Dimethyloctane-3,5-dione epimer I	0.15	β-Diketone
4,6-Dimethyloctane-3,5-dione epimer II	0.16	β-Diketone
α-Terpineol	0.25	Monoterpenic alcohol
Myrtenol	0.01	Monoterpenic alcohol
2-Methylbutyl tiglate	0.03	Aliphatic ester
Unknown	0.02	Unknown
Dodecane	0.01	Alkane
Decanal	0.06	Aliphatic aldehyde
Unknown	0.05	Unknown
Unknown	0.03	Unknown
Nerol	1.10	Monoterpenic alcohol
Hexyl 2-methylbutyrate	0.01	Aliphatic ester
Unknown	0.08	β-Diketone
(3Z)-Hexenyl isovalerate	0.02	Aliphatic ester
Hexyl 2-methylbutyrate?	0.06	Aliphatic ester
Hexyl isovalerate	0.01	Aliphatic ester
Isoamyl hexanoate	0.09	Aliphatic ester
3-Methylpentyl angelate	0.03	Aliphatic ester
Unknown	0.05	Aliphatic ester
Linalyl acetate	0.03	Monoterpenic ester
Unknown	0.02	Aliphatic ester
(3Z)-Hexenyl angelate	0.04	Aliphatic ester
Hexyl angelate	0.23	Aliphatic ester
2-Undecanone	0.01	Aliphatic ketone
2-Acetyl-para-cresol?	0.01	Simple phenolic
Tridecane	0.16	Alkane
Hexyl tiglate	0.01	Aliphatic ester
α-Terpinyl acetate	0.02	Monoterpenic ester
Eugenol	0.02	Phenylpropanoid
Neryl acetate	13.07	Monoterpenic ester
α-Ylangene	0.32	Sesquiterpene
α-Copaene	1.01	Sesquiterpene
Italicene isomer	0.73	Sesquiterpene
Geranyl acetate	0.06	Monoterpenic ester
α-Funebrene	0.10	Sesquiterpene

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Isoitalicene	0.12	Sesquiterpene
Italicene	2.76	Sesquiterpene
Isocaryophyllene	0.08	Sesquiterpene
$\alpha$ -Gurjunene	0.03	Sesquiterpene
$\alpha$ -Cedrene	0.05	Sesquiterpene
$\beta$ -Caryophyllene	4.41	Sesquiterpene
cis- $\alpha$ -Bergamotene	0.93	Sesquiterpene
$\beta$ -Copaene	0.01	Sesquiterpene
trans- $\alpha$ -Bergamotene	0.94	Sesquiterpene
Italidione I (4,6,9-Trimethyldec-8-ene-3,5-dione)	1.50	$\beta$ -Diketone
Unknown	0.04	Sesquiterpene
Cadina-4,11-diene	0.07	Sesquiterpene
$\alpha$ -Humulene	0.42	Sesquiterpene
allo-Aromadendrene	0.12	Sesquiterpene
(E)- $\beta$ -Farnesene	0.34	Sesquiterpene
Neryl propionate	1.62	Monoterpenic ester
$\beta$ -Acoradiene	0.58	Sesquiterpene
4,5-diepi-Aristolochene	0.36	Sesquiterpene
Unknown	0.22	Sesquiterpene
Selina-4,11-diene	2.31	Sesquiterpene
trans- $\beta$ -Bergamotene	0.54	Sesquiterpene
Italidione II isomer I (2,4,6,9-Tetramethyldec-8-ene-3,5-dione)	3.02	$\beta$ -Diketone
$\beta$ -Selinene	8.16	Sesquiterpene
ar-Curcumene	0.30	Sesquiterpene
Unknown	0.02	Sesquiterpene
$\gamma$ -Curcumene	9.28	Sesquiterpene
Italidione II isomer II (5,7,10-Trimethylundec-9-ene-4,6-dione)	1.29	$\beta$ -Diketone
$\alpha$ -Selinene	6.07	Sesquiterpene
Italidione II analog	0.26	$\beta$ -Diketone
$\delta$ -Amorphene	0.30	Sesquiterpene
10-epi-Italicene ether	0.06	Sesquiterpenic ether
$\gamma$ -Cadinene	0.18	Sesquiterpene
$\beta$ -Curcumene	0.74	Sesquiterpene
7-epi- $\alpha$ -Selinene	0.15	Sesquiterpene
$\delta$ -Cadinene	0.64	Sesquiterpene
trans-Calamenene	0.01	Sesquiterpene
(E)- $\gamma$ -Bisabolene	0.12	Sesquiterpene
trans-Cadina-1,4-diene	0.06	Sesquiterpene
Italicene ether	0.09	Sesquiterpenic ether
$\alpha$ -Calacorene	0.13	Sesquiterpene
Selina-3,7(11)-diene	0.10	Sesquiterpene
(E)- $\alpha$ -Bisabolene	0.11	Sesquiterpene
(E)-Nerolidol	0.11	Sesquiterpenic alcohol
Italidione III isomer I	0.58*	$\beta$ -Diketone
Caryophyllene oxide	0.58*	Sesquiterpenic ether
Italidione III isomer II	0.59	$\beta$ -Diketone
Italidione III isomer III	0.25	$\beta$ -Diketone
Guaiol	0.21	Sesquiterpenic alcohol
Copaborneol	0.21	Sesquiterpenic alcohol
Eudesm-5-en-11-ol	0.74	Sesquiterpenic alcohol

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Unknown	0.21	Oxygenated sesquiterpene
Unknown	0.06	Oxygenated sesquiterpene
Unknown	0.09	Unknown
1-epi-Cubenol	0.02	Sesquiterpenic alcohol
Neryl angelate?	0.10	Monoterpenic ester
$\gamma$ -Eudesmol	0.05	Sesquiterpenic alcohol
Caryophylladienol I	0.05	Sesquiterpenic alcohol
Eudesmol analog?	0.34	Sesquiterpenic alcohol
$\tau$ -Cadinol	0.05	Sesquiterpenic alcohol
$\tau$ -Muurolol	0.03	Sesquiterpenic alcohol
Cubenol	0.02	Sesquiterpenic alcohol
$\beta$ -Eudesmol	0.13	Sesquiterpenic alcohol
Selin-11-en-4 $\alpha$ -ol	0.33	Sesquiterpenic alcohol
$\alpha$ -Eudesmol	0.09	Sesquiterpenic alcohol
Bulnesol	0.03	Sesquiterpenic alcohol
$\beta$ -Bisabolol	0.10	Sesquiterpenic alcohol
$\alpha$ -Bisabolol	0.05	Sesquiterpenic alcohol
epi- $\alpha$ -Bisabolol	0.04	Sesquiterpenic alcohol
Neryl 4-methylvalerate?	0.01	Monoterpenic ester
Unknown	0.12	Unknown
Geranyl 4-methylvalerate?	0.05	Monoterpenic ester
Unknown	0.22	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Geranyl hexanoate	0.02	Monoterpenic ester
Unknown	0.03	Oxygenated sesquiterpene
Unknown	0.03	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.04	Oxygenated sesquiterpene
Unknown	0.03	Oxygenated sesquiterpene
trans-Bisabola-1(6),10-diene-2,3-diol	0.16	Sesquiterpenic alcohol
Unknown	0.06	Unknown
<b>Consolidated total</b>	<b>96.69%</b>	

\*: 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

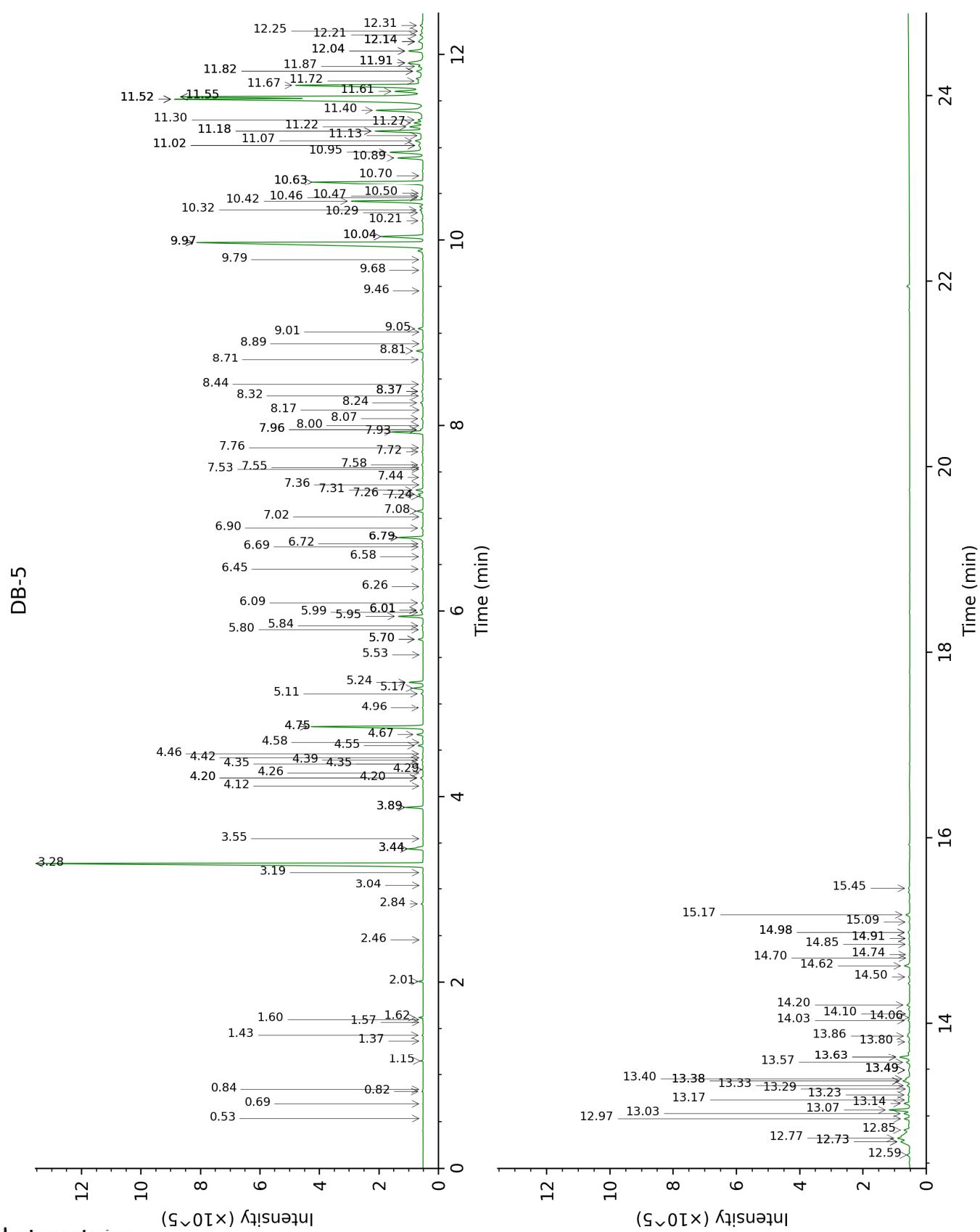
tr: The compound has been detected below 0.005% of total signal.

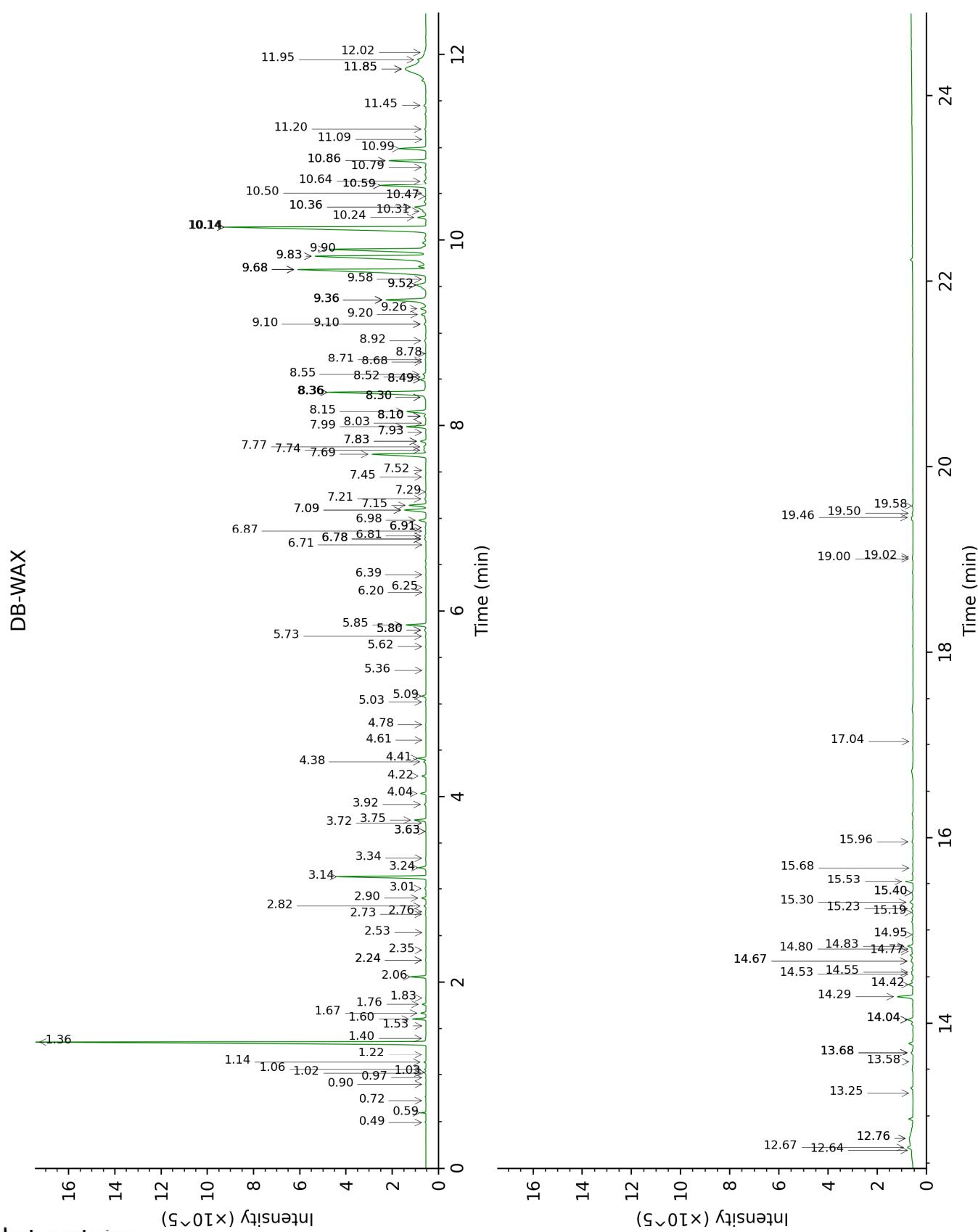
Note: no correction factor was applied

**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	%
2-Methyl-3-buten-2-ol	0.53	603	tr	1.53	1014	tr
2-Methylbutyral	0.69	652	0.01	0.72	881	0.01
3-Pentanone	0.82	693	0.02	1.03	941	0.02
2-Ethylfuran	0.84	700	0.01	0.90	919	tr
2-Methyl-3-pentanone	1.15	742	0.05	1.14	959	0.05
Unknown [m/z 73, 41 (54), 87 (50), 56 (47), 54 (29), 55 (25), 100 (23)... 115? (6)]	1.37	772	0.01	0.97	931	0.01
Unknown [m/z 73, 87 (52), 41 (45), 56 (42), 100 (29)...]	1.43	781	0.02	1.02	939	0.02
Hexanal	1.57	799	0.01	1.83	1044	0.01
Octane	1.60	803	0.01	0.49	784	tr
2-Methyl-2-heptene	1.62	805	0.08	0.60	831	0.09
4-Methyl-3-hexanone	2.01	836	0.10	1.76	1037	0.11
Hexanol	2.46	873	0.01	5.36	1323	0.01
Bornylene	2.84	904	0.06	1.06	946	0.03
Tricyclene	3.04	917	0.01	1.22	974	0.01
$\alpha$ -Thujene	3.18	927	0.02	1.40	1000	0.03
$\alpha$ -Pinene	3.28	933	15.39	1.36	996	15.42
Camphene	3.44*	944	0.58	1.67	1028	0.17
$\alpha$ -Fenchene	3.44*	944	[0.58]	1.60	1021	0.41
Thuja-2,4(10)-diene	3.55	951	0.01	2.24*	1085	0.02
$\beta$ -Pinene	3.89*	973	0.54	2.06	1067	0.53
Sabinene	3.89*	973	[0.54]	2.24*	1085	[0.02]
6-Methyl-5-hepten-2-one	4.12	988	0.01	5.02	1298	0.02
Myrcene	4.20*	994	0.09	2.82	1133	0.07
2-Pentylfuran	4.20*	994	[0.09]	3.63*	1197	0.02
<i>trans</i> -Dehydroxylinalool oxide	4.20*	994	[0.09]	3.34	1174	0.02
6-Methyl-5-hepten-2-ol	4.26	997	0.01	6.87	1433	0.02
2-Carene	4.29	999	0.02	2.34	1096	0.01
Unknown [m/z = 123, 43 (16), 152 (14), 124 (9), 137 (6)]	4.35*	1003	0.04	2.73	1126	0.03
$\alpha$ -Phellandrene	4.35*	1003	[0.04]	2.76	1128	0.02

Isobutyl 2-methylbutyrate	4.39	1006	0.04	3.01	1148	0.05
Δ3-Carene	4.42	1008	0.01	2.53	1111	0.01
(3Z)-Hexenyl acetate	4.46	1010	0.02	4.78	1280	0.02
α-Terpinene	4.55	1016	0.15	2.90	1140	0.15
para-Methylanisole	4.58	1018	0.01	6.20	1383	0.01
para-Cymene	4.67	1023	0.20	4.04	1226	0.20
1,8-Cineole	4.75*	1028	3.77	3.24	1166	0.30
Limonene	4.75*	1028	[3.77]	3.14	1159	3.50
(Z)-β-Ocimene	4.96	1041	0.03	3.72	1203	0.03
(E)-β-Ocimene	5.11	1051	0.06	3.92	1218	0.06
Isobutyl angelate	5.17	1055	0.31	4.41	1254	0.30
γ-Terpinene	5.24	1059	0.44	3.75	1206	0.44
Octanol	5.53	1077	0.01	8.10*	1526	0.11
para-Cymenene	5.70*	1088	0.16	6.26	1387	0.01
Terpinolene	5.70*	1088	[0.16]	4.22	1240	0.16
2-Nonanone	5.80	1094	0.03	5.73	1349	0.03
2,4-Dimethylheptane-3,5-dione	5.84	1097	0.05	7.45	1476	0.03
Linalool	5.94	1103	0.81	7.99	1517	0.80
Nonanal	5.99	1106	0.05	5.80*	1354	0.08
Isoamyl isovalerate	6.01*	1107	0.10	4.61	1268	0.01
2-Methylbutyl 2-methylbutyrate	6.01*	1107	[0.10]	4.38	1251	0.09
endo-Fenchol	6.09	1112	0.06	8.30*	1542	0.11
α-Campholenal	6.26	1123	0.02	6.91*	1436	0.05
trans-Pinocarveol	6.45	1135	0.04	9.10*	1604	0.11
trans-Verbenol	6.58	1144	0.03	9.36*	1625	2.41
para-Vinylanisole	6.69	1151	0.04	9.26	1617	0.28
Isoamyl angelate	6.72	1153	0.04	5.80*	1354	[0.08]
Nerol oxide	6.79*	1157	0.87	6.78*†	1426	0.13
2-Methylbutyl angelate	6.79*	1157	[0.87]	5.85	1358	0.80
Pinocarvone	6.79*	1157	[0.87]	7.83*	1505	0.24
Borneol	6.90	1164	0.05	9.68*†	1651	9.58
Unknown [m/z 83, 100 (34), 55 (33), 43 (21), 84 (21)...]	7.02	1172	0.01	5.62	1341	0.02
Terpinen-4-ol	7.08	1176	0.21	8.49*	1556	0.37
4,6-Dimethyloctane-3,5-dione epimer I	7.24	1186	0.15	8.49*	1556	[0.37]
4,6-Dimethyloctane-3,5-dione epimer II	7.26	1187	0.16	8.55	1561	0.15
α-Terpineol	7.31	1190	0.25	9.68*†	1651	[9.58]
Myrtenol	7.36	1194	0.01	10.79	1743	0.03

2-Methylbutyl tiglate	7.44	1199	0.03	6.78*†	1426	[0.13]
Unknown [m/z 95, 93 (32), 121 (24), 79 (22), 91 (21), 105 (16)... 154 (2)]	7.53	1204	0.02	10.86*	1749	1.64
Dodecane	7.55	1205	0.01	3.63*	1197	[0.02]
Decanal	7.58	1207	0.06	7.21	1458	0.06
Unknown [m/z 81, 57 (91), 168 (73), 67 (52), 140 (45), 41 (36), 113 (27)...]	7.72	1217	0.05			
Unknown [m/z 81, 109 (85), 168 (72), 57 (69), 67 (58), 41 (49), 140 (45)...]	7.76	1220	0.03			
Nerol	7.93	1231	1.10	10.99	1760	1.16
Hexyl 2-methylbutyrate	7.96*	1233	0.09	6.39	1397	0.01
Unknown [m/z 113, 57 (55), 85 (16), 170 (16)]	7.96*	1233	[0.09]			
(3Z)-Hexenyl isovalerate	8.00	1236	0.02	7.09*	1449	1.03
Hexyl 2-methylbutyrate?	8.08	1240	0.06			
Hexyl isovalerate	8.17	1247	0.01	6.71	1421	0.01
Isoamyl hexanoate	8.24	1252	0.09	6.81†	1428	[0.13]
3-Methylpentyl angelate	8.32	1257	0.03	7.29	1464	0.03
Unknown [m/z 83, 55 (29), 57 (24), 100 (21), 104 (13)...]	8.37*	1260	0.07	6.78*†	1426	[0.13]
Linalyl acetate	8.37*	1260	[0.07]	8.03	1520	0.03
Unknown [m/z 83, 55 (30), 57 (23), 100 (20), 98 (14)...]	8.44	1265	0.02	6.91*	1436	[0.05]
(3Z)-Hexenyl angelate	8.71	1283	0.04	8.10*	1526	[0.11]
Hexyl angelate	8.81	1290	0.23	7.83*	1505	[0.24]
2-Undecanone	8.89	1295	0.01	8.52	1558	0.06
2-Acetyl-para-cresol?	9.01	1303	0.01	11.95†	1843	[5.97]
Tridecane	9.05	1304	0.16	5.09	1303	0.17
Hexyl tiglate	9.46	1332	0.01	8.78	1579	0.01
α-Terpinyl acetate	9.68	1348	0.02	9.58	1643	0.05
Eugenol	9.79	1356	0.02	14.67*	2096	0.15
Neryl acetate	9.97*	1369	13.38	10.14*	1688	13.44
α-Ylangene	9.97*	1369	[13.38]	6.98	1441	0.32
α-Copaene	10.04*	1373	1.77	7.09*	1449	[1.03]

Italicene isomer	10.04*	1373	[1.77]	7.15	1453	0.73
Geranyl acetate	10.21	1385	0.06	10.47	1716	0.03
α-Funebrene	10.29	1391	0.10	7.77	1500	0.12
Isoitalicene	10.32	1393	0.12	7.74	1498	0.15
Italicene	10.42	1400	2.76	7.69	1494	2.74
Isocaryophyllene	10.46	1403	0.08	8.10*	1526	[0.11]
α-Gurjunene	10.47	1404	0.03	7.52	1481	0.02
α-Cedrene	10.50	1406	0.05	7.93	1512	0.02
β-Caryophyllene	10.63*	1416	5.35	8.36*	1546	5.42
cis-α-Bergamotene	10.63*	1416	[5.35]	8.15	1530	0.93
β-Copaene	10.70	1421	0.01	8.30*	1542	[0.11]
trans-α-Bergamotene	10.89	1435	0.94	8.36*	1546	[5.42]
Italidione I (4,6,9-Trimethyldec-8-ene-3,5-dione)	10.95	1440	1.50	11.85*†	1834	5.97
Unknown [m/z 91, 161 (92), 105 (85), 119 (63), 133 (53), 79 (49), 204 (46)]	11.02*	1445	0.37	8.71	1573	0.04
Cadina-4,11-diene	11.02*	1445	[0.37]	9.10*	1604	[0.11]
α-Humulene	11.07	1449	0.42	9.20	1612	0.23
allo-Aromadendrene	11.13	1453	0.12	8.92	1589	0.09
(E)-β-Farnesene	11.18*	1457	1.96	9.52*	1638	0.88
Neryl propionate	11.18*	1457	[1.96]	10.86*	1749	[1.64]
β-Acoradiene	11.22	1460	0.58	9.36*	1625	[2.41]
4,5-diepi-Aristolochene	11.27	1463	0.36	9.36*	1625	[2.41]
Unknown [m/z 119, 91 (85), 93 (77), 105 (76), 79 (61), 134 (60), 94 (49), 204 (46)]	11.30	1466	0.22	9.36*	1625	[2.41]
Selina-4,11-diene	11.40	1473	2.31	9.36*	1625	[2.41]
trans-β-Bergamotene	11.52*†	1482	21.32	9.52*	1638	[0.88]
Italidione II isomer I (2,4,6,9-Tetramethyldec-8-ene-3,5-dione)	11.52*†	1482	[21.32]	11.85*†	1834	[5.97]
β-Selinene	11.52*†	1482	[21.32]	9.83*	1663	8.46
αr-Curcumene	11.52*†	1482	[21.32]	10.59*	1726	2.12
Unknown [m/z 41, 69 (90), 79 (78), 93 (72), 91 (70)...204]	11.55*†	1484	[21.32]	8.68	1571	0.02
γ-Curcumene	11.55*†	1484	[21.32]	9.68*†	1651	[9.58]
Italidione II isomer II (5,7,10-Trimethylundec-9-ene-4,6-dione)	11.61	1488	1.29	11.85*†	1834	[5.97]

$\alpha$ -Selinene	11.67	1493	6.07	9.90	1669	5.75
Italidione II analog	11.72	1497	0.26	12.64†	1906	1.68
$\delta$ -Amorphene	11.82*	1505	0.36	9.83*	1663	[8.46]
10-epi-Italicene ether	11.82*	1505	[0.36]	11.20	1778	0.06
$\gamma$ -Cadinene	11.87	1509	0.18	10.24	1697	0.34
$\beta$ -Curcumene	11.91*	1512	0.89	10.14*	1688	[13.44]
7-epi- $\alpha$ -Selinene	11.91*	1512	[0.89]	10.31	1702	0.15
$\delta$ -Cadinene	12.04*	1522	0.64	10.36*	1706	0.76
<i>trans</i> -Calamenene	12.04*	1522	[0.64]	11.09	1769	0.01
(E)- $\gamma$ -Bisabolene	12.14*	1530	0.28	10.36*	1706	[0.76]
<i>trans</i> -Cadina-1,4-diene	12.14*	1530	[0.28]	10.59*	1726	[2.12]
Italicene ether	12.14*	1530	[0.28]	11.45	1800	0.09
$\alpha$ -Calacorene	12.21	1535	0.13	12.02†	1850	[5.97]
Selina-3,7(11)-diene	12.25	1538	0.10	10.50	1719	0.03
(E)- $\alpha$ -Bisabolene	12.31	1543	0.11	10.64	1730	0.10
(E)-Nerolidol	12.59	1564	0.11	13.68*	2002	0.11
Italidione III isomer I	12.73*	1576	0.58	12.76*†	1918	[1.68]
Caryophyllene oxide	12.73*	1576	[0.58]	12.67†	1909	[1.68]
Italidione III isomer II	12.77	1578	0.59	12.76*†	1918	[1.68]
Italidione III isomer III	12.85	1585	0.25			
Guaiol	12.97	1595	0.21	14.04*	2036	0.27
Copaborneol	13.03	1599	0.21	14.83	2112	0.25
Eudesm-5-en-11-ol	13.07	1602	0.74	14.29	2059	0.73
Unknown [m/z 43, 81 (97), 135 (71), 95 (62), 204 (61), 71 (59), 207 (56)... 222 (3)]	13.14	1608	0.21	14.42	2071	0.20
Unknown [m/z 179, 161 (66), 119 (44), 95 (38), 105 (35)... 204 (24), 222 (1)]	13.17	1611	0.06	14.55	2084	0.07
Unknown [m/z 182, 109 (58), 69 (50), 41 (42), 43 (40), 139 (31)... 235 (17), 250 (1)...]	13.23	1615	0.09	14.04*	2036	[0.27]
1-epi-Cubenol	13.29	1620	0.02	13.68*	2002	[0.11]
Neryl angelate?	13.33	1624	0.10			
$\gamma$ -Eudesmol	13.38*†	1628	0.44	14.80	2108	0.05
Caryophylladienol I	13.38*†	1628	[0.44]	15.96	2225	0.05

Eudesmol analog?	13.40†	1629	[0.44]			
τ-Cadinol	13.49*	1637	0.09	14.77	2106	0.05
τ-Muurolol	13.49*	1637	[0.09]	14.95	2124	0.03
Cubenol	13.49*	1637	[0.09]	13.58	1992	0.02
β-Eudesmol	13.58	1644	0.13	15.30	2158	0.18
Selin-11-en-4α-ol	13.63*	1649	0.42	15.53	2180	0.33
α-Eudesmol	13.63*	1649	[0.42]	15.23	2151	0.09
Bulnesol	13.80	1663	0.03	15.19	2147	0.05
β-Bisabolol	13.86	1668	0.10	14.67*	2096	[0.15]
α-Bisabolol	14.03	1682	0.05	15.40*	2168	0.07
epi-α-Bisabolol	14.06	1684	0.04	15.40*	2168	[0.07]
Neryl 4-methylvalerate?	14.10	1687	0.01	13.25	1962	0.03
Unknown [m/z 196, 69 (62), 109 (58), 41 (54), 139 (41)... 249 (21) ...]	14.20	1695	0.12	14.53	2082	0.06
Geranyl 4-methylvalerate?	14.50	1721	0.05	13.68*	2002	[0.11]
Unknown [m/z 43, 69 (32), 198 (29), 41 (27), 93 (26)... 202 (20) ...]	14.62	1731	0.22			
Unknown [m/z 82, 125 (40), 41 (35), 69 (31), 67 (27)... 236? (t)]	14.70	1738	0.01	15.68	2196	0.01
Geranyl hexanoate	14.74	1742	0.02	14.04*	2036	[0.27]
Unknown [m/z 109, 127 (46), 138 (45), 81 (27), 123 (25)... 220? (2)]	14.85	1751	0.03	19.00	2559	0.03
Unknown [m/z 109, 138 (71), 82 (42), 123 (41), 127 (38) ...]	14.91*	1756	0.06	19.02	2561	0.03
Unknown [m/z 136, 121 (74), 135 (55), 218 (36), 148 (33), 40 (42)... 236? (1)]	14.91*	1756	[0.06]			
Unknown [m/z 96, 41 (29), 178 (28), 43 (27)... 236 (2)]	14.98*	1762	0.09	17.04	2338	0.02
Unknown [m/z 109, 127 (46), 138 (45), 82 (34), 81 (31)... 236? (t)]	14.98*	1762	[0.09]	19.50	2618	0.04
Unknown [m/z 109, 138 (75), 123	15.09	1772	0.03	19.58	2628	0.03

(45), 127 (42), 81 (30)...] <i>trans</i> -Bisabola-1(6),10-diene-2,3-diol Unknown [m/z 43, 82 (69), 41 (66), 93 (62), 96 (55), 55 (49), 67 (45), 154 (44)...]	15.17	1778	0.16	19.46	2613	0.08
	15.45	1803	0.06			
<b>Total identified</b>	<b>95.75%</b>				<b>95.18%</b>	
<b>Total reported</b>	<b>96.97%</b>				<b>95.80%</b>	

\*: 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