

**Date :** November 21, 2022

**CERTIFICATE OF ANALYSIS – GC PROFILING**

**SAMPLE IDENTIFICATION**

**Internal code :** 22K14-PTH04


**Customer identification :** Ginger Steam Distilled - Sri Lanka - GO0103R

**Type :** Essential oil

**Source :** *Zingiber officinale*

**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 :** Amélie Simard, Analyste

**Analysis date :** November 17, 2022

Checked and approved by :



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

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*PHYSICOCHEMICAL DATA*

**Physical aspect:** Light orange liquid

**Refractive index:**  $1.4897 \pm 0.0003$  (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
Isovaleral	0.01	Aliphatic aldehyde
2-Methylbutyral	0.01	Aliphatic aldehyde
Toluene	0.01	Simple phenolic
Hexanal	0.38	Aliphatic aldehyde
2-Heptanone	0.07	Aliphatic ketone
2-Heptanol	0.10	Aliphatic alcohol
Tricyclene	0.20	Monoterpene
$\alpha$ -Thujene	0.02	Monoterpene
$\alpha$ -Pinene	2.91	Monoterpene
Camphene	6.78	Monoterpene
$\alpha$ -Fenchene	0.02	Monoterpene
Thuja-2,4(10)-diene	0.01	Monoterpene
Unknown	0.01	Monoterpene
Sabinene	0.07	Monoterpene
$\beta$ -Pinene	0.29	Monoterpene
6-Methyl-5-hepten-2-one	0.43	Aliphatic ketone
Myrcene	0.84	Monoterpene
6-Methyl-5-hepten-2-ol	0.02	Aliphatic alcohol
$\alpha$ -Phellandrene	0.26	Monoterpene
Octanal	0.12	Aliphatic aldehyde
Pseudolimonene	0.03	Monoterpene
$\Delta^3$ -Carene	0.06	Monoterpene
$\alpha$ -Terpinene	0.03	Monoterpene
Unknown	0.01	Monoterpene
para-Cymene	0.09	Monoterpene
1,8-Cineole	6.96*	Monoterpenic ether
$\beta$ -Phellandrene	6.96*	Monoterpene
Limonene	1.29	Monoterpene
(Z)- $\beta$ -Ocimene	0.01	Monoterpene
2-Heptyl acetate	0.02	Aliphatic ester
(E)- $\beta$ -Ocimene	0.01	Monoterpene
2,6-Dimethyl-5-heptenal (melonal)	0.02	Aliphatic aldehyde
$\gamma$ -Terpinene	0.04	Monoterpene
cis-Sabinene hydrate	0.01	Monoterpenic alcohol
cis-Linalool oxide (fur.)	0.01	Monoterpenic alcohol
Terpinolene	0.19	Monoterpene
para-Cymenene	0.01	Monoterpene
2-Nonanone	0.11	Aliphatic ketone
Unknown	0.09	Oxygenated monoterpene
Rosefuran	0.20	Monoterpenic ether
Linalool	0.44	Monoterpenic alcohol
2-Nonanol	0.10	Aliphatic alcohol
endo-Fenchol	0.04	Monoterpenic alcohol
Bornyl methyl ether	0.03	Monoterpenic ether

(E)-4,8-Dimethylnona-1,3,7-triene	0.06	Terpene derivative
<i>trans</i> -Pinene hydrate	0.02	Monoterpenic alcohol
<i>trans</i> -para-Menth-2-en-1-ol	0.02	Monoterpenic alcohol
Camphor	0.07	Monoterpenic ketone
Camphene hydrate	0.09	Monoterpenic alcohol
exo-Isocitral	0.01	Monoterpenic aldehyde
Isoborneol	0.04	Monoterpenic alcohol
Citronellal	0.09	Monoterpenic aldehyde
Borneol	0.90	Monoterpenic alcohol
Isoneral	0.04	Monoterpenic aldehyde
Unknown	0.01	Oxygenated monoterpene
Rosefuran oxide	0.01	Monoterpenic ether
Terpinen-4-ol	0.30	Monoterpenic alcohol
Isogeranial	0.01	Monoterpenic aldehyde
Cryptone	0.02	Normonoterpenic ketone
para-Cymen-8-ol	0.03	Monoterpenic alcohol
$\alpha$ -Terpineol	0.37	Monoterpenic alcohol
Myrtenal	0.12	Monoterpenic aldehyde
Myrtenol	0.05	Monoterpenic alcohol
<i>trans</i> -Piperitol	0.02	Monoterpenic alcohol
Decanal	0.18	Aliphatic aldehyde
<i>trans</i> -Carveol	0.05	Monoterpenic alcohol
Bornyl formate	0.01	Monoterpenic ester
Nerol	0.01	Monoterpenic alcohol
Citronellol	0.26	Monoterpenic alcohol
Neral	0.42	Monoterpenic aldehyde
Carvone	0.02	Monoterpenic ketone
Unknown	0.06	Oxygenated monoterpene
Geraniol	0.17	Monoterpenic alcohol
Geranial	0.68	Monoterpenic aldehyde
Citronellyl formate	0.02	Monoterpenic ester
Bornyl acetate	0.08	Monoterpenic ester
2-Undecanone	0.27	Aliphatic ketone
Geranyl formate	0.04	Monoterpenic ester
Carvacrol	0.04	Monoterpenic alcohol
$\delta$ -Elemene	0.11	Sesquiterpene
$\alpha$ -Cubebene	0.04	Sesquiterpene
Citronellyl acetate	0.05	Monoterpenic ester
Cyclosativene I	0.24	Sesquiterpene
Cyclosativene II	0.10	Sesquiterpene
Neryl acetate	0.01	Monoterpenic ester
$\alpha$ -Copaene	0.61	Sesquiterpene
Unknown	0.01	Unknown
<i>cis</i> - $\beta$ -Elemene	0.03	Sesquiterpene
Geranyl acetate	0.16	Monoterpenic ester
$\beta$ -Cubebene	0.06	Sesquiterpene
$\beta$ -Elemene	0.87	Sesquiterpene
Vanillin	0.01	Simple phenolic
$\gamma$ -4-Dimethylbenzenebutyral	0.01	Simple phenolic
Sesquithujene	0.27	Sesquiterpene
Dodecanal	0.01	Aliphatic aldehyde
$\beta$ -Caryophyllene	0.13	Sesquiterpene

α-Santalene	0.02	Sesquiterpene
β-Copaene	0.06	Sesquiterpene
γ-Elemene	0.13	Sesquiterpene
<i>trans</i> -α-Bergamotene	0.13	Sesquiterpene
Nerylacetone	0.01	Terpenic ketone
Sesquisabinene A	0.05	Sesquiterpene
Unknown	0.13	Sesquiterpene
α-Humulene	0.07	Sesquiterpene
Sesquisabinene B	0.24	Sesquiterpene
allo-Aromadendrene	0.42	Sesquiterpene
( <i>E</i> )-β-Farnesene	0.37	Sesquiterpene
Selina-4,11-diene	0.22	Sesquiterpene
γ-Murolene	0.28	Sesquiterpene
Germacrene D	1.50	Sesquiterpene
γ-Curcumene	0.18	Sesquiterpene
β-Selinene	tr	Sesquiterpene
α-Curcumene	6.18	Sesquiterpene
Unknown	1.35	Sesquiterpene
Bicyclosesquiphellandrene?	3.12	Sesquiterpene
epi-Cubebol	0.06	Sesquiterpenic alcohol
α-Zingiberene	25.48	Sesquiterpene
α-Murolene	0.12	Sesquiterpene
β-Bisabolene	5.86	Sesquiterpene
Cubebol	0.08	Sesquiterpenic alcohol
γ-Cadinene	0.09	Sesquiterpene
(3 <i>E</i> ,6 <i>E</i> )-α-Farnesene	6.35	Sesquiterpene
7-epi-α-Selinene	0.10	Sesquiterpene
β-Sesquiphellandrene	9.68	Sesquiterpene
δ-Cadinene	0.32	Sesquiterpene
( <i>E</i> )-γ-Bisabolene	0.25	Sesquiterpene
Unknown	0.12	Oxygenated sesquiterpene
Unknown	0.05	Oxygenated sesquiterpene
α-Calacorene	0.05	Sesquiterpene
α-Elemol	0.25	Sesquiterpenic alcohol
Germacrene B	0.49	Sesquiterpene
<i>cis</i> -Sesquisabinene hydrate	0.11	Sesquiterpenic alcohol
( <i>E</i> )-Nerolidol	0.37	Sesquiterpenic alcohol
1'-Hydroxyeugenol	0.04	Phenylpropanoid
α-Turmerol	0.03	Sesquiterpenic alcohol
<i>trans</i> -Sesquisabinene hydrate	0.19	Sesquiterpenic alcohol
Unknown	0.05	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
<i>cis</i> -Zingiberenol	0.29	Sesquiterpenic alcohol
10-epi-γ-Eudesmol	0.08	Sesquiterpenic alcohol
Unknown	0.18	Oxygenated sesquiterpene
γ-Eudesmol	0.05	Sesquiterpenic alcohol
<i>trans</i> -Zingiberenol	0.16	Sesquiterpenic alcohol
β-Eudesmol	0.17	Sesquiterpenic alcohol
Zingerone	0.01	Phenylbutanoid
α-Eudesmol	0.08	Sesquiterpenic alcohol
Selin-11-en-4α-ol	0.08	Sesquiterpenic alcohol
(3 <i>E</i> ,5 <i>E</i> )-7-Hydroxyfarnesene	0.05	Sesquiterpenic alcohol

Zingerone methyl ether	0.03	Simple phenolic
4-(1,5-Dimethylhex-4-enyl)cyclohex-2-enone	0.12	Norsesquiterpenic ketone
Unknown	0.21	Oxygenated sesquiterpene
Unknown	0.23	Oxygenated sesquiterpene
ar-Curcumen-15-al	0.06	Sesquiterpenic aldehyde
Unknown	0.05	Oxygenated sesquiterpene
(2E,6E)-Farnesal	0.04	Sesquiterpenic aldehyde
Unknown	0.03	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.13	Oxygenated sesquiterpene
Unknown	0.07	Oxygenated sesquiterpene
Unknown	0.03	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Geranyl-para-cymene	0.07	Diterpene
<b>Consolidated total</b>	<b>96.60%</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

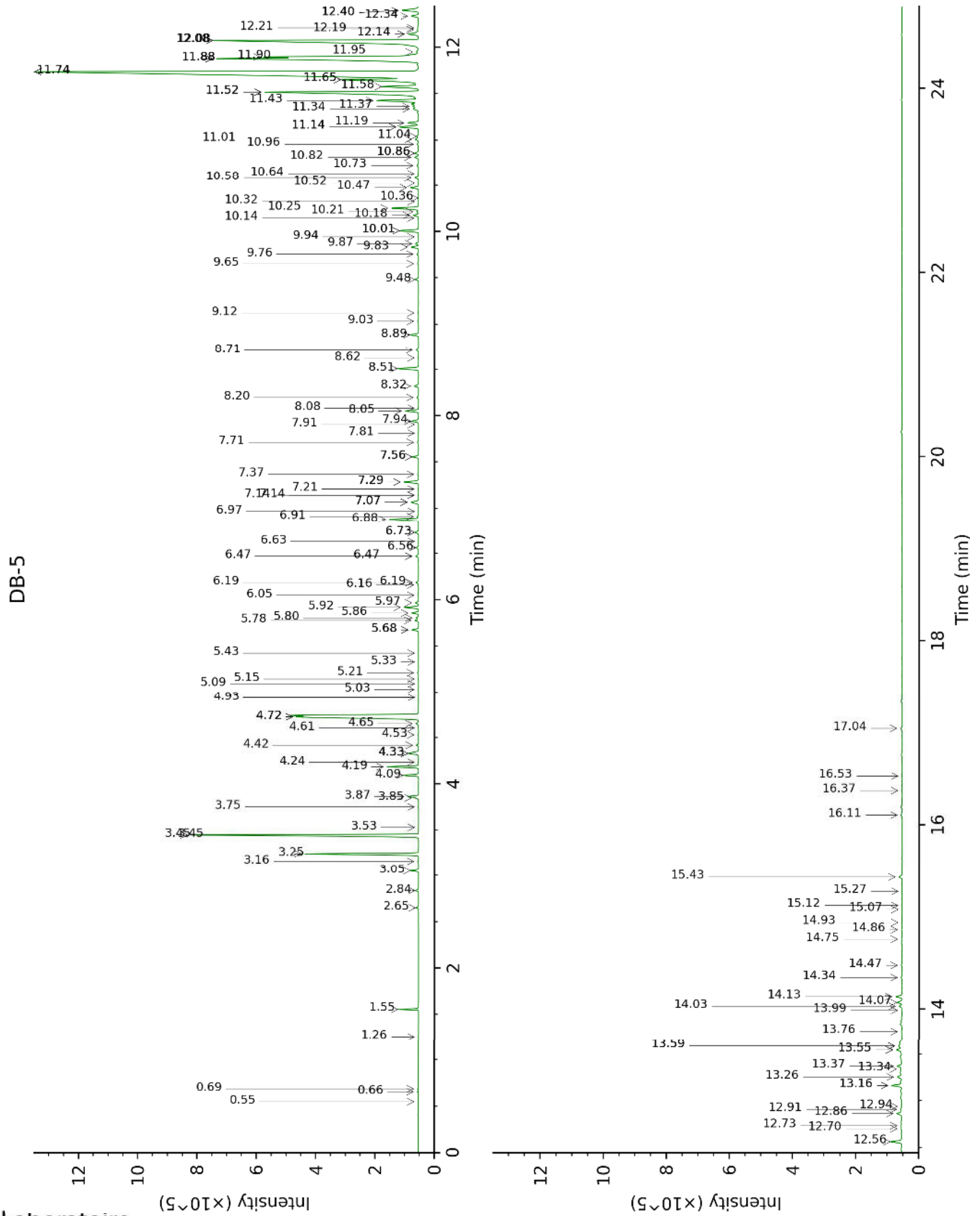
tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied

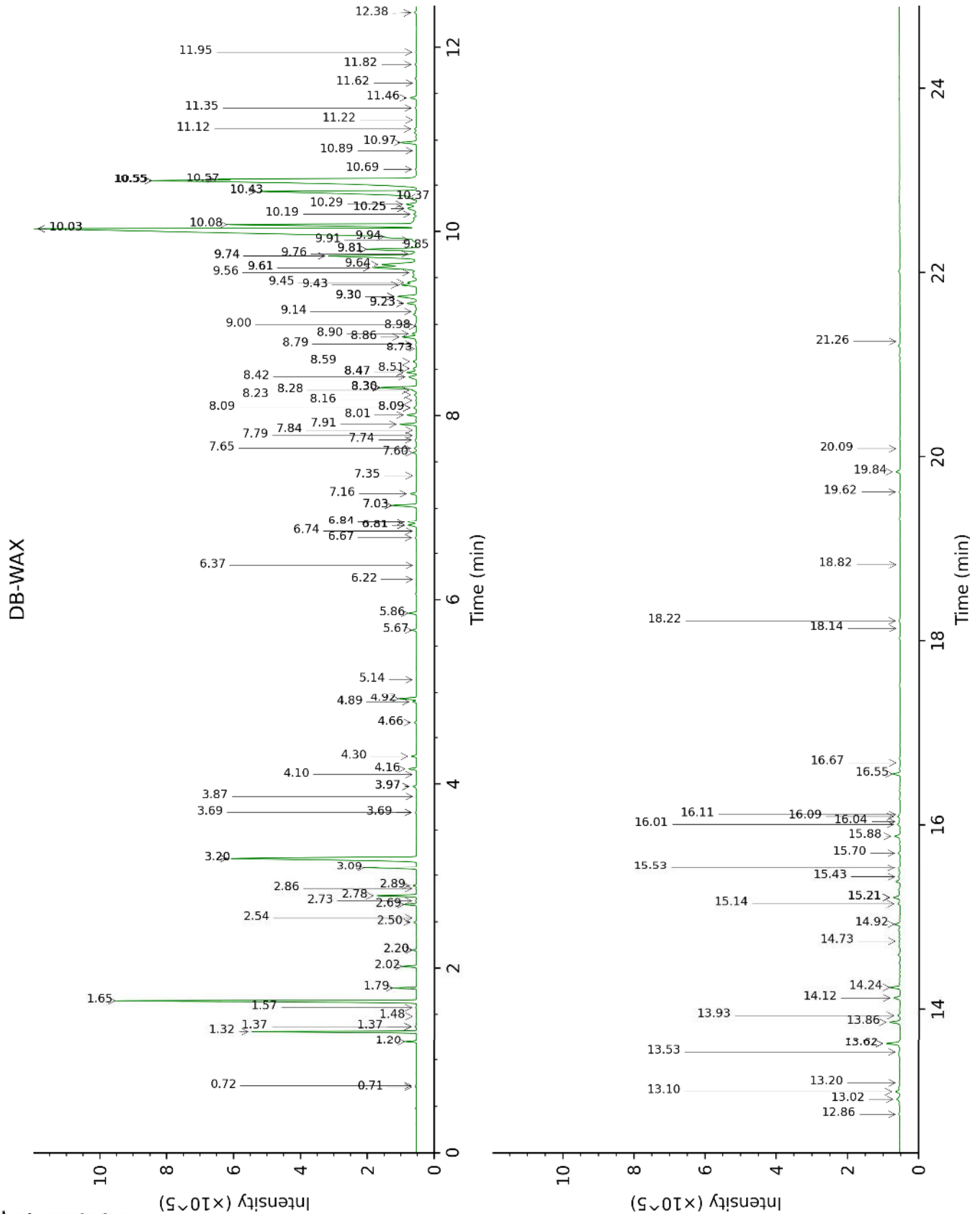
**About "consolidated" data:** The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm 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	0.55	609	tr	1.48	1010	0.01
Isovaleral	0.66	642	0.01	0.72	885	0.01
2-Methylbutyral	0.69	651	0.01	0.71	879	0.01
Toluene	1.26	757	0.01	1.37*	999	0.03
Hexanal	1.56	798	0.38	1.79	1041	0.39
2-Heptanone	2.65	889	0.07	2.89	1142	0.07
2-Heptanol	2.84	904	0.10	4.89	1298	0.09
Tricyclene	3.05	918	0.20	1.20	972	0.19
$\alpha$ -Thujene	3.16	925	0.02	1.37*	999	[0.03]
$\alpha$ -Pinene	3.25	931	2.91	1.32	992	2.92
Camphene	3.45*	944	6.76	1.65	1028	6.78
$\alpha$ -Fenchene	3.45*	944	[6.76]	1.58	1020	0.02
Thuja-2,4(10)-diene	3.53	949	0.01	2.20*	1083	0.08
Unknown [m/z 91, 119 (60), 77 (36), 92 (31), 93 (31)... 134 (23)]	3.75	964	0.01	2.54	1114	0.01
Sabinene	3.85†	970	0.36	2.20*	1083	[0.08]
$\beta$ -Pinene	3.86†	971	[0.36]	2.02	1065	0.29
6-Methyl-5-hepten-2-one	4.09	986	0.43	4.92	1300	0.44
Myrcene	4.19	992	0.84	2.78	1133	0.84
6-Methyl-5-hepten-2-ol	4.24	996	0.02	6.81*†	1431	0.56
$\alpha$ -Phellandrene	4.33*	1002	0.41	2.69	1125	0.26
Octanal	4.33*	1002	[0.41]	4.30	1252	0.12
Pseudolimonene	4.33*	1002	[0.41]	2.73	1129	0.03
$\Delta^3$ -Carene	4.42	1007	0.06	2.50	1110	0.06
$\alpha$ -Terpinene	4.53	1014	0.03	2.86	1139	0.02
Unknown [m/z 71, 41 (48), 43 (46), 53 (28), 55 (16)... 134 (3)]	4.60	1019	0.01			
para-Cymene	4.65	1022	0.09	3.97*	1228	0.11
1,8-Cineole	4.72*†	1026	8.25	3.20*	1167	7.02
$\beta$ -Phellandrene	4.72*†	1026	[8.25]	3.20*	1167	[7.02]
Limonene	4.72*†	1026	[8.25]	3.09	1158	1.29
(Z)- $\beta$ -Ocimene	4.94	1040	0.01	3.69*	1207	0.04
2-Heptyl acetate	5.03	1046	0.02	4.10	1238	0.02
(E)- $\beta$ -Ocimene	5.09	1050	0.01	3.87	1220	0.01
2,6-Dimethyl-5-heptenal (melonal)	5.15	1053	0.02	5.14	1308	0.02
$\gamma$ -Terpinene	5.21	1057	0.04	3.69*	1207	[0.04]
cis-Sabinene hydrate	5.33	1064	0.01	6.74	1426	0.02
cis-Linalool oxide (fur.)	5.43	1070	0.01	6.37	1398	0.01
Terpinolene	5.68*	1086	0.21	4.16	1242	0.19
para-Cymenene	5.68*	1086	[0.21]	6.22	1387	0.01
2-Nonanone	5.78	1092	0.11	5.67	1347	0.11
Unknown [m/z 96, 109 (55), 79 (41), 67 (38), 41 (36)... 150 (3)]	5.80	1094	0.09	8.58	1567	0.11
Rosefuran	5.86	1097	0.20	5.86	1361	0.20

Linalool	5.92	1101	0.44	7.91	1514	0.42
2-Nonanol	5.97	1104	0.10	7.60	1490	0.10
endo-Fenchol	6.05	1109	0.04	8.23	1539	0.07
Bornyl methyl ether	6.16	1116	0.03	3.97*	1228	[0.11]
(E)-4,8-Dimethylnona-1,3,7-triene	6.19*	1118	0.08	4.66	1280	0.06
trans-Pinene hydrate	6.19*	1118	[0.08]	7.79	1504	0.02
trans-para-Menth-2-en-1-ol	6.47*	1136	0.11	8.79	1582	0.02
Camphor	6.47*	1136	[0.11]	7.03*	1448	0.69
Camphene hydrate	6.56	1142	0.09	8.30*	1545	1.04
exo-Isocitral	6.63	1146	0.01	7.35	1472	0.01
Isoborneol	6.73*	1153	0.13	9.23*	1618	0.28
Citronellal	6.73*	1153	[0.13]	6.84*†	1434	[0.56]
Borneol	6.88	1162	0.90	9.61*	1649	1.57
Isoneral	6.91	1164	0.04	7.74	1501	0.06
Unknown [m/z 109, 79 (18), 81 (15), 91 (12), 77 (10)... 152 (3)]	6.97	1168	0.01			
Rosefuran oxide	7.07*	1174	0.31	8.47*	1557	0.27
Terpinen-4-ol	7.07*	1174	[0.31]	8.42	1554	0.30
Isogeranial	7.14*	1179	0.02	8.09*	1528	0.09
Cryptone	7.14*	1179	[0.02]	8.98	1597	0.02
para-Cymen-8-ol	7.21	1183	0.03	11.35	1795	0.05
α-Terpineol	7.28*	1188	0.48	9.61*	1649	[1.57]
Myrtenal	7.28*	1188	[0.48]	8.51	1561	0.12
Myrtenol	7.37	1193	0.05	10.69	1738	0.05
trans-Piperitol	7.56*	1206	0.20	10.25*	1701	0.43
Decanal	7.56*	1206	[0.20]	7.16	1457	0.18
trans-Carveol	7.71	1216	0.05	11.22	1784	0.01
Bornyl formate	7.81	1222	0.01	7.84	1509	0.02
Nerol	7.91	1229	0.01	10.89	1756	0.01
Citronellol	7.94	1231	0.26	10.57†	1728	[16.11]
Neral	8.05	1238	0.42	9.30*	1624	0.70
Carvone	8.08	1240	0.02	9.85	1668	0.01
Unknown [m/z 109, 119 (84), 91 (81), 134 (55)... 137 (27)...]	8.20	1248	0.06	11.12	1775	0.07
Geraniol	8.32	1256	0.17	11.46	1804	0.20
Geranial	8.51	1269	0.68	9.94	1676	0.85
Citronellyl formate	8.62	1277	0.02	8.73	1578	0.02
Bornyl acetate	8.71	1282	0.08	8.09*	1528	[0.09]
2-Undecanone	8.89	1294	0.27	8.47*	1557	[0.27]
Geranyl formate	9.03	1302	0.04	9.76	1661	0.10
Carvacrol	9.12	1308	0.04	15.20*	2156	0.24
δ-Elemene	9.48	1334	0.11	6.81*†	1431	[0.56]
α-Cubebene	9.65	1346	0.04	6.67	1420	0.04
Citronellyl acetate	9.76	1353	0.05	9.30*	1624	[0.70]
Cyclosativene I	9.83	1358	0.24	6.81*†	1431	[0.56]
Cyclosativene II	9.87	1361	0.10	6.84*†	1434	[0.56]
Neryl acetate	9.94	1366	0.01	10.03*	1683	25.50
α-Copaene	10.01*	1371	0.63	7.03*	1448	[0.69]

Unknown [m/z 81, 59 (94), 41 (74), 85 (40), 43 (55)...]	10.01*	1371	[0.63]	13.20	1962	0.01
<i>cis</i> -β-Elemene	10.14	1380	0.03	8.16	1534	0.03
Geranyl acetate	10.18	1382	0.16	10.43*	1717	6.52
β-Cubebene	10.21	1385	0.06	7.65	1494	0.06
β-Elemene	10.25	1388	0.87	8.30*	1545	[1.04]
Vanillin	10.32	1393	0.01	18.14	2469	0.01
γ-4-Dimethylbenzenebutyral	10.36	1396	0.01			
Sesquithujene	10.48	1404	0.27	8.01	1522	0.28
Dodecanal	10.52	1407	0.01	9.81*	1665	1.46
β-Caryophyllene	10.58	1412	0.13	8.30*	1545	[1.04]
α-Santalene	10.64	1416	0.02	8.09*	1528	[0.09]
β-Copaene	10.73	1422	0.06	8.28	1542	0.07
γ-Elemene	10.82	1429	0.13	8.90	1591	0.13
<i>trans</i> -α-Bergamotene	10.86*	1432	0.14	8.30*	1545	[1.04]
Nerylacetone	10.86*	1432	[0.14]	11.62	1818	0.01
Sesquisabinene A	10.96	1440	0.05	9.00	1599	0.06
Unknown [m/z 139, 69 (60), 41 (51), 43 (47), 119 (41)... 204 (1)]	11.01	1443	0.13			
α-Humulene	11.04	1446	0.07	9.14	1610	0.05
Sesquisabinene B	11.14*	1453	0.66	9.23*	1618	[0.28]
allo-Aromadendrene	11.14*	1453	[0.66]	8.86	1588	0.42
( <i>E</i> )-β-Farnesene	11.19	1456	0.37	9.42	1634	0.45
Selina-4,11-diene	11.34†	1468	0.66	9.30*	1624	[0.70]
γ-Muurolene	11.37†	1470	[0.66]	9.45	1636	0.28
Germacrene D	11.43	1474	1.50	9.64	1652	1.40
γ-Curcumene	11.52*	1481	6.69	9.56	1644	0.18
β-Selinene	11.52*	1481	[6.69]	9.74*	1659	3.12
ar-Curcumene	11.52*	1481	[6.69]	10.55*†	1727	16.11
Unknown [m/z 161, 91 (100), 105 (93), 79 (89), 93 (89), 107 (79)... 204 (34)]	11.58	1486	1.35	9.81*	1665	[1.46]
Bicyclosesquiphellandrene?	11.65*	1491	3.18	9.74*	1659	[3.12]
epi-Cubebol	11.65*	1491	[3.18]	11.82	1836	0.06
α-Zingiberene	11.74*	1498	25.80	10.03*	1683	[25.50]
α-Muurolene	11.74*	1498	[25.80]	9.91	1673	0.12
β-Bisabolene	11.88*†	1508	12.56	10.08	1687	5.86
Cubebol	11.88*†	1508	[12.56]	12.38	1886	0.08
γ-Cadinene	11.88*†	1508	[12.56]	10.19	1696	0.09
(3 <i>E</i> ,6 <i>E</i> )-α-Farnesene	11.90†	1510	[12.56]	10.43*	1717	[6.52]
7-epi-α-Selinene	11.95	1514	0.10	10.25*	1701	[0.43]
β-Sesquiphellandrene	12.08*	1524	9.99	10.55*†	1727	[16.11]
δ-Cadinene	12.08*	1524	[9.99]	10.30	1705	0.32
( <i>E</i> )-γ-Bisabolene	12.14*	1529	0.43	10.37	1711	0.25
Unknown [m/z 177, 159 (67), 41 (43), 91 (43), 43 (41)... 220 (t)]	12.14*	1529	[0.43]	13.10	1953	0.12
Unknown [m/z 43, 177 (99), 93 (75), 41 (73), 91 (65), 107 (60)... 220 (4)]	12.19	1533	0.05	12.86	1930	0.03

$\alpha$ -Calacorene	12.21	1534	0.05	11.95	1848	0.03
$\alpha$ -Elemol	12.34	1544	0.25	13.86	2024	0.33
Germacrene B	12.40*	1549	0.65	10.98	1763	0.49
<i>cis</i> -Sesquisabinene hydrate	12.40*	1549	[0.65]	13.02	1945	0.11
( <i>E</i> )-Nerolidol	12.56	1562	0.37	13.62*	2001	0.38
1'-Hydroxyeugenol	12.70	1573	0.04	19.62	2642	0.02
$\alpha$ -Turmerol	12.73	1575	0.03	15.20*	2156	[0.24]
<i>trans</i> -Sesquisabinene hydrate	12.86	1586	0.19	14.12	2050	0.20
Unknown [m/z 132, 118 (89), 145 (85), 119 (79), 117 (60)...]	12.91	1589	0.05	13.53	1992	0.02
Unknown [m/z 132, 118 (82), 145 (76), 119 (69), 117 (56), 91 (43), 135 (42)...]	12.94	1592	0.01	13.62*	2001	[0.38]
<i>cis</i> -Zingiberenol	13.16*	1609	0.34	14.24	2061	0.29
10- <i>epi</i> - $\gamma$ -Eudesmol	13.16*	1609	[0.34]	13.93	2031	0.08
Unknown [m/z 119, 85 (92), 105 (37), 120 (36), 91 (28)... 218 (6)]	13.26	1617	0.18	16.09	2248	0.09
$\gamma$ -Eudesmol	13.34	1624	0.05	14.73	2109	0.04
<i>trans</i> -Zingiberenol	13.37	1626	0.16	14.92	2128	0.18
$\beta$ -Eudesmol	13.55*	1641	0.22	15.20*	2156	[0.24]
Zingerone	13.55*	1641	[0.22]	20.09	2698	0.01
$\alpha$ -Eudesmol	13.59*	1644	0.15	15.14	2150	0.08
Selin-11-en-4 $\alpha$ -ol	13.59*	1644	[0.15]	15.43	2179	0.08
(3 <i>E</i> ,5 <i>E</i> )-7-Hydroxyfarnesene	13.76	1658	0.05	16.04	2242	0.04
Zingerone methyl ether	13.99	1677	0.03	18.82	2548	0.01
4-(1,5-Dimethylhex-4-enyl)cyclohex-2-enone	14.03	1681	0.12	15.53	2189	0.06
Unknown [m/z 137, 119 (70), 84 (69), 41 (68), 69 (53), 55 (45), 109 (38)... 222 (2)]	14.07	1684	0.21	15.88	2225	0.18
Unknown [m/z 69, 41 (59), 118 (33), 43 (32), 55 (31)... 234? (t)]	14.14	1689	0.23	16.55	2296	0.21
$\alpha$ -Curcumen-15-al	14.34	1706	0.06	16.11	2250	0.02
Unknown [m/z 119, 91 (31), 105 (29), 41 (25), 133 (23), 158 (21)...]	14.47	1718	0.05	16.67	2308	0.01
(2 <i>E</i> ,6 <i>E</i> )-Farnesal	14.75	1742	0.04	15.70	2206	0.06
Unknown [m/z 82, 43 (85), 91 (67), 93 (66), 41 (66), 69 (59), 106 (47)... 218 (5)...]	14.86	1751	0.03			
Unknown [m/z 43, 82 (100), 41 (86), 69 (76), 93 (72), 91 (72)... 218 (4)...]	14.93	1758	0.02			
Unknown [m/z 79, 41 (77), 135 (75), 69 (74), 43 (70)... 220 (9)]	15.08	1770	0.01			

Unknown [m/z 151, 41 (78), 95 (71), 109 (59), 55 (56), 69 (55)... 234 (15)]	15.12	1773	0.02			
Unknown [m/z 69, 41 (96), 43 (90), 109 (51), 55 (42), 81 (33)...]	15.27	1786	0.01	18.22	2478	0.05
Unknown [m/z 69, 43 (95), 41 (84), 109 (78), 95 (54), 93 (49)... 177 (36), 220 (2)...]	15.43	1800	0.13	19.84	2668	0.12
Unknown [m/z 43, 109 (77), 69 (65), 41 (60), 55 (51), 95 (44), 135 (43)... 207 (19)...]	16.11	1861	0.07			
Unknown [m/z 125, 41 (88), 109 (76), 69 (76), 151 (68), 55 (45), 95 (36)... 236 (21)]	16.37	1885	0.03	21.26	2844	0.01
Unknown [m/z 125, 41 (86), 151 (78), 109 (67), 69 (63)... 236 (22)]	16.53	1899	0.02			
Geranyl-para-cymene	17.04	1948	0.07	16.01	2239	0.09
<b>Total identified</b>		<b>94.80%</b>			<b>95.87%</b>	
<b>Total reported</b>		<b>97.58%</b>			<b>96.92%</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