PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: G40106

ESSENTIAL OIL: GINGER ROOT C02
BOTANICAL NAME: ZINGIBER OFFICINALE
ORIGIN: INDONESIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF GINGER ROOT C02 OIL	%
ar-CURCUMENE	13.7
[6]-GINGEROL	10.9
α-ZINGIBERENE	6.6
β-SESQUIPHELLANDRENE	5.4
[6]-SHOGAOL	5.4
β-BISABOLENE	3.1
[6]-GINGERDIOL GERANIAL ACETAL	2.0
[10]-ISOSHOGAOL	2.0
ZINGERONE	2.0
DIACETOXY-[6]-GINGERDIOL	1.7
GERANIAL	1.5
[8]-SHOGAOL	1.3
CAMPHENE	1.2
(3E,6E)-α-FARNESENE	1.1

Comments from Robert Tisserand: Rich, warm, spicy odor profile. Contains over 30% of gingerols and shogaols. These active constituents give fresh Ginger its pungency, and are not found in the distilled oil.

Date : March 15, 2018

Certificate of Analysis - GC Profiling

Sample identification

Internal code : 18C15-PTH1-1-CC
Customer identification : Ginger Co2 Extract - Indonesia - G4010681R
Type : CO2 extract
Source : *Zingiber officinale*
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 : Sylvain Mercier, M. Sc., Chimiste
Analysis date : March 15, 2018

Checked and approved by :

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

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PHYSICOCHEMICAL DATA

Physical aspect: Orange/red viscous liquid
Refractive index: 1.5070 ± 0.0003 (20 °C)

CONCLUSION

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

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ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
2-Methyl-3-buten-2-ol	0.04	0.03	Aliphatic alcohol
Hexanal	0.40	0.58	Aliphatic aldehyde
Biomarker *Z.* officinale CO2, I	0.16	0.26*	Aliphatic aldehyde
2-Heptanol	0.02	0.03	Aliphatic alcohol
Tricyclene	0.02	0.04	Monoterpene
α-Pinene	0.29	0.46	Monoterpene
Camphene	1.21	1.93	Monoterpene
β-Pinene	0.04*	0.06	Monoterpene
Sabinene	[0.04]*	[0.26]*	Monoterpene
6-Methyl-5-hepten-2-one	0.06	0.11	Aliphatic ketone
Myrcene	0.18	0.29	Monoterpene
6-Methyl-5-hepten-2-ol	0.01	0.01	Aliphatic alcohol
Pseudolimonene	0.02	0.01	Monoterpene
Octanal	0.14*	0.20	Aliphatic aldehyde
Hexanoic acid	[0.14]*	0.04*	Aliphatic acid
Δ3-Carene	0.02	0.02	Monoterpene
Biomarker *Z.* officinale CO2, II	0.06	0.10	Aliphatic aldehyde
para-Cymene	0.01	0.04*	Monoterpene
Limonene	0.79	0.32	Monoterpene
1,8-Cineole	[0.79]	0.97	Monoterpenic ether
Unknown	tr	tr	Unknown
γ-Terpinene	tr	0.01	Monoterpene
cis-Linalool oxide (fur.)	0.01	0.01	Monoterpenic alcohol
trans-Linalool oxide (fur.)	0.03*	0.01	Monoterpenic alcohol
para-Cymenene	[0.03]*	0.01	Monoterpene
2-Nonanone	0.01	0.02	Aliphatic ketone
Unknown	0.09	0.20*	Oxygenated monoterpene
Rosefuran	0.05	0.09	Monoterpenic ether
Linalool	0.16	0.24	Monoterpenic alcohol
2-Nonanol	0.01	0.01	Aliphatic alcohol
Bornyl methyl ether	0.02	[0.04]*	Monoterpenic ether
Camphor	0.03	0.24*	Monoterpenic ketone
trans-para-Menth-2-en-1-ol	0.01	0.02	Monoterpenic alcohol
exo-Isocitral	0.04*	0.02	Monoterpenic aldehyde
Camphene hydrate	[0.04]*	0.03	Monoterpenic alcohol
Citronellal	0.02	0.04	Monoterpenic aldehyde
Borneol	0.68*	1.58*	Monoterpenic alcohol
Isoneral	[0.68]*	0.03	Monoterpenic aldehyde
Unknown	0.08		Oxygenated monoterpene
Terpinen-4-ol	0.12	0.18*	Monoterpenic alcohol
para-Cymen-8-ol	0.02	[0.04]*	Monoterpenic alcohol
α-Terpineol	0.07	[1.58]*	Monoterpenic alcohol
Myrtenal	0.26	[0.20]*	Monoterpenic aldehyde
Myrtenol	0.03	0.03	Monoterpenic alcohol
trans-Piperitol	0.33	0.12	Monoterpenic alcohol
Biomarker *Z.* officinale CO2, III	[0.33]	0.25	Aliphatic aldehyde
trans-Carveol	0.01	0.02	Monoterpenic alcohol
Nerol	0.01	0.01	Monoterpenic alcohol

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Citronellol	0.17	3.75	Monoterpenic alcohol
Neral	0.92	1.51*	Monoterpenic aldehyde
Geraniol	0.70	1.19	Monoterpenic alcohol
Geranial	1.51	2.52	Monoterpenic aldehyde
Bornyl acetate	0.13	0.18	Monoterpenic ester
2-Undecanone	0.05	[0.18]*	Aliphatic ketone
Geranyl formate	0.02	1.02*	Monoterpenic ester
2-Undecanol	0.03	0.04	Aliphatic alcohol
3-Oxo-para-menth-1-en-7-al	0.08		Monoterpenic ketone
α-Cubebene	0.02	0.01	Sesquiterpene
Citronellyl acetate	0.03	[1.51]*	Monoterpenic ester
Cyclosativene II	0.07	0.10	Sesquiterpene
Neryl acetate	0.01	10.01*	Monoterpenic ester
α-Copaene	0.19	[0.24]*	Sesquiterpene
Geranic acid	0.10	0.13	Aliphatic acid
Unknown	0.03		Unknown
Geranyl acetate	0.20*	2.65*	Monoterpenic ester
β-Cubebene	[0.20]*	0.02	Sesquiterpene
β-Elemene	0.14	0.21*	Sesquiterpene
Vanillin	0.05	0.10	Simple phenolic
γ-4-Dimethylbenzenebutyral	0.08		Simple phenolic
Dodecanal	0.11	0.14	Aliphatic aldehyde
β-Caryophyllene	0.04	[0.21]*	Sesquiterpene
β-Copaene	0.01	0.01	Sesquiterpene
Unknown	0.13		Unknown
trans-α-Bergamotene	0.06	[0.21]*	Sesquiterpene
Sesquisabinene A	0.12	0.15	Sesquiterpene
Unknown	0.02		Sesquiterpene
α-Humulene	0.02	0.04	Sesquiterpene
Sesquisabinene B	0.23	0.22	Sesquiterpene
(*E*)-β-Farnesene	0.15	0.26	Sesquiterpene
γ-Muurolene	0.07	0.16	Sesquiterpene
Germacrene D	0.12	0.16	Sesquiterpene
ar-Curcumene	5.77*	13.68*	Sesquiterpene
β-Selinene	[5.77]*	0.03	Sesquiterpene
Bicyclosesquiphellandrene?	0.70*	[1.02]*	Sesquiterpene
epi-Cubebol	[0.70]*	0.04	Sesquiterpenic alcohol
α-Zingiberene	6.60	[10.01]*	Sesquiterpene
β-Bisabolene	3.14	[10.01]*	Sesquiterpene
(3*E*,6*E*)-α-Farnesene	1.11	[2.65]*	Sesquiterpene
β-Sesquiphellandrene	5.44	[13.68]*	Sesquiterpene
Unknown	0.12	0.10	Oxygenated sesquiterpene
α-Elemol	0.10	0.19	Sesquiterpenic alcohol
Germacrene B	0.05	0.09	Sesquiterpene
cis-Sesquisabinene hydrate	0.14	0.22	Sesquiterpenic alcohol
β-Calacorene	0.14*	0.01	Sesquiterpene
(*E*)-Nerolidol	[0.14]*	0.17	Sesquiterpenic alcohol
ar-Turmerol	0.12	0.12	Sesquiterpenic alcohol
Unknown	0.35	0.29	Oxygenated sesquiterpene
cis-Zingiberenol	0.61	0.78	Sesquiterpenic alcohol
Unknown	0.20*	0.05	Oxygenated sesquiterpene
γ-Eudesmol	[0.20]*	0.11	Sesquiterpenic alcohol

trans-Zingiberenol	0.29	0.57	Sesquiterpenic alcohol
β-Eudesmol	0.12	0.62*	Sesquiterpenic alcohol
α-Eudesmol	1.64*	0.20	Sesquiterpenic alcohol
Zingerone	[1.64]*	1.95	Phenylbutanoid
(3*E*,5*E*)-7-Hydroxyfarnesene	0.32	0.29	Sesquiterpenic alcohol
Zingerone methyl ether	0.02	0.06	Simple phenolic
α-Bisabolol	0.20	[0.62]*	Sesquiterpenic alcohol
Unknown	0.52	0.88	Oxygenated sesquiterpene
Unknown	0.96	1.51	Oxygenated sesquiterpene
Xanthorizzhol?	0.24	0.29	Sesquiterpenic alcohol
Unknown	0.18		Oxygenated sesquiterpene
Unknown	0.06	0.12	Oxygenated sesquiterpene
Unknown	0.20		Oxygenated sesquiterpene
Unknown	0.10	0.11*	Oxygenated sesquiterpene
Unknown	0.10		Oxygenated sesquiterpene
Unknown	0.12	[0.11]*	Oxygenated sesquiterpene
Cryptomeridiol	0.12	0.16	Sesquiterpenic alcohol
Unknown	2.00	2.85	Oxygenated sesquiterpene
Unknown	0.18		Oxygenated sesquiterpene
Unknown	0.76	0.95*	Oxygenated sesquiterpene
Unknown	0.15	[0.95]*	Unknown
Unknown	0.10	0.17	Oxygenated sesquiterpene
Geranyl-para-cymene	0.13	0.09	Diterpene
Palmitic acid	0.93	1.56	Aliphatic acid
(*E*,*E*)-Geranyllinalool	0.05	0.03	Diterpenic alcohol
[4]-Shogaol	0.08		Gingerol derivative
Unknown	0.04		Gingerol derivative
Unknown	0.11		Gingerol derivative
Linoleic acid	1.36	0.52	Aliphatic acid
Oleic acid	[1.36]	0.76	Aliphatic acid
[4]-Gingerol	0.19		Gingerol derivative
[4]-Isogingerol?	0.51		Gingerol derivative
[6]-Isoshogaol?	0.21	0.34	Gingerol derivative
1-(4'-Hydroxy-3'-methoxyphenyl)-7-decen-3-one?	0.08		Gingerol derivative
[6]-Paradol	0.27		Gingerol derivative
Methyl [6]-isoshogaol?	0.04		Gingerol derivative
[6]-Shogaol	5.37	5.29	Gingerol derivative
Methyl [6]-shogaol	0.25		Gingerol derivative
Acetoxy-[6]-dihydroparadol	0.11		Gingerol derivative
Diacetoxy-[4]-gingerdiol	0.13		Gingerol derivative
Geranyl laurate	0.13	0.11	Monoterpenic ester
[6]-Gingerol	10.88		Gingerol derivative
Unknown	0.56		Gingerol derivative
Methyl [6]-gingerol	0.07		Gingerol derivative
1-(4'-Hydroxy-3'-methoxyphenyl)-7-dodecen-3-one?	0.08		Gingerol derivative
[8]-Paradol	0.05		Gingerol derivative
Acetoxy-[6]-gingerol	0.15		Gingerol derivative
Unknown	0.04		Gingerol derivative
[6]-Gingerdiol isomer I	0.05		Gingerol derivative
[6]-Gingerdiol isomer II	0.33		Gingerol derivative

[8]-Shogaol	1.25	2.24	Gingerol derivative
5-Acetoxy-[6]-gingerdiol	0.21		Gingerol derivative
Methyl 5-acetoxy-[6]-gingerdiol	0.05		Gingerol derivative
Diacetoxy-[6]-gingerdiol	1.70		Gingerol derivative
[8]-Gingerdione	0.09		Gingerol derivative
1-Dehydro-[6]-gingerdione	0.13		Gingerol derivative
[8]-Gingerol	0.04		Gingerol derivative
1-(4'-Hydroxy-3'-methoxyphenyl)-7-tetradecen-3-one?	0.02		Gingerol derivative
[10]-Isoshogaol	2.01		Gingerol derivative
[10]-Paradol	0.09		Gingerol derivative
Unknown	0.04		Gingerol derivative
Unknown	0.15		Gingerol derivative
Unknown	1.49		Gingerol derivative
[10]-Gingerdione	0.17		Gingerol derivative
1-Dehydro-[8]-gingerdione	0.22		Gingerol derivative
[12]-Isoshogaol?	0.10		Gingerol derivative
Unknown	0.09		Gingerol derivative
[12]-Shogaol	0.23		Gingerol derivative
[12]-Gingerdione	0.15		Gingerol derivative
1-Dehydro-[10]-gingerdione	0.15		Gingerol derivative
[6]-Gingerdiol neral acetal?	0.05		Gingerol derivative
[6]-Gingerdiol geranial acetal	2.02		Gingerol derivative
(*E*)-Gingerenone A	0.57		Gingerol derivative
Total identified	**68.64%**	**64.80%**	

*: 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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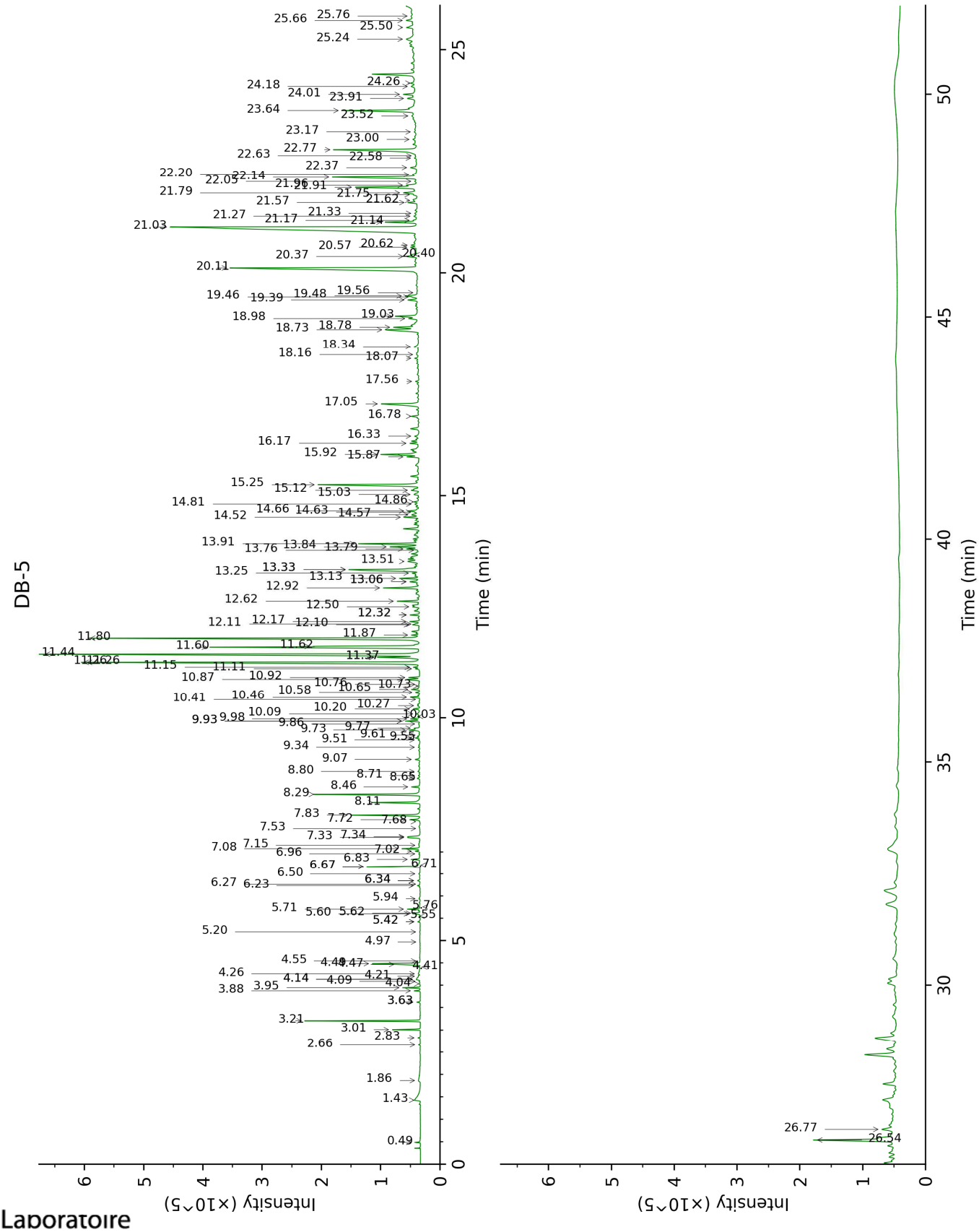

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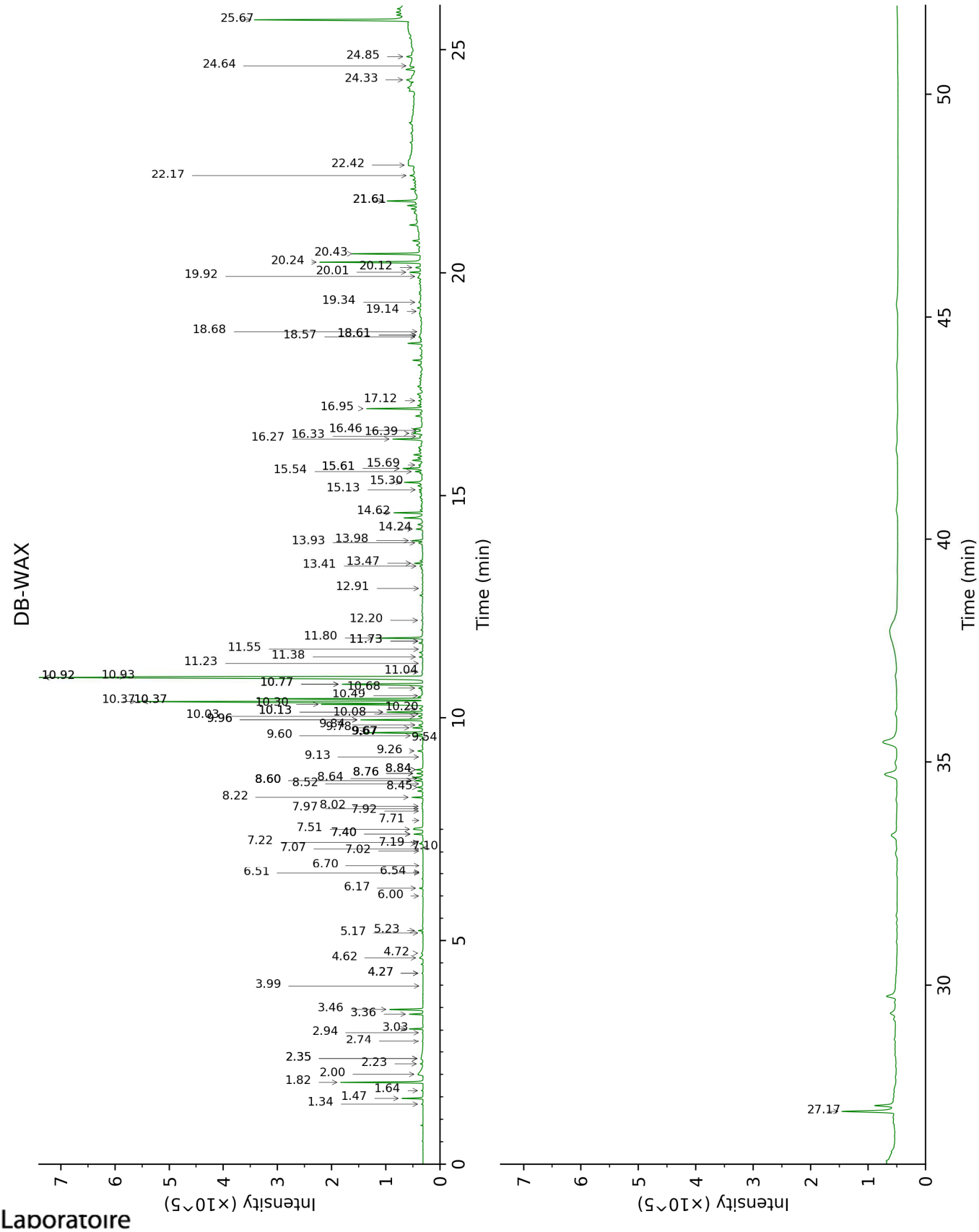
DB-WAX
Time (min)
Intensity (×10^5)
25.67
24.85
24.64
24.33
22.42
22.17
21.61
20.43
20.24
20.12
20.01
19.92
19.34
19.14
18.68
18.57
18.61
17.12
16.95
16.46
16.39
16.27
16.33
15.69
15.61
15.54
15.30
15.13
14.62
14.24
13.98
13.93
13.47
13.41
12.91
12.20
11.80
11.73
11.55
11.38
11.23
11.04
10.93
10.92
10.77
10.68
10.49
10.37
10.30
10.20
10.13
10.08
10.03
9.96
9.67
9.60
9.54
9.26
9.13
8.84
8.76
8.64
8.60
8.52
8.45
8.22
8.02
7.97
7.92
7.71
7.51
7.40
7.22
7.19
7.10
7.07
7.02
6.70
6.54
6.51
6.17
6.00
5.23
5.17
4.72
4.62
4.27
3.99
3.46
3.36
3.03
2.94
2.74
2.35
2.23
2.00
1.82
1.64
1.47
1.34
27.17

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	606	0.04	1.64	1013	0.03
Hexanal	1.43	799	0.40	2.00	1048	0.58
Biomarker *Z. officinale* CO2, I	1.86	837	0.16	2.35*	1081	0.26
2-Heptanol	2.66	904	0.02	5.17	1293	0.03
Tricyclene	2.83	915	0.02	1.34	976	0.04
α-Pinene	3.01	927	0.29	1.47	996	0.46
Camphene	3.21	940	1.21	1.82	1031	1.93
β-Pinene	3.63*	968	0.04	2.24	1070	0.06
Sabinene	3.63*	968	[0.04]	2.35*	1081	[0.26]
6-Methyl-5-hepten-2-one	3.88	985	0.06	5.23	1297	0.11
Myrcene	3.95	990	0.18	3.03	1136	0.29
6-Methyl-5-hepten-2-ol	4.04	995	0.01	7.07	1430	0.01
Pseudolimonene	4.09	999	0.02	2.94	1130	0.01
Octanal	4.14*	1002	0.14	4.62	1253	0.20
Hexanoic acid	4.14*	1002	[0.14]	11.73*	1800	0.04
Δ3-Carene	4.20	1006	0.02	2.74	1114	0.02
Biomarker *Z. officinale* CO2, II	4.26	1010	0.06	4.72	1261	0.10
para-Cymene	4.41	1020	0.01	4.27*	1229	0.04
Limonene	4.47†	1023	0.79	3.36	1161	0.32
1,8-Cineole	4.49†	1024	[0.79]	3.46	1169	0.97
Unknown [m/z 59, 43 (12), 109 (11), 41 (10), 127 (8)...]	4.55	1028	tr	6.54	1390	tr
γ-Terpinene	4.97	1055	tr	3.99	1208	0.01
cis-Linalool oxide (fur.)	5.20	1069	0.01	6.70	1402	0.01
trans-Linalool oxide (fur.)	5.42*	1083	0.03	7.10	1432	0.01
para-Cymenene	5.42*	1083	[0.03]	6.52	1389	0.01
2-Nonanone	5.55	1091	0.01	6.00	1352	0.02
Unknown [m/z 96, 109 (55), 79 (41), 67 (38), 41 (36)... 150 (3)]	5.60	1094	0.09	8.84*	1564	0.20
Rosefuran	5.62	1095	0.05	6.18	1365	0.09
Linalool	5.71	1101	0.16	8.22	1516	0.24
2-Nonanol	5.76	1104	0.01	7.92	1492	0.01
Bornyl methyl ether	5.94	1116	0.02	4.27*	1229	[0.04]
Camphor	6.23	1135	0.03	7.40*	1454	0.24
trans-para-Menth-2-en-1-ol	6.27	1137	0.01	9.13	1586	0.02
exo-Isocitral	6.34*	1142	0.04	7.70	1477	0.02
Camphene hydrate	6.34*	1142	[0.04]	8.64	1548	0.03
Citronellal	6.50	1152	0.02	7.22	1441	0.04
Borneol	6.67*	1162	0.68	9.96*	1652	1.58
Isoneral	6.67*	1162	[0.68]	8.02	1500	0.03
Unknown [m/z 109, 79 (18), 81 (15), 91 (12), 77 (10)... 152 (3)]	6.71	1165	0.08			
Terpinen-4-ol	6.83	1173	0.12	8.76*	1557	0.18
para-Cymen-8-ol	6.96	1181	0.02	11.73*	1800	[0.04]

α-Terpineol	7.02	1185	0.07	9.96*	1652	[1.58]
Myrtenal	7.08	1189	0.26	8.84*	1564	[0.20]
Myrtenol	7.15	1193	0.03	11.04	1742	0.03
trans-Piperitol	7.33†	1205	0.33	10.68	1711	0.12
Biomarker *Z.* officinale CO2, III	7.34†	1206	[0.33]	7.51	1462	0.25
trans-Carveol	7.53	1218	0.01	11.55	1785	0.02
Nerol	7.68	1228	0.01	11.23	1758	0.01
Citronellol	7.72	1231	0.17	10.93	1733	3.75
Neral	7.82	1238	0.92	9.67*	1629	1.51
Geraniol	8.11	1257	0.70	11.80	1807	1.19
Geranial	8.29	1269	1.51	10.30	1680	2.52
Bornyl acetate	8.46	1280	0.13	8.45	1533	0.18
2-Undecanone	8.65	1293	0.05	8.76*	1557	[0.18]
Geranyl formate	8.71	1298	0.02	10.13*	1666	1.02
2-Undecanol	8.80	1304	0.03	10.50	1696	0.04
3-Oxo-para-menth-1-en-7-al	9.07	1322	0.08			
α-Cubebene	9.34	1342	0.02	7.02	1426	0.01
Citronellyl acetate	9.50	1353	0.03	9.67*	1629	[1.51]
Cyclosativene II	9.55	1356	0.07	7.19	1438	0.10
Neryl acetate	9.61	1361	0.01	10.37*	1685	10.01
α-Copaene	9.73	1369	0.19	7.40*	1454	[0.24]
Geranic acid	9.77	1372	0.10	17.12	2321	0.13
Unknown [m/z 139, 69 (63), 83 (53), 43 (49), 41 (39)...]	9.86	1379	0.03			
Geranyl acetate	9.93*	1383	0.20	10.77*	1719	2.65
β-Cubebene	9.93*	1383	[0.20]	7.97	1496	0.02
β-Elemene	9.98	1387	0.14	8.60*	1545	0.21
Vanillin	10.03	1390	0.05	18.57	2479	0.10
γ-4-Dimethylbenzenebutyral	10.09	1394	0.08			
Dodecanal	10.20	1402	0.11	10.20	1672	0.14
β-Caryophyllene	10.27	1408	0.04	8.60*	1545	[0.21]
β-Copaene	10.41	1418	0.01	8.52	1539	0.01
Unknown [m/z 43, 83 (81), 126 (64), 41 (53), 55 (43)...]	10.46	1422	0.13			
trans-α-Bergamotene	10.58	1431	0.06	8.60*	1545	[0.21]
Sesquisabinene A	10.65	1436	0.12	9.26	1596	0.15
Unknown [m/z 139, 69 (43), 91 (42), 41 (36), 81 (36), 43 (36)... 204 (5)]	10.73	1442	0.02			
α-Humulene	10.76	1444	0.02	9.54	1618	0.04
Sesquisabinene B	10.87	1452	0.23	9.60	1623	0.22
(*E*)-β-Farnesene	10.92	1456	0.15	9.78	1638	0.26
γ-Muurolene	11.11	1470	0.07	9.84	1643	0.16
Germacrene D	11.15	1473	0.12	10.03	1658	0.16
ar-Curcumene	11.26*	1481	5.77	10.92*	1732	13.68
β-Selinene	11.26*	1481	[5.77]	10.08	1662	0.03
Bicyclosesquiphellandrene?	11.37*	1489	0.70	10.13*	1666	[1.02]
epi-Cubebol	11.37*	1489	[0.70]	12.20	1842	0.04
α-Zingiberene	11.44	1495	6.60	10.37*	1685	[10.01]

β-Bisabolene	11.60	1506	3.14	10.37*	1685	[10.01]
(3*E*,6*E*)-α-Farnesene	11.62	1508	1.11	10.77*	1719	[2.65]
β-Sesquiphellandrene	11.80	1522	5.44	10.92*	1732	[13.68]
Unknown [m/z 177, 159 (67), 41 (43), 91 (43), 43 (41)... 220 (t)]	11.87	1528	0.12	13.41	1951	0.10
α-Elemol	12.10	1546	0.10	14.24	2029	0.19
Germacrene B	12.11	1547	0.05	11.38	1770	0.09
cis-Sesquisabinene hydrate	12.17	1551	0.14	13.47	1957	0.22
β-Calacorene	12.32*	1563	0.14	12.91	1905	0.01
(*E*)-Nerolidol	12.32*	1563	[0.14]	13.93	1999	0.17
ar-Turmerol	12.50	1577	0.12	15.69	2171	0.12
Unknown [m/z 132, 118 (89), 145 (85), 119 (79), 117 (60)...]	12.62	1587	0.35	13.98	2004	0.29
cis-Zingiberenol	12.92	1611	0.61	14.62	2065	0.78
Unknown [m/z 119, 85 (92), 105 (37), 120 (36), 91 (28)... 218 (6)]	13.06*	1622	0.20	16.46	2250	0.05
γ-Eudesmol	13.06*	1622	[0.20]	15.13	2116	0.11
trans-Zingiberenol	13.13	1628	0.29	15.30	2132	0.57
β-Eudesmol	13.25	1638	0.12	15.61*	2163	0.62
α-Eudesmol	13.33*	1645	1.64	15.54	2156	0.20
Zingerone	13.33*	1645	[1.64]	20.43	2698	1.95
(3*E*,5*E*)-7-Hydroxyfarnesene	13.51	1660	0.32	16.39	2244	0.29
Zingerone methyl ether	13.76	1680	0.02	19.14	2545	0.06
α-Bisabolol	13.79	1683	0.20	15.61*	2163	[0.62]
Unknown [m/z 137, 119 (70), 84 (69), 41 (68), 69 (53), 55 (45), 109 (38)... 222 (2)]	13.84	1687	0.52	16.27	2230	0.88
Unknown [m/z 69, 41 (59), 118 (33), 43 (32), 55 (31)... 234? (t)]	13.91	1692	0.96	16.95	2302	1.51
Xanthorizzhol?	14.52	1744	0.24	20.01	2648	0.29
Unknown [m/z 82, 43 (85), 91 (67), 93 (66), 41 (66), 69 (59), 106 (47)... 218 (5)...]	14.57	1749	0.18			
Unknown [m/z 105, 148 (87), 91 (83), 135 (78), 131 (76)... 218 (21)...]	14.63	1754	0.06	19.34	2569	0.12
Unknown [m/z 43, 82 (100), 41 (86), 69 (76), 93 (72), 91 (72)... 218 (4)...]	14.66	1757	0.20			
Unknown [m/z 79, 41 (77), 135 (75), 69 (74), 43 (70)... 220 (9)]	14.81	1770	0.10	18.61*	2484	0.11
Unknown [m/z 151, 41 (78), 95 (71), 109 (59), 55 (56), 69 (55)... 234 (15)]	14.86	1774	0.10			
Unknown [m/z 69, 41 (96), 43 (90), 109 (51), 55 (42), 81 (33)...]	15.03	1789	0.12	18.61*	2484	[0.11]

Cryptomeridiol	15.12	1797	0.12	20.12	2661	0.16
Unknown [m/z 69, 43 (95), 41 (84), 109 (78), 95 (54), 93 (49)... 177 (36), 220 (2)...]	15.25	1808	2.00	20.24	2676	2.85
Unknown [m/z 109, 69 (58), 43 (56), 41 (42), 135 (37), 55 (27)... 220 (5)]	15.87	1864	0.18			
Unknown [m/z 125, 41 (88), 109 (76), 69 (76), 151 (68), 55 (45), 95 (36)... 236 (21)]	15.92	1869	0.76	21.61*	2846	0.95
Unknown [m/z 43, 109 (89), 69 (71), 41 (63), 94 (53), 79 (47), 93 (44)...]	16.17	1892	0.15	21.61*	2846	[0.95]
Unknown [m/z 125, 41 (86), 151 (78), 109 (67), 69 (63)... 236 (22)]	16.33	1906	0.10	22.17	2920	0.17
Geranyl-para-cymene	16.78	1949	0.13	16.33	2237	0.09
Palmitic acid	17.05	1975	0.93	22.42	2952	1.56
(*E*,*E*)-Geranyllinalool	17.56	2024	0.05	18.68	2492	0.03
[4]-Shogaol	18.07	2075	0.08			
Unknown [m/z 135, 150 (34), 77 (13), 163 (11)... 262 (2)]	18.16	2083	0.04			
Unknown [m/z 137, 203 (15), 138 (11), 105 (11), 41 (9)... 274 (7), 286? (1)]	18.34	2102	0.11			
Linoleic acid	18.73†	2141	1.36	24.64	3260	0.52
Oleic acid	18.78†	2147	[1.36]	24.33	3215	0.76
[4]-Gingerol	18.98	2167	0.19			
[4]-Isogingerol?	19.03	2173	0.51			
[6]-Isoshogaol?	19.39	2211	0.21	24.85	3290	0.34
1-(4'-Hydroxy-3'-methoxyphenyl)-7-decen-3-one?	19.46	2218	0.08			
[6]-Paradol	19.48	2220	0.27			
Methyl [6]-isoshogaol?	19.56	2228	0.04			
[6]-Shogaol	20.11	2288	5.37	25.67	3412	5.29
Methyl [6]-shogaol	20.37	2316	0.25			
Acetoxy-[6]-dihydroparadol	20.40	2320	0.11			
Diacetoxy-[4]-gingerdiol	20.57	2339	0.13			
Geranyl laurate	20.62	2344	0.13	19.92	2637	0.11
[6]-Gingerol	21.03	2390	10.88			
Unknown [m/z 137, 138 (9), 316 (6), 122 (5)]	21.14	2402	0.56			
Methyl [6]-gingerol	21.17	2406	0.07			
1-(4'-Hydroxy-3'-methoxyphenyl)-7-dodecen-3-one?	21.27	2417	0.08			
[8]-Paradol	21.33	2424	0.05			
Acetoxy-[6]-gingerol	21.57	2453	0.15			
Unknown [m/z 137, 316 (31), 109 (24), 179 (21), 150	21.62	2458	0.04			

(20)]						
[6]-Gingerdiol isomer I	21.75	2473	0.05			
[6]-Gingerdiol isomer II	21.79	2478	0.33			
[8]-Shogaol	21.92	2493	1.25	27.17	3615	2.24
5-Acetoxy-[6]-gingerdiol	21.96	2498	0.21			
Methyl 5-acetoxy-[6]-gingerdiol	22.05	2508	0.05			
Diacetoxy-[6]-gingerdiol	22.14	2520	1.70			
[8]-Gingerdione	22.20	2527	0.09			
1-Dehydro-[6]-gingerdione	22.37	2547	0.13			
[8]-Gingerol	22.58	2572	0.04			
1-(4'-Hydroxy-3'-methoxyphenyl)-7-tetradecen-3-one?	22.63	2579	0.02			
[10]-Isoshogaol	22.77	2595	2.01			
[10]-Paradol	23.00	2624	0.09			
Unknown [m/z 137, 109 (24), 207 (24), 43 (24)... 344 (14)]	23.17	2644	0.04			
Unknown [m/z 137, 55 (23), 41 (21), 69 (18), 150 (17), 135 (14)... 330 (12)]	23.52	2689	0.15			
Unknown [m/z 137, 205 (13), 332 (9), 122 (7)]	23.64	2704	1.49			
[10]-Gingerdione	23.92	2739	0.17			
1-Dehydro-[8]-gingerdione	24.01	2751	0.22			
[12]-Isoshogaol?	24.18	2774	0.10			
Unknown [m/z 137, 138 (8), 122 (6), 372 (6)]	24.26	2783	0.09			
[12]-Shogaol	25.24	2914	0.23			
[12]-Gingerdione	25.50	2950	0.15			
1-Dehydro-[10]-gingerdione	25.66	2972	0.15			
[6]-Gingerdiol neral acetal?	25.76	2986	0.05			
[6]-Gingerdiol geranial acetal	26.54	3089	2.02			
(*E*)-Gingerenone A	26.77	3117	0.57			
Total identified		**68.64%**			**64.80%**	
Total reported		**77.42%**			**70.77%**	

*: 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