

Date : 2025-02-25

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 25B11-PTH04

**Customer Identification :** Organic Ginger Root CO2 - Nigeria - GL0103R

**Type :** CO2 Extract

**Source :** *Zingiber officinale*

**Customer :** Plant Therapy

Checked and approved by:

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

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## *GAS CHROMATOGRAPHIC ANALYSIS*

**Method :** PC-MAT-004 - Terpenes and volatiles profiling by response factor

**Results :** See analysis summary (next page)

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

**Date :** 2025-02-20

## *PHYSICOCHEMICAL DATA*

## *CONCLUSION*

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

## ANALYSIS SUMMARY

Identification	mg/g	% m/m	Class
Hexanal	25.93	2.59	Aliphatic aldehyde
2-Heptanol	0.30	0.03	Aliphatic alcohol
Tricyclene	0.13	0.01	Monoterpene
$\alpha$ -Thujene	0.04	0.0	Monoterpene
$\alpha$ -Pinene	2.39	0.24	Monoterpene
$\alpha$ -Fenchene	0.12	0.01	Monoterpene
Camphene	7.74	0.77	Monoterpene
Sabinene	0.13	0.01	Monoterpene
$\beta$ -Pinene	0.35	0.03	Monoterpene
6-Methyl-5-hepten-2-one	0.57	0.06	Aliphatic ketone
Myrcene	1.28	0.13	Monoterpene
$\alpha$ -Phellandrene	0.32	0.03	Monoterpene
Octanal	7.61	0.76	Aliphatic aldehyde
$\Delta$ 3-Carene	0.16	0.02	Monoterpene
<i>para</i> -Cymene	0.16	0.02	Monoterpene
Limonene	2.13	0.21	Monoterpene
1,8-Cineole	[14.05]	1.41	Monoterpenic ether
$\beta$ -Phellandrene	[12.36]	1.24	Monoterpene
$\gamma$ -Terpinene	0.07	0.01	Monoterpene
Terpinolene	0.41	0.04	Monoterpene
2-Nonanone	0.22	0.02	Aliphatic ketone
Unknown	0.68	0.07	Oxygenated monoterpene
Rosefuran	0.73	0.07	Monoterpenic ether
Linalool	1.22	0.12	Monoterpenic alcohol
2-Nonanol	0.26	0.03	Aliphatic alcohol
Bornyl methyl ether	0.16	0.02	Monoterpenic ether
( <i>E</i> )-4,8-Dimethylnona-1,3,7-triene	0.20	0.02	Terpene derivative
Camphor	0.44	0.04	Monoterpenic ketone
Camphene hydrate	0.33	0.03	Monoterpenic alcohol
<i>exo</i> -Isocitral	0.24	0.02	Monoterpenic aldehyde
Citronellal	0.33	0.03	Monoterpenic aldehyde
Borneol	4.15	0.42	Monoterpenic alcohol
Isoneral	0.27	0.03	Monoterpenic aldehyde
Rosefuran oxide	[1.42]	0.14	Monoterpenic ether
Terpinen-4-ol	[1.18]	0.12	Monoterpenic alcohol
Cryptone	0.16	0.02	Normonoterpenic ketone
<i>para</i> -Cymen-8-ol	0.35	0.03	Monoterpenic alcohol
$\alpha$ -Terpineol	2.26	0.23	Monoterpenic alcohol
Myrtenol	0.71	0.07	Monoterpenic alcohol
Decanal	16.34	1.63	Aliphatic aldehyde
2,3-Epoxyneral?	0.09	0.01	Monoterpenic aldehyde

Citronellol	1.39	0.14	Monoterpenic alcohol
Neral	4.56	0.46	Monoterpenic aldehyde
Unknown	0.40	0.04	Oxygenated monoterpene
Geraniol	1.55	0.15	Monoterpenic alcohol
Geranial	7.10	0.71	Monoterpenic aldehyde
Bornyl acetate	0.45	0.04	Monoterpenic ester
2-Undecanone	1.33	0.13	Aliphatic ketone
2-Undecanol	0.18	0.02	Aliphatic alcohol
8-Hydroxy-neo-menthol	0.05	0.01	Monoterpenic alcohol
$\delta$ -Elemene	0.21	0.02	Sesquiterpene
$\alpha$ -Cubebene	0.06	0.01	Sesquiterpene
Citronellyl acetate	0.37	0.04	Monoterpenic ester
Cyclosativene I	0.54	0.05	Sesquiterpene
Cyclosativene II	0.20	0.02	Sesquiterpene
Neryl acetate	0.13	0.01	Monoterpenic ester
$\alpha$ -Copaene	1.39	0.14	Sesquiterpene
7-epi-Sesquithujene?	0.21	0.02	Sesquiterpene
$\beta$ -Cubebene	0.18	0.02	Sesquiterpene
Geranyl acetate	0.91	0.09	Monoterpenic ester
$\beta$ -Elemene	1.95	0.2	Sesquiterpene
Vanillin	0.48	0.05	Simple phenolic
$\gamma$ -4-Dimethylbenzenebutyral	0.13	0.01	Simple phenolic
Sesquithujene	0.72	0.07	Sesquiterpene
Dodecanal	0.73	0.07	Aliphatic aldehyde
$\beta$ -Caryophyllene	0.32	0.03	Sesquiterpene
$\beta$ -Copaene	0.20	0.02	Sesquiterpene
$\gamma$ -Elemene	0.52	0.05	Sesquiterpene
(Z)- $\beta$ -Farnesene?	0.28	0.03	Sesquiterpene
<i>trans</i> - $\alpha$ -Bergamotene	0.60	0.06	Sesquiterpene
Sesquisabinene A	0.17	0.02	Sesquiterpene
$\alpha$ -Humulene	0.33	0.03	Sesquiterpene
allo-Aromadendrene	1.27	0.13	Sesquiterpene
Sesquisabinene B	0.90	0.09	Sesquiterpene
(E)- $\beta$ -Farnesene	1.21	0.12	Sesquiterpene
$\gamma$ -Muurolene	0.54	0.05	Sesquiterpene
Germacrene D	4.09	0.41	Sesquiterpene
<i>ar</i> -Curcumene	21.54	2.15	Sesquiterpene
$\beta$ -Selinene	1.20	0.12	Sesquiterpene
Unknown	4.95	0.49	Sesquiterpene
epi-Cubebol	0.32	0.03	Sesquiterpenic alcohol
Bicyclosquiphellandrene?	9.41	0.94	Sesquiterpene
$\alpha$ -Zingiberene	84.25	8.43	Sesquiterpene
Cubebol	0.73	0.07	Sesquiterpenic alcohol
$\beta$ -Bisabolene	19.13	1.91	Sesquiterpene
(3E,6E)- $\alpha$ -Farnesene	18.87	1.89	Sesquiterpene

γ-Cadinene	1.40	0.14	Sesquiterpene
δ-Cadinene	0.16	0.02	Sesquiterpene
β-Sesquiphellandrene	38.01	3.8	Sesquiterpene
(E)-γ-Bisabolene	0.15	0.01	Sesquiterpene
Unknown	2.01	0.2	Oxygenated sesquiterpene
α-Calacorene	0.12	0.01	Sesquiterpene
Unknown	0.14	0.01	Oxygenated sesquiterpene
α-Elemol	1.45	0.14	Sesquiterpenic alcohol
Germacrene B	1.42	0.14	Sesquiterpene
cis-Sesquisabinene hydrate	0.86	0.09	Sesquiterpenic alcohol
(E)-Nerolidol	1.93	0.19	Sesquiterpenic alcohol
1'-Hydroxyeugenol	1.78	0.18	Phenylpropanoid
ar-Turmerol	0.35	0.03	Sesquiterpenic alcohol
trans-Sesquisabinene hydrate	2.35	0.24	Sesquiterpenic alcohol
Unknown	0.39	0.04	Oxygenated sesquiterpene
Unknown	0.25	0.03	Oxygenated sesquiterpene
cis-Zingiberenol	3.37	0.34	Sesquiterpenic alcohol
Unknown	0.95	0.1	Oxygenated sesquiterpene
Unknown	1.78	0.18	Oxygenated sesquiterpene
γ-Eudesmol	0.71	0.07	Sesquiterpenic alcohol
trans-Zingiberenol	1.60	0.16	Sesquiterpenic alcohol
Zingerone	70.39	7.04	Phenylbutanoid
β-Eudesmol	0.83	0.08	Sesquiterpenic alcohol
α-Eudesmol	1.51	0.15	Sesquiterpenic alcohol
Selin-11-en-4α-ol	0.82	0.08	Sesquiterpenic alcohol
(3E,5E)-7-Hydroxyfarnesene	1.01	0.1	Sesquiterpenic alcohol
β-Bisabolol	1.03	0.1	Sesquiterpenic alcohol
Zingerone methyl ether	0.54	0.05	Simple phenolic
α-Bisabolol	1.68	0.17	Sesquiterpenic alcohol
Unknown	3.31	0.33	Oxygenated sesquiterpene
Unknown	4.22	0.42	Oxygenated sesquiterpene
Unknown	1.57	0.16	Oxygenated sesquiterpene
Oplopanone	0.35	0.03	Sesquiterpenic alcohol
Xanthorizzhol	1.43	0.14	Sesquiterpenic alcohol
Unknown	0.25	0.03	Oxygenated sesquiterpene
Unknown	0.77	0.08	Oxygenated sesquiterpene
Unknown	0.26	0.03	Oxygenated sesquiterpene
Unknown	6.21	0.62	Oxygenated sesquiterpene
Unknown	2.00	0.2	Oxygenated sesquiterpene
Unknown	1.12	0.11	Oxygenated sesquiterpene
Unknown	0.21	0.02	Oxygenated sesquiterpene
Geranyl-para-cymene	1.06	0.11	Diterpene
Palmitic acid	7.66	0.77	Aliphatic acid
[4]-Shogaol	0.78	0.08	Gingerol derivative
Unknown	0.65	0.07	Gingerol derivative

Unknown	1.07	0.11	Gingerol derivative
Unknown	0.47	0.05	Oxygenated diterpene
Linoleic acid	6.62	0.66	Aliphatic acid
Oleic acid	9.47	0.95	Aliphatic acid
<i>cis</i> -Vaccenic acid?	3.33	0.33	Aliphatic acid
[4]-Gingerol	2.16	0.22	Gingerol derivative
[4]-Isogingerol?	3.97	0.4	Gingerol derivative
[6]-Isoshogaol?	1.39	0.14	Gingerol derivative
1-(4'-Hydroxy-3'-methoxyphenyl)-7-decen-3-one?	0.35	0.03	Gingerol derivative
[6]-Paradol	3.23	0.32	Gingerol derivative
Methyl [6]-isoshogaol?	0.49	0.05	Gingerol derivative
Methyl [6]-paradol?	0.05	0.01	Gingerol derivative
[6]-Dihydroparadol?	0.52	0.05	Gingerol derivative
[6]-Shogaol	33.01	3.3	Gingerol derivative
Methyl [6]-shogaol	3.53	0.35	Gingerol derivative
Acetoxy-[6]-dihydroparadol	0.51	0.05	Gingerol derivative
[6]-Gingerdione	0.27	0.03	Gingerol derivative
Diacetoxy-[4]-gingerdiol	0.89	0.09	Gingerol derivative
Geranyl laurate	0.79	0.08	Monoterpenic ester
[6]-Gingerol	65.46	6.55	Gingerol derivative
[6]-Isogingerol?	1.26	0.13	Gingerol derivative
[8]-Isoshogaol	1.27	0.13	Gingerol derivative
1-(4'-Hydroxy-3'-methoxyphenyl)-7-dodecen-3-one?	2.45	0.25	Gingerol derivative
[8]-Paradol	0.65	0.07	Gingerol derivative
Acetoxy-[6]-gingerol	0.35	0.03	Gingerol derivative
[6]-Gingerdiol isomer I	1.92	0.19	Gingerol derivative
[6]-Gingerdiol isomer II	0.66	0.07	Gingerol derivative
[8]-Shogaol	7.48	0.75	Gingerol derivative
5-Acetoxy-[6]-gingerdiol	1.12	0.11	Gingerol derivative
Methyl 5-acetoxy-[6]-gingerdiol	6.21	0.62	Gingerol derivative
Diacetoxy-[6]-gingerdiol	5.13	0.51	Gingerol derivative
[8]-Gingerdione	1.98	0.2	Gingerol derivative
1-Dehydro-[6]-gingerdione	1.60	0.16	Gingerol derivative
[10]-Isoshogaol	7.09	0.71	Gingerol derivative
[10]-Paradol	0.26	0.03	Gingerol derivative
Unknown	0.45	0.04	Gingerol derivative
[10]-Shogaol	12.48	1.25	Gingerol derivative
Unknown	0.71	0.07	Gingerol derivative
[10]-Gingerdione	2.54	0.25	Gingerol derivative
1-Dehydro-[8]-gingerdione	1.52	0.15	Gingerol derivative
[12]-Isoshogaol?	2.52	0.25	Gingerol derivative
[12]-Shogaol	0.65	0.07	Gingerol derivative
[12]-Gingerdione	0.32	0.03	Gingerol derivative

[6]-Gingerdiol geranial acetal	2.43	0.24	Gingerol derivative
(E)-Gingerenone A	0.18	0.02	Gingerol derivative
<b>Consolidated total</b>	<b>661.91</b>	<b>66.19</b>	

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

Note: Individual compounds contents were corrected following the method of Cachet et al., 2016 (Flavour and Fragrance Journal guidelines).

Unknown compounds are expressed in equivalents of internal standard without correction.

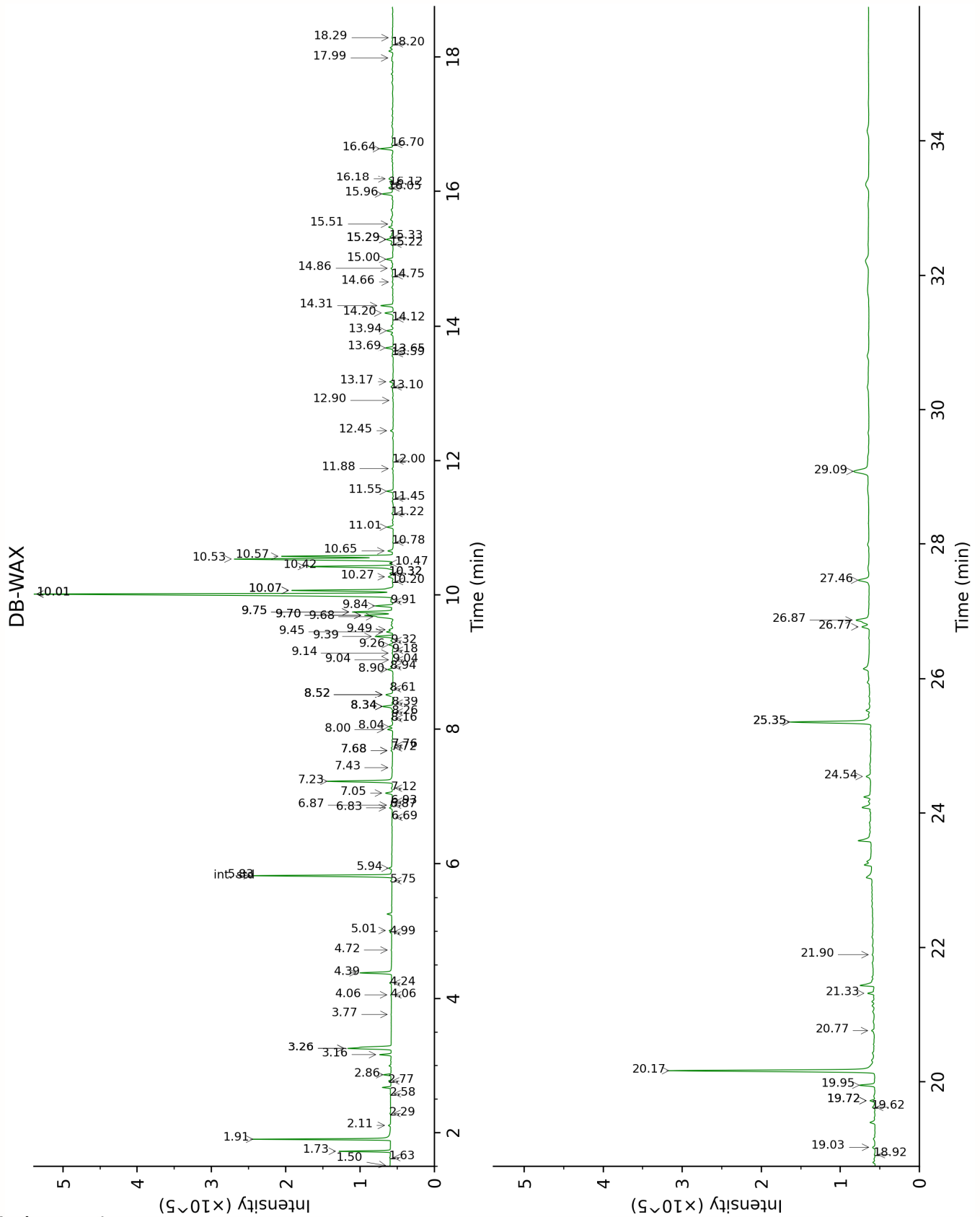
**About "consolidated" data:** The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm 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.

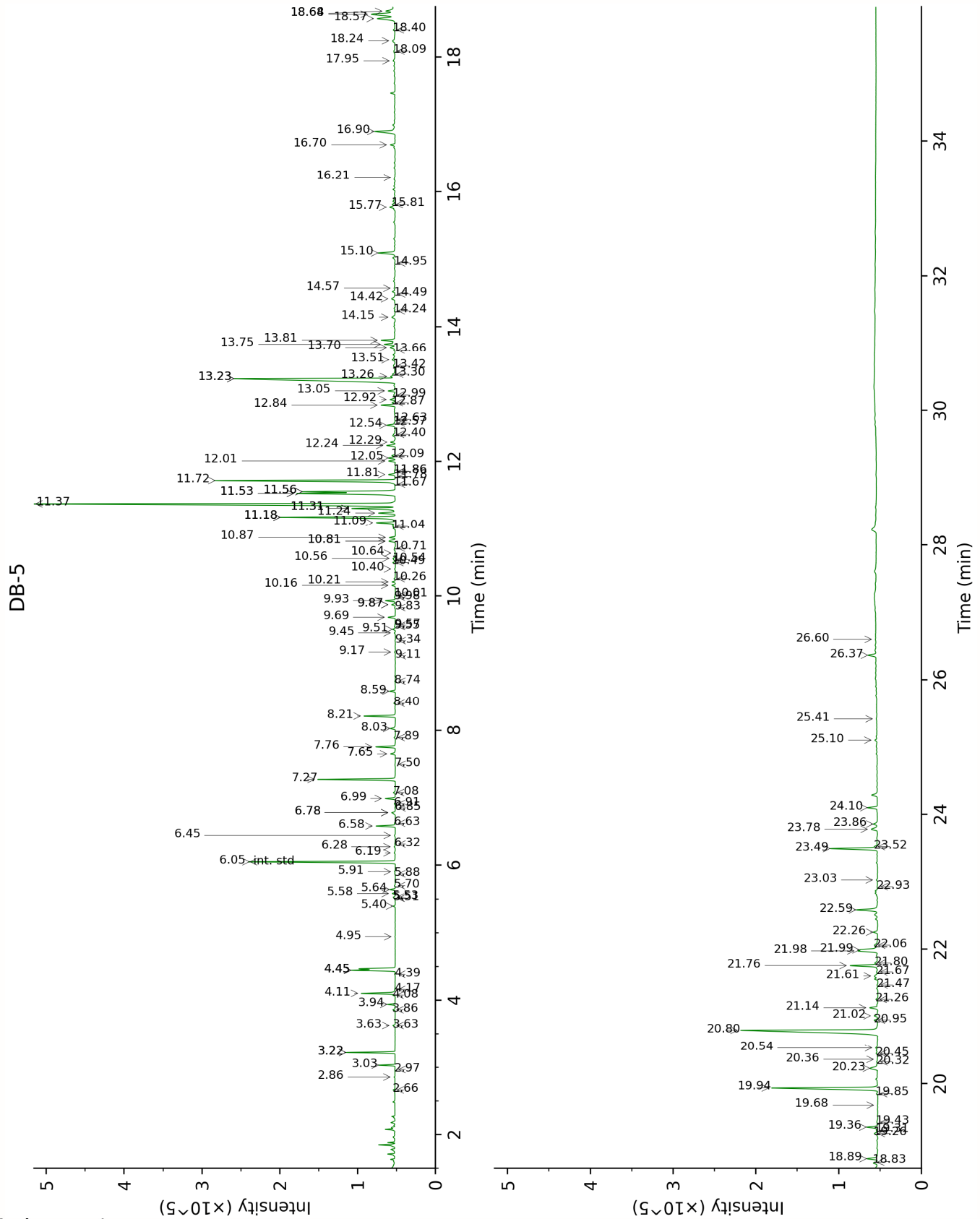
**Unknowns:** The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

**Bracketed value (xx):** A bracketed percent value indicate that two or more compound percentage could not be solved due to coelution.









FULL ANALYSIS DATA

Hexanal	Column DB-WAX			Column DB-5		
	1.91	1051.5	3.79	1.48	807.5	3.00
2-Heptanol	4.99	1296.9	0.06	2.66	907.9	0.04
Tricyclene	1.31	987.9	0.03	2.86	920.8	0.02
$\alpha$ -Thujene	1.50	1010.0	0.01	2.97	928.4	0.01
$\alpha$ -Pinene	1.42	1001.3	0.45	3.03	932.8	0.35
$\alpha$ -Fenchene	1.63	1023.2	0.02	3.22*	945.4	[1.07]
Camphene	1.73	1033.0	1.36	3.22*	945.4	[1.07]
Sabinene	2.29	1090.9	0.02	3.63*	973.0	[0.07]
$\beta$ -Pinene	2.11	1072.6	0.06	3.63*	973.0	[0.07]
6-Methyl-5-hepten-2-one	5.01	1298.6	0.10	3.86	988.7	0.07
Myrcene	2.86	1137.4	0.24	3.94	994.1	0.19
$\alpha$ -Phellandrene	2.77	1130.0	0.08	4.08	1003.4	0.05
Octanal	4.39	1253.0	1.19	4.11	1005.1	0.95
$\Delta^3$ -Carene	2.58	1114.9	0.01	4.16	1008.8	0.02
<i>para</i> -Cymene	4.06*	1229.3	[0.03]	4.39	1023.0	0.02
Limonene	3.16	1161.2	0.37	4.45*†	1026.7	[1.16]
1,8-Cineole	3.26*	1168.6	[2.32]	4.45*†	1026.7	[1.16]
$\beta$ -Phellandrene	3.26*	1168.6	[2.32]	4.45*†	1026.7	[1.16]
$\gamma$ -Terpinene	3.77	1208.1	0.01	4.94	1058.2	0.01
Terpinolene	4.24	1242.2	0.07	5.40	1086.9	0.06
2-Nonanone	5.75	1351.9	0.04	5.51	1094.2	0.03
Unknown ZIOF IX [m/z 96, 109 (55), 79 (41), 67 (38), 41 (36)... 150 (3)]	8.61	1566.0	0.12	5.53	1095.2	0.08
Rosefuran	5.94	1365.2	0.12	5.58	1098.7	0.09
Linalool	8.00	1518.3	0.18	5.64	1102.5	0.16
2-Nonanol	7.68*	1494.1	[0.05]	5.70	1106.0	0.03
Bornyl methyl ether	4.06*	1229.3	[0.03]	5.88	1117.3	0.02
( <i>E</i> )-4,8-Dimethylnona-1,3,7-triene	4.72	1277.5	0.03	5.91	1119.4	0.03
Camphor	7.12	1452.6	0.04	6.19	1137.3	0.06
Camphene hydrate	8.39	1548.6	0.03	6.28	1143.1	0.04
exo-Isocitral	7.43	1475.2	0.03	6.32	1145.7	0.03
Citronellal	6.93	1438.1	0.05	6.44	1153.9	0.04
Borneol	9.70*†	1652.9	[1.27]	6.58	1162.9	0.53
Isoneral	7.76	1500.3	0.02	6.63	1165.6	0.03
Rosefuran oxide	8.52*	1559.1	[0.40]	6.78*	1175.6	[0.15]
Terpinen-4-ol	8.52*	1559.1	[0.40]	6.78*	1175.6	[0.15]
Cryptone	9.04*	1599.5	[0.04]	6.85	1180.1	0.02
<i>para</i> -Cymen-8-ol	11.45	1799.8	0.03	6.91	1184.1	0.05
$\alpha$ -Terpineol	9.70*†	1652.9	[1.27]	6.99	1189.1	0.29
Myrtenol	10.78	1743.1	0.02	7.08	1194.7	0.09
Decanal	7.23	1460.2	2.51	7.27	1207.4	2.14

2,3-Epoxyneral?				7.50	1222.4	0.01
Citronellol	10.66	1732.1	0.25	7.65	1232.8	0.18
Neral	9.39	1627.5	0.72	7.76	1239.8	0.57
Unknown BODA V [m/z 109, 119 (84), 91 (81), 134 (55)... 137 (27)...]	11.22	1780.1	0.06	7.89	1249.0	0.04
Geraniol	11.55	1808.8	0.27	8.03	1258.1	0.20
Geranial	10.01*	1678.4	[16.35]	8.21	1270.4	0.89
Bornyl acetate	8.16	1530.7	0.05	8.40	1283.3	0.05
2-Undecanone	8.52*	1559.1	[0.40]	8.59	1295.7	0.18
2-Undecanol	10.20	1693.8	0.03	8.74	1305.7	0.03
8-Hydroxy-neo-menthol	14.12	2044.3	0.02	9.11	1332.4	0.01
δ-Elemene	6.83	1430.9	0.11	9.17	1336.3	0.03
α-Cubebene	6.69	1420.4	0.02	9.34	1348.2	0.01
Citronellyl acetate	9.32	1622.6	0.09	9.45	1356.4	0.04
Cyclosativene I	6.87*	1433.8	[0.08]	9.51	1360.2	0.08
Cyclosativene II	6.87*	1433.8	[0.08]	9.55	1363.0	0.03
Neryl acetate	10.07*	1682.9	[3.86]	9.57	1364.5	0.02
α-Copaene	7.05	1447.2	0.27	9.69	1372.8	0.21
7-epi-Sesquithujene?	7.72	1497.2	0.05	9.83	1382.9	0.03
β-Cubebene	7.68*	1494.1	[0.05]	9.87*	1385.9	[0.13]
Geranyl acetate	10.47	1716.6	0.13	9.87*	1385.9	[0.13]
β-Elemene	8.34*	1544.8	[0.47]	9.93	1390.2	0.29
Vanillin	18.20	2470.9	0.02	9.98	1393.8	0.05
γ-4- Dimethylbenzenebutyral				10.01	1396.0	0.02
Sesquithujene	8.04	1521.6	0.16	10.16	1406.3	0.11
Dodecanal	9.91	1669.8	0.10	10.21	1410.1	0.10
β-Caryophyllene	8.34*	1544.8	[0.47]	10.26	1413.7	0.05
β-Copaene	8.26	1538.4	0.03	10.40	1424.4	0.03
γ-Elemene	8.94	1591.2	0.10	10.50	1431.4	0.08
(Z)-β-Farnesene?	9.14	1607.5	0.04	10.54	1434.9	0.04
trans-α-Bergamotene	8.34*	1544.8	[0.47]	10.56	1436.2	0.09
Sesquisabinene A	9.04*	1599.5	[0.04]	10.64	1441.9	0.03
α-Humulene	9.18	1610.9	0.02	10.71	1447.5	0.05
allo-Aromadendrene	8.90	1588.1	0.23	10.81*	1455.1	[0.30]
Sesquisabinene B	9.26	1617.6	0.16	10.81*	1455.1	[0.30]
(E)-β-Farnesene	9.45	1633.0	0.27	10.87	1459.3	0.18
γ-Murolene	9.49	1635.6	0.16	11.04	1471.7	0.08
Germacrene D	9.68*†	1651.2	[0.46]	11.09	1476.1	0.61
ar-Curcumene	10.58	1725.4	4.10	11.18*	1482.2	[3.59]
β-Selinene	9.75*	1657.0	[1.74]	11.18*	1482.2	[3.59]
Unknown ZIOF XVII [m/z 161, 91 (100), 105 (93), 79 (89), 93 (89), 107 (79)... 204	9.84	1664.3	0.73	11.24	1486.9	0.55

(34)]						
epi-Cubebol	11.88	1838.4	0.05	11.31*	1492.0	[1.44]
Bicyclosesquiphellandrene?	9.75*	1657.0	[1.74]	11.31*	1492.0	[1.44]
$\alpha$ -Zingiberene	10.01*	1678.4	[16.35]	11.37	1497.0	12.54
Cubebol	12.45	1888.2	0.12	11.53*†	1508.9	[3.26]
$\beta$ -Bisabolene	10.07*	1682.9	[3.86]	11.53*†	1508.9	[3.26]
(3E,6E)- $\alpha$ -Farnesene	10.42	1712.5	3.38	11.56*†	1510.9	[2.71]
$\gamma$ -Cadinene	10.27	1699.6	0.25	11.56*†	1510.9	[2.71]
$\delta$ -Cadinene	10.32*	1704.0	[0.14]	11.67	1519.6	0.02
$\beta$ -Sesquiphellandrene	10.53	1721.9	6.87	11.72	1523.8	5.66
(E)- $\gamma$ -Bisabolene	10.32*	1704.0	[0.14]	11.78	1528.6	0.02
Unknown ZIOF XIX [m/z 177, 159 (67), 41 (43), 91 (43), 43 (41)... 220 (t)]	13.17	1955.2	0.15	11.81	1530.8	0.22
$\alpha$ -Calacorene	12.00	1848.7	0.02	11.86*	1534.5	[0.06]
Unknown ZIOF XX [m/z 43, 177 (99), 93 (75), 41 (73), 91 (65), 107 (60)... 220 (4)]	12.90	1929.6	0.02	11.86*	1534.5	[0.06]
$\alpha$ -Elemol	13.94	2027.5	0.28	12.01	1546.6	0.20
Germacrene B	11.01	1762.1	0.25	12.06	1550.1	0.21
cis-Sesquisabinene hydrate	13.10	1948.2	0.12	12.09	1552.9	0.12
(E)-Nerolidol	13.69	2003.0	0.33	12.24	1564.7	0.26
1'-Hydroxyeugenol	19.72*	2649.3	[0.22]	12.29	1568.5	0.18
ar-Turmerol	15.29*	2160.0	[0.37]	12.40	1577.6	0.05
trans-Sesquisabinene hydrate	14.20	2052.8	0.37	12.54	1588.2	0.32
Unknown ZIOF XXIII [m/z 132, 118 (89), 145 (85), 119 (79), 117 (60)...]	13.59	1993.8	0.05	12.57	1590.9	0.04
Unknown ZIOF XXIV [m/z 132, 118 (82), 145 (76), 119 (69), 117 (56), 91 (43), 135 (42)...]	13.65	1999.1	0.02	12.63	1595.1	0.03
cis-Zingiberenol	14.31	2063.2	0.51	12.84	1611.9	0.46
Unknown SWGL V [m/z 81, 43 (52), 161 (49), 105 (30), 207 (27), 95 (26), 93 (24), 109 (24)...]	14.86	2117.4	0.10	12.87	1614.9	0.11
Unknown CULO XXV [m/z 119, 85 (92), 105 (37), 120 (36), 91 (28)... 218 (6)]	16.12	2245.2	0.22	12.92	1618.7	0.20
$\gamma$ -Eudesmol	14.75	2106.4	0.09	12.99	1624.3	0.10
trans-Zingiberenol	15.00	2130.8	0.29	13.05	1629.4	0.22
Zingerone	20.17	2703.6	9.11	13.23*	1644.4	[8.77]
$\beta$ -Eudesmol	15.33	2163.8	0.14	13.23*	1644.4	[8.77]

α-Eudesmol	15.22	2153.1	0.12	13.26	1647.0	0.21
Selin-11-en-4α-ol	15.51	2182.6	0.08	13.30	1649.9	0.11
(3E,5E)-7-Hydroxyfarnesene	16.18	2252.1	0.28	13.42	1660.1	0.14
β-Bisabolol	14.66	2097.1	0.05	13.51	1667.6	0.14
Zingerone methyl ether	18.92	2554.3	0.04	13.66	1679.7	0.06
α-Bisabolol	15.29*	2160.0	[0.37]	13.70	1683.1	0.23
Unknown ZIOF XXXVIII [m/z 137, 119 (70), 84 (69), 41 (68), 69 (53), 55 (45), 109 (38)... 222 (2)]	15.96	2228.9	0.51	13.75	1687.1	0.37
Unknown ZIOF XXVI [m/z 69, 41 (59), 118 (33), 43 (32), 55 (31)... 234? (t)]	16.64	2300.1	0.53	13.81	1692.1	0.47
Unknown ZIOF XXXIX [m/z 119, 91 (31), 105 (29), 41 (25), 133 (23), 158 (21)...]	16.70	2306.8	0.09	14.15	1721.0	0.18
Oplopanone	17.99	2447.4	0.07	14.24	1729.2	0.04
Xanthorizzhol	19.72*	2649.3	[0.22]	14.42	1744.6	0.20
Unknown ZIOF XXVII [m/z 82, 43 (85), 91 (67), 93 (66), 41 (66), 69 (59), 106 (47)... 218 (5)...]				14.49	1750.8	0.03
Unknown ZIOF XXVIII [m/z 105, 148 (87), 91 (83), 135 (78), 131 (76)... 218 (21)...]	19.03	2566.9	0.13	14.58	1758.1	0.09
Unknown ZIOF XXXII [m/z 69, 41 (96), 43 (90), 109 (51), 55 (42), 81 (33)...]	18.29	2481.0	0.06	14.95	1790.4	0.03
Unknown AMBA XVIII [m/z 69, 43 (95), 41 (84), 109 (78), 95 (54), 93 (49)... 177 (36), 220 (2)...]	19.95	2677.0	0.65	15.10	1803.2	0.69
Unknown MOPE V [m/z 109, 69 (58), 43 (56), 41 (42), 135 (37), 55 (27)... 220 (5)]	21.33	2849.0	0.25	15.77	1864.5	0.22
Unknown ZIOF XL [m/z 137, 218 (84), 119 (72), 69 (64), 175 (61), 41 (60), 93 (58)]	20.77	2778.3	0.15	15.81	1868.0	0.13
Unknown ZIOF XXXIV [m/z 125, 41 (86), 151 (78), 109 (67), 69 (63)... 236 (22)]	21.90	2923.5	0.07	16.21	1904.7	0.02
Geranyl- <i>para</i> -cymene	16.05	2238.1	0.21	16.70	1951.3	0.17
Palmitic acid				16.90	1970.1	0.99
[4]-Shogaol				17.94	2072.3	0.09
Unknown ZIOF XLI [m/z				18.09	2086.8	0.07

135, 150 (34), 77 (13), 163 (11)... 262 (2)]						
Unknown ZIOF XLII [m/z 137, 203 (15), 138 (11), 105 (11), 41 (9)... 274 (7), 286? (1)]				18.24	2101.8	0.12
Unknown ZIOF XLIII [m/z 69, 41 (44), 121 (37), 107 (36), 81 (33)... 272 (2)]				18.40	2118.4	0.05
Linoleic acid				18.57	2135.6	0.86
Oleic acid				18.64	2142.4	1.24
<i>cis</i> -Vaccenic acid?				18.68	2147.3	0.44
[4]-Gingerol				18.83	2162.0	0.24
[4]-Isogingerol?				18.89	2168.5	0.43
[6]-Isoshogaol?	24.54	3289.7	0.24	19.26	2207.1	0.17
1-(4'-Hydroxy-3'-methoxyphenyl)-7-decen-3-one?				19.31	2211.8	0.04
[6]-Paradol				19.36	2217.4	0.40
Methyl [6]-isoshogaol?				19.43	2225.2	0.06
Methyl [6]-paradol?				19.68	2252.4	0.01
[6]-Dihydroparadol?	25.35*	3409.8	[3.84]	19.85	2270.6	0.06
[6]-Shogaol	25.35*	3409.8	[3.84]	19.94	2279.8	4.01
Methyl [6]-shogaol				20.23	2311.6	0.44
Acetoxy-[6]-dihydroparadol				20.32	2322.2	0.06
[6]-Gingerdione				20.36	2326.5	0.03
Diacetoxy-[4]-gingerdiol				20.45	2336.5	0.09
Geranyl laurate	19.62	2637.6	0.16	20.54	2345.9	0.11
[6]-Gingerol				20.80	2375.5	7.46
[6]-Isogingerol?				20.95	2392.4	0.14
[8]-Isoshogaol				21.02	2399.5	0.16
1-(4'-Hydroxy-3'-methoxyphenyl)-7-dodecen-3-one?				21.14	2413.3	0.31
[8]-Paradol				21.26	2427.7	0.08
Acetoxy-[6]-gingerol				21.47	2452.4	0.04
[6]-Gingerdiol isomer I				21.61	2467.9	0.20
[6]-Gingerdiol isomer II				21.67	2474.8	0.08
[8]-Shogaol	26.87	3625.9	1.10	21.76	2485.8	0.94
5-Acetoxy-[6]-gingerdiol				21.80	2490.1	0.12
Methyl 5-acetoxy-[6]-gingerdiol				21.98	2511.3	0.70
Diacetoxy-[6]-gingerdiol	26.77	3613.4	0.41	21.99	2513.2	0.54
[8]-Gingerdione				22.06	2521.5	0.23
1-Dehydro-[6]-gingerdiol				22.26	2544.7	0.18

[10]-Isoshogaol	27.46	3694.1	0.77	22.59	2584.4	0.91
[10]-Paradol				22.93	2626.3	0.03
Unknown ZIOF XLVII [m/z 137, 109 (24), 207 (24), 43 (24)... 344 (14)]				23.03	2638.8	0.05
[10]-Shogaol	29.09	3843.5	1.71	23.49	2696.5	1.60
Unknown ZIOF XLVIII [m/z 137, 205 (13), 332 (9), 122 (7)]				23.52	2700.1	0.08
[10]-Gingerdione				23.78	2733.1	0.31
1-Dehydro-[8]-gingerdione				23.86	2743.1	0.17
[12]-Isoshogaol?				24.10	2774.3	0.33
[12]-Shogaol				25.10	2906.8	0.09
[12]-Gingerdione				25.42	2950.0	0.04
[6]-Gingerdiol geranial acetal				26.37	3078.1	0.31
(E)-Gingerenone A				26.60	3107.3	0.02
Total reported		86.23%			90.89%	

\*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, only the first one is 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