

Date : January 20, 2023

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 23A06-NSO01

Customer identification : Organic EO: Lemongrass Lot No: LGNA0622

Botanical Species: Cymbopogon flexuosus

Type : Essential oil

Source : Cymbopogon flexuosus

Customer : Natural Sourcing LLC

ANALYSIS

Method: PC-MAT-014 ***ISO** - 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 : January 12, 2023

Checked and approved by :



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

Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia. This report is digitally signed, it is only considered valid if the digital signature is intact. The results only describe the samples that were submitted to the assays.



*P*HYSICO*C*HEMICAL *D*ATA

Physical aspect: Light yellow liquid

Refractive index: 1.4840 ± 0.0003 (20 °C; method PC-MAT-016)

*C*ONCLUSION

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
Ethanol	tr	Aliphatic alcohol
Isobutyral	0.01	Aliphatic aldehyde
2-Methyl-3-buten-2-ol	0.05	Aliphatic alcohol
Isovaleral	0.02	Aliphatic aldehyde
2-Methylbutyral	0.02	Aliphatic aldehyde
2-Ethylfuran	0.01	Furan
Isoamyl alcohol	0.01	Aliphatic alcohol
2-Methylbutanol	tr	Aliphatic alcohol
Prenal	tr	Aliphatic aldehyde
Hexanal	0.01	Aliphatic aldehyde
Unknown	0.01	Unknown
(2E)-Hexenal	tr	Aliphatic aldehyde
(3Z)-Hexenol	0.01	Aliphatic alcohol
4-Heptanone	0.02	Aliphatic ketone
Hexanol	0.01	Aliphatic alcohol
Unknown	0.01	Unknown
Nonane	tr	Alkane
Tricyclene	0.17	Monoterpene
α -Pinene	0.26	Monoterpene
Camphene	1.26	Monoterpene
β -Pinene	0.03	Monoterpene
Sabinene	0.01	Monoterpene
6-Methyl-5-hepten-2-one	2.18	Aliphatic ketone
Dehydro-1,8-cineole	0.12	Monoterpenic ether
Unknown	tr	Aliphatic ester
Myrcene	0.08	Monoterpene
6-Methyl-5-hepten-2-ol	0.07	Aliphatic alcohol
α -Phellandrene	0.02	Monoterpene
Octanal	0.07	Aliphatic aldehyde
α -Terpinene	0.01	Monoterpene
para-Cymene	0.04	Monoterpene
β -Phellandrene	0.02	Monoterpene
Limonene	0.41	Monoterpene
1,8-Cineole	0.08	Monoterpenic ether
Benzeneacetaldehyde	0.01	Simple phenolic
(Z)- β -Ocimene	0.23	Monoterpene
(E)- β -Ocimene	0.17	Monoterpene
2,6-Dimethyl-5-heptenal (melonal)	0.04	Aliphatic aldehyde
γ -Terpinene	0.02	Monoterpene
cis-Linalool oxide (fur.)	0.03	Monoterpenic alcohol
4-Nonanone	0.93	Aliphatic ketone
trans-Linalool oxide (fur.)	0.06	Monoterpenic alcohol
para-Cymenene	0.01	Monoterpene
Terpinolene	0.04	Monoterpene
α -Pinene oxide	0.01	Monoterpenic ether

Laboratoire

PhytoChemia*Plus que des analyses... des conseils*

4-Nonanol	0.03	Aliphatic alcohol
Rosefuran	0.19	Monoterpenic ether
Linalool	1.27	Monoterpenic alcohol
cis-Chrysanthemal?	0.04	Monoterpenic aldehyde
trans-para-Mentha-2,8-dien-1-ol	0.05	Monoterpenic alcohol
Unknown	0.20	Unknown
Unknown	0.02	Unknown
exo-Isocitral	0.11	Monoterpenic aldehyde
trans-Chrysanthemal	0.29	Monoterpenic aldehyde
Citronellal	0.32	Monoterpenic aldehyde
Borneol	0.12	Monoterpenic alcohol
Isoneral	0.70	Monoterpenic aldehyde
α-Phellandren-8-ol	0.13	Monoterpenic alcohol
Rosefuran oxide	0.17*	Monoterpenic ether
Terpinen-4-ol	0.17*	Monoterpenic alcohol
Unknown	0.22	Oxygenated monoterpenes
Isogeranial	1.26	Monoterpenic aldehyde
Unknown	0.03	Unknown
α-Terpineol	0.11	Monoterpenic alcohol
Myrtenal	0.05	Monoterpenic aldehyde
Unknown	0.12	Unknown
trans-Isopiperitenol	0.06	Monoterpenic alcohol
Unknown	0.11	Oxygenated monoterpenes
Decanal	0.12	Aliphatic aldehyde
cis-Isopiperitenol	0.08	Monoterpenic alcohol
2,3-Epoxyneral?	0.05	Monoterpenic aldehyde
Nerol	0.17	Monoterpenic alcohol
Citronellol	0.10	Monoterpenic alcohol
Neral	29.53	Monoterpenic aldehyde
(Z)-Isogeraniol	0.03	Monoterpenic alcohol
Piperitone	0.10	Monoterpenic ketone
Geraniol	7.30	Monoterpenic alcohol
Geranal	37.44	Monoterpenic aldehyde
Unknown	0.12	Oxygenated monoterpenes
Bornyl acetate	0.03	Monoterpenic ester
2-Undecanone	0.01	Aliphatic ketone
Geranyl formate	0.08	Monoterpenic ester
Methyl geranate	0.01	Monoterpenic ester
Unknown	0.05	Unknown
α-Cubebene	0.06	Sesquiterpene
Citronellyl acetate	0.01	Monoterpenic ester
Eugenol	0.01	Phenylpropanoid
Neric acid	0.07	Monoterpenic acid
Cyclosativene I	0.09	Sesquiterpene
Neryl acetate	0.04	Monoterpenic ester
α-Ylangene	0.05	Sesquiterpene
Geranic acid	0.21	Aliphatic acid
α-Copaene	0.04	Sesquiterpene
1,5-diepi-β-Bourbonene	0.02	Sesquiterpene
β-Bourbonene	0.03	Sesquiterpene
Geranyl acetate	4.81	Monoterpenic ester

Laboratoire
PhytoChemia

Plus que des analyses... des conseils

β-Cubebene	0.02	Sesquiterpene
β-Elemene	0.14	Sesquiterpene
β-Longipinene	0.03	Sesquiterpene
Longifolene	0.02	Sesquiterpene
β-Caryophyllene	1.52	Sesquiterpene
β-Ylangene	0.04	Sesquiterpene
β-Copaene	0.03	Sesquiterpene
<i>trans</i> -α-Bergamotene	0.02	Sesquiterpene
6,9-Guaidiene	0.01	Sesquiterpene
α-Humulene	0.13	Sesquiterpene
(E)-Isoeugenol	0.34	Phenylpropanoid
cis-Muurola-4(15),5-diene	0.02	Sesquiterpene
Unknown	0.01	Unknown
<i>trans</i> -Cadina-1(6),4-diene	0.05	Sesquiterpene
Germacrene D	0.21	Sesquiterpene
γ-Amorphene	0.03	Sesquiterpene
epi-Cubebol	0.08	Sesquiterpenic alcohol
Methyl (E)-iseugenol	0.02	Phenylpropanoid
α-Muurolene	0.06	Sesquiterpene
δ-Amorphene	0.03	Sesquiterpene
γ-Cadinene	0.97	Sesquiterpene
Cubebol	0.11	Sesquiterpenic alcohol
δ-Cadinene	0.43	Sesquiterpene
(E)-γ-Bisabolene	0.07	Sesquiterpene
<i>trans</i> -Cadina-1,4-diene	0.03	Sesquiterpene
10-epi-Cubebol?	tr	Sesquiterpenic alcohol
Unknown	0.06	Unknown
α-Cadinene	0.06	Sesquiterpene
α-Elemol	0.06	Sesquiterpenic alcohol
(E)-α-Bisabolene	0.03	Sesquiterpene
Germacrene B	0.04	Sesquiterpene
Geranyl butyrate	0.07	Monoterpenic ester
Caryophyllene oxide	0.38	Sesquiterpenic ether
Caryophyllene oxide isomer	0.04	Sesquiterpenic ether
Humulene epoxide II	0.03	Sesquiterpenic ether
10-epi-Cubenol	0.03	Sesquiterpenic alcohol
1-epi-Cubenol	0.04	Sesquiterpenic alcohol
Cubenol	0.02	Sesquiterpenic alcohol
τ-Cadinol	0.02	Sesquiterpenic alcohol
β-Eudesmol	0.02	Sesquiterpenic alcohol
α-Eudesmol	0.02	Sesquiterpenic alcohol
α-Cadinol	0.01	Sesquiterpenic alcohol
Farnesal isomer	0.02	Sesquiterpenic aldehyde
(2E,6E)-Farnesal	0.02	Sesquiterpenic aldehyde
Phytone	0.02	Terpenic ketone
Geranyl caprylate	0.02	Monoterpenic ester
Unknown	0.01	Unknown
Unknown	0.01	Unknown
Unknown	0.03	Unknown
Unknown	0.02	Unknown
Dicitral	0.05	Diterpenic aldehyde

Unknown	0.01	Unknown
Benzyl (<i>E</i>)-isoeugenol	0.06	Phenolic ester
Unknown	0.01	Unknown
Unknown	0.01	Unknown
Unknown	0.02	Unknown
Consolidated total	98.46%	

*: 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

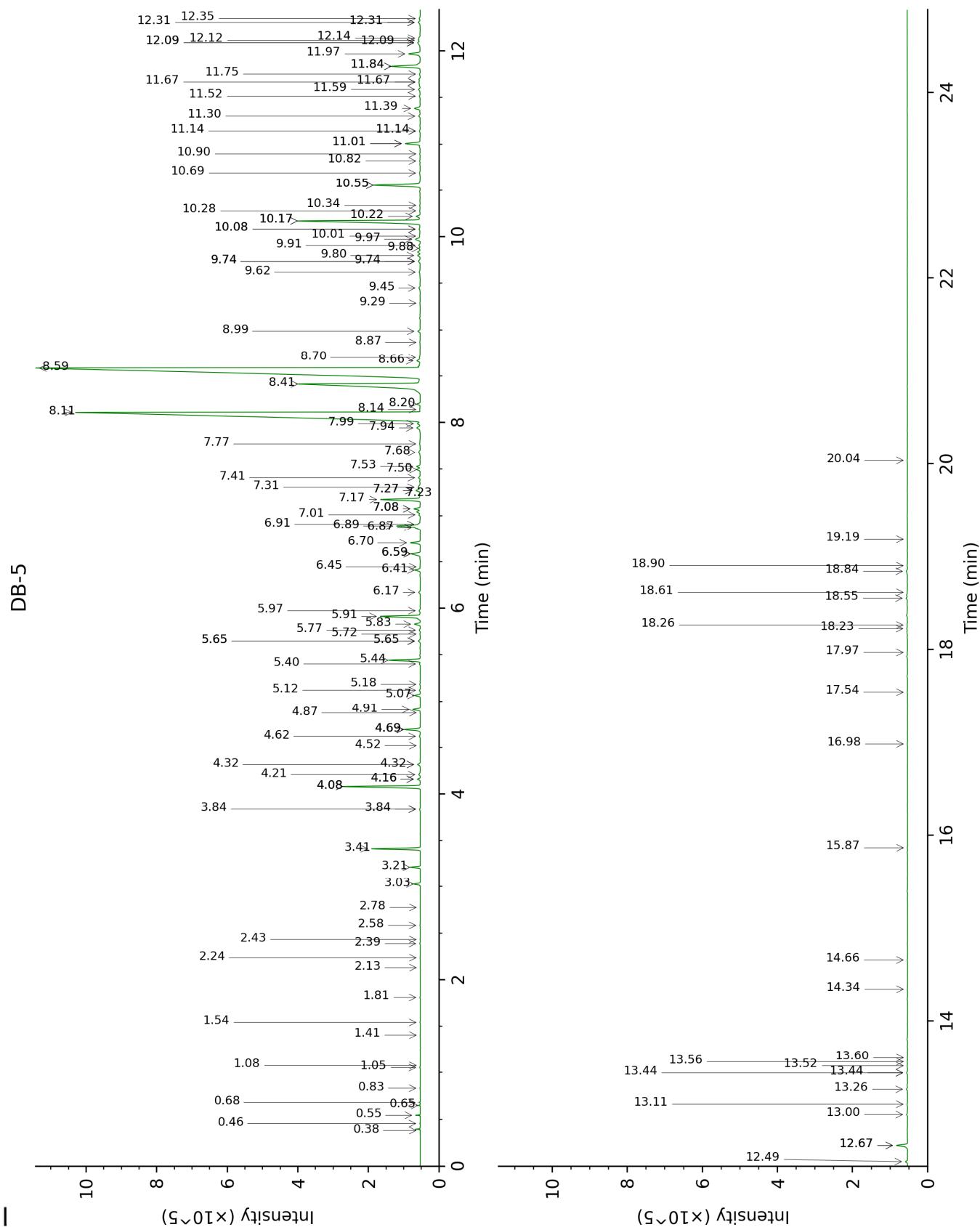
tr: The compound has been detected below 0.005% of total signal.

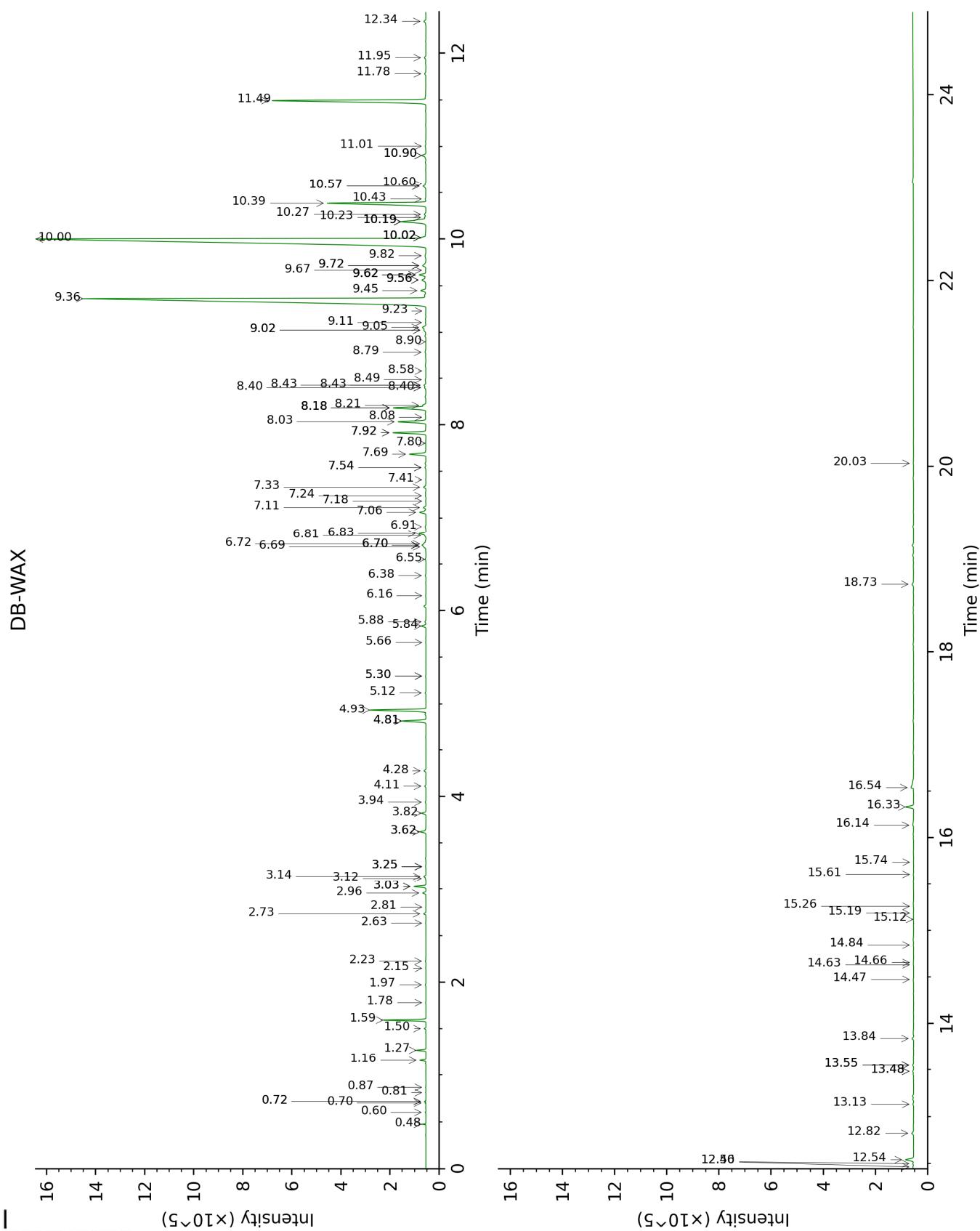
Note: no correction factor was applied

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	%
Ethanol	0.38	499	tr	0.81	908	0.01
Isobutyral	0.46	539	0.01	0.48	784	0.06
2-Methyl-3-buten-2-ol	0.54	606	0.05	1.50	1015	0.04
Isovaleral	0.65	641	0.02	0.72*	889	0.02
2-Methylbutyral	0.68	651	0.02	0.70	882	0.01
2-Ethylfuran	0.83	702	0.01	0.87	918	0.01
Isoamyl alcohol	1.05	733	0.01	3.25*	1175	0.02
2-Methylbutanol	1.08	736	tr	3.25*	1175	[0.02]
Prenal	1.41	781	tr	3.03*	1157	0.42
Hexanal	1.54	799	0.01	1.78	1044	0.01
Unknown [m/z 81, 69 (80), 41 (65), 83 (52), 109 (48), 55 (47)…]	1.81	823	0.01	0.60	842	0.01
(2E)-Hexenal	2.13	849	tr	3.25*	1175	[0.02]
(3Z)-Hexenol	2.24	858	0.01	5.66	1352	0.01
4-Heptanone	2.39	870	0.02	2.23	1091	0.02
Hexanol	2.43	874	0.01	5.30*	1326	0.02
Unknown [m/z 69, 41 (57), 81 (57), 80 (18), 79 (18), 67 (17)…]	2.58	886	0.01			
Nonane	2.78	902	tr	0.72*	889	[0.02]
Tricyclene	3.03	919	0.17	1.16	969	0.16
α-Pinene	3.22	931	0.26	1.27	989	0.25
Camphene	3.41	944	1.26	1.60	1024	1.26
β-Pinene	3.84*	972	0.03	1.97	1064	0.03
Sabinene	3.84*	972	[0.03]	2.15	1083	0.01
6-Methyl-5-hepten-2-one	4.08*	988	2.29	4.93	1299	2.18
Dehydro-1,8-cineole	4.08*	988	[2.29]	2.96	1151	0.12
Unknown [m/z 67, 82 (50), 41 (47), 55 (31), 98 (14)]	4.16*	993	0.09	4.81*	1295	0.93
Myrcene	4.16*	993	[0.09]	2.74	1133	0.08
6-Methyl-5-hepten-2-ol	4.21	996	0.07	6.72	1429	0.07
α-Phellandrene	4.32*	1003	0.10	2.63	1124	0.02
Octanal	4.32*	1003	[0.10]	4.28	1254	0.07
α-Terpinene	4.52	1016	0.01	2.81	1139	0.01
para-Cymene	4.62	1022	0.04	3.94	1229	0.03
β-Phellandrene	4.69*	1026	0.52	3.12	1164	0.02
Limonene	4.69*	1026	[0.52]	3.03*	1157	[0.42]
1,8-Cineole	4.69*	1026	[0.52]	3.14	1166	0.08
Benzeneacetaldehyde	4.87	1038	0.01	8.58	1571	0.01
(Z)-β-Ocimene	4.91	1040	0.23	3.62*	1205	0.23
(E)-β-Ocimene	5.06	1050	0.17	3.82	1220	0.15

2,6-Dimethyl-5-heptenal (melonal)	5.12	1053	0.04	5.12	1312	0.03
γ -Terpinene	5.18	1057	0.02	3.62*	1205	[0.23]
cis-Linalool oxide (fur.)	5.40	1071	0.03	6.38	1404	0.03
4-Nonanone	5.44	1073	0.93	4.81*	1295	[0.93]
trans-Linalool oxide (fur.)	5.65*	1086	0.07	6.69	1427	0.06
para-Cymenene	5.65*	1086	[0.07]	6.16	1388	0.01
Terpinolene	5.65*	1086	[0.07]	4.11	1242	0.04
α -Pinene oxide	5.72	1091	0.01	5.30*	1326	[0.02]
4-Nonanol	5.77	1093	0.03			
Rosefuran	5.83	1097	0.19	5.84	1364	0.18
Linalool	5.91	1102	1.27	7.92*	1519	1.30
cis-Chrysanthemal?	5.98	1106	0.04	5.88	1368	0.04
trans-para-Menthad-2,8-dien-1-ol	6.17	1119	0.05	8.79	1587	0.05
Unknown [m/z 81, 70 (98), 67 (63), 82 (53), 41 (46), 69 (46), 109 (43)...]	6.41	1134	0.20	6.70*	1428	0.21
Unknown [m/z 95, 67 (86), 41 (68), 82 (64), 123 (62)...]	6.45	1136	0.02	7.41	1481	0.01
exo-Isocitral	6.59*	1145	0.38	7.33	1475	0.11
trans-Chrysanthemal	6.59*	1145	[0.38]	7.06	1455	0.29
Citronellal	6.70	1153	0.32	6.83	1438	0.30
Borneol	6.87	1163	0.12	9.62*	1654	0.30
Isoneral	6.89†	1165	0.82	7.69	1502	0.70
α -Phellandren-8-ol	6.91†	1166	[0.82]	10.02*†	1686	[37.46]
Rosefuran oxide	7.01†	1172	0.38	8.40*†	1557	0.15
Terpinen-4-ol	7.08*†	1176	[0.38]	8.43*†	1559	[0.15]
Unknown [m/z 84, 83 (74), 137 (56), 41 (47), 93 (43), 108 (40)... 152 (2)]	7.08*†	1176	[0.38]	9.45	1640	0.22
Isogeranial	7.18	1183	1.26	8.03	1529	1.19
Unknown [m/z 69, 41 (65), 109 (36), 67 (16), 84 (11), 43 (10), 55 (9)...]	7.23	1186	0.03			
α -Terpineol	7.27*	1189	0.16	9.62*	1654	[0.30]
Myrtenal	7.27*	1189	[0.16]	8.49	1564	0.05
Unknown [m/z 43, 81 (47), 67 (45), 69 944), 41 (42), 59 (40), 55 (39)...]	7.31	1191	0.12	9.02*†	1606	0.30
trans-Isopiperitenol	7.41	1198	0.06	10.23	1704	0.05
Unknown [m/z 84, 41 (83), 83 (79), 91 (76), 93 (67), 119 (64), 137	7.50	1203	0.11	10.02*†	1686	[37.46]

Laboratoire
PhytoChemia

Plus que des analyses... des conseils

(63), 109 (54), 108 (54)... 152 (4)]					
Decanal	7.53	1205	0.12	7.11	1459
cis-Isopiperitenol	7.68	1215	0.08	10.19*	1701
2,3-Epoxyneral?	7.77	1221	0.05		
Nerol	7.94	1233	0.17	10.90*	1761
Citronellol	7.99	1236	0.10	10.57*	1733
Neral	8.11	1244	29.53	9.36	1633
(Z)-Isogeraniol	8.14	1246	0.03	11.00	1770
Piperitone	8.20	1250	0.10	9.72*	1662
Geraniol	8.41	1264	7.30	11.49	1812
Geranial	8.59	1276	37.44	10.00†	1685
Unknown [m/z 43, 69 (77), 41 (70), 109 (54)... 152 (6)]	8.66	1281	0.12	12.82	1931
Bornyl acetate	8.70	1283	0.03	8.08	1532
2-Undecanone	8.87	1294	0.01	8.43*†	1559
Geranyl formate	8.99	1302	0.08	9.72*	1662
Methyl geranate	9.29	1324	0.01	9.56*	1650
Unknown [m/z 82, 59 (44), 41 (43), 95 (31), 43 (29), 81 (24)...]	9.45	1335	0.05	12.50	1901
α-Cubebene	9.62	1347	0.06	6.55	1417
Citronellyl acetate	9.74*	1355	0.09	9.23	1623
Eugenol	9.74*	1355	[0.09]	14.63	2102
Neric acid	9.74*	1355	[0.09]	16.14	2255
Cyclosativene I	9.80	1359	0.09	6.70*	1428
Neryl acetate	9.88	1365	0.04	10.02*†	1686
α-Ylangene	9.91	1367	0.05	6.81	1436
Geranic acid	9.97	1372	0.21	16.54	2297
α-Copaene	10.01	1374	0.04	6.91	1443
1,5-diepi-β-Bourbonene	10.08*	1379	0.04	7.18	1464
β-Bourbonene	10.08*	1379	[0.04]	7.24	1468
Geranyl acetate	10.17*	1386	4.86	10.39	1717
β-Cubebene	10.17*	1386	[4.86]	7.54*	1491
β-Elemene	10.22	1389	0.14	8.21†	1542
β-Longipinene	10.28	1393	0.03	7.54*	1491
Longifolene	10.34	1397	0.02	7.80	1511
β-Caryophyllene	10.56*	1413	1.63	8.18*†	1540
β-Ylangene	10.56*	1413	[1.63]	7.92*	1519
β-Copaene	10.69	1423	0.03	8.18*†	1540
trans-α-Bergamotene	10.82	1433	0.02	8.18*†	1540
6,9-Guaiadiene	10.90	1438	0.01	8.40*†	1557
α-Humulene	11.01*	1447	0.51	9.05†	1608
(E)-Isoeugenol	11.01*	1447	[0.51]	16.33	2275
cis-Muurola-4(15),5-diene	11.14*	1457	0.03	9.11	1613
Unknown coelution I	11.14*	1457	[0.03]	8.90	1596
trans-Cadina-1(6),4-diene	11.30	1468	0.05	9.02*†	1606
					[0.30]

Laboratoire
PhytoChemia

Plus que des analyses... des conseils

Germacrene D	11.39	1475	0.21	9.56*	1650	[0.25]
γ -Amorphene	11.52	1484	0.03	9.62*	1654	[0.30]
epi-Cubebol	11.59	1490	0.08	11.78	1837	0.06
Methyl (<i>E</i>)-isoeugenol	11.67*	1496	0.10	14.84	2123	0.02
α -Muurolene	11.67*	1496	[0.10]	9.82	1671	0.06
δ -Amorphene	11.75	1502	0.03	9.67	1658	0.02
γ -Cadinene	11.84*	1508	1.10	10.19*	1701	[1.48]
Cubebol	11.84*	1508	[1.10]	12.34	1887	0.11
δ -Cadinene	11.97	1519	0.43	10.19*	1701	[1.48]
(<i>E</i>)- γ -Bisabolene	12.09*	1528	0.16	10.27	1707	0.07
<i>trans</i> -Cadina-1,4-diene	12.09*	1528	[0.16]	10.43	1721	0.03
10-epi-Cubebol?	12.09*	1528	[0.16]	13.55*	1998	0.05
Unknown [m/z 85, 59 (82), 71 (58), 41 (36), 43 (34)...]	12.12	1530	0.06			
α -Cadinene	12.14	1532	0.06	10.60	1735	0.03
α -Elemol	12.31*	1545	0.09	13.84	2026	0.06
(<i>E</i>)- α -Bisabolene	12.31*	1545	[0.09]	10.57*	1733	[0.14]
Germacrene B	12.35	1549	0.04	10.90*	1761	[0.21]
Geranyl butyrate	12.49	1560	0.07	11.95	1853	0.08
Caryophyllene oxide	12.67*	1573	0.40	12.54	1905	0.38
Caryophyllene oxide isomer	12.67*	1573	[0.40]	12.46	1898	0.04
Humulene epoxide II	13.00	1599	0.03	13.13	1959	0.03
10-epi-Cubenol	13.10	1608	0.03	13.48*	1992	0.05
1-epi-Cubenol	13.26	1621	0.04	13.55*	1998	[0.05]
Cubenol	13.44*	1636	0.05	13.48*	1992	[0.05]
τ -Cadinol	13.44*	1636	[0.05]	14.66	2105	0.02
β -Eudesmol	13.52	1642	0.02	15.19	2158	0.02
α -Eudesmol	13.56	1645	0.02	15.12	2151	0.01
α -Cadinol	13.60	1649	0.01	15.26	2165	0.01
Farnesal isomer	14.34	1710	0.02			
(2 <i>E</i> ,6 <i>E</i>)-Farnesal	14.66	1737	0.02	15.61	2200	0.02
Phytone	15.87	1844	0.02	14.47	2087	0.03
Geranyl caprylate	16.98	1947	0.02	15.74	2214	0.01
Unknown [m/z 41, 69 (95), 109 (41), 95 (39), 55 (36), 121 (36)...]	17.54	2000	0.01			
Unknown [m/z 69, 41 (94), 81 (42), 109 (39), 107 (33), 43 (31)...]	17.97	2042	0.01			
Unknown [m/z 93, 69 (95), 135 (76), 107 (53), 41 (53), 109 (50)... 235 (10)...]	18.23	2068	0.03			
Unknown [m/z 57, 85 (55), 163 (47), 41 (44), 120 (35), 202 (30), 145 (25)... 219 (17), 304 (t)]	18.26	2072	0.02			
Dicitral	18.55	2100	0.05			

Unknown [m/z 69, 41 (37), 81 (23), 95 (19), 109 (18)…]	18.62	2106	0.01	18.73	2538	0.09
Benzyl (<i>E</i>)-isoeugenol	18.84	2130	0.06			
Unknown [m/z 69, 41 (38), 151 (36), 123 (34), 82 (24), 43 (23), 109 (21)…]	18.90	2136	0.01	20.03	2692	0.02
Unknown [m/z 94, 43 (85), 93 (81), 69 (76), 137 (76), 95 (60), 134 (51)…]	19.19	2165	0.01			
Unknown [m/z 123, 94 (100), 43 (86), 69 (75), 95 (47), 41 (47), 93 (45)…]	20.04	2256	0.02			
Total identified			97.76%			97.25%
Total reported			98.62%			97.73%

*: Two or more compounds are coeluting on this column

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

t: 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