

Date : July 20, 2017

SAMPLE IDENTIFICATION

Internal code : 17G11-PTH4-1-DM

Customer identification : Tangerine Organic - Argentina - TP010016R

Type : Essential oil

Source : *Citrus reticulata*

Customer : Plant Therapy

ANALYSIS

Method : PC-PA-001-15E06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).

Analyst : Benoit Roger Ph. D.

Analysis date : 2017-07-18

Checked and approved by :

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

Note: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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.

IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
α-Pinene	3.43	929	0.49	0.48	940	1.01	Monoterpene
Sabinene	4.15	972	0.18	0.16	1057	1.73	Monoterpene
β-Pinene	4.21	976	0.02	0.01	1040	1.58	Monoterpene
Myrcene	4.50	993	1.84	1.82	1113	2.27	Monoterpene
α-Phellandrene	4.77*	1009	0.23	0.04	1106	2.20	Monoterpene
Δ3-Carene	4.77*	1009	[0.23]	0.17	1087	2.03	Monoterpene
Octanal	4.88	1015	0.15	0.15	1229	3.75	Aliphatic aldehyde
Limonene	5.32	1039	92.72	92.63	1152	2.75	Monoterpene
cis-β-Ocimene	5.38	1042	tr	0.01	1185	3.17*	Monoterpene
trans-β-Ocimene	5.56	1052	0.01	0.01	1197	3.34	Monoterpene
γ-Terpinene	5.74	1062	0.01	[0.01]	1185	3.17*	Monoterpene
Terpinolene	6.21	1087	0.04	0.03	1219	3.62	Monoterpene
Linalool	6.70	1109	0.11	0.10	1484	8.00	Monoterp. alcohol
Nonanal	6.80	1113	0.02	0.02	1334	5.27	Aliphatic aldehyde
Citronellal	7.98	1156	0.01	0.01	1411	6.47	Monoterp. aldehyde
α-Terpineol	9.46	1206	0.03	0.05	1618	12.17*	Monoterp. alcohol
Decanal	9.81	1214	0.12	0.12	1439	6.93	Aliphatic aldehyde
Neral	11.17	1244	0.03	0.02	1593	11.29	Monoterp. aldehyde
Geranial	12.69	1278	0.05	0.04	1649	13.40*	Monoterp. aldehyde
α-Copaene	17.73	1362	0.03	0.02	1436	6.86	Sesquiterpene
Dodecanal	21.76	1418	0.02	[0.04]	1649	13.40*	Aliphatic aldehyde
Germacrene D	25.63	1464	0.02	[0.05]	1618	12.17*	Sesquiterpene
δ-Cadinene	29.38	1511	0.03	0.04	1673	14.64	Sesquiterpene
β-Sinensal	40.02	1705	0.01	0.02	2119	38.99	Sesquiterp. aldehyde
α-Sinensal	41.72	1759	0.04	0.03	2223	41.88	Sesquiterp. aldehyde
Tangeretin	70.23	3184	0.68				Coumarin
Nobiletin	73.07	3355	0.29				Coumarin
Heptamethoxyflavone isomer?	73.37	3371	0.51				Flavonoid
Total identified			97.69%	95.98%			

*: Two or more compounds are coeluting on this column

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

Note: no correction factor was applied

OTHER DATA

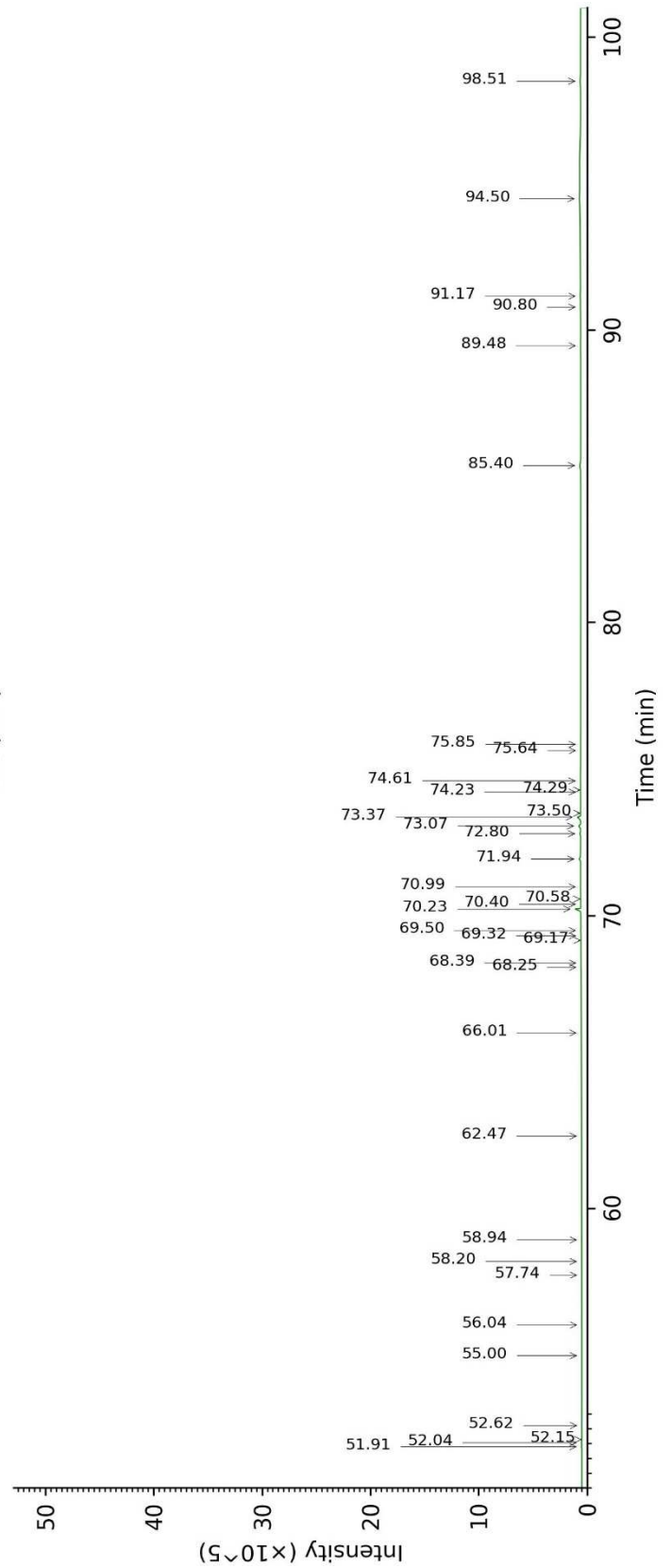
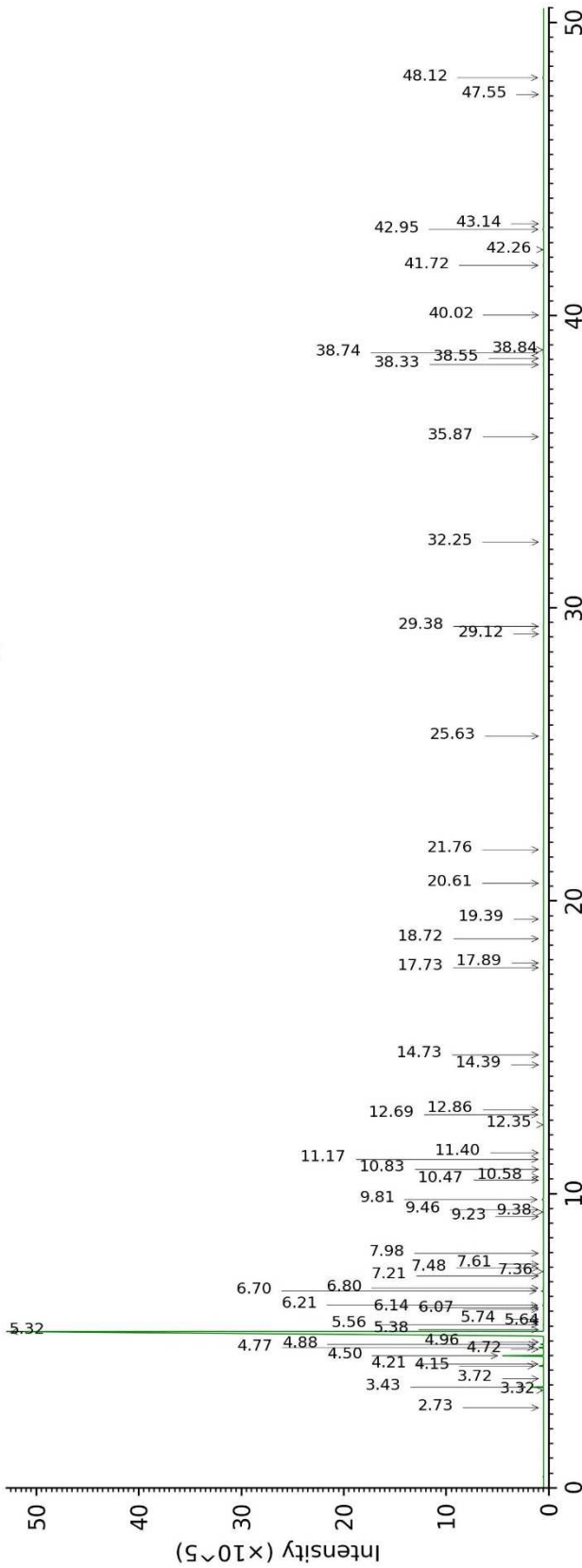
Physical aspect : Bright orange liquid

Refractive index : 1.4735 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method.

17G11-PTH4-1-DM_BP5



17G11-PTH4-1-DM_WAX

