

Date : September 05, 2019

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 19H22-PTH12-1-SCC

**Customer identification :** Ho Wood - China - H80104812R

**Type :** Essential oil

**Source :** *Cinnamomum camphora*

**Customer :** Plant Therapy

ANALYSIS

**Method:** PC-PA-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 :** Sylvain Mercier, M. Sc., Chimiste

**Analysis date :** August 29, 2019

Checked and approved by :



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

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*PHYSICOCHEMICAL DATA*

**Physical aspect:** Clear liquid

**Refractive index:**  $1.4622 \pm 0.0003$  (20 °C)

*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	%	Classe
Myrcene	0.09	Monoterpene
$\alpha$ -Phellandrene	0.02	Monoterpene
$\alpha$ -Terpinene	0.03	Monoterpene
para-Cymene	0.03	Monoterpene
1,8-Cineole	0.06	Monoterpenic ether
Limonene	0.06	Monoterpene
$\beta$ -Phellandrene	0.03	Monoterpene
(Z)- $\beta$ -Ocimene	0.05	Monoterpene
(E)- $\beta$ -Ocimene	0.08	Monoterpene
$\gamma$ -Terpinene	0.03	Monoterpene
cis-Sabinene hydrate	0.01	Monoterpenic alcohol
cis-Linalool oxide (fur.)	0.06	Monoterpenic alcohol
trans-Linalool oxide (fur.)	0.22	Monoterpenic alcohol
Terpinolene	0.04	Monoterpene
Linalool	99.05	Monoterpenic alcohol
Hotrienol	0.01	Monoterpenic alcohol
Camphor	0.03	Monoterpenic ketone
Unknown	tr	Unknown
<b>Consolidated total</b>	<b>99.90%</b>	

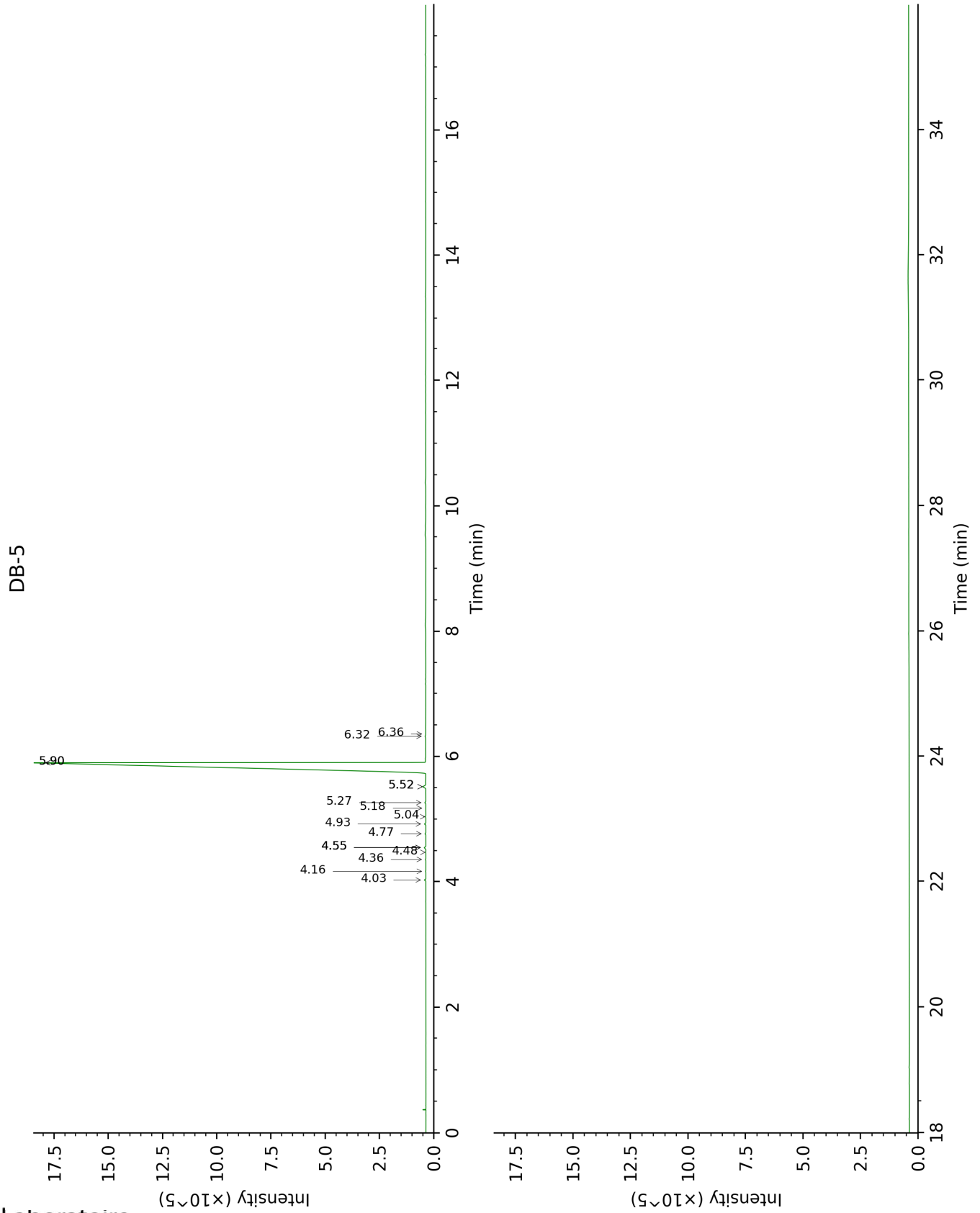
tr: The compound has been detected below 0.005% of total signal.

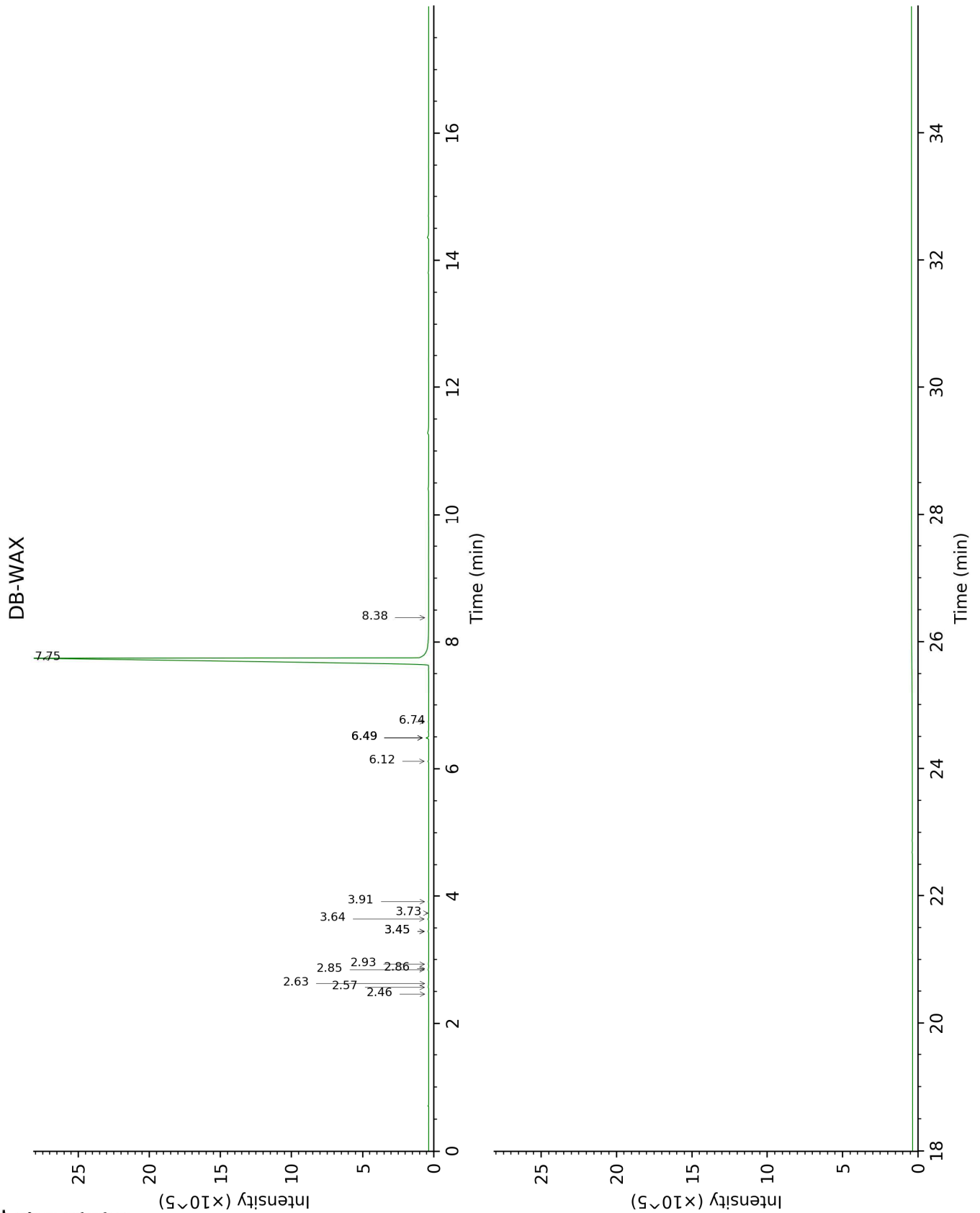
Note: no correction factor was applied

**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.

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FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
Myrcene	4.02	992	0.09	2.57	1135	0.04
$\alpha$ -Phellandrene	4.16	1001	0.02	2.46	1127	0.02
$\alpha$ -Terpinene	4.36	1014	0.03	2.63	1140	0.03
para-Cymene	4.48	1021	0.03	3.73	1228	0.03
1,8-Cineole	4.55*	1026	0.14	2.93	1165	0.06
Limonene	4.55*	1026	[0.14]	2.84	1158	0.06
$\beta$ -Phellandrene	4.55*	1026	[0.14]	2.86	1159	0.03
(Z)- $\beta$ -Ocimene	4.77	1040	0.05	3.45*	1207	0.08
(E)- $\beta$ -Ocimene	4.93	1049	0.08	3.64	1221	0.08
$\gamma$ -Terpinene	5.04	1057	0.03	3.45*	1207	[0.08]
<i>cis</i> -Sabinene hydrate	5.18	1065	0.01	6.49*	1428	0.24
<i>cis</i> -Linalool oxide (fur.)	5.27	1071	0.06	6.12	1401	0.06
<i>trans</i> -Linalool oxide (fur.)	5.52*	1087	0.26	6.49*	1428	[0.24]
Terpinolene	5.52*	1087	[0.26]	3.91	1242	0.04
Linalool	5.90*	1111	99.05	7.75	1524	99.05
Hotrienol	5.90*	1111	[99.05]	8.38	1574	0.01
Camphor	6.32	1138	0.03	6.74	1448	0.04
Unknown [m/z 109, 124 (45), 119 (41), 43 (35), 91 (28), 95 (25)...]	6.36	1141	tr	6.49*	1428	[0.24]
<b>Total identified</b>	<b>99.88%</b>			<b>99.86%</b>		
<b>Total reported</b>	<b>99.89%</b>			<b>99.86%</b>		

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

[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  
R.T.: Retention time (minutes)  
R.I.: Retention index