

Date : 2024-07-15

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 24F28-PTH01

Customer Identification : Organic Eucalyptus Globulus - China - E30116R

Type : Essential Oil

Source : *Eucalyptus globulus*

Customer : Plant Therapy

Checked and approved by:

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

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GAS CHROMATOGRAPHIC ANALYSIS

Method : PC-MAT-014 - Analysis of the composition of an essential oil or other volatile liquide by FAST GC-FID

✖ISO

Results : See analysis summary (next page)

Analyst : Rachel Fontaine, B. Sc. Chimiste, 2019-109

Date : 2024-07-09

PHYSICOCHEMICAL DATA

Refractive index : 1.4611 ± 0.0003 (20 °C)

Method : PC-MAT-016 - Measure of the refractive index of a liquid.

Analyst : Cindy Caron B. Sc.

Date : 2024-06-28

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	%	Class
Hashishene	tr	Monoterpene
α -Thujene	0.02	Monoterpene
α -Pinene	3.28	Monoterpene
α -Fenchene	0.01	Monoterpene
Camphene	0.04	Monoterpene
Thuja-2,4(10)-diene	0.01	Monoterpene
Sabinene	0.01	Monoterpene
β -Pinene	0.43	Monoterpene
<i>trans-meta</i> -Mentha-2,8-diene	0.02	Monoterpene
Myrcene	0.54	Monoterpene
Pseudolimonene	0.02	Monoterpene
α -Phellandrene	0.76	Monoterpene
α -Terpinene	0.18	Monoterpene
<i>para</i> -Cymene	3.87	Monoterpene
1,8-Cineole	80.32	Monoterpenic ether
Limonene	7.11	Monoterpene
(<i>Z</i>)- β -Ocimene	0.10	Monoterpene
(<i>E</i>)- β -Ocimene	0.03	Monoterpene
γ -Terpinene	2.35	Monoterpene
Unknown	0.02	Oxygenated monoterpene
<i>cis</i> -Linalool oxide (fur.)	0.01	Monoterpenic alcohol
Terpinolene	0.06	Monoterpene
<i>para</i> -Cymenene	0.02	Monoterpene
α -Pinene oxide	0.01	Monoterpenic ether
<i>trans</i> -Pinocarveol	0.02	Monoterpenic alcohol
Terpinen-4-ol	0.01	Monoterpenic alcohol
Cryptone	0.01	Normonoterpenic ketone
α -Terpineol	0.03	Monoterpenic alcohol
<i>cis</i> - α -Phellandrene epoxide (iPr vs Me)	0.01	Monoterpenic ether
<i>trans</i> -Carveol	0.02	Monoterpenic alcohol
Carvone	0.02	Monoterpenic ketone
Unknown	0.02	Unknown
Aromadendrene	0.01	Sesquiterpene
Consolidated total	99.37	

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

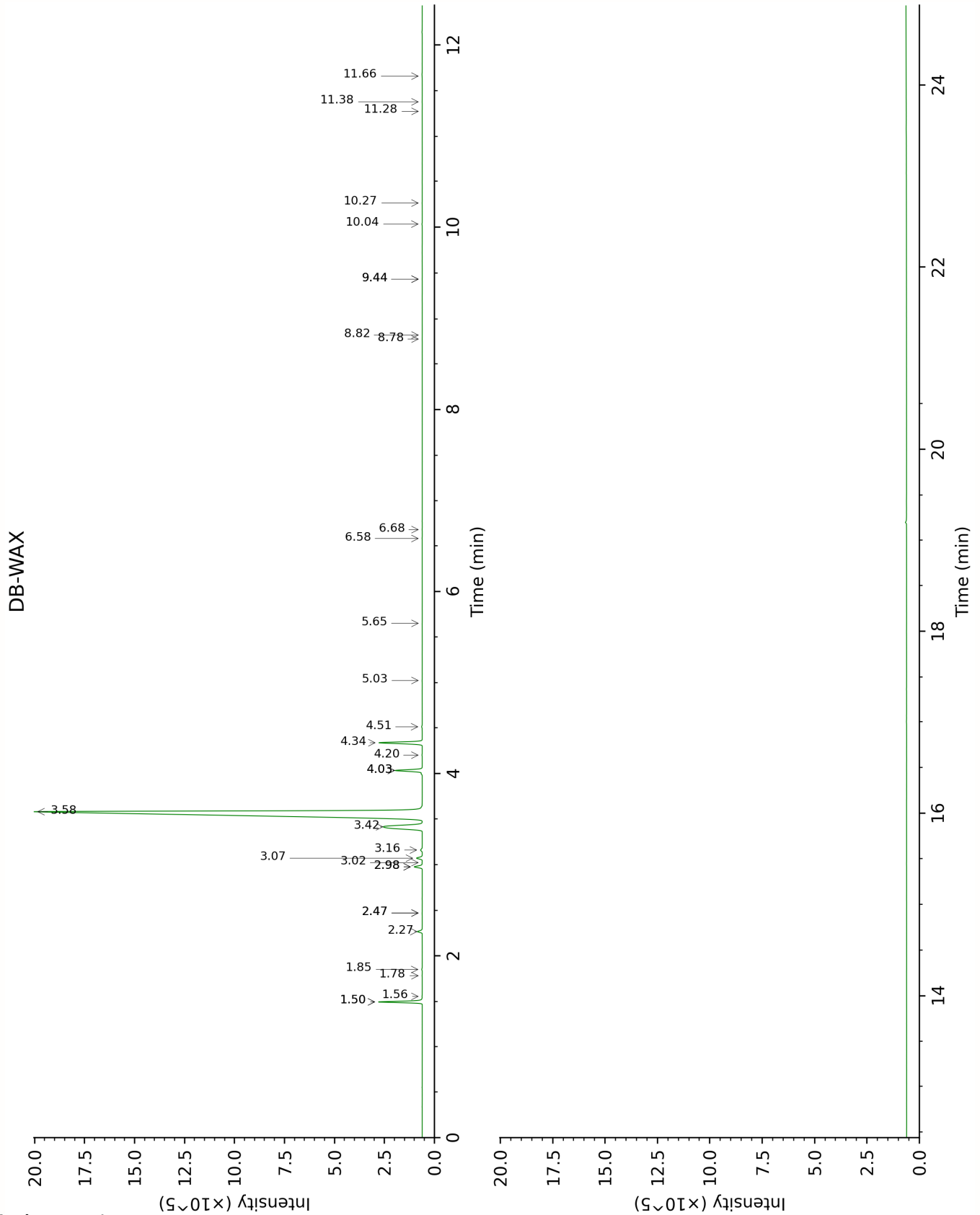
Note: no correction factor was applied

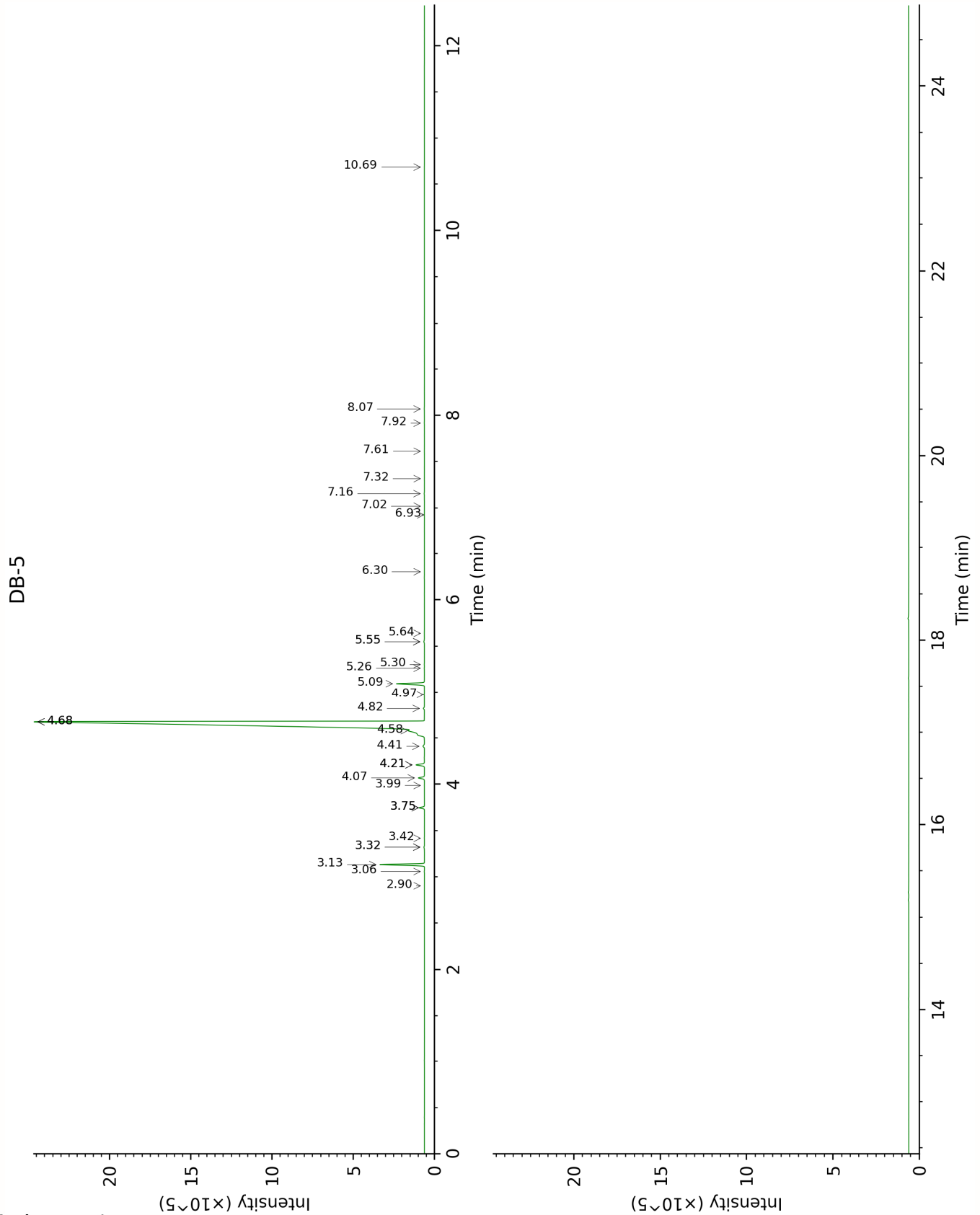
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm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

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

This page was intentionally left blank. The following pages present the complete data of the analysis.





FULL ANALYSIS DATA

Hashishene	Column DB-WAX			Column DB-5		
	1.50*	991.6	[3.27]	2.90	916.2	tr
α -Thujene	1.56	998.7	0.02	3.06	926.4	0.02
α -Pinene	1.50*	991.6	[3.27]	3.13	931.4	3.28
α -Fenchene	1.78	1020.4	0.01	3.32*	943.9	[0.05]
Camphene	1.85	1027.0	0.04	3.32*	943.9	[0.05]
Thuja-2,4(10)-diene	2.47*	1086.0	[0.02]	3.42	950.2	0.01
Sabinene	2.47*	1086.0	[0.02]	3.75*	972.1	[0.44]
β -Pinene	2.27	1066.6	0.43	3.75*	972.1	[0.44]
<i>trans-meta</i> -Mentha-2,8-diene	2.98*	1126.3	[0.74]	3.99	988.0	0.02
Myrcene	3.07	1133.5	0.53	4.07	993.4	0.54
Pseudolimonene	3.02	1129.8	0.02	4.21*	1002.7	[0.77]
α -Phellandrene	2.98*	1126.3	[0.74]	4.21*	1002.7	[0.77]
α -Terpinene	3.16	1140.3	0.18	4.41	1015.4	0.18
<i>para</i> -Cymene	4.34	1226.6	3.87	4.58*†	1026.0	[2.49]
1,8-Cineole	3.58	1172.0	80.32	4.68*†	1031.9	[88.03]
Limonene	3.42	1159.5	7.11	4.68*†	1031.9	[88.03]
(<i>Z</i>)- β -Ocimene	4.03*	1205.3	[2.43]	4.82	1041.0	0.10
(<i>E</i>)- β -Ocimene	4.20	1217.1	0.03	4.97	1050.7	0.03
γ -Terpinene	4.03*	1205.3	[2.43]	5.10	1058.2	2.35
Unknown PIMA I [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	5.03	1274.9	0.02	5.26	1068.7	0.02
<i>cis</i> -Linalool oxide (fur.)	6.68	1397.0	0.01	5.30	1071.3	0.01
Terpinolene	4.51	1238.9	0.06	5.55*	1086.7	[0.07]
<i>para</i> -Cymenene	6.58	1390.1	0.02	5.55*	1086.7	[0.07]
α -Pinene oxide	5.65	1324.7	0.02	5.64	1092.4	0.01
<i>trans</i> -Pinocarveol	9.44*	1603.4	[0.01]	6.30	1134.7	0.02
Terpinen-4-ol	8.82	1556.3	tr	6.93	1174.5	0.01
Cryptone	9.44*	1603.4	[0.01]	7.02	1180.4	0.01
α -Terpineol	10.04	1651.4	0.03	7.16	1189.1	0.03
<i>cis</i> - α -Phellandrene epoxide (iPr vs Me)	11.28	1753.4	0.01	7.32	1199.4	0.01
<i>trans</i> -Carveol	11.66	1785.7	0.02	7.61	1219.0	0.02
Carvone	10.26	1669.7	0.02	7.92	1239.4	0.02

Unknown CALU IV [m/z 43, 97 (69), 107 (46), 41 (28), 55 (21), 109 (20)...]	11.38	1762.1	0.02	8.07	1249.6	0.02
Aromadendrene	8.78	1553.0	tr	10.69	1433.1	0.01
Total reported		99.28%			99.58%	

*: 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