Date : November 30, 2022

Certificate of Analysis – GC Profiling

Sample identification

Internal code : 22K23-PTH03
Customer identification : Wintergreen - China - W10108R
Type : Essential oil
Source : *Gaultheria procumbens*
Customer : Plant Therapy

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 : Amélie Simard, Analyste
Analysis date : November 30, 2022

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Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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

Laboratoire PhytoChemia
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PHYSICOCHEMICAL DATA

Physical aspect: Clear liquid
Refractive index: 1.5366 ± 0.0003 (20 °C; method PC-MAT-016)

CONCLUSION

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

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Analysis summary – Consolidated contents

New readers of similar reports are encouraged to read table footnotes at least once.

Identification	%	Class
(3*Z*)-Hexenol	0.04	Aliphatic alcohol
(2*E*)-Hexenol	0.01	Aliphatic alcohol
Hexanol	0.02	Aliphatic alcohol
α-Pinene	0.01	Monoterpene
Benzaldehyde	0.01	Simple phenolic
β-Pinene	0.01	Monoterpene
Phenol	0.01	Simple phenolic
(3*Z*)-Hexenyl acetate	0.01	Aliphatic ester
1,8-Cineole	0.02	Monoterpenic ether
Limonene	0.01	Monoterpene
Benzyl alcohol	0.02	Simple phenolic
cis-Linalool oxide (fur.)	0.01	Monoterpenic alcohol
Octanol	0.01	Aliphatic alcohol
trans-Linalool oxide (fur.)	0.01	Monoterpenic alcohol
Linalool	0.08	Monoterpenic alcohol
Terpinen-4-ol	0.01	Monoterpenic alcohol
Methyl salicylate	99.28	Phenolic ester
Ethyl salicylate	tr	Phenolic ester
Eugenol	0.21	Phenylpropanoid
Benzyl salicylate	0.02	Phenolic ester
Consolidated total	**99.79%**	

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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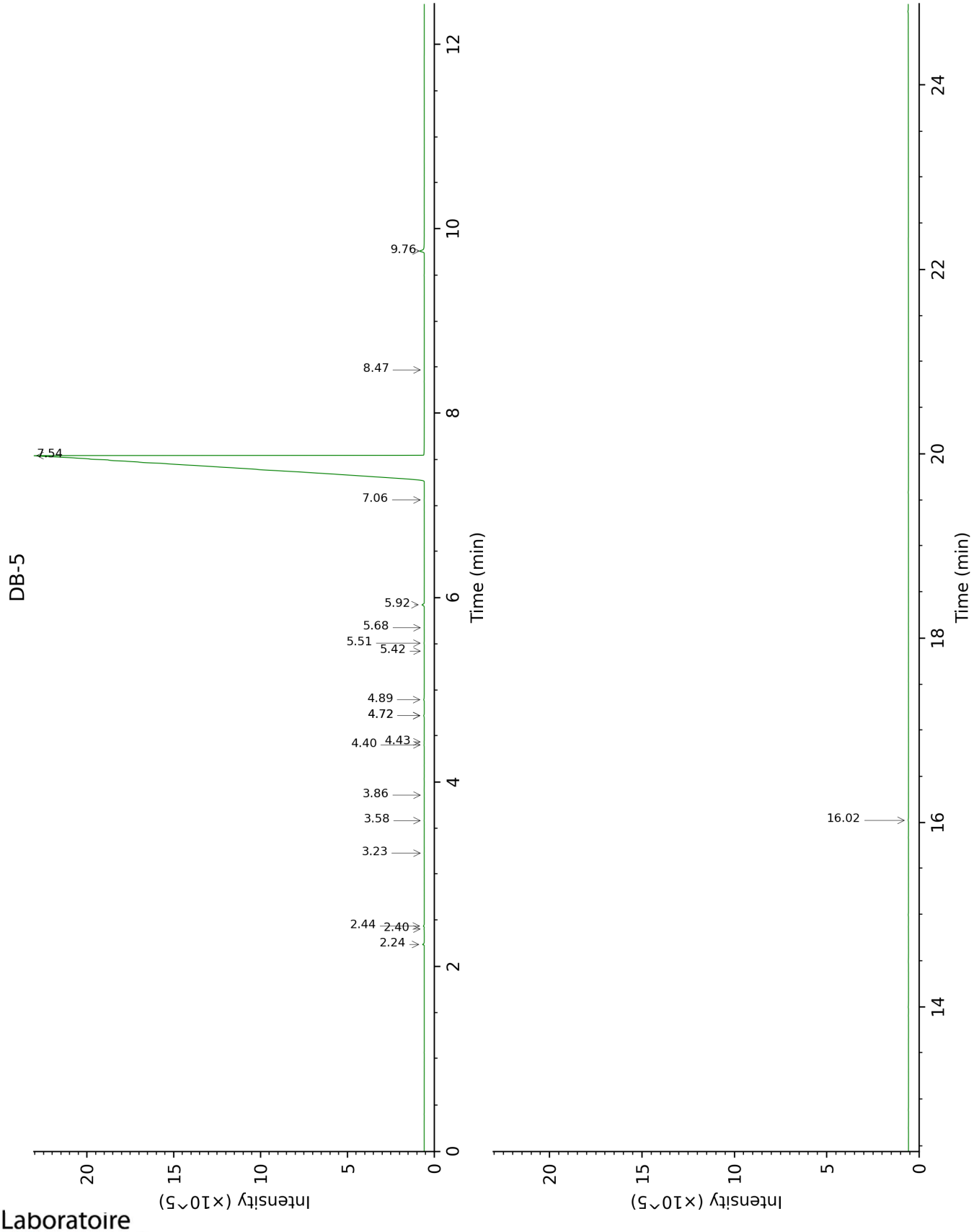
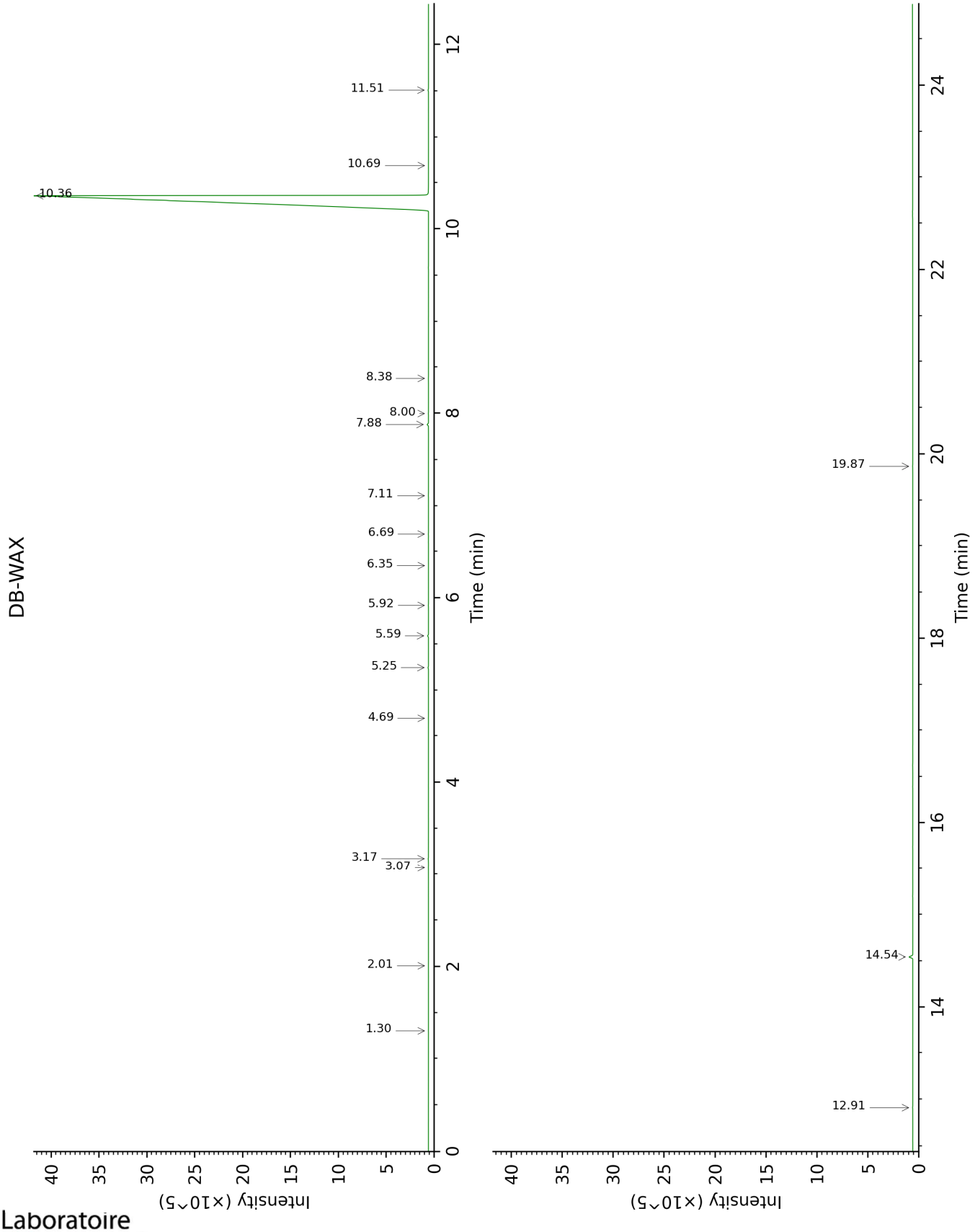

DB-5
9.76
8.47
7.54
7.06
5.92
5.68
5.51
5.42
4.89
4.72
4.40
4.43
3.86
3.58
3.23
2.44
2.40
2.24
16.02
Time (min)
Intensity (×10^5)


DB-WAX
11.51
10.69
10.36
8.38
8.00
7.88
7.11
6.69
6.35
5.92
5.59
5.25
4.69
3.17
3.07
2.01
1.30
19.87
14.54
12.91
Time (min)
Intensity (×10^5)

FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
(3*Z*)-Hexenol	2.24	856	0.04	5.59	1344	0.05
(2*E*)-Hexenol	2.40	869	0.01	5.92	1368	0.01
Hexanol	2.44	872	0.02	5.24	1320	0.03
α-Pinene	3.23	930	0.01	1.30	994	tr
Benzaldehyde	3.58	953	0.01	7.11	1457	0.01
β-Pinene	3.86	971	0.01	2.01	1067	tr
Phenol	4.40	1006	0.01	12.91	1942	0.02
(3*Z*)-Hexenyl acetate	4.44	1008	0.01	4.69	1286	0.01
1,8-Cineole	4.72*	1026	0.02	3.17	1168	0.02
Limonene	4.72*	1026	[0.02]	3.07	1159	0.01
Benzyl alcohol	4.89	1037	0.02	11.51	1814	0.03
cis-Linalool oxide (fur.)	5.42	1070	0.01	6.35	1400	0.01
Octanol	5.51	1075	0.01	8.00	1525	0.01
trans-Linalool oxide (fur.)	5.68	1086	0.01	6.69	1425	0.01
Linalool	5.92	1101	0.08	7.88	1516	0.08
Terpinen-4-ol	7.06	1174	0.01	8.38	1555	0.01
Methyl salicylate	7.54	1204	99.28	10.36	1715	99.21
Ethyl salicylate	8.47	1266	tr	10.69	1744	tr
Eugenol	9.76	1355	0.21	14.54	2098	0.23
Benzyl salicylate	16.02	1856	0.02	19.87	2685	0.01
Total identified		**99.78%**			**99.75%**	
Total reported		**99.78%**			**99.75%**	

*: 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

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