

Date : March 07, 2019

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 19C04-PTH03-1-SCC

Customer identification : Wintergreen Organic - China - W2010483R

Type : Essential oil

Source : *Gaultheria procumbens*

Customer : Plant Therapy

ANALYSIS

Method: PC-PA-014-17J19 - 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 : March 06, 2019

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Note: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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

PHYSICOCHEMICAL DATA

Physical aspect: Clear liquid

Refractive index: 1.5353 ± 0.0003 (20 °C)

CONCLUSION

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

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Benzyl alcohol	0.01	0.02	Simple phenolic
Linalool	0.02	0.01	Monoterpenic alcohol
Menthol	0.02	0.01	Monoterpenic alcohol
Methyl salicylate	99.38	99.61*	Phenolic ester
Nerol	tr	0.01	Monoterpenic alcohol
Geraniol	0.06	0.07*	Monoterpenic alcohol
Ethyl salicylate	0.09	0.10	Phenolic ester
Unknown	0.02		Unknown
Dehydro elsholtzia ketone	0.01	[0.07]*	Monoterpenic ketone
β -Caryophyllene	0.02	0.01	Sesquiterpene
α -Muurolene	0.02	0.01	Sesquiterpene
δ -Cadinene	0.01	[99.61]*	Sesquiterpene
Phytol isomer	0.01		Diterpenic alcohol
Total identified	99.65%	99.85%	

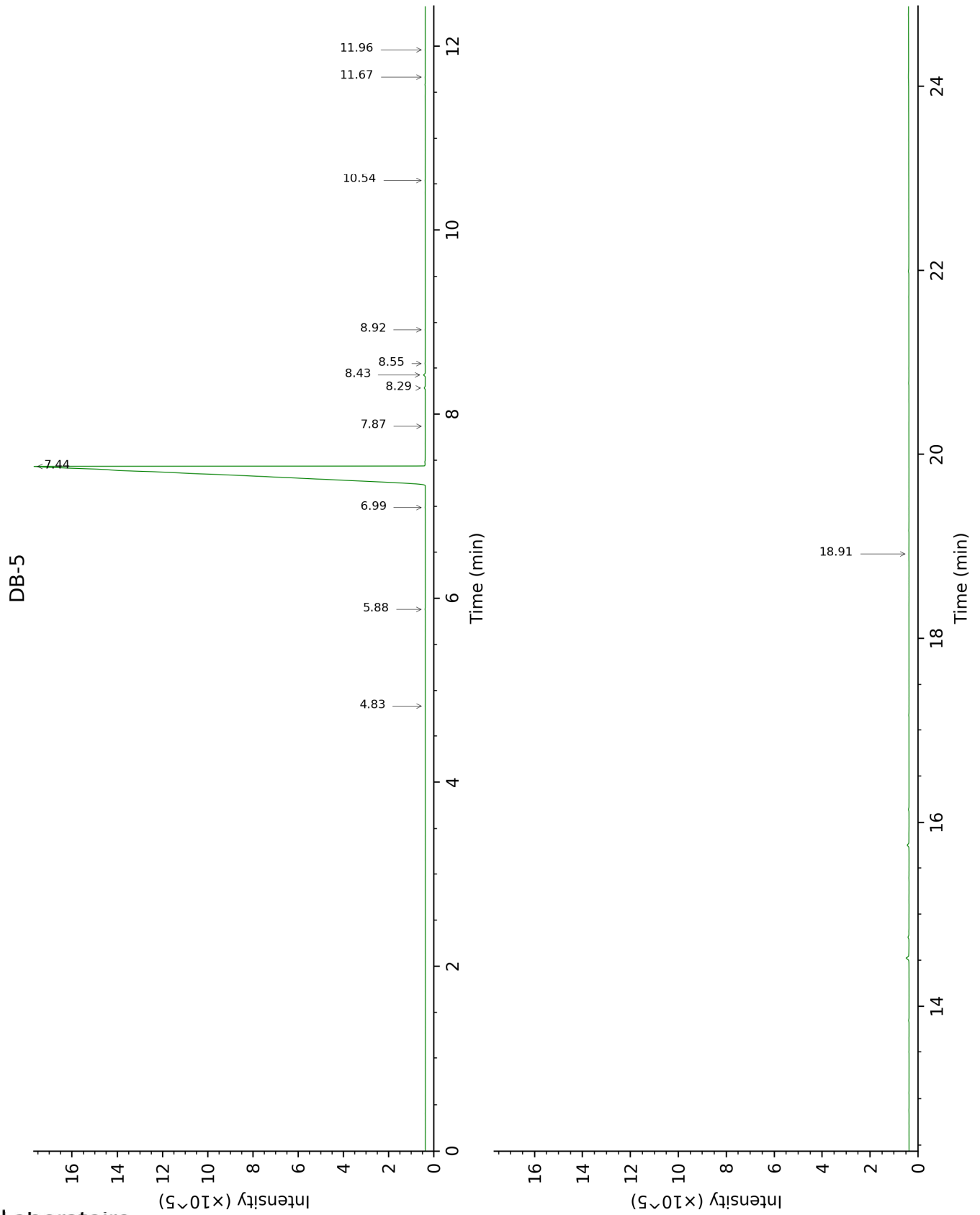
*: Two or more compounds are coeluting on this column

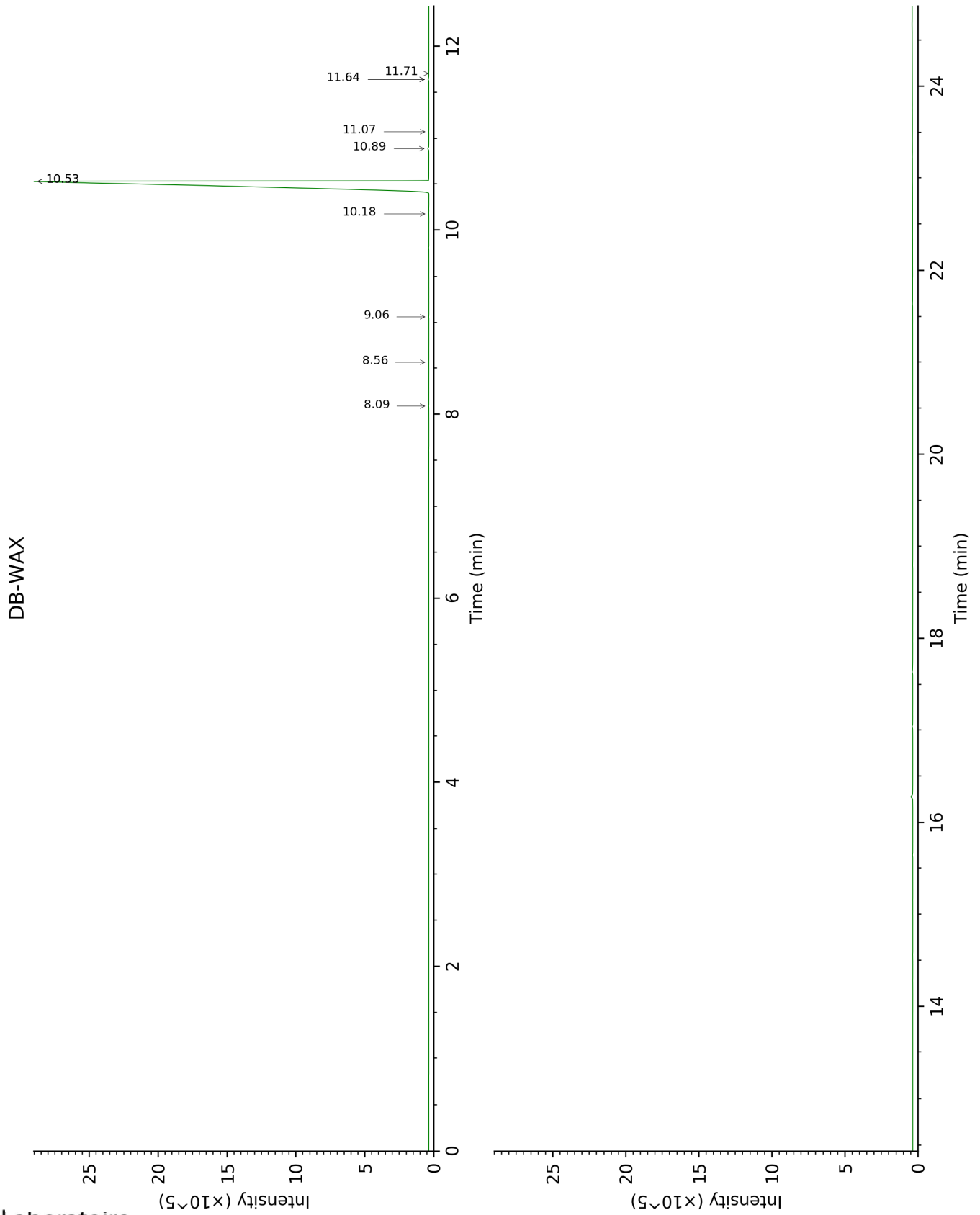
[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

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

Note: no correction factor was applied

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	%
Benzyl alcohol	4.83	1033	0.01	11.71	1809	0.02
Linalool	5.88	1099	0.02	8.09	1511	0.01
Menthol	6.99	1170	0.02	9.06	1588	0.01
Methyl salicylate	7.44	1199	99.38	10.53*	1708	99.61
Nerol	7.87	1228	tr	11.08	1755	0.01
Geraniol	8.28	1256	0.06	11.64*	1804	0.07
Ethyl salicylate	8.43	1266	0.09	10.89	1739	0.10
Unknown [m/z 192, 93 (97), 177 (57), 121 (57), 91 (48), 136 (48)...]	8.55	1274	0.02			
Dehydro elsholtzia ketone	8.92	1299	0.01	11.64*	1804	[0.07]
β -Caryophyllene	10.54	1410	0.02	8.56	1548	0.01
α -Muurolene	11.67	1494	0.02	10.18	1679	0.01
δ -Cadinene	11.96	1516	0.01	10.53*	1708	[99.61]
Phytol isomer	18.92	2136	0.01			
Total identified		99.65%			99.85%	
Total reported		99.67%			99.85%	

*: Two or more compounds are coeluting on this column

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