



316 Old Hickory Blvd East, Madison, TN 37115

tel (615)612-4270 fax (615)860-9171

orderdesk@naturesgift.com

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Violet Leaf Absolute

Viola odorata

Solvent extracted, Egypt

Batch #EG-22726

Aliphatic Alcohols 0.11%

(3Z) hexenol	0.04
(2E) hexenol	0.01
hexenol	0.02
octen-3-ol	0.04

Monoterpenols 0.33%

linalol	0.24
α terpineol	0.09

Esters 0%

(3Z) hexenyl acetate	0.02
methyl salicylate	0.04
methyl palmitate	0.09
ethyl palmitate	0.32
ethyl linoleate	0.37
ethyl oleate	0.32

Aldehydes 0.32%

(2E,6Z) nonadienal	0.22
(2E) nonenal	0.10

Aliphatic Acids 67.53%

(2E) hexenoic acid	0.17
caprylic acid	0.04
myristic acid	0.19
pentadecylic acid	0.04
palmitic acid	20.94
stearic acid	3.40
linoleic acid	11.95
oleic acid	30.80

Phenols 0.14%

benzaldehyde	0.01
benzyl alcohol	0.06
phenylethyl alcohol	0.07

Other 2.97%

2-pentylfuran	0.01
dodecane	0.02
γ nonalactone	0.03
3-oxo-7,8-dihydro- α -ionone	0.33
squalene	0.28
γ sitosterol	2.30

Raw Material: leaves

INCI Name: Viola odorata

Production Method: solvent

Date of Analysis: August, 2018

Date : August 21, 2018

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 18H10-NGA2-1-DM

Customer identification : Violet Leaf Absolute - Batch#EG-22726

Type : Absolute

Source : *Viola odorata*

Customer : Nature's Gift Aromatherapy

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 : August 13, 2018

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Note: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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: Dark green viscous with particles

Refractive index: 1.4910 ± 0.0003 (20 °C)

CONCLUSION

Given the lack of reliable references available so as what should be found in violet absolute, Laboratoire PhytoChemia can make no statement as to the identity and purity of such extracts. This sample contains mostly fatty acids and triterpenic compounds.

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
(3Z)-Hexenol	0.04	0.05	Aliphatic alcohol
(2E)-Hexenol	0.01	0.02	Aliphatic alcohol
Hexanol	0.02	0.02	Aliphatic alcohol
Benzaldehyde	0.01	0.01	Simple phenolic
Octen-3-ol	0.04	0.04	Aliphatic alcohol
2-Pentylfuran	0.01	0.01	Furan
(3Z)-Hexenyl acetate	0.02	0.02	Aliphatic ester
Benzyl alcohol	0.06	0.06	Simple phenolic
(2E)-Hexenoic acid	0.17	0.17	Aliphatic acid
Undecane	0.28*	tr	Alkane
Linalool	[0.28]*	0.24	Monoterpenic alcohol
Phenylethyl alcohol	0.07	0.10	Simple phenolic
(2E,6Z)-Nonadienal?	0.22		Aliphatic aldehyde
(2E)-Nonenal	0.10	0.06	Aliphatic aldehyde
Methyl salicylate	0.13*	0.04	Phenolic ester
α -Terpineol	[0.13]*	0.09	Monoterpenic alcohol
Caprylic acid	0.06*	0.04	Aliphatic acid
Dodecane	[0.06]*	0.02	Alkane
γ -Nonalactone	0.03	0.04	Aliphatic lactone
3-Oxo-7,8-dihydro- α -ionone	0.33		Ionone or analog
Myristic acid	0.19	0.17	Aliphatic acid
Dehydrovomifoliol	0.08		Ionone or analog
Pentadecylic acid	0.04	0.06	Aliphatic acid
Methyl palmitate	0.09	0.10	Aliphatic ester
Palmitoleic acid	0.25		Aliphatic acid
Ethyl palmitate	21.26*	0.32	Aliphatic ester
Palmitic acid	[21.26]*	23.06	Aliphatic acid
Stearic acid	49.33	3.40	Aliphatic acid
Linoleic acid	[49.33]*	11.95	Aliphatic acid
Oleic acid	[49.33]*	30.80	Aliphatic acid
Ethyl linoleate	[49.33]*	0.37	Aliphatic ester
Ethyl oleate?	[49.33]*	0.32	Aliphatic ester
Squalene	0.28	0.23	Triterpene
γ -Sitosterol?	2.30		Sterol
Total identified	75.43%	71.81%	

*: Two or more compounds are coeluting on this column

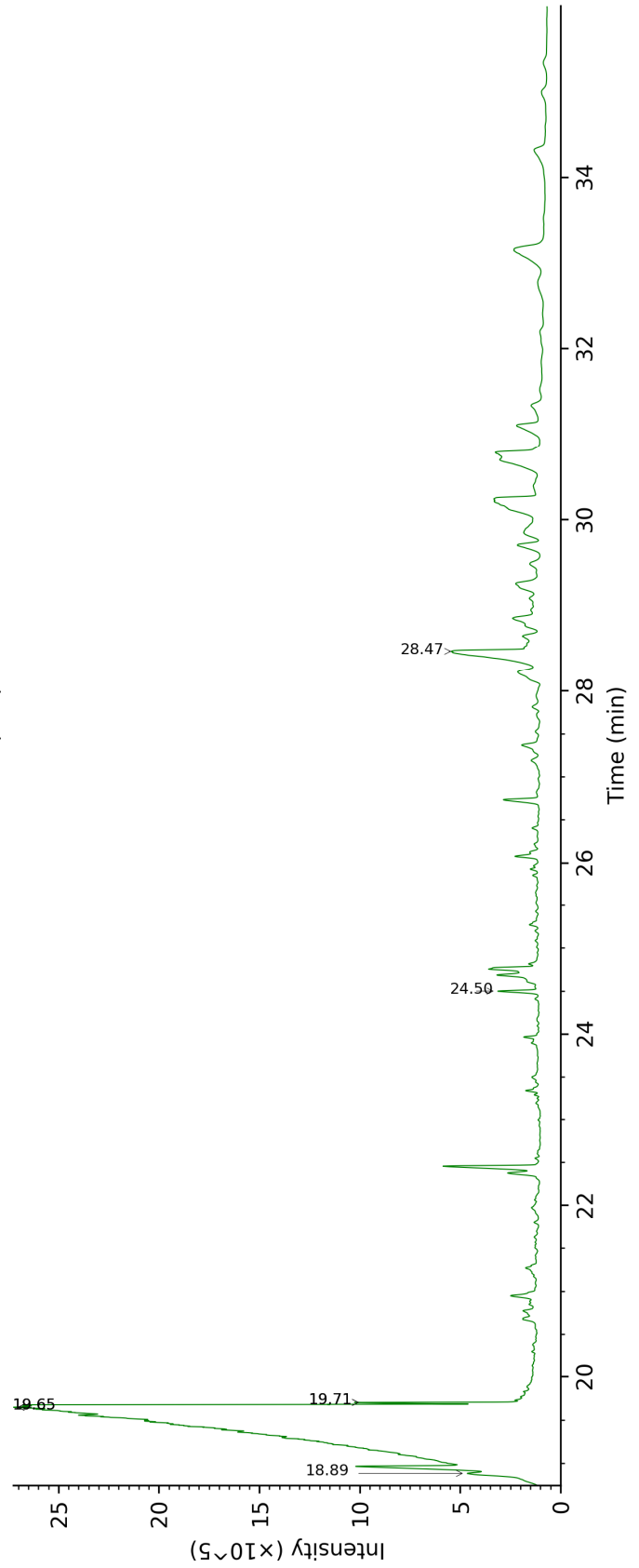
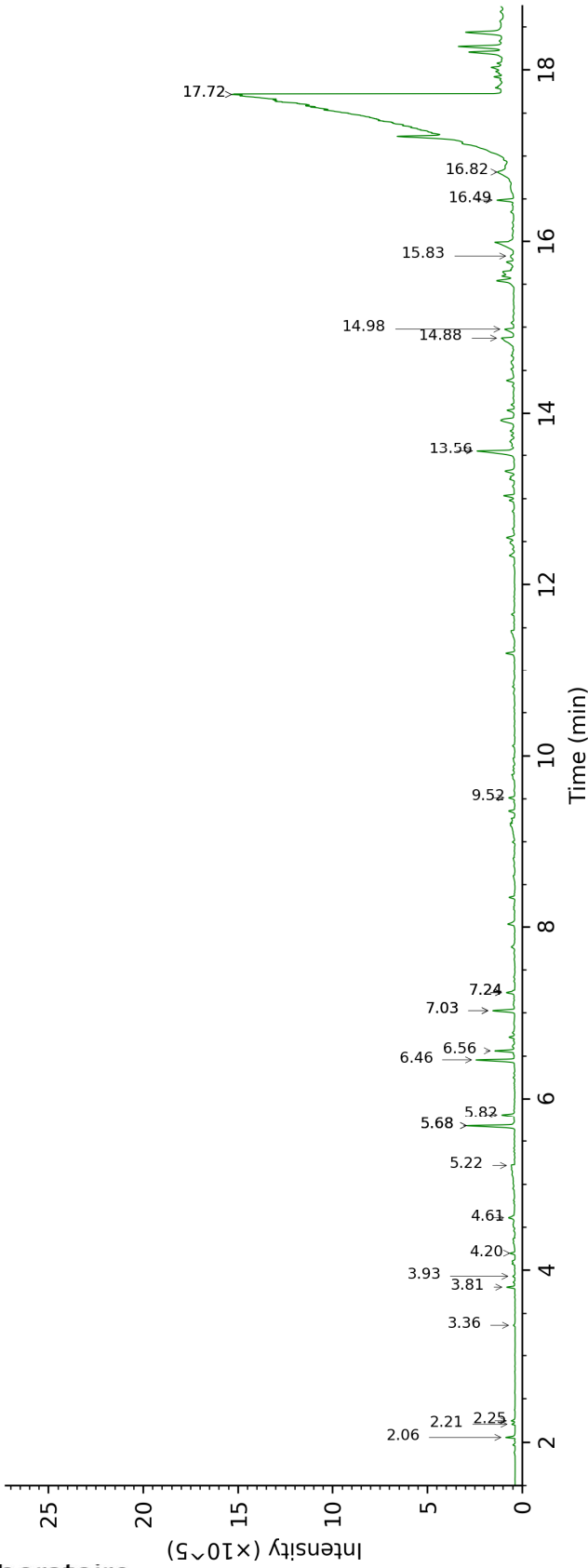
[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

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

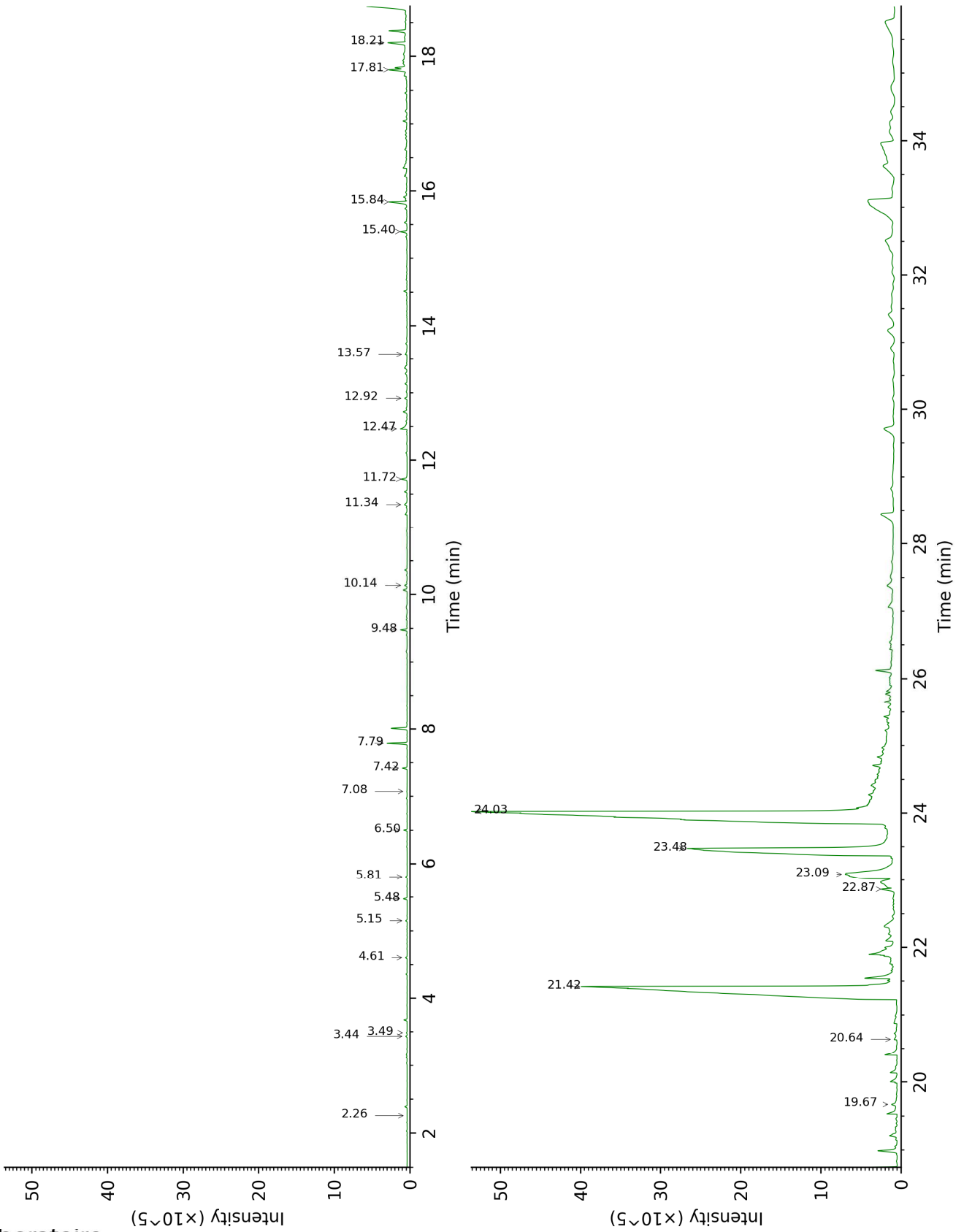
Note: no correction factor was applied

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DB-5



DB-WAX



FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
(3Z)-Hexenol	2.06	855	0.04	5.48	1339	0.05
(2E)-Hexenol	2.21	868	0.01	5.81	1363	0.02
Hexanol	2.25	871	0.02	5.15	1315	0.02
Benzaldehyde	3.36	953	0.01	7.08	1459	0.01
Octen-3-ol	3.81	982	0.04	6.50	1415	0.04
2-Pentylfuran	3.93	991	0.01	3.49	1194	0.01
(3Z)-Hexenyl acetate	4.20	1008	0.02	4.60	1276	0.02
Benzyl alcohol	4.61	1035	0.06	11.34	1810	0.06
(2E)-Hexenoic acid	5.22	1073	0.17	12.47	1912	0.17
Undecane	5.68*	1102	0.28	2.26	1096	tr
Linalool	5.68*	1102	[0.28]	7.79	1514	0.24
Phenylethyl alcohol	5.82	1111	0.07	11.72	1844	0.10
(2E,6Z)-Nonadienal?	6.46	1152	0.22			
(2E)-Nonenal	6.56	1159	0.10	7.42	1485	0.06
Methyl salicylate	7.03*	1189	0.13	10.14	1704	0.04
α-Terpineol	7.03*	1189	[0.13]	9.48	1648	0.09
Caprylic acid	7.24*	1202	0.06	13.57	2017	0.04
Dodecane	7.24*	1202	[0.06]	3.44	1190	0.02
γ-Nonalactone	9.52	1358	0.03	12.92	1955	0.04
3-Oxo-7,8-dihydro-α-ionone	13.56	1668	0.33			
Myristic acid	14.88	1781	0.19	19.67	2674	0.17
Dehydrovomifoliol	14.98	1790	0.08			
Pentadecylic acid	15.83	1867	0.04	20.64	2792	0.06
Methyl palmitate	16.49	1928	0.09	15.40	2199	0.10
Palmitoleic acid	16.82	1960	0.25			
Ethyl palmitate	17.72*	2047	21.26	15.84	2245	0.32
Palmitic acid	17.72*	2047	[21.26]	21.42	2890	23.06
Stearic acid	18.89†	2166	49.33	23.09	3108	3.40
Linoleic acid	19.65*†	2248	[49.33]	23.48	3160	11.95
Oleic acid	19.65*†	2248	[49.33]	24.03	3235	30.80
Ethyl linoleate	19.71*†	2254	[49.33]	18.21	2503	0.37
Ethyl oleate?	19.71*†	2254	[49.33]	17.81	2458	0.32
Squalene	24.50	2830	0.28	22.87	3078	0.23
γ-Sitosterol?	28.47	3300	2.30			
Total identified		75.43%			71.81%	
Total reported		75.43%			71.81%	

*: Two or more compounds are coeluting on this column

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