

# White Cognac Essential Oil

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Date : October 19, 2017

SAMPLE IDENTIFICATION

Internal code : 17/13-FSE1-1-CC  
Customer identification : White Cognac - France - 330195  
Type : Essential oil  
Source : Vitis vinifera  
Customer : Flowers Shining Everywhere Inc.

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ANALYSIS

Method : PC-PA-001-15E06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).  
Identifications double-checked by GC-MS  
Analyst : Sylvain Mercier, M. Sc., chimiste  
Analysis date : 2017-10-19

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Checked and approved by :

Alexis St-Gelais

Alexis St-Gelais, M. Sc., chimiste

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# IDENTIFIED COMPOUNDS

Identification	Column: BPS			Column: WAX			Molecular Class
	R.T.	R.L	%	%	R.L	R.T.	
Ethanol	0.35	632	0.27	0.25	786	0.69	Aliphatic alcohol
Ethyl acetate	0.53	656	0.11				Aliphatic ester
Acetic acid	0.55	658	0.04				Aliphatic acid
Isoamyl alcohol	1.16	738	0.02	0.02	1151	3.01	Aliphatic alcohol
Isoamyl acetate	2.70	880	0.01	0.02	1061	2.05	Aliphatic ester
Ethyl hexanoate	4.74	1004	0.17	0.15	1186	3.47	Aliphatic ester
Hexanoic acid	5.02	1019	0.03	23.60	1805	24.67*	Fatty acid
Ethyl octanoate	9.42	1202	6.01	5.87	1392	6.57*	Aliphatic ester
Octanoic acid	10.13	1218	1.16	1.26	2006	36.80	Fatty acid
Isopentyl hexanoate	11.53	1249	0.01	[5.87]	1392	6.57*	Aliphatic ester
Propyl octanoate	13.71	1296	0.02				Fatty acid
Methyl decanoate	15.63	1326	0.04				Aliphatic ester
Isobutyl octanoate	17.05	1347	0.02				Aliphatic ester
Ethyl 9-decanoate	20.15	1394	0.11				Aliphatic ester
Ethyl decanoate	21.04	1405	40.50	39.43	1604	12.83	Aliphatic ester
Decanoic acid	23.73	1438	11.16	11.40	2207	42.71	Fatty acid
Isopentyl octanoate	24.61	1448	0.38	0.42	1615	13.40	Aliphatic ester
2-Methylbutyl octanoate	24.78	1450	0.07				Aliphatic ester
Propyl decanoate	28.57	1495	0.10				Aliphatic ester
Isobutyl decanoate	33.09	1558	0.13				Aliphatic ester
Ethyl dodecanoate	36.21	1605	24.32	[23.60]	1805	24.67*	Aliphatic ester
Dodecanoic acid	36.92	1623	5.01	6.04	2422	47.51*	Fatty acid
Isopentyl decanoate	38.14	1652	1.62	1.83	1818	25.61	Aliphatic ester
2-Methylbutyl decanoate	38.20	1654	0.23				Aliphatic ester
Propyl dodecanoate	39.86	1695	0.05				Aliphatic ester
Myristic acid	43.10	1796	0.42	0.46	2637	51.68	Fatty acid
Ethyl tetradecanoate	43.20	1799	1.22	1.27	1993	36.18	Aliphatic ester
Isoamyl laurate	44.54	1848	0.50				Aliphatic ester
2-Methylbutyl laurate	44.60	1850	0.06				Aliphatic ester
Ethyl 9-hexadecenoate	47.83	1975	0.39				Aliphatic ester
Hexadecenoic acid Isomer	48.37	1997	2.16	2.48	2852	55.53	Fatty acid
Ethyl hexadecenoate	48.46	2001	3.15	3.34	2218	42.98	Aliphatic ester
Isomer							
<b>Total Identified</b>			<b>99.49%</b>				<b>97.84%</b>

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

bold: Duplicate percentage due to coelutions, not taken account in the identified total

Note: no correction factor was applied

Essential oil, White wine  
Internal Code: 17713-FSE1-1-CC

Customer Identification:  
White Cognac - France - 330195

Report prepared for  
Flowers Shining Everywhere Inc.

#### OTHER DATA

**Physical aspect:** Faintly yellow liquid

**Refractive Index:**  $1.4310 \pm 0.0003$  (20 °C)

#### CONCLUSION

No adulterant, contaminant or diluent were detected using this method.



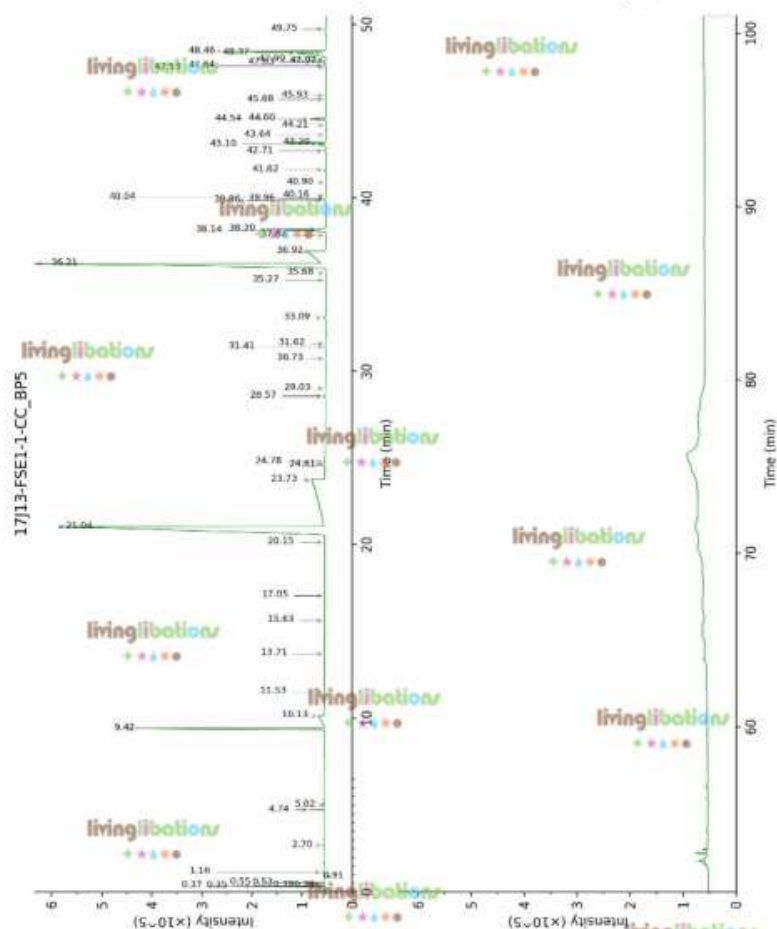
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Essential oil, Vitis vinifera  
Internal Code: 17113-FSE1-1-CC

Customer Identification:  
White Cognac - France - 330195

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Flowers Shining Everywhere Inc.

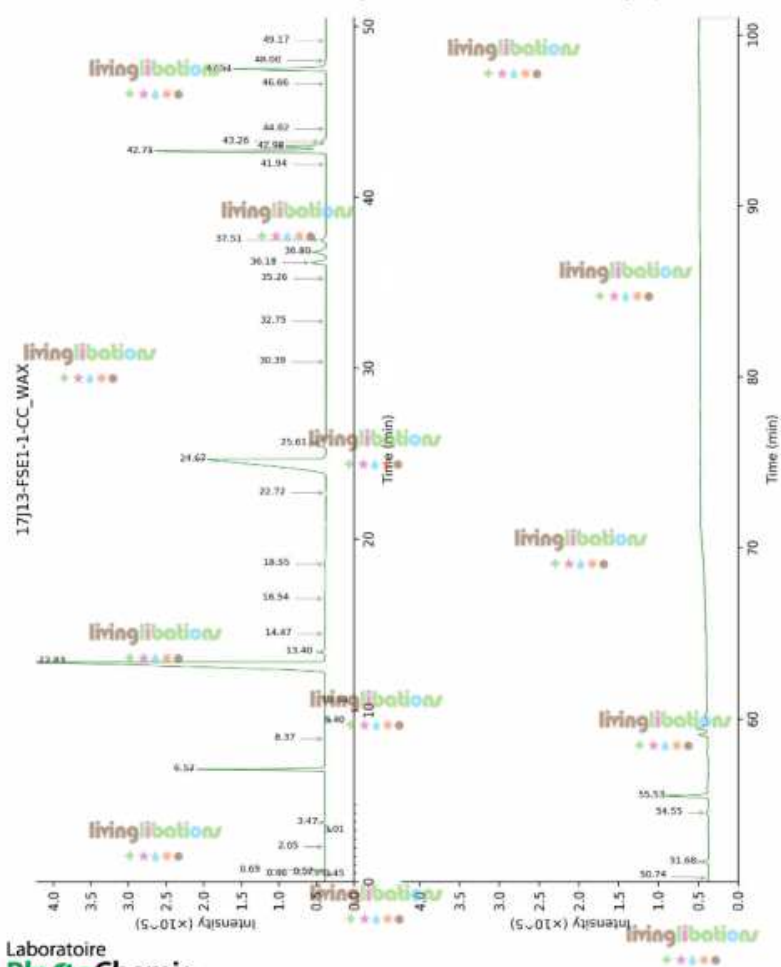


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