

Caraway Essential Oil

ESSENTIAL OIL ANALYSIS

Laboratoire
PhytoChemia





SAMPLE IDENTIFICATION

Internal code : 17L08-FSE12-1-CC

Customer identification : Carraway Stream Distilled - Hungery - HC180817

Type : Essential oil

Source : *Carum carvi*

Customer : Flowers Shining Everywhere Inc.



ANALYSIS

Method : PC-PA-001-1SE06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).

+ **Identifications** double-checked by GC-MS

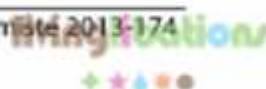
Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-12-14



Checked and approved by :

Alexis St-Gelais, M. Sc., chimiste 2013-174



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IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
α-Pinene	3.42	927	0.01	0.01	950	1.14	Monoterpene
Sabinene	4.14	969	0.01	0.01	1052	1.88	Monoterpene
Myrcene	4.48	989	0.15	0.14	1115	2.48	Monoterpene
Δ3-Carene	4.76	1005	0.02	0.01	1079	2.22	Monoterpene
Octanal	4.88	1012	0.02	0.02	1230	4.02*	Aliphatic aldehyde
Limonene	5.26	1032	43.56	43.37	1148	2.92	Monoterpene
cis-β-Ocimene	5.36	1038	tr	0.02	1187	3.42*	Monoterpene
trans-β-Ocimene	5.54	1047	0.01	0.02	1201	3.61	Monoterpene
γ-Terpinene	5.73	1058	tr	[0.02]	1187	3.42*	Monoterpene
Terpinolene	6.21	1084	0.02	[0.02]	1230	4.02*	Monoterpene
Linalool	6.71	1107	0.02	0.01	1486	8.63	Monoterp. alcohol
trans-para-Mentha-2,8-dien-1-ol	7.22	1125	0.04	0.07	1571	11.47	Monoterp. alcohol
cis-Limonene oxide	7.35	1130	0.03	0.02	1367	6.11	Monoterp. ether
trans-Limonene oxide	7.47	1134	0.02	0.02	1379	6.31	Monoterp. ether
cis-Dihydrocarvone	9.51*	1204	0.73	0.73	1515	9.36*	Monoterp. ketone
α-Terpineol	9.51*	1204	[0.73]	54.53	1632	14.02*	Monoterp. alcohol
trans-Dihydrocarvone	9.70	1208	0.16	0.18	1526	9.79	Monoterp. ketone
trans-Carveol	10.66	1229	0.02	0.02	1744	20.29	Monoterp. alcohol
neoiso-Dihydrocarveol	10.81	1233	0.05	0.04	1716	18.47	Monoterp. ketone
Carvone	11.84	1255	54.76	[54.53]	1632	14.02*	Monoterp. ketone
β-Caryophyllene	20.63	1401	0.03	[0.73]	1515	9.36*	Sesquiterpene
Total identified			99.66%	99.22%			

*: Two or more compounds are coeluting on this column

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

Note: no correction factor was applied

OTHER DATA

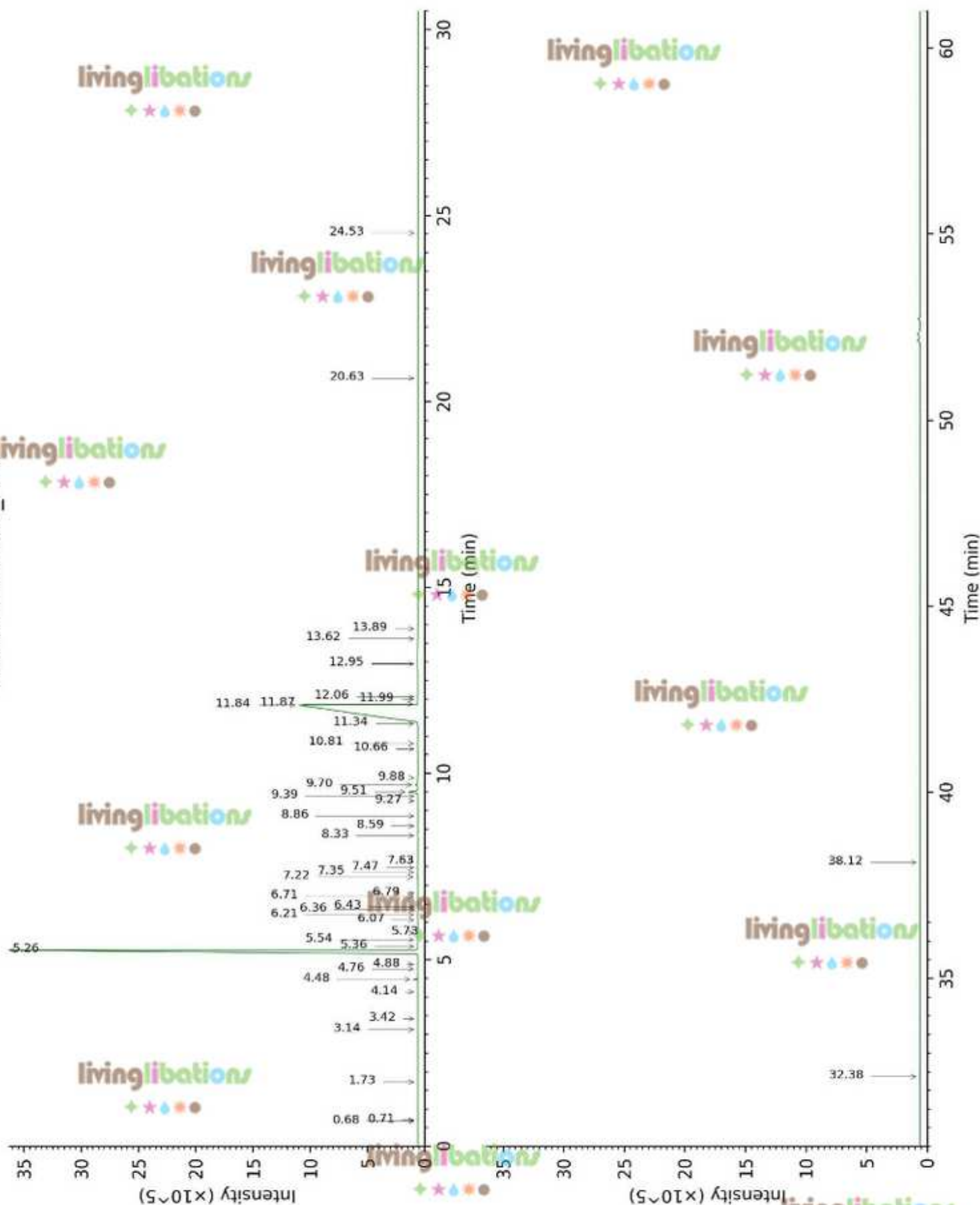
Physical aspect : Clear liquid

Refractive Index : 1.4860 ± 0.0003 (20 °C)

CONCLUSION

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

17L08-FSE12-1-CC_BP5



17L08-FSE12-1-CC_WAX

