



PLANT THERAPY  
100% PURE ESSENTIAL OILS

## GC/MS BATCH NUMBER: BR0101

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**ESSENTIAL OIL:** BASIL LINALOOL ORGANIC

**BOTANICAL NAME:** OCIMUM BASILCUM

**ORIGIN:** NEPAL

KEY CONSTITUENTS PRESENT IN THIS BATCH OF BASIL LINALOOL ORGANIC OIL	%
LINALOOL	65.2
GERANIOL	4.7
EUGENOL	3.2
1,8-CINEOLE	3.6
trans- $\alpha$ -BERGAMOTENE	3.0
GERMACRENE D	2.2
$\tau$ -CADINOL	1.6
$\gamma$ -CADINENE	1.6
TERPINEN-4-ol	1.6

Comments from Robert Tisserand: Fresh, green-spicy odor profile. Meets 6 of 7 AFNOR standards for Basil linalool. Linalool is marginally high, which is not a concern in this oil.

**Date :** September 18, 2017

*SAMPLE IDENTIFICATION*

**Internal code :** 17118-PTH9-1-DM

**Customer identification :** Basil Linalool Organic - Nepal - BR010163R

**Type :** Essential oil

**Source :** *Ocimum basilicum*

**Customer :** Plant Therapy

*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 :** 2017-09-18

Checked and approved by :

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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.	
<i>cis</i> -Hex-3-en-1-ol	2.48	864	0.06	0.04	1321	5.59	Aliphatic alcohol
$\alpha$ -Thujene	3.31	920	0.08	0.13	948	1.23	Monoterpene
$\alpha$ -Pinene	3.41	926	0.34	0.25	938	1.19	Monoterpene
$\alpha$ -Fenchene	3.70	943	0.10	0.08	988	1.48	Monoterpene
Sabinene	4.13	969	0.18	0.15	1055	2.03	Monoterpene
$\beta$ -Pinene	4.19	972	0.40	0.34	1034	1.85	Monoterpene
Myrcene	4.47	989	0.35	0.38	1111	2.63*	Monoterpene
$\alpha$ -Phellandrene	4.75	1004	0.03	[0.38]	1111	2.63*	Monoterpene
Limonene	5.13	1025	0.22	4.02	1141	3.01*	Monoterpene
$\beta$ -Phellandrene	5.17	1027	0.36	[4.02]	1141	3.01*	Monoterpene
1,8-Cineole	5.23	1031	3.61	[4.02]	1141	3.01*	Monoterp. ether
<i>cis</i> - $\beta$ -Ocimene	5.35	1037	0.06	0.21	1183	3.60*	Monoterpene
<i>trans</i> - $\beta$ -Ocimene	5.53	1047	0.78	1.00	1202	3.79	Monoterpene
$\gamma$ -Terpinene	5.72	1057	0.18	[0.21]	1183	3.60*	Monoterpene
<i>cis</i> -Linalool oxide (fur.)	6.00	1072	0.05	0.05	1374	6.42	Monoterp. alcohol
<i>cis</i> -Sabinene hydrate	6.06	1075	0.14	0.21	1401	6.92*	Monoterp. alcohol
Terpinolene	6.19	1083	0.15	0.14	1223	4.10	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	6.31	1089	0.13	[0.21]	1401	6.92*	Monoterp. alcohol
Linalool	6.89*	1113	64.93	65.15	1500	9.39	Monoterp. alcohol
<i>trans</i> -Sabinene hydrate	6.89*	1113	[64.93]	0.15	1477	8.75	Monoterp. alcohol
( <i>E</i> )-Epoxyocimene	7.63	1140	0.10				Monoterp. ether
Camphor	7.80	1146	0.35	0.46	1420	7.36*	Monoterp. ketone
Menthone	7.99	1153	0.03	0.05	1396	6.80	Monoterp. ketone
Borneol	8.64	1177	0.31	3.07	1617	14.02*	Monoterp. alcohol
Terpinen-4-ol	8.82	1183	1.57	5.59	1524	10.26*	Monoterp. alcohol
Methylchavicol	9.47*	1203	0.74	0.94	1581	12.39*	Phenylpropanoid
$\alpha$ -Terpineol	9.47*	1203	[0.74]	[3.07]	1617	14.02*	Monoterp. alcohol
Citronellol	10.82	1233	0.08	0.07	1703	18.65	Monoterp. alcohol
Neral	11.16	1241	0.09	0.20	1594	12.88*	Monoterp. aldehyde
Geraniol	11.97	1258	4.69	4.99	1776	23.59	Monoterp. alcohol
Geranial	12.68	1274	0.17	0.17	1641	15.32	Monoterp. aldehyde
Bornyl acetate	12.92	1279	0.81	0.89	1506	9.62	Monoterp. ester
$\alpha$ -Cubebene	16.22	1335	0.02	0.01	1412	7.19	Sesquiterpene
Eugenol	17.73*	1358	3.31	3.21	2053	38.86	Phenylpropanoid
$\alpha$ -Copaene	17.73*	1358	[3.31]	[0.46]	1420	7.36*	Sesquiterpene
Neryl acetate	17.87	1360	0.03	1.64	1664	16.53*	Monoterp. ester
$\beta$ -Bourbonene	18.12	1363	0.09	0.10	1451	8.12	Sesquiterpene
$\beta$ -Elemene	18.94	1376	0.74	[5.59]	1524	10.26*	Sesquiterpene
Geranyl acetate	19.36	1382	0.55	0.65	1688	17.80*	Monoterp. ester
$\beta$ -Caryophyllene	20.59	1400	0.30	[5.59]	1524	10.26*	Sesquiterpene
$\beta$ -Gurjunene	21.21	1408	0.07	[5.59]	1524	10.26*	Sesquiterpene

<i>trans</i> - $\alpha$ -Bergamotene	22.21	1419	2.97	[5.59]	1524	10.26*	Sesquiterpene
<i>cis</i> - $\beta$ -Farnesene	22.91	1428	0.13	[0.20]	1594	12.88*	Sesquiterpene
$\alpha$ -Humulene	23.40	1434	0.36	[0.94]	1581	12.39*	Sesquiterpene
Dauca-5,8-diene	24.08	1442	0.33	[0.94]	1581	12.39*	Sesquiterpene
<i>trans</i> - $\beta$ -Farnesene	24.49	1447	0.10	[3.07]	1617	14.02*	Sesquiterpene
Germacrene D	25.66	1461	2.23	[3.07]	1617	14.02*	Sesquiterpene
Viridiflorene	26.27	1468	0.22	0.13	1608	13.56	Sesquiterpene
Bicyclgermacrene	26.86	1475	0.36	0.29	1635	15.02	Sesquiterpene
Valencene	27.54	1483	0.54	0.63	1658	16.22	Sesquiterpene
$\delta$ -Guaiene	27.79	1486	0.61	0.50	1628	14.62	Sesquiterpene
$\gamma$ -Cadinene	28.73	1497	1.59	[1.64]	1664	16.53*	Sesquiterpene
$\delta$ -Cadinene	29.36	1506	0.18	[0.65]	1688	17.80*	Sesquiterpene
<i>trans</i> -Calamenene	30.20	1518	0.11	0.19	1724	20.06	Sesquiterpene
( <i>E</i> )-Nerolidol	33.85	1569	0.37	0.36	1979	36.17	Sesquiterp. alcohol
1,10-diepi-Cubenol	36.01	1600	0.31	0.30	1946	34.69	Sesquiterp. alcohol
$\tau$ -Cadinol	37.55	1638	1.64	1.78	2064	39.18	Sesquiterp. alcohol
$\beta$ -Eudesmol	37.86	1646	0.04	0.07	2124	40.97	Sesquiterp. alcohol
$\alpha$ -Cadinol	38.08	1651	0.14	0.12	2115	40.75	Sesquiterp. alcohol
<b>Total identified</b>			<b>98.43%</b>	<b>98.71%</b>			

\*: 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

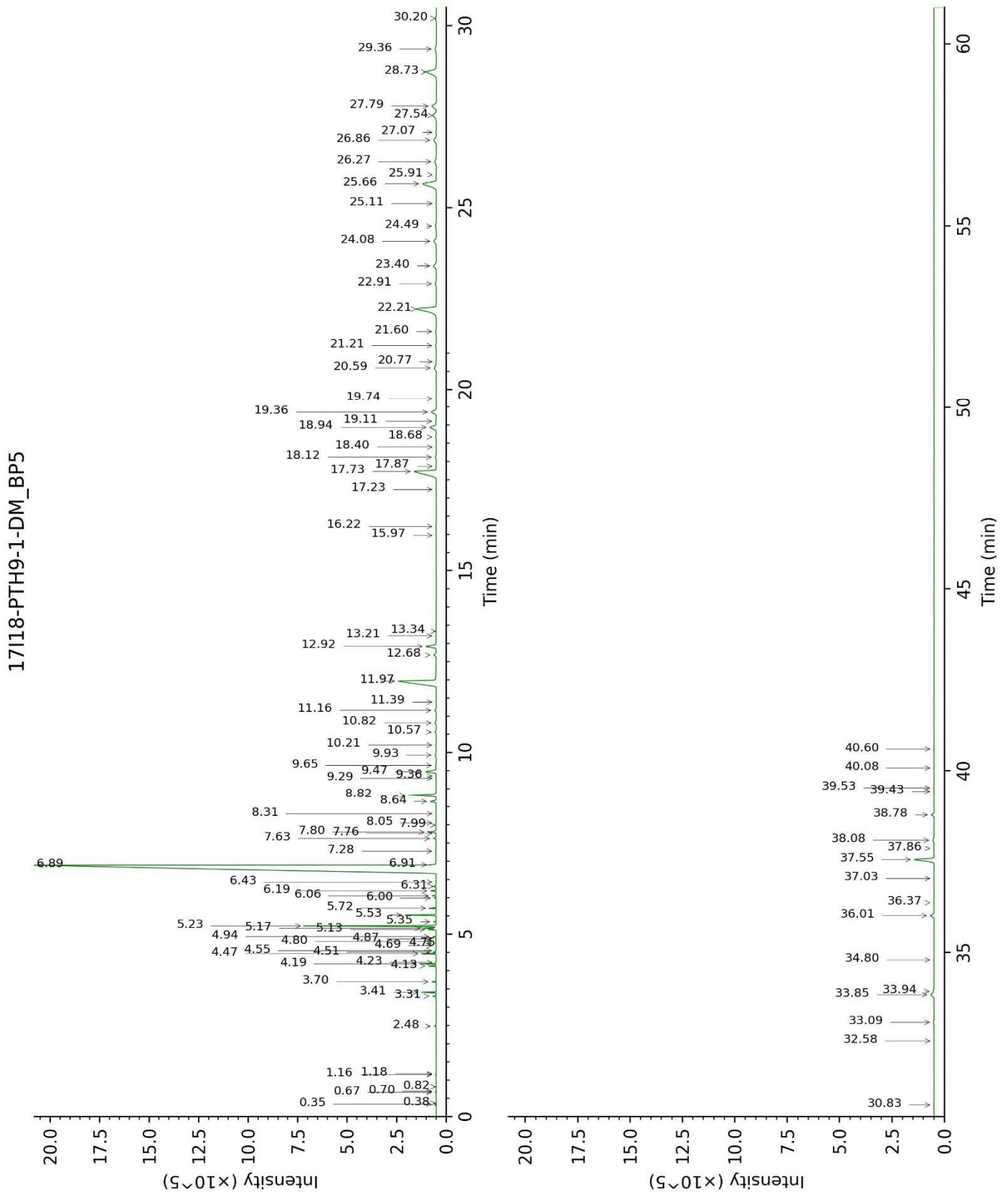
#### OTHER DATA

**Physical aspect :** Faintly yellow liquid

**Refractive index :** 1.4695  $\pm$  0.0003 (20 °C)

#### CONCLUSION

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



17118-PTH9-1-DM\_WAX

