

GC/MS BATCH NUMBER: B10103

ESSENTIAL OIL: BASIL LINALOOL

BOTANICAL NAME: OCIMUM BASILICUM

ORIGIN: EGYPT

KEY CONSTITUENTS PRESENT IN THIS BATCH OF BASIL LINALOOL OIL	%
LINALOOL	52.5
1,8-CINEOLE	8.7
trans- α -BERGAMOTENE	5.9
EUGENOL	5.2
GERMACRENE D	2.9
δ -CADINENE	2.4
T-CADINOL	2.3
γ -CADINENE	1.7
δ -GUAIENE	1.3
METHYL CHAVICOL (ESTRAGOLE)	1.1
trans- β -OCIMENE	0.6
CAMPHOR	0.5
TERPINEN-4-OL	0.4

Comments from Robert Tisserand: Smells like a very good linalool chemotype of Basil. 7 of 8 key ISO constituents are within the standard range with cineole being slightly high, which is not a problem.

Date : May 2, 2016

SAMPLE IDENTIFICATION

Internal code : 16D11-PTH1-1-HM

Customer identification : Basil (Linalool CT) - Egypt - B1010358

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).

Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2016-04-29

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.	
Isoamyl alcohol	1.05	727	0.01	0.01	1156	2.53	Aliphatic alcohol
cis-Hex-3-en-1-ol	2.31	863	0.02	0.05	1336	4.92	Aliphatic alcohol
Hashishene	2.98	914	0.01	0.48	950	0.90*	Monoterpene
α-Thujene	3.09	921	0.03	0.03	958	0.94	Monoterpene
α-Pinene	3.19	927	0.48	[0.48]	950	0.90*	Monoterpene
Camphene	3.46	944	0.10	0.10	1005	1.13	Monoterpene
Sabinene	3.88	970	0.47	0.48	1060	1.57	Monoterpene
β-Pinene	3.94	973	0.95	0.92	1042	1.43	Monoterpene
Myrcene	4.23*	991	1.02	0.91	1118	2.07	Monoterpene
Dehydro-1,8-cineole	4.23*	991	[1.02]	0.02	1132	2.23	Monoterp. ether
α-Phellandrene	4.49*	1006	0.02	0.01	1110	1.99	Monoterpene
Δ3-Carene	4.49*	1006	[0.02]	0.01	1093	1.83	Monoterpene
α-Terpinene	4.67	1017	0.07	0.08	1124	2.15	Monoterpene
para-Cymene	4.85	1027	0.08	0.09	1212	3.17	Monoterpene
Limonene	4.90	1030	0.42	0.31	1142	2.36	Monoterpene
1,8-Cineole	4.97	1034	8.74	8.13	1151	2.46	Monoterp. ether
cis-β-Ocimene	5.08	1040	0.08	0.15	1191	2.92*	Monoterpene
trans-β-Ocimene	5.26	1050	0.67	0.60	1206	3.10	Monoterpene
γ-Terpinene	5.44	1060	0.08	[0.15]	1191	2.92*	Monoterpene
cis-Linalool oxide (fur.)	5.71	1075	0.04	0.04	1386	5.64	Monoterp. alcohol
cis-Sabinene hydrate	5.73	1076	0.11	0.20	1414	6.07	Monoterp. alcohol
Terpinolene	5.90	1086	0.13	0.11	1226	3.38	Monoterpene
Octanol	5.96	1089	0.04	0.09	1514	7.96	Aliphatic alcohol
trans-Linalool oxide (fur.)	6.01*	1092	0.04	0.03	1416	6.11	Monoterp. alcohol
Fenchone	6.01*	1092	[0.04]	0.01	1332	4.86	Monoterp. ketone
6,7-Epoxy-myrcene	6.13	1098	0.03	0.03	1356	5.20	Monoterp. ether
Linalool	6.48	1113	52.48	54.70	1513	7.95	Monoterp. alcohol
(Z)-Epoxyocimene	6.83	1127	0.02				Monoterp. ether
1-Terpineol	7.19*	1141	0.17	0.10	1525	8.28	Monoterp. alcohol
(E)-Epoxyocimene	7.19*	1141	[0.17]				Monoterp. ether
Camphor	7.32	1146	0.51	0.87	1427	6.32*	Monoterp. ketone
Borneol	8.01	1174	0.29	0.99	1631	11.72	Monoterp. alcohol
Terpinen-4-ol	8.21	1182	0.36	6.65	1534	8.55*	Monoterp. alcohol
α-Terpineol	8.78	1203	0.83	1.31	1636	11.95*	Monoterp. alcohol
Methylchavicol	8.86	1205	1.07	1.08	1587	10.18*	Phenylpropanoid
Octyl acetate	9.34	1216	0.18	0.16	1437	6.48	Aliphatic ester
Neral	10.57	1245	0.10	0.14	1605	10.75	Monoterp. aldehyde
Bornyl acetate	12.08	1281	0.91	1.02	1517	8.06	Monoterp. ester
α-Cubebene	14.97	1335	0.04	0.04	1407	5.95	Sesquiterpene
Eugenol	16.35	1357	5.22	4.92	2066	36.47	Phenylpropanoid
α-Copaene	16.57	1360	0.16	[0.87]	1427	6.32*	Sesquiterpene

β-Bourbonene	16.97	1367	0.25	0.26	1456	6.87	Sesquiterpene
β-Cubebene	17.50	1375	0.11	0.14	1482	7.34	Sesquiterpene
β-Elemene	17.74	1379	1.21	1.16	1529	8.40*	Sesquiterpene
β-Caryophyllene	19.27	1404	0.25	[1.16]	1529	8.40*	Sesquiterpene
cis-α-Bergamotene	19.40	1405	0.10	0.13	1515	8.01	Sesquiterpene
Aromadendrene	20.12	1414	0.16	[6.65]	1534	8.55*	Sesquiterpene
trans-α-Bergamotene	20.94	1424	5.93	[6.65]	1534	8.55*	Sesquiterpene
cis-β-Farnesene	21.50	1431	0.18	0.29	1585	10.12	Sesquiterpene
α-Humulene	21.94	1436	0.70	0.43	1590	10.27	Sesquiterpene
Dauca-5,8-diene	22.57	1444	0.47	[1.08]	1587	10.18*	Sesquiterpene
trans-β-Farnesene	23.11	1450	0.13	0.12	1621	11.28	Sesquiterpene
Germacrene D	24.11	1463	2.85	3.03	1626	11.49	Sesquiterpene
Viridiflorene	24.75	1471	0.40	0.28	1617	11.09	Sesquiterpene
Bicyclgermacrene	25.26	1477	0.87	0.76	1644	12.31	Sesquiterpene
δ-Guaiene	25.98	1486	1.28	[1.31]	1636	11.95*	Sesquiterpene
γ-Cadinene	26.18	1488	1.67	1.32	1666	13.28	Sesquiterpene
δ-Cadinene	27.06	1499	2.37	2.45	1671	13.51	Sesquiterpene
trans-Calamenene	27.64	1506	0.36	0.20	1732	16.47	Sesquiterpene
trans-Cadina-1,4-diene	28.50	1517	0.16	0.20	1695	14.63	Sesquiterpene
Maaliol	31.46	1556	0.11	0.10	1890	26.54	Sesquiterp. alcohol
(E)-Nerolidol	32.39*	1568	0.30	0.12	1994	33.15	Sesquiterp. alcohol
Spathulenol	32.39*	1568	[0.30]	0.14	2021	34.75	Sesquiterp. alcohol
1,10-diepi-Cubenol	34.83	1600	0.45	0.44	1955	30.80	Sesquiterp. alcohol
τ-Cadinol	36.46	1636	2.30	2.52	2075	36.79	Sesquiterp. alcohol
β-Eudesmol	36.75	1643	0.07	0.05	2113	38.10	Sesquiterp. alcohol
α-Cadinol	36.99	1648	0.10	0.12	2126	38.58	Sesquiterp. alcohol
α-Bisabolol	38.60	1686	0.03	0.03	2136	38.87	Sesquiterp. alcohol
Total identified			98.79%	99.16%			

*: 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 : Slightly yellow liquid

Refractive index : 1.4735 ± 0.0003 (20 °C)

CONCLUSION

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



