



## GC/MS BATCH NUMBER: CC0101

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**ESSENTIAL OIL:** CINNAMON BARK  
**BOTANICAL NAME:** CINNAMOMUM VERUM  
**ORIGIN:** SRI LANKA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CINNAMON BARK OIL	%
(E)-CINNAMALDEHYDE	73.5
LINALOOL	5.8
$\beta$ -CARYOPHYLLENE	5.7
(E)-CINNAMYL ACETATE	4.8
EUGENOL	4.1
BENZYL BENZOATE	1.3

Comments from Robert Tisserand: Excellent "dry wood" cinnamon odor. Constituents are in expected amounts for this oil.

**Date :** August 5, 2016

*SAMPLE IDENTIFICATION*

**Internal code :** 16G22-PTH6-1-SM

**Customer identification :** Cinnamon Bark - Sri Lanka - CC0101512R

**Type :** Essential oil

**Source :** *Cinnamomum verum*

**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 :** 2016-08-01

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.	
$\alpha$ -Thujene	3.24	922	0.07	0.10	952	0.91	Monoterpene
$\alpha$ -Pinene	3.34	929	0.34	0.31	944	0.88	Monoterpene
Camphene	3.63	946	0.12	0.11	999	1.10	Monoterpene
Sabinene	4.06	972	0.02	0.02	1055	1.53	Monoterpene
$\beta$ -Pinene	4.12	976	0.11	0.10	1038	1.39	Monoterpene
Benzaldehyde	4.16	978	0.05	0.04	1430	6.35	Simple phenolic
Myrcene	4.40	993	0.04	0.05	1113	2.02	Monoterpene
$\alpha$ -Phellandrene	4.67*	1008	0.43	0.36	1107	1.95	Monoterpene
$\Delta$ 3-Carene	4.67*	1008	[0.43]	0.03	1088	1.79	Monoterpene
Octanal	4.80	1016	tr	tr	1230	3.43	Aliphatic aldehyde
$\alpha$ -Terpinene	4.86	1019	0.14	0.14	1120	2.10	Monoterpene
para-Cymene	5.05	1029	0.50	0.50	1207	3.10	Monoterpene
Limonene	5.08	1031	0.19	0.17	1138	2.31	Monoterpene
$\beta$ -Phellandrene	5.11	1033	0.58	0.61	1144	2.38*	Monoterpene
1,8-Cineole	5.15	1035	0.06	[0.61]	1144	2.38*	Monoterp. ether
cis- $\beta$ -Ocimene	5.27	1042	0.02	0.04	1186	2.86*	Monoterpene
trans- $\beta$ -Ocimene	5.45	1052	0.01	0.01	1200	3.04	Monoterpene
$\gamma$ -Terpinene	5.63	1062	0.02	[0.04]	1186	2.86*	Monoterpene
cis-Linalool oxide (fur.)	5.93	1078	0.01	0.01	1376	5.50	Monoterp. alcohol
Isoterpinolene	6.02	1083	0.01	0.01	1218	3.25	Monoterpene
Terpinolene	6.10	1088	0.04	0.03	1222	3.32	Monoterpene
trans-Linalool oxide (fur.)	6.24	1096	0.02	0.02	1404	5.91	Monoterp. alcohol
para-Cymenene	6.31	1100	0.01	0.01	1367	5.37	Monoterpene
Linalool	6.68	1114	5.84	5.85	1494	7.58	Monoterp. alcohol
Camphor	7.65	1150	0.01	0.01	1420	6.19	Monoterp. ketone
Hydrocinnamaldehyde	8.36	1177	0.04				Phenylpropanoid
Terpinen-4-ol	8.65	1188	0.04	5.73	1525	8.28*	Monoterp. alcohol
$\alpha$ -Terpineol	9.32	1208	0.09	0.07	1623	11.35	Monoterp. alcohol
(Z)-Cinnamaldehyde	10.35	1232	0.21	0.17	1765	18.38	Phenylpropanoid
o-Anisaldehyde	11.21	1251	0.16	0.12	1826	22.10	Simple phenolic
(E)-Cinnamaldehyde	13.72	1306	73.52	74.06	1908	27.85	Phenylpropanoid
$\alpha$ -Copaene	17.34	1363	0.22	0.21	1435	6.45	Sesquiterpene
Eugenol	17.74	1369	4.06	4.09	2049	35.89	Phenylpropanoid
Hydrocinnamyl acetate	18.66	1383	0.09				Phenylpropanoid ester
$\beta$ -Caryophyllene	20.30	1407	5.74	[5.73]	1525	8.28*	Sesquiterpene
$\alpha$ -Humulene	22.94	1439	0.35	0.30	1582	10.02	Sesquiterpene
(E)-Cinnamyl acetate	24.89	1462	4.80	4.83	2030	35.20	Phenylpropanoid ester
$\delta$ -Cadinene	28.80*	1511	0.13	0.03	1673	13.59	Sesquiterpene
(E)-Cinnamic acid	28.80*	1511	[0.13]				Phenylpropanoid
Eugenyl acetate	30.88	1539	0.13	0.12	2146	39.14	Phenylpropanoid ester
(E)-o-	31.94	1554	0.04	0.04	2292	42.83	Phenylpropanoid

Methoxycinnamaldehyde							
Caryophyllene oxide	33.42	1574	0.15	0.13	1847	23.53	Sesquiterp. ether
Benzyl benzoate	42.11	1780	1.26	1.25	2466	46.58	Phenolic ester
<b>Total identified</b>			<b>99.67%</b>	<b>99.68%</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 :** Light yellow liquid

**Refractive index :**  $1.5915 \pm 0.0003$  (20 °C)

#### CONCLUSION

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



