PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: CC0102

ESSENTIAL OIL: CINNAMON BARK
BOTANICAL NAME: CINNAMOMUM VERUM
ORIGIN: MADAGASCAR

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CINNAMON BARK OIL	%
(E)-CINNAMALDEHYDE	62.6
EUGENOL	8.2
β-CARYOPHYLLENE	5.4
LINALOOL	4.9
(E)-CINNAMYL ACETATE	3.3
β-PHELLANDRENE	1.9
LIMONENE	1.3
p-CYMENE	1.3
α-PINENE	1.1
α-PHELLANDRENE	1.1

Comments from Robert Tisserand: Excellent spicy odor profile, and the lab report looks perfect.

Date : January 26, 2017

SAMPLE IDENTIFICATION

Internal code : 17A17-PTH2-1-DM
Customer identification : Cinnamon Bark - Mad. - CC0102511R
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 : 2017-01-25

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.	
Styrene	2.84	896	0.04	0.04	1196	3.75	Phenylpropanoid
Tricyclene	3.15	916	0.01	tr	919	1.14	Monoterpene
α-Thujene	3.24	921	0.18	0.28	956	1.30	Monoterpene
α-Pinene	3.35	928	1.12	1.02	946	1.25	Monoterpene
Camphene	3.63*	945	0.42	0.39	994	1.56	Monoterpene
α-Fenchene	3.63*	945	[0.42]	0.01	985	1.50	Monoterpene
Sabinene	4.06	972	0.11	0.11	1066	2.12	Monoterpene
β-Pinene	4.12	976	0.38	0.38	1044	1.94	Monoterpene
Benzaldehyde	4.17	979	0.34	0.33	1438	7.95	Simple phenolic
Myrcene	4.41	994	0.14	0.14	1119	2.71	Monoterpene
α-Phellandrene	4.68*	1007	1.05	0.94	1112	2.63	Monoterpene
Δ3-Carene	4.68*	1007	[1.05]	0.09	1098	2.43	Monoterpene
Octanal	4.81	1014	0.01	0.03	1235	4.34*	Aliphatic aldehyde
α-Terpinene	4.86	1017	0.62	0.61	1126	2.81	Monoterpene
para-Cymene	5.07	1028	1.31	1.37	1212	4.00	Monoterpene
Limonene	5.10	1029	1.31	1.26	1144	3.05	Monoterpene
β-Phellandrene	5.13	1031	1.89	2.66	1151	3.15*	Monoterpene
1,8-Cineole	5.15	1032	0.76	[2.66]	1151	3.15*	Monoterp. ether
cis-β-Ocimene	5.28	1039	0.08	0.07	1190	3.66	Monoterpene
trans-β-Ocimene	5.46	1048	0.05	0.05	1205	3.88	Monoterpene
γ-Terpinene	5.64	1057	0.06	0.05	1192	3.69	Monoterpene
cis-Linalool oxide (fur.)	5.94	1073	0.01	0.01	1383	6.65	Monoterp. alcohol
Isoterpinolene	6.04	1078	0.01	[0.03]	1235	4.34*	Monoterpene
Terpinolene	6.11	1082	0.13	0.13	1226	4.20	Monoterpene
trans-Linalool oxide (fur.)	6.25	1089	0.02	0.02	1407	7.19	Monoterp. alcohol
para-Cymenene	6.34	1094	0.01	0.01	1370	6.45	Monoterpene
Linalool	6.69	1107	4.87	4.84	1500	9.55	Monoterp. alcohol
Hydrocinnamaldehyde	8.39	1171	0.08				Phenylpropanoid
Borneol	8.57	1177	0.03	0.03	1619	14.50	Monoterp. alcohol
Terpinen-4-ol	8.69	1181	0.29	0.29	1529	10.65	Monoterp. alcohol
para-Cymen-8-ol	9.22	1199	0.01	0.02	1769	23.57	Monoterp. alcohol
α-Terpineol	9.37	1203	0.55	0.53	1623	14.73	Monoterp. alcohol
α-Phellandrene epoxide	9.67	1209	0.03	0.02	1720	20.27	Monoterpene
(*Z*)-Cinnamaldehyde	10.41	1226	0.58	0.45	1774	23.92	Phenylpropanoid
(*E*)-Cinnamaldehyde	13.77	1299	62.64	63.67	1922	33.98	Phenylpropanoid
(*E*)-Cinnamyl alcohol	15.70	1329	0.11	0.09	2176	42.59	Phenylpropanoid
α-Copaene	17.39	1354	0.44	0.41	1427	7.67	Sesquiterpene
Eugenol	17.89	1362	8.24	8.24	2065	39.52	Phenylpropanoid
β-Caryophyllene	20.36	1398	5.37	5.11	1518	10.25	Sesquiterpene
α-Humulene	23.04	1430	0.77	0.73	1579	12.56	Sesquiterpene
(*E*)-Cinnamyl acetate	24.95	1453	3.25	3.19	2044	38.84	Phenylpropanoid ester

(*E*)-Cinnamic acid	28.68	1498	0.19	0.20	2746	54.34	Phenylpropanoid
δ-Cadinene	28.90	1501	0.06	0.05	1677	17.57	Sesquiterpene
trans-γ-Bisabolene	30.05	1517	0.01	0.01	1692	18.39	Sesquiterpene
Eugenyl acetate	30.96	1530	0.14	0.13	2160	42.16	Phenylpropanoid ester
(*E*)-o-Methoxycinnamaldehyde	32.13	1546	0.27	0.27	2303	45.61	Phenylpropanoid
Caryophyllene oxide	33.52*	1565	0.31	0.21	1845	29.02	Sesquiterp. ether
(*E*)-Nerolidol	33.52*	1565	[0.31]	0.02	1986	36.88	Sesquiterp. alcohol
Spathulenol	33.75	1568	0.02	0.02	2016	37.95	Sesquiterp. alcohol
(*E*)-o-Methoxycinnamyl acetate	39.40	1685	0.01	0.01	2426	48.22	Phenylpropanoid ester
Benzyl benzoate	42.17	1768	0.61	0.58	2481	49.34	Phenolic ester
Total identified			**98.94%**	**99.12%**			

*: Two or more compounds are coeluting on this column

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

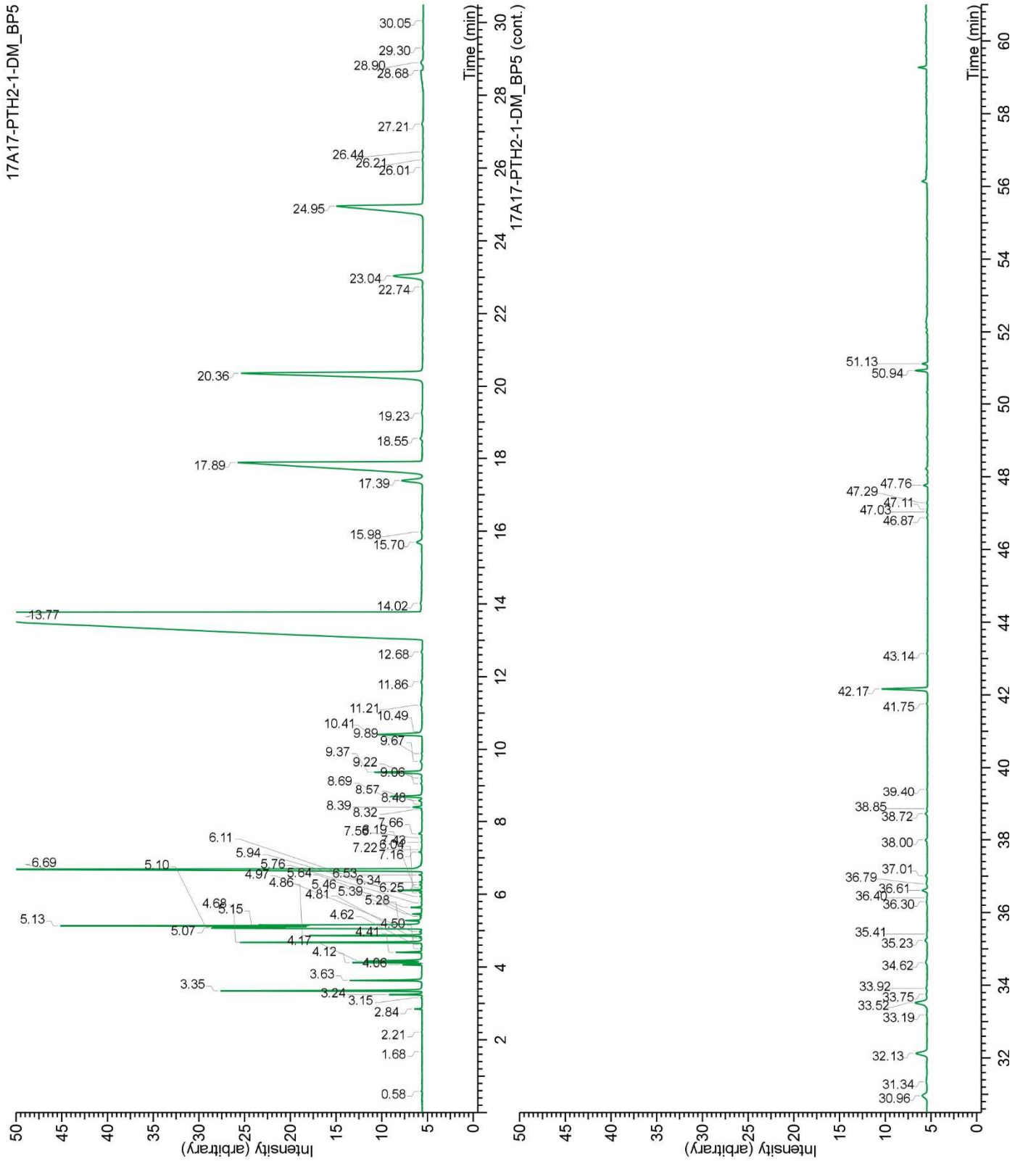
Note: no correction factor was applied

Other Data

Physical aspect : Light yellow liquid
Refractive index : 1.5695 ± 0.0003 (20 °C)

Conclusion

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



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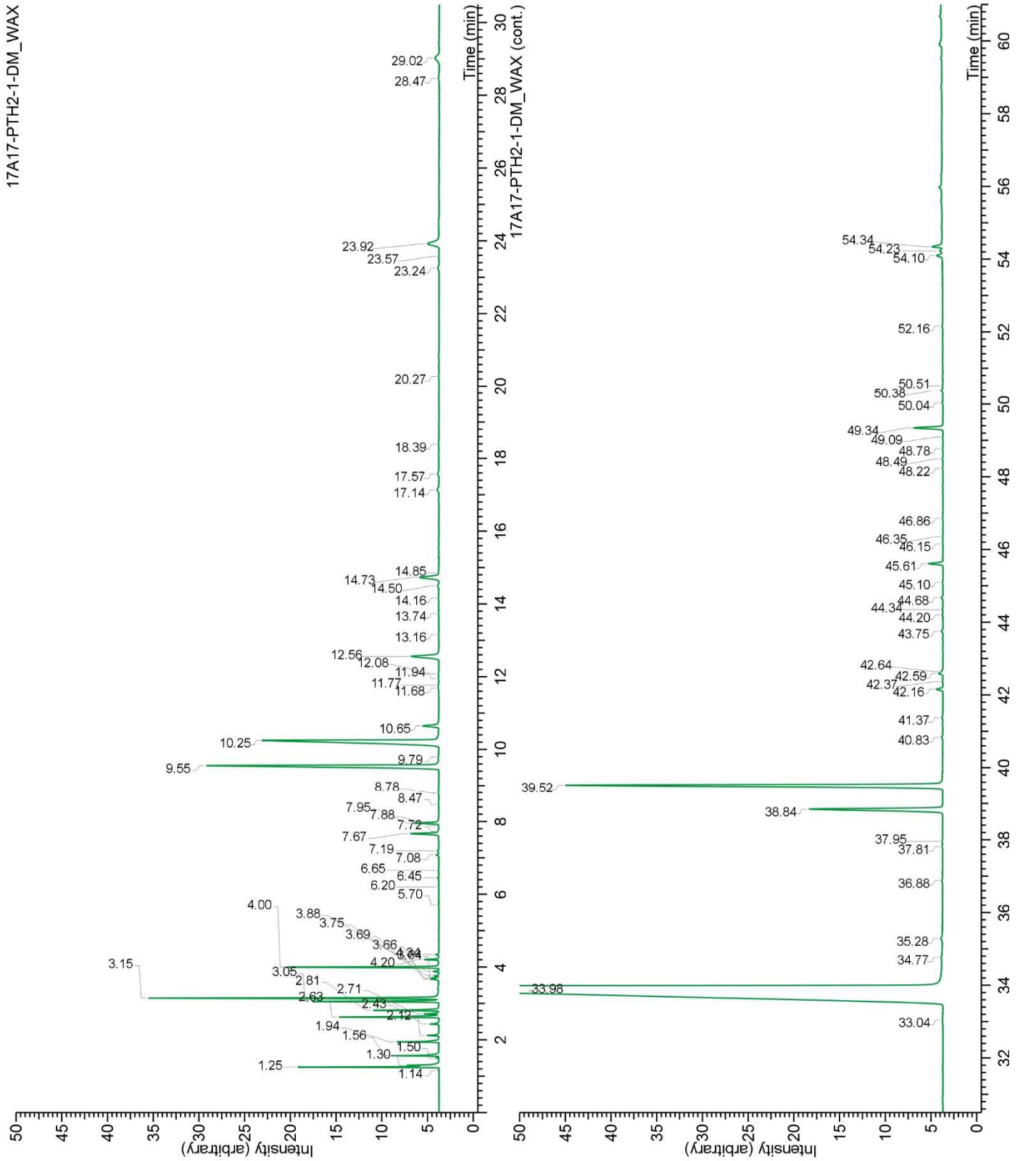
17A17-PTH2-1-DM_WAX
Time (min)
Intensity (arbitrary)
29.02
28.47
23.92
23.57
23.24
20.27
18.39
17.57
17.14
14.85
14.73
14.50
14.16
13.74
13.16
12.56
12.08
11.94
11.77
11.68
10.65
10.25
9.79
9.55
8.78
8.47
7.95
7.88
7.72
7.67
7.19
7.08
6.65
6.45
6.20
5.70
4.00
3.88
3.75
3.69
3.66
4.20
3.15
3.05
2.81
2.71
2.63
2.43
2.12
1.94
1.56
1.50
1.30
1.25
1.14
17A17-PTH2-1-DM_WAX (cont.)
Time (min)
Intensity (arbitrary)
54.34
54.23
54.10
52.16
50.51
50.38
50.04
49.34
49.09
48.78
48.49
48.22
46.86
46.35
46.15
45.61
45.10
44.68
44.34
44.20
43.75
42.64
42.59
42.37
42.16
41.37
40.83
39.52
38.84
37.95
37.81
36.88
35.28
34.77
33.98
33.04