

Date : March 07, 2019

CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 19C04-PTH02-1-SCC

Customer identification : Buddha Wood - Australia - BO010271R

Type : Essential oil

Source : *Eremophila mitchellii*

Customer : Plant Therapy

ANALYSIS

Method: PC-PA-014-17J19 - Analysis of the composition of an essential oil, or other volatile liquid, by FAST GC-FID (in French); identifications validated by GC-MS.

Analyst : Sylvain Mercier, M. Sc., Chimiste

Analysis date : March 06, 2019

Checked and approved by :

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

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PHYSICOCHEMICAL DATA

Physical aspect: Dark orange liquid

Refractive index: 1.5363 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method.

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
4-Vinylguaiacol	0.03	0.02	Simple phenolic
Unknown	0.07		Unknown
cis-β-Elemene	0.02	0.02	Sesquiterpene
Unknown	0.02		Unknown
Selina-5,11-diene	0.01	0.02	Sesquiterpene
Unknown	0.08		Unknown
4,5-diepi-Aristolochene	0.28	0.28	Sesquiterpene
Unknown	0.02		Unknown
Unknown	0.08		Sesquiterpene
β-Selinene	0.37	0.39	Sesquiterpene
Valencene	1.01	0.96	Sesquiterpene
α-Selinene	0.26	0.25*	Sesquiterpene
Eremophilene	0.15	[0.25]*	Sesquiterpene
Eremophila-1(10),8,11-triene	0.07		Sesquiterpene
γ-Vetivenene	0.05	0.03	Sesquiterpene
Unknown	0.09		Oxygenated sesquiterpene
Unknown	0.10		Unknown
Unknown	0.11		Unknown
Unknown	0.05		Unknown
Unknown	0.39		Unknown
Unknown	0.07		Unknown
Unknown	1.02	1.78	Oxygenated sesquiterpene
Unknown	0.28*		Unknown
γ-Eudesmol	[0.28]*	0.08	Sesquiterpenic alcohol
Unknown	1.04		Oxygenated sesquiterpene
Neointermedeol	0.22	3.90*	Sesquiterpenic alcohol
Unknown	0.66		Unknown
Unknown	0.14		Sesquiterpene
Eremophila-1,11-dien-9-one	3.44	[3.90]*	Sesquiterpenic ketone
Unknown	0.12		Unknown
Unknown	0.06	0.33	Oxygenated sesquiterpene
Unknown	0.17		Unknown
Unknown	0.18		Unknown
Eremophilone	33.33	33.53	Sesquiterpenic ketone
8-Hydroxydihydroeremophilone	12.32	12.40	Sesquiterpenic alcohol
8α-Hydroxyeremophila-1,11-dien-9-one?	1.41		Sesquiterpenic ketone
Unknown	1.58		Unknown
Unknown	0.14		Unknown
Unknown	0.70		Unknown
Dehydrofukinone	0.34	0.55	Sesquiterpenic ketone
Unknown	0.26		Unknown
Unknown	0.16		Unknown
Unknown	0.19		Unknown
Hydroxyeremophilone	27.91	26.45	Sesquiterpenic ketone
Unknown	0.54		Unknown
Unknown	0.06		Unknown
9-Hydroxy-1,7(11),9-eremophilatrien-8-	6.71	7.45	Unknown

one			
Unknown	0.10		Unknown
Unknown	0.13		Unknown
Total identified	88.46%	86.34%	

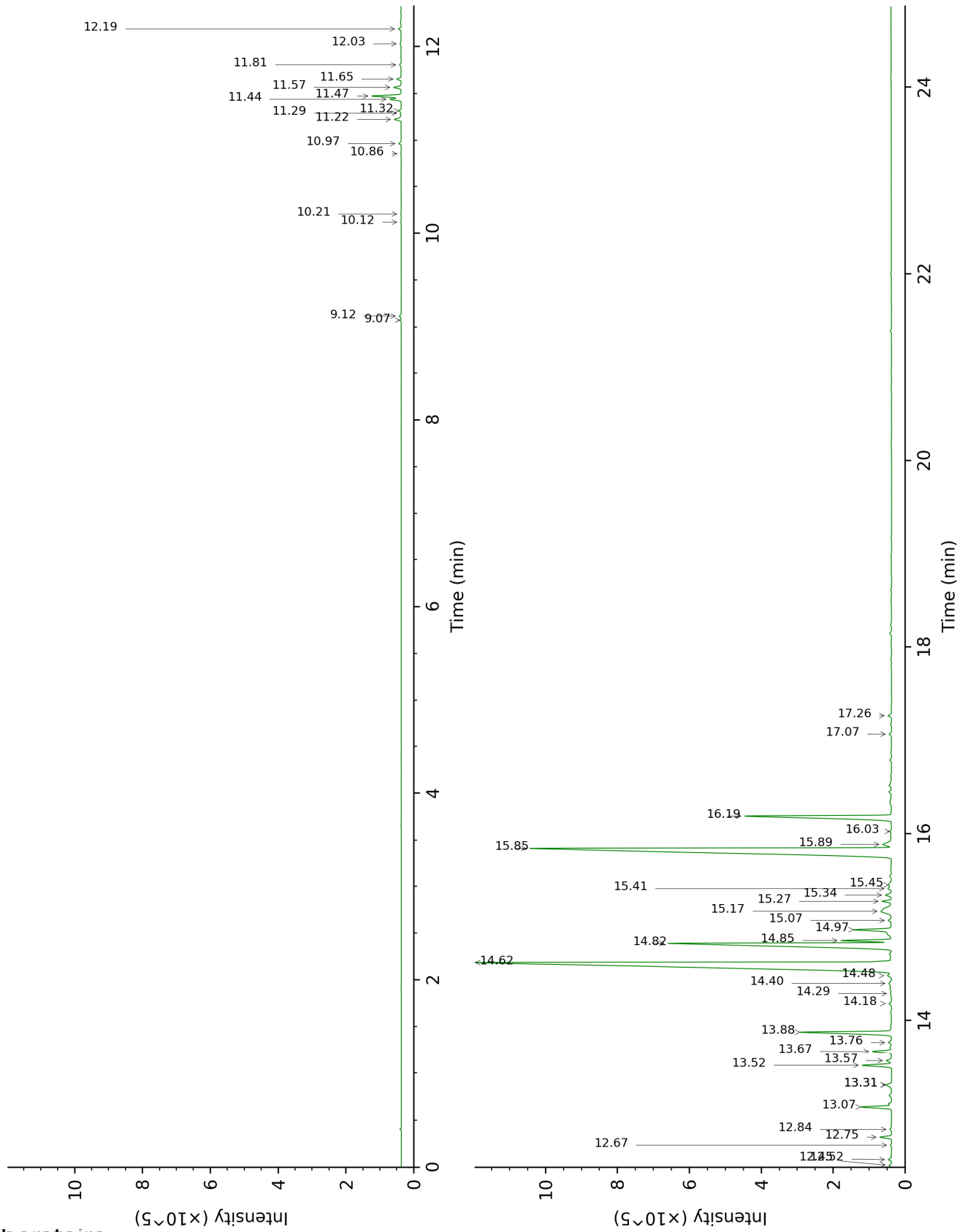
*: Two or more compounds are coeluting on this column

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

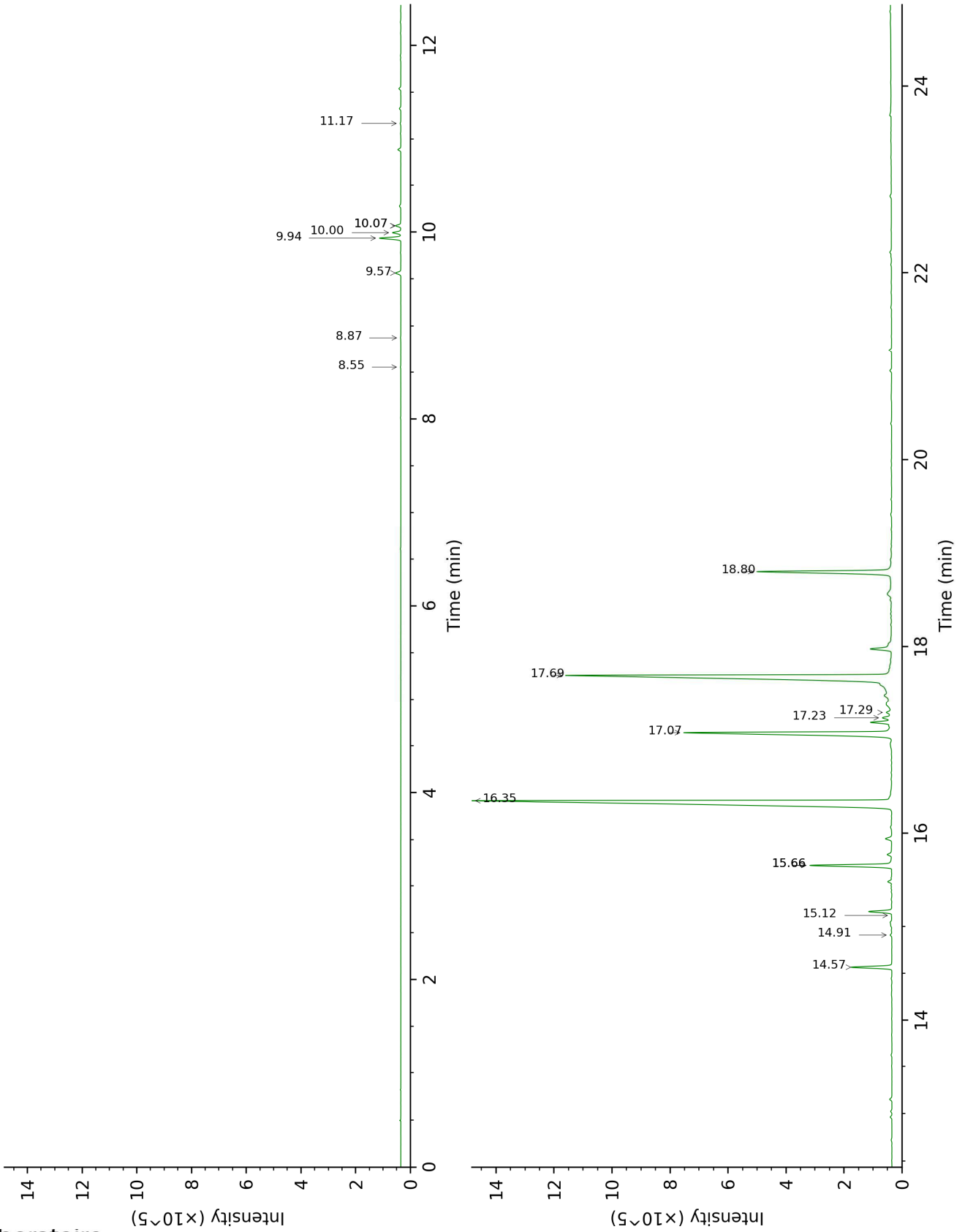
Note: no correction factor was applied

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DB-5



DB-WAX



FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
4-Vinylguaiacol	9.07	1306	0.03	15.12	2129	0.02
Unknown [m/z 97, 109 (29), 81 (18), 95 (17), 166 (16), 67 (14)...]	9.12	1309	0.07			
<i>cis</i> - β -Elemene	10.12	1380	0.02	8.56	1547	0.02
Unknown [m/z 122, 79 (33), 107 (30), 164 (25), 93 (24), 91 (15)...]	10.21	1386	0.02			
Selina-5,11-diene	10.86	1434	0.01	8.87	1573	0.02
Unknown [m/z 111, 126 (68), 69 (51), 41 (40), 55 (29), 179 (21)...]	10.97	1442	0.08			
4,5-diepi-Aristolochene	11.22	1461	0.28	9.57	1628	0.28
Unknown [m/z 109, (152 (49), 124 (41), 67 (34), 81 (34), 180 (33)...]	11.29	1466	0.02			
Unknown [m/z 111, 189 (70), 126 (52), 133 (50), 105 (40), 91 (34)...204 (28)]	11.32	1468	0.08			
β -Selinene	11.44	1477	0.37	10.00	1664	0.39
Valencene	11.47	1479	1.01	9.94	1659	0.96
α -Selinene	11.57	1486	0.26	10.07*	1670	0.25
Eremophilene	11.66	1493	0.15	10.07*	1670	[0.25]
Eremophila-1(10),8,11-triene	11.81	1504	0.07			
γ -Vetivenene	12.03	1522	0.05	11.17	1763	0.03
Unknown [m/z 145, 202 (90), 131 (80), 91 (71), 105 (68), 82 (54), 187 (53), 117 (47)... 220 (24)]	12.19	1534	0.09			
Unknown [m/z 148, 105 (72), 189 (58), 119 (53), 91 (48), 133 (46)...]	12.45	1555	0.10			
Unknown [m/z 96, 68 (89), 206 (73), 109 (55), 137 (37), 67 (36)...]	12.52	1560	0.11			
Unknown [m/z 109, 95 (71), 81 (70), 110 (58), 68 (53)...]	12.67	1572	0.05			
Unknown [m/z 151, 194 (63), 152 (62), 113 (55), 109 (53)...]	12.75	1578	0.39			
Unknown [m/z 109, 208 (90), 140 (54), 41 (52), 69 (49), 55 (46)...]	12.84	1585	0.07			
Unknown [m/z 43, 81 (97), 135 (71), 95 (62), 204 (61), 71 (59), 207 (56)... 222 (3)]	13.07	1604	1.02	14.57	2075	1.78
Unknown [m/z 133, 105 (87), 91 (84), 218 (68), 93 (60), 119 (60)...]	13.31*	1623	0.28			

γ -Eudesmol	13.31*	1623	[0.28]	14.91	2108	0.08
Unknown [m/z 109, 55 (95), 111 (93), 108 (92), 107 (73), 81 (72)...]	13.52	1640	1.04			
Neointermedeol	13.57	1644	0.22	15.66*	2183	3.90
Unknown [m/z 151, 109 (30), 137 (18), 67 (17), 95 (17), 41 (12)...]	13.67	1653	0.66			
Unknown [m/z 204, 147 (56), 189 (39), 91 (35), 119 (32), 107 (30)...]	13.76	1661	0.14			
Eremophila-1,11-dien-9-one	13.88	1670	3.44	15.66*	2183	[3.90]
Unknown [m/z 105, 133 (39), 201 (35), 119 (35), 91 (26), 120 (19)...]	14.18	1695	0.12			
Unknown [m/z 93, 81 (90), 95 (86), 91 (83), 41 (83), 107 (81)... 220 (29), 238? (4)]	14.29	1704	0.06	17.29	2354	0.33
Unknown [m/z 109, 119 (39), 154 (32), 67 (22), 95 (21), 96 (21)...]	14.40	1714	0.17			
Unknown [m/z 123, 236 (86), 109 (72), 193 (67), 207 (55), 41 (52)...]	14.48	1721	0.18			
Eremophilone	14.62	1733	33.33	16.35	2254	33.53
8-Hydroxydihydroeremophilone	14.82	1750	12.32	17.08	2331	12.40
8 α -Hydroxyeremophila-1,11-dien-9-one?	14.85	1753	1.41			
Unknown [m/z 137, 234 (78), 109 (67), 41 (66), 69 (59), 43 (52), 191 (49)...]	14.97	1763	1.58			
Unknown [m/z 137, 191 (58), 109 (41), 41 (52), 234 (49), 152 (44)...]	15.07	1772	0.14			
Unknown [m/z 234, 217 (50), 81 (30), 41 (28), 67 (27), 109 (26)...]	15.17	1780	0.70			
Dehydrofukinone	15.27	1789	0.34	17.23	2348	0.55
Unknown [m/z 234, 191 (71), 149 (31), 163 (30), 41 (30), 219 (29)...]	15.34	1795	0.26			
Unknown [m/z 133, 175 (81), 161 (58), 91 (51), 105 (50), 41 (47)...]	15.41	1801	0.16			
Unknown [m/z 109, 108 (52), 93 (41), 95 (36), 151 (33), 67 (33)...]	15.45	1805	0.19			
Hydroxyeremophilone	15.84	1841	27.91	17.69	2397	26.45
Unknown [m/z 232, 217 (22), 91 (21), 215 (20), 231 (19)...]	15.89	1845	0.54			
Unknown [m/z 137, 179 (64),	16.03	1857	0.06			

123 (57), 194 (42), 43 (41)...						
9-Hydroxy-1,7(11),9- eremophilatrien-8-one	16.19	1872	6.71	18.80	2521	7.45
Unknown [m/z 109, 163 (80), 232 (45), 175 (27), 161 (26)...	17.06	1954	0.10			
Unknown [m/z 217, 122 (83), 232 (66), 161 (61), 109 (50)...	17.26	1972	0.13			
Total identified		88.46%			86.34%	
Total reported		96.58%			88.45%	

*: Two or more compounds are coeluting on this column

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

†: Peaks apexes were resolved, but peaks overlapped and were summed for analysis

Note: no correction factor was applied

R.T.: Retention time (minutes)

R.I.: Retention index