

Date : 2024-07-11

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

**Internal code :** 24F26-PTH02

**Customer Identification :** Buddha Wood - Australia - BO0108R

**Type :** Essential Oil

**Source :** *Eremophila mitchellii*

**Customer :** Plant Therapy

Checked and approved by:

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Alexis St-Gelais, Ph. D., Chimiste 2013-174

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## GAS CHROMATOGRAPHIC ANALYSIS

**Method :** PC-MAT-014 - Analysis of the composition of an essential oil or other volatile liquide by FAST GC-FID

**\*ISO**

**Results :** See analysis summary (next page)

**Analyst :** Alexis St-Gelais, Ph. D., Chimiste 2013-174

**Date :** 2024-07-08

## PHYSICOCHEMICAL DATA

**Refractive index :**  $1.5378 \pm 0.0003$  (20 °C)

**Method :** PC-MAT-016 - Measure of the refractive index of a liquid.

**Analyst :** Cindy Caron B. Sc.

**Date :** 2024-06-28

## CONCLUSION

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

## ANALYSIS SUMMARY - CONSOLIDATED CONTENTS

New readers of similar reports are encouraged to read table footnotes at least once.

Identification	%	Class
Furfural	0.02	Furan
5-Methylfurfural	0.01	Furan
Terpinen-4-ol	0.01	Monoterpenic alcohol
4-Vinylguaiaicol	0.01	Simple phenolic
Unknown	0.05	Unknown
Unknown	0.01	Unknown
$\beta$ -Elemene	0.02	Sesquiterpene
Selina-5,11-diene	0.01	Sesquiterpene
Unknown	0.07	Unknown
4,5-diepi-Aristolochene	0.21	Sesquiterpene
Unknown	0.03	Unknown
Unknown	0.02	Sesquiterpene
Selina-4,11-diene	0.10	Sesquiterpene
$\beta$ -Selinene	0.33	Sesquiterpene
Eremophilene	0.86	Sesquiterpene
$\alpha$ -Selinene	0.24	Sesquiterpene
Eremophila-1(10),8,11-triene	0.16	Sesquiterpene
Nootkatene	0.07	Sesquiterpene
Unknown	0.09	Oxygenated sesquiterpene
$\beta$ -Vetivenene	0.02	Sesquiterpene
Eremophila ketone	0.02	Sesquiterpenic ketone
Unknown	0.10	Unknown
Unknown	0.06	Unknown
Unknown	0.02	Unknown
Unknown	0.04	Oxygenated sesquiterpene
Unknown	0.14	Unknown
Unknown	0.01	Unknown
Unknown	1.08	Oxygenated sesquiterpene
Unknown	0.15	Unknown
$\gamma$ -Eudesmol	0.15	Sesquiterpenic alcohol
Unknown	1.09	Oxygenated sesquiterpene
Neointermedeol	0.19	Sesquiterpenic alcohol
Unknown	0.64	Unknown
Unknown	0.13	Sesquiterpene
Eremophila-1,11-dien-9-one	3.56	Sesquiterpenic ketone
Unknown	0.20	Unknown
Unknown	0.15	Oxygenated sesquiterpene
Unknown	0.21	Unknown
Unknown	0.09	Unknown
Eremophilone	30.35	Sesquiterpenic ketone

8-Hydroxydihydroeremophilone	13.00	Sesquiterpenic alcohol
8 $\alpha$ -Hydroxyeremophila-1,11-dien-9-one	1.05	Sesquiterpenic alcohol
Unknown	1.26	Unknown
Unknown	0.18	Unknown
Unknown	0.68	Unknown
Dehydrofukinone	0.43	Sesquiterpenic ketone
Unknown	0.62	Unknown
Unknown	0.27	Unknown
Unknown	0.28	Unknown
Hydroxyeremophilone	28.63	Sesquiterpenic ketone
Unknown	0.52	Unknown
Unknown	0.04	Unknown
9-Hydroxy-1,7(11),9-eremophilatrien-8-one	5.60	Unknown
Unknown	0.12	Unknown
Unknown	0.33	Unknown
<b>Consolidated total</b>	<b>93.72</b>	

tr: The compound has been detected below 0.005% of the total signal

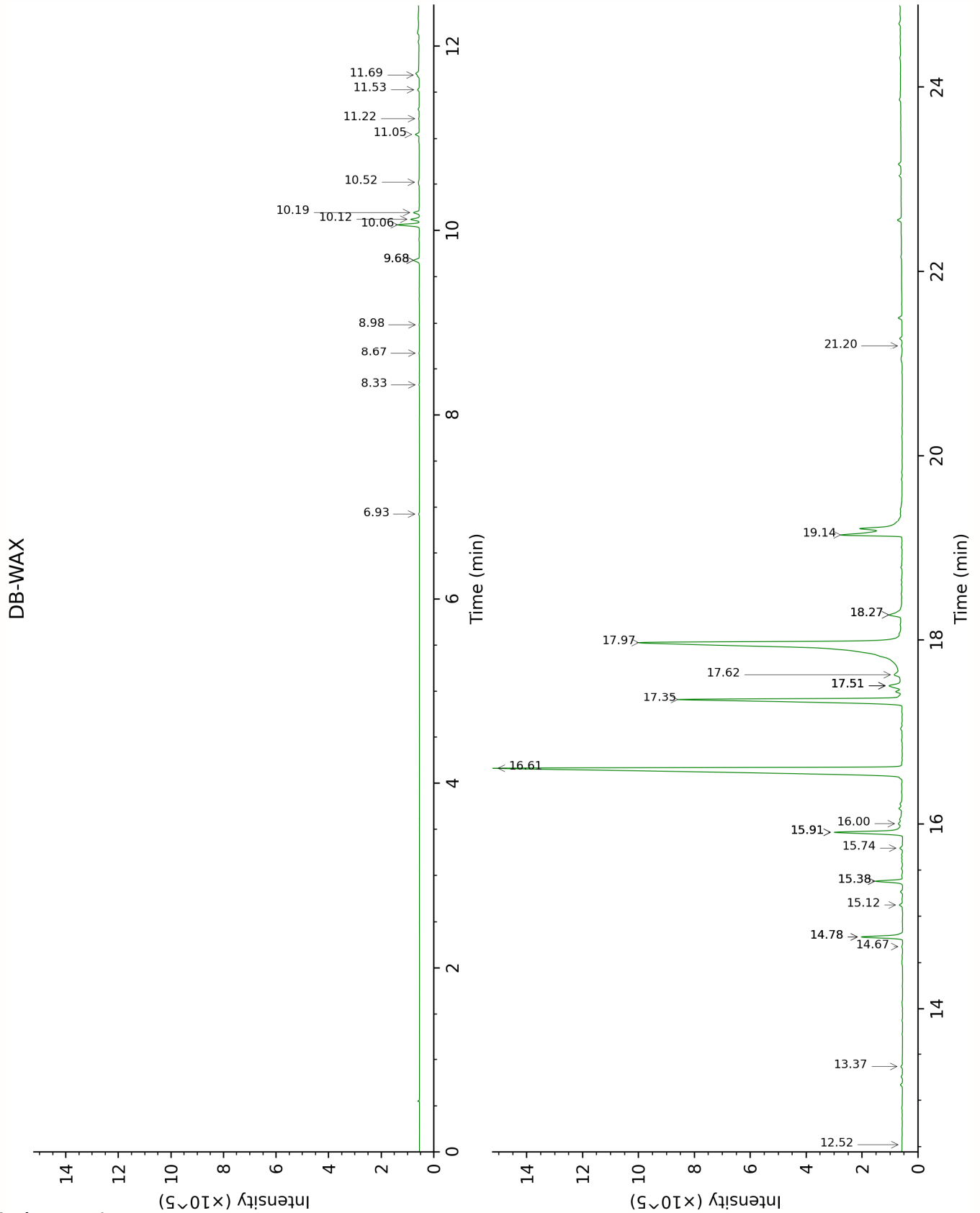
Note: no correction factor was applied

**About "consolidated" data:** The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm is set to prioritize data from the most standard DB-5 column, and smallest values so as to avoid overestimating individual content. This process is semi-automatic. Advanced users are invited to consult the "Full analysis data" table after the chromatograms in this report to access the full untreated data and perform their own calculations if needed.

**Unknowns:** Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

**Bracketed value ([xx]):** A bracketed percent value indicate that two or more compound percentage could not be solved due to coelution.

This page was intentionally left blank. The following pages present the complete data of the analysis.





FULL ANALYSIS DATA

Furfural	Column DB-WAX			Column DB-5		
	6.93	1415.3	0.03	1.84	830.5	0.02
5-Methylfurfural	8.33	1518.4	0.02	3.58	961.1	0.01
Terpinen-4-ol				6.89	1172.1	0.01
4-Vinylguaiaicol	15.38*	2129.5	[1.09]	8.92	1306.7	0.01
Unknown ERMI I [m/z 97, 109 (29), 81 (18), 95 (17), 166 (16), 67 (14)...]	10.52	1690.2	0.07	9.00	1312.7	0.05
Unknown ERMI II [m/z 122, 79 (33), 107 (30), 164 (25), 93 (24), 91 (15)...]				10.01	1383.7	0.01
β-Elemene	8.67	1544.6	0.02	10.10	1389.7	0.02
Selina-5,11-diene	8.98	1568.5	0.01	10.74	1437.0	0.01
Unknown ERMI III [m/z 111, 126 (68), 69 (51), 41 (40), 55 (29), 179 (21)...]	11.53	1774.6	0.07	10.85	1445.2	0.07
4,5-diepi-Aristolochene	9.68*	1622.9	[0.28]	11.11	1464.2	0.21
Unknown ERMI V [m/z 109, (152 (49), 124 (41), 67 (34), 81 (34), 180 (33)...]				11.15	1467.1	0.03
Unknown ERMI IV [m/z 111, 189 (70), 126 (52), 133 (50), 105 (40), 91 (34)...204 (28)]				11.17	1468.9	0.02
Selina-4,11-diene	9.68*	1622.9	[0.28]	11.20	1471.4	0.10
β-Selinene	10.12	1658.2	0.34	11.32	1480.1	0.33
Eremophilene	10.06	1653.5	0.88	11.36	1482.9	0.86
α-Selinene	10.19	1664.0	0.23	11.45	1489.6	0.24
Eremophila-1(10),8,11-triene	11.05	1734.1	0.17	11.54	1496.3	0.16
Nootkatene	11.22	1748.4	0.03	11.69	1507.7	0.07
Unknown AGAR XII [m/z 145, 202 (90), 131 (80), 91 (71), 105 (68), 82 (54), 187 (53), 117 (47)... 220 (24)]				12.07	1537.7	0.09
β-Vetivenene	11.69	1787.9	0.07	12.14	1543.5	0.02
Eremophila ketone	12.52	1860.9	0.02	12.25	1551.6	0.02
Unknown ERMI IX [m/z 148, 105 (72), 189 (58), 119 (53), 91 (48), 133 (46)...]				12.34	1558.5	0.10
Unknown ERMI VIII [m/z 96, 68 (89), 206 (73), 109 (55), 137 (37), 67 (36)...]	13.37	1937.3	0.07	12.40	1563.2	0.06
Unknown ERMI X [m/z 109, 95 (71), 81 (70), 110 (58), 68 (53)...]				12.48	1569.5	0.02



Unknown AGAR XV [m/z 93, 107 (55), 91 (37), 41 (34), 55 (34)... 220 (1)]	14.67	2060.1	0.03	12.55	1575.0	0.04
Unknown ERMI VI [m/z 151, 194 (63), 152 (62), 113 (55), 109 (53)...]	15.91*	2182.2	[3.46]	12.63	1581.8	0.14
Unknown ERMI VII [m/z 109, 208 (90), 140 (54), 41 (52), 69 (49), 55 (46)...]				12.75	1591.3	0.01
Unknown MIAL II [m/z 43, 81 (97), 135 (71), 95 (62), 204 (61), 71 (59), 207 (56)... 222 (3)]	14.78*	2070.1	[1.84]	12.95	1607.0	1.08
Unknown ERMI XIV [m/z 133, 105 (87), 91 (84), 218 (68), 93 (60), 119 (60)...]				13.18*	1626.3	[0.30]
$\gamma$ -Eudesmol	15.12	2103.9	0.15	13.18*	1626.3	[0.30]
Unknown ERMI XIII [m/z 109, 55 (95), 111 (93), 108 (92), 107 (73), 81 (72)...]	15.38*	2129.5	[1.09]	13.39	1643.6	1.09
Neointermedeol	15.91*	2182.2	[3.46]	13.44	1647.8	0.19
Unknown ERMI XII [m/z 151, 109 (30), 137 (18), 67 (17), 95 (17), 41 (12)...]	14.78*	2070.1	[1.84]	13.54	1656.0	0.64
Unknown ERMI XI [m/z 204, 147 (56), 189 (39), 91 (35), 119 (32), 107 (30)...]	15.74	2165.1	0.12	13.64	1664.1	0.13
Eremophila-1,11-dien-9-one	15.91*	2182.2	[3.46]	13.76	1673.7	3.56
Unknown ERMI XVII [m/z 105, 133 (39), 201 (35), 119 (35), 91 (26), 120 (19)...]				14.06	1698.3	0.20
Unknown AGAR XXIV [m/z 93, 81 (90), 95 (86), 91 (83), 41 (83), 107 (81)... 220 (29), 238? (4)]	17.51*	2349.9	[0.99]	14.17	1708.1	0.15
Unknown ERMI XVI [m/z 109, 119 (39), 154 (32), 67 (22), 95 (21), 96 (21)...]				14.28	1717.9	0.21
Unknown ERMI XV [m/z 123, 236 (86), 109 (72), 193 (67), 207 (55), 41 (52)...]	16.00	2191.8	0.26	14.35	1723.8	0.09
Eremophilone	16.60	2254.0	31.02	14.50	1736.8	30.35
8-Hydroxydihydroeremophilone	17.35	2333.1	12.94	14.71	1754.9	13.00
8 $\alpha$ -Hydroxyeremophila-1,11-dien-9-one	18.27*	2434.5	[1.14]	14.73	1756.8	1.05

Unknown MISC XC [m/z 137, 234 (78), 109 (67), 41 (66), 69 (59), 43 (52), 191 (49)...]				14.85	1766.7	1.26
Unknown ERMI XVIII [m/z 137, 191 (58), 109 (41), 41 (52), 234 (49), 152 (44)...]	17.51*	2349.9	[0.99]	14.94	1775.2	0.18
Unknown MISC XCI [m/z 234, 217 (50), 81 (30), 41 (28), 67 (27), 109 (26)...]	17.62	2362.7	0.78	15.04	1783.6	0.68
Dehydrofukinone	17.51*	2349.9	[0.99]	15.07	1785.9	0.43
Unknown ERMI XIX [m/z 234, 191 (71), 149 (31), 163 (30), 41 (30), 219 (29)...]	17.51*	2349.9	[0.99]	15.21	1798.3	0.62
Unknown ERMI XX [m/z 133, 175 (81), 161 (58), 91 (51), 105 (50), 41 (47)...]				15.28	1804.7	0.27
Unknown ERMI XXI [m/z 109, 108 (52), 93 (41), 95 (36), 151 (33), 67 (33)...]	18.27*	2434.5	[1.14]	15.31	1806.7	0.28
Hydroxyeremophilone	17.97	2400.9	30.63	15.73	1845.4	28.63
Unknown ERMI XXII [m/z 232, 217 (22), 91 (21), 215 (20), 231 (19)...]				15.77	1848.5	0.52
Unknown ERMI XXIII [m/z 137, 179 (64), 123 (57), 194 (42), 43 (41)...]				15.88	1858.9	0.04
9-Hydroxy-1,7(11),9-eremophilatrien-8-one	19.14†	2533.2	3.83	16.06	1875.6	5.60
Unknown ERMI XXV [m/z 109, 163 (80), 232 (45), 175 (27), 161 (26)...]	21.20	2782.8	0.04	16.93	1956.8	0.12
Unknown ERMI XXIV [m/z 217, 122 (83), 232 (66), 161 (61), 109 (50)...]				17.13	1975.9	0.33
Total reported		93.95%			93.72%	

\*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, only the first one is taken into account in the consolidated total

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

tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied

R.T.: Retention time (minutes)

R.I.: Retention index