

Date : 2024-02-22

CERTIFICATE OF ANALYSIS - GC PROFILING

SAMPLE IDENTIFICATION

**Internal code** : 24B08-PTH03

**Customer Identification** : Buddha Wood - Australia - BO0107R

**Type** : Essential Oil

**Source** : *Eremophila mitchellii*

**Customer** : Plant Therapy

Checked and approved by:

---

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

*Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia. This report is digitally signed, it is only considered valid if the digital signature is intact. The results only describe the samples that were submitted to the assays.*

## 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 :** 2024-02-22

## PHYSICOCHEMICAL DATA

**Refractive index :**  $1.5376 \pm 0.0003$  (20 °C)

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

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

**Date :** 2024-02-08

## 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
Unknown	0.04	Unknown
$\beta$ -Elemene	0.02	Sesquiterpene
Selina-5,11-diene	0.02	Sesquiterpene
Unknown	0.07	Unknown
4,5-diepi-Aristolochene	0.23	Sesquiterpene
Unknown	0.05	Sesquiterpene
Selina-4,11-diene	0.11	Sesquiterpene
$\beta$ -Selinene	0.35	Sesquiterpene
Eremophilene	0.91	Sesquiterpene
$\alpha$ -Selinene	0.26	Sesquiterpene
Eremophila-1(10),8,11-triene	0.16	Sesquiterpene
Nootkatene	0.05	Sesquiterpene
$\gamma$ -Vetivenene	0.06	Sesquiterpene
Unknown	0.10	Oxygenated sesquiterpene
$\beta$ -Vetivenene	0.03	Sesquiterpene
Eremophila ketone	0.02	Sesquiterpenic ketone
Eremophila-1(10),11-dien-9 $\beta$ -ol	0.02	Sesquiterpenic alcohol
Unknown	0.09	Unknown
Unknown	0.08	Unknown
Unknown	0.02	Unknown
Unknown	0.04	Oxygenated sesquiterpene
Unknown	0.15	Unknown
Unknown	0.02	Unknown
Unknown	1.11	Oxygenated sesquiterpene
$\gamma$ -Eudesmol	0.11	Sesquiterpenic alcohol
Unknown	0.23	Unknown
Unknown	1.14	Oxygenated sesquiterpene
Neointermedeol	0.20	Sesquiterpenic alcohol
Unknown	0.74	Unknown
Unknown	0.13	Sesquiterpene
Eremophila-1,11-dien-9-one	3.76	Sesquiterpenic ketone
Unknown	0.08	Unknown
Unknown	0.04	Oxygenated sesquiterpene
Unknown	0.15	Unknown
Unknown	0.13	Unknown
Eremophilone	31.76	Sesquiterpenic ketone
8-Hydroxydihydroeremophilone	13.62	Sesquiterpenic alcohol
8 $\alpha$ -Hydroxyeremophila-1,11-dien-9-one	1.13	Sesquiterpenic alcohol
Unknown	1.22	Unknown
Unknown	0.12	Unknown

Unknown	0.80	Unknown
Dehydrofukinone	0.32	Sesquiterpenic ketone
Unknown	0.24	Unknown
Unknown	0.11	Unknown
Unknown	0.11	Unknown
Hydroxyeremophilone	29.78	Sesquiterpenic ketone
Unknown	0.43	Unknown
Unknown	0.10	Unknown
9-Hydroxy-1,7(11),9-eremophilatrien-8-one	5.79	Unknown
Unknown	0.13	Unknown
Unknown	0.16	Unknown
<b>Consolidated total</b>	<b>96.59</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.

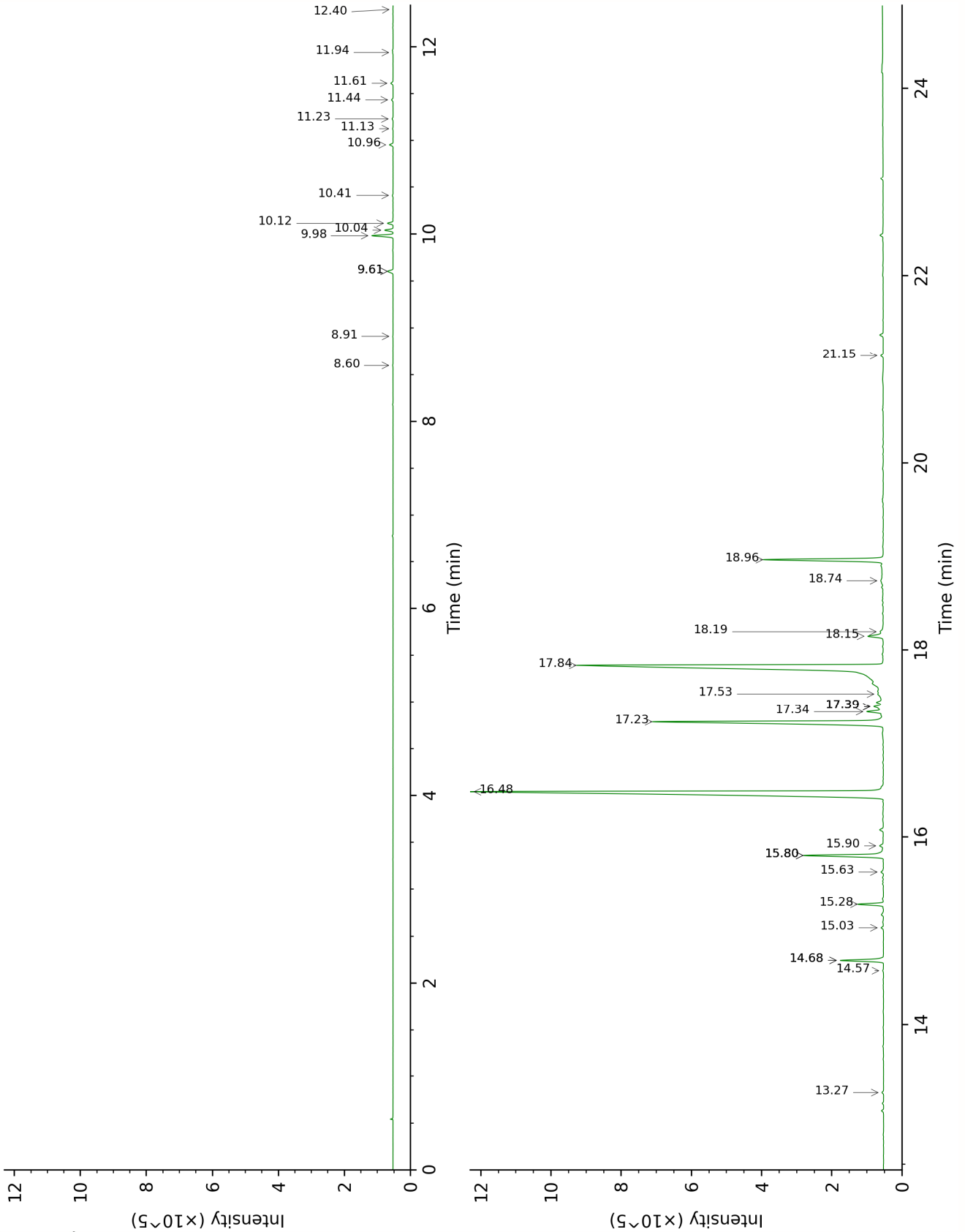
**Unknowns:** Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

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

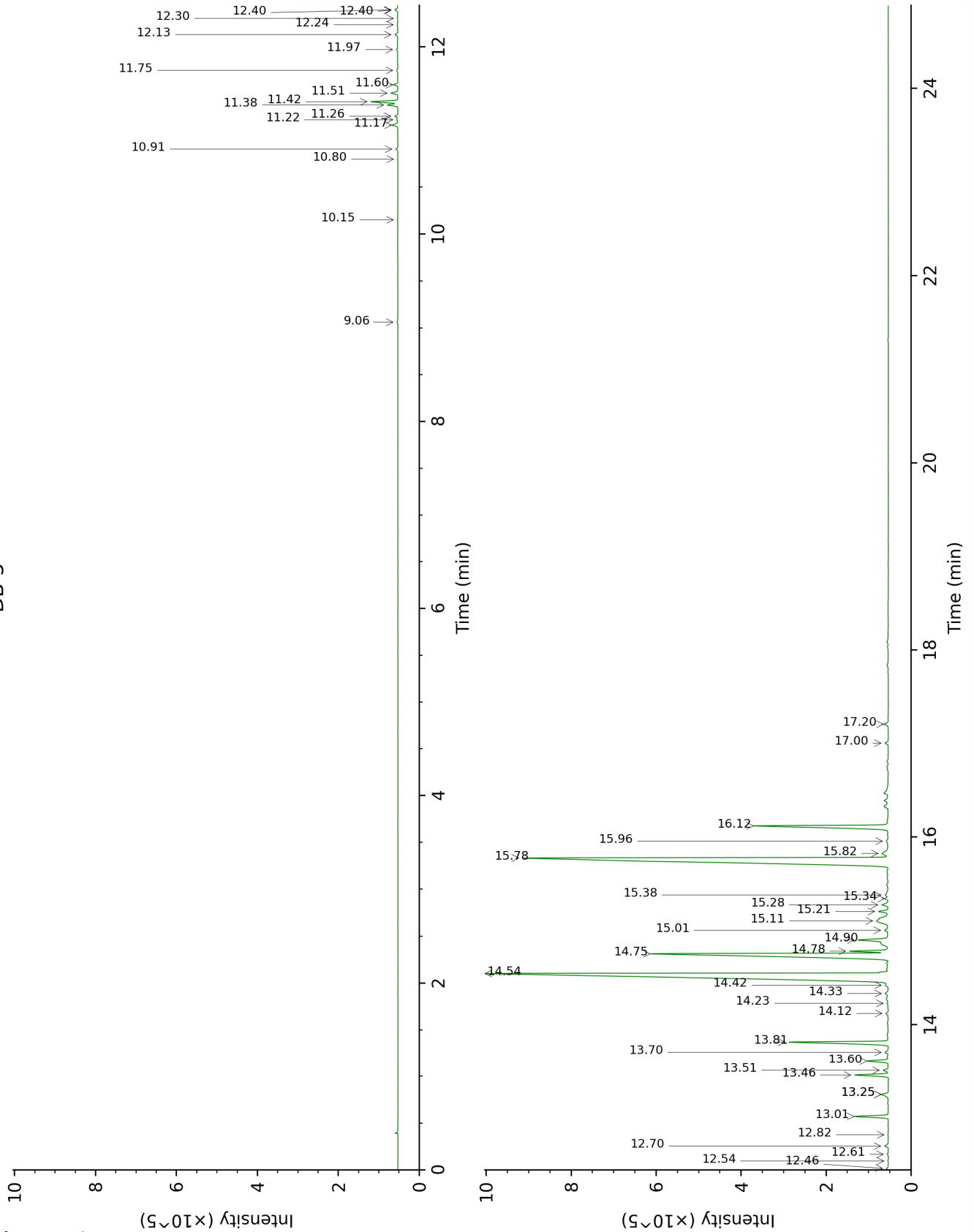
This page was intentionally left blank. The following pages present the complete data of the analysis.

Buddha Wood - Australia - BO0107R

DB-WAX



DB-5



FULL ANALYSIS DATA

Unknown ERMI I [m/z 97, 109 (29), 81 (18), 95 (17), 166 (16), 67 (14)...]	Column DB-WAX			Column DB-5		
	10.41	1690.8	0.03	9.06	1312.8	0.04
β-Elemene	8.60	1546.0	0.03	10.15	1389.4	0.02
Selina-5,11-diene	8.92	1570.6	0.02	10.80	1437.1	0.02
Unknown ERMI III [m/z 111, 126 (68), 69 (51), 41 (40), 55 (29), 179 (21)...]	11.44	1777.3	0.07	10.91	1445.0	0.07
4,5-diepi-Aristolochene	9.60*	1625.2	[0.29]	11.17	1464.1	0.23
Unknown ERMI IV [m/z 111, 189 (70), 126 (52), 133 (50), 105 (40), 91 (34)...204 (28)]				11.22	1468.3	0.05
Selina-4,11-diene	9.60*	1625.2	[0.29]	11.26	1471.1	0.11
β-Selinene	10.04	1660.8	0.36	11.38	1480.0	0.35
Eremophilene	9.98	1656.0	0.91	11.42	1482.6	0.91
α-Selinene	10.12	1666.7	0.24	11.51	1489.4	0.26
Eremophila-1(10),8,11-triene	10.96	1736.6	0.16	11.60	1496.0	0.16
Nootkatene	11.13	1751.2	0.02	11.75	1507.6	0.05
γ-Vetivenene	11.23	1760.1	0.05	11.97	1524.9	0.06
Unknown AGAR XII [m/z 145, 202 (90), 131 (80), 91 (71), 105 (68), 82 (54), 187 (53), 117 (47)... 220 (24)]				12.13	1537.4	0.10
β-Vetivenene	11.61	1792.3	0.11	12.24	1545.7	0.03
Eremophila ketone	12.40	1861.8	0.01	12.30	1551.0	0.02
Eremophila-1(10),11-dien-9β-ol	11.94	1821.0	0.02	12.40*	1558.2	[0.12]
Unknown ERMI IX [m/z 148, 105 (72), 189 (58), 119 (53), 91 (48), 133 (46)...]				12.40*	1558.2	[0.12]
Unknown ERMI VIII [m/z 96, 68 (89), 206 (73), 109 (55), 137 (37), 67 (36)...]	13.27	1940.3	0.07	12.46	1563.0	0.08
Unknown ERMI X [m/z 109, 95 (71), 81 (70), 110 (58), 68 (53)...]				12.54	1569.3	0.02
Unknown AGAR XV [m/z 93, 107 (55), 91 (37), 41 (34), 55 (34)... 220 (1)]	14.57	2063.6	0.05	12.61	1574.9	0.04
Unknown ERMI VI [m/z 151, 194 (63), 152 (62), 113 (55), 109 (53)...]	15.80*	2185.1	[4.00]	12.70	1581.8	0.15
Unknown ERMI VII [m/z 109, 208 (90), 140 (54), 41 (52), 69				12.82	1591.3	0.02



(49), 55 (46)...						
Unknown MIAL II [m/z 43, 81 (97), 135 (71), 95 (62), 204 (61), 71 (59), 207 (56)... 222 (3)]	14.68*	2074.1	[1.98]	13.01	1606.7	1.11
γ-Eudesmol	15.03	2107.8	0.11	13.25*	1626.0	[0.34]
Unknown ERMI XIV [m/z 133, 105 (87), 91 (84), 218 (68), 93 (60), 119 (60)...				13.25*	1626.0	[0.34]
Unknown ERMI XIII [m/z 109, 55 (95), 111 (93), 108 (92), 107 (73), 81 (72)...	15.28	2133.1	1.09	13.46	1643.1	1.14
Neointermedeol	15.80*	2185.1	[4.00]	13.51	1647.3	0.20
Unknown ERMI XII [m/z 151, 109 (30), 137 (18), 67 (17), 95 (17), 41 (12)...	14.68*	2074.1	[1.98]	13.60	1655.4	0.74
Unknown ERMI XI [m/z 204, 147 (56), 189 (39), 91 (35), 119 (32), 107 (30)...	15.63	2167.4	0.13	13.70	1663.7	0.13
Eremophila-1,11-dien-9-one	15.80*	2185.1	[4.00]	13.81	1672.7	3.76
Unknown ERMI XVII [m/z 105, 133 (39), 201 (35), 119 (35), 91 (26), 120 (19)...				14.12	1697.9	0.08
Unknown AGAR XXIV [m/z 93, 81 (90), 95 (86), 91 (83), 41 (83), 107 (81)... 220 (29), 238? (4)]	17.39*	2351.6	[0.66]	14.23	1706.9	0.04
Unknown ERMI XVI [m/z 109, 119 (39), 154 (32), 67 (22), 95 (21), 96 (21)...				14.33	1716.0	0.15
Unknown ERMI XV [m/z 123, 236 (86), 109 (72), 193 (67), 207 (55), 41 (52)...	15.90	2195.4	0.17	14.42	1723.6	0.13
Eremophilone	16.48	2255.1	31.99	14.54	1734.4	31.76
8-Hydroxydihydroeremophilone	17.23	2333.9	13.91	14.75	1752.6	13.62
8α-Hydroxyeremophila-1,11-dien-9-one	18.15	2434.2	0.92	14.78	1755.1	1.13
Unknown MISC XC [m/z 137, 234 (78), 109 (67), 41 (66), 69 (59), 43 (52), 191 (49)...	17.34	2345.6	0.83	14.90	1765.4	1.22
Unknown ERMI XVIII [m/z 137, 191 (58), 109 (41), 41 (52), 234 (49), 152 (44)...	17.39*	2351.6	[0.66]	15.00	1774.3	0.12
Unknown MISC XCI [m/z 234, 217 (50), 81 (30), 41 (28), 67	17.53	2366.5	0.54	15.10	1783.0	0.80

(27), 109 (26)...						
Dehydrofukinone	17.39*	2351.6	[0.66]	15.21	1791.7	0.32
Unknown ERMI XIX [m/z 234, 191 (71), 149 (31), 163 (30), 41 (30), 219 (29)...	17.39*	2351.6	[0.66]	15.28	1797.8	0.24
Unknown ERMI XX [m/z 133, 175 (81), 161 (58), 91 (51), 105 (50), 41 (47)...				15.34	1803.7	0.11
Unknown ERMI XXI [m/z 109, 108 (52), 93 (41), 95 (36), 151 (33), 67 (33)...	18.19	2439.6	0.21	15.38	1807.0	0.11
Hydroxyeremophilone	17.84	2399.6	30.21	15.78	1842.8	29.78
Unknown ERMI XXII [m/z 232, 217 (22), 91 (21), 215 (20), 231 (19)...	18.74	2500.3	0.25	15.82	1847.3	0.43
Unknown ERMI XXIII [m/z 137, 179 (64), 123 (57), 194 (42), 43 (41)...				15.96	1859.2	0.10
9-Hydroxy-1,7(11),9-eremophilatrien-8-one	18.96	2526.3	5.97	16.12	1873.9	5.79
Unknown ERMI XXV [m/z 109, 163 (80), 232 (45), 175 (27), 161 (26)...	21.15	2787.8	0.11	17.00	1956.3	0.13
Unknown ERMI XXIV [m/z 217, 122 (83), 232 (66), 161 (61), 109 (50)...				17.20	1975.5	0.16
Total reported		95.54%			96.59%	

\*: 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