Date : 2026-11-13

Certificate of Analysis - GC Profiling

Sample Identification

Internal code : 26F26-PTH01
Customer Identification : Himalayan Cedarwood - India - C50114
Type : Essential Oil
Source : *Cedrus deodara*
Customer : Plant Therapy

Checked an 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Notes: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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. The compliance status of the sample is provided to facilitate the reading of the report. The client remains ultimately responsible for reviewing the results presented within this report and to establish compliance of the tested batch against relevant quality criteria.

This report is an update from the first version issued on 2026-07-06 to correct the customer identification.

Méthode certifiée ISO 17025:2017 Certified method

Laboratoire PhytoChemia

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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 : Sylvain Mercier, M. Sc., Chimiste 2014-005
Date : 2026-06-30

Physicochemical data

Refractive index : 1.513 ± 0.0003 (20 °C)
Method : PC-MAT-016 - Measure of the refractive index of a liquid.
Analyst : Cindy Caron B. Sc.
Date : 2026-06-26

Conclusion

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

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Analysis Summary - Consolidated Contents

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

Identification	%	Class
Mesityl oxide	0.02	Aliphatic ketone
α-Pinene	0.06	Monoterpene
Camphene	0.01	Monoterpene
β-Pinene	0.02	Monoterpene
Limonene	0.02	Monoterpene
para-Cresol	0.01	Simple phenolic
para-Cymenene	0.02	Monoterpene
Terpinolene	0.01	Monoterpene
Unknown	0.01	Oxygenated monoterpene
Phenylethyl alcohol	0.01	Simple phenolic
Limona ketone	0.87	Normonoterpenic ketone
α,4-Dimethyl-3-cyclohexene-1-methanol	0.05	Normonoterpenic alcohol
α,4-Dimethyl-3-cyclohexene-1-methanol epimer	0.05	Normonoterpenic alcohol
Borneol	0.02	Monoterpenic alcohol
Terpinen-4-ol	0.01	Monoterpenic alcohol
4-Methylacetophenone	0.17	Simple phenolic
α-Terpineol	0.07	Monoterpenic alcohol
Unknown	0.03	Oxygenated monoterpene
Unknown	0.01	Unknown
para-Menth-1-en-9-ol	0.01	Monoterpenic alcohol
α-Longipinene	0.14	Sesquiterpene
Longicyclene	0.01	Sesquiterpene
α-Ylangene	0.08	Sesquiterpene
Unknown	0.03	Terpene derivative
Unknown	0.02	Terpene derivative
Unknown	0.27	Sesquiterpene
(3*Z*)-Hexenyl (3*Z*)-hexenoate	0.24	Aliphatic ester
Sativene	0.07	Sesquiterpene
Unknown	0.43	Sesquiterpene
β-Elemene	0.03	Sesquiterpene
β-Longipinene	0.03	Sesquiterpene
Sibirene	0.04	Sesquiterpene
Longifolene	0.88	Sesquiterpene
Unknown	0.01	Unknown
(*Z*?)-Vestitenone, or analog	0.10	Terpenic ketone
α-Cedrene	0.02	Sesquiterpene
β-Caryophyllene	0.02	Sesquiterpene
Unknown	0.05	Unknown
Himachala-2,4-diene	0.59	Sesquiterpene

Unknown	0.03	Sesquiterpene
Unknown	0.24	Sesquiterpene
trans-α-Bergamotene	0.03	Sesquiterpene
Himachala-2,4-diene isomer	0.39	Sesquiterpene
(*E*)-Vestitenone	0.53	Terpenic ketone
α-Himachalene	17.43	Sesquiterpene
α-Humulene	0.04	Sesquiterpene
Unknown	0.34	Sesquiterpene
(*E*)-β-Farnesene	0.47	Sesquiterpene
Unknown	0.49	Sesquiterpene
Unknown	0.61	Sesquiterpene
γ-Himachalene	9.97	Sesquiterpene
11-αH-Himachala-1,4-diene	1.93	Sesquiterpene
Unknown	0.22	Sesquiterpenic ether
Himachala-3(12),4-diene	0.06	Sesquiterpene
(*Z*)-α-Bisabolene	0.02	Sesquiterpene
Cycloisolongifol-5-ol	0.13	Sesquiterpenic alcohol
β-Himachalene	38.08	Sesquiterpene
Unknown	0.25	Sesquiterpene
α-Dehydro-ar-himachalene	0.73	Sesquiterpene
γ-Dehydro-ar-himachalene	0.77	Sesquiterpene
Unknown	0.77	Sesquiterpene
Unknown	0.06	Sesquiterpene
ar-Himachalene	0.32	Sesquiterpene
α-Calacorene	0.15	Sesquiterpene
(*E*)-α-Bisabolene	1.15	Sesquiterpene
Unknown	0.10	Unknown
Unknown	0.13	Oxygenated sesquiterpene
(*E*)-Nerolidol	0.08	Sesquiterpenic alcohol
Himachalene epoxide	0.28	Sesquiterpenic ether
Unknown	0.18	Unknown
Unknown	0.08	Oxygenated sesquiterpene
Unknown	0.03	Unknown
Longiborneol	0.25	Sesquiterpenic alcohol
ar-Dihydroturmerone	0.02	Sesquiterpenic ketone
β-Himachalene oxide	0.28	Sesquiterpenic ether
Unknown	0.57	Oxygenated sesquiterpene
α-Corocalene	0.03	Sesquiterpene
Unknown	0.17	Oxygenated sesquiterpene
Unknown	0.33	Oxygenated sesquiterpene
Unknown	0.11	Oxygenated sesquiterpene
Himachalol	0.98	Sesquiterpenic alcohol
Unknown	0.12	Unknown
Allohimachalol	0.55	Sesquiterpenic alcohol
β-Atlantone	0.30	Sesquiterpenic ketone

Unknown	0.10	Oxygenated sesquiterpene
(*E*)-10,11-Dihydroatlantone	0.30	Sesquiterpenic ketone
Deodarone epimer I	0.70	Sesquiterpenic ketone
(*Z*)-γ-Atlantone	1.72	Sesquiterpenic ketone
Deodarone epimer II	0.30	Sesquiterpenic ketone
(*E*)-γ-Atlantone	1.84	Sesquiterpenic ketone
Unknown	0.05	Oxygenated sesquiterpene
(*Z*)-α-Atlantone	1.54	Sesquiterpenic ketone
Unknown	0.19	Oxygenated sesquiterpene
Unknown	0.08	Oxygenated sesquiterpene
Unknown	0.12	Oxygenated sesquiterpene
Unknown	0.05	Oxygenated sesquiterpene
Unknown	0.10	Oxygenated sesquiterpene
Unknown	0.03	Oxygenated sesquiterpene
(*E*)-α-Atlantone	6.25	Sesquiterpenic ketone
Unknown	0.03	Oxygenated sesquiterpene
Unknown	0.01	Oxygenated sesquiterpene
Unknown	0.22	Oxygenated sesquiterpene
Unknown	0.04	Oxygenated sesquiterpene
Unknown	0.04	Oxygenated sesquiterpene
Unknown	0.02	Oxygenated sesquiterpene
Consolidated total	**98.04**	

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

Note: no correction factor was applied

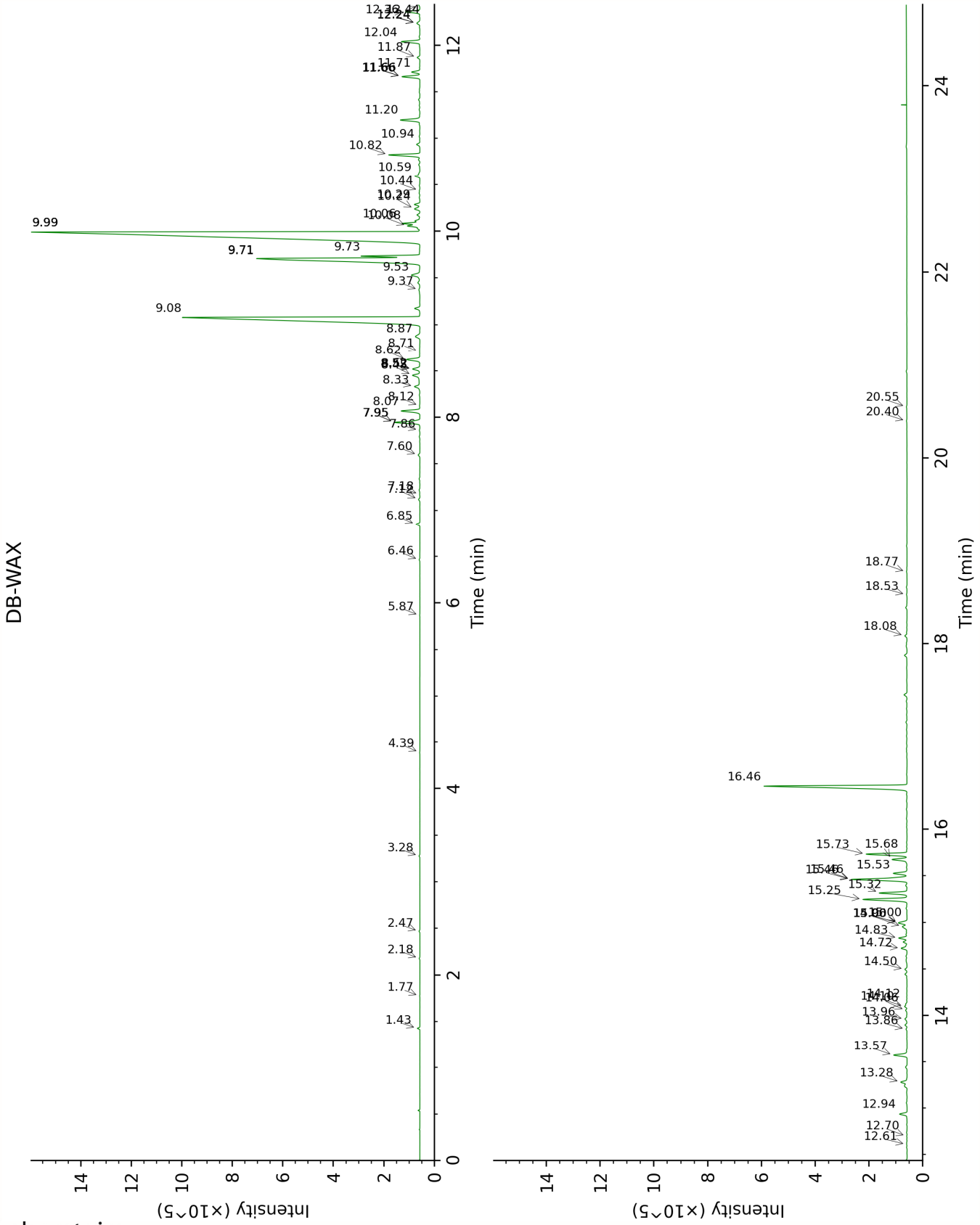
About "consolidated" data: The table above presents the breakdown of the sample volatile constituents after applying an algorithm to collapse data acquired from the multi-columns system of PhytoChemia into a single set of consolidated contents. In case of discrepancies between columns, the algorithm 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.

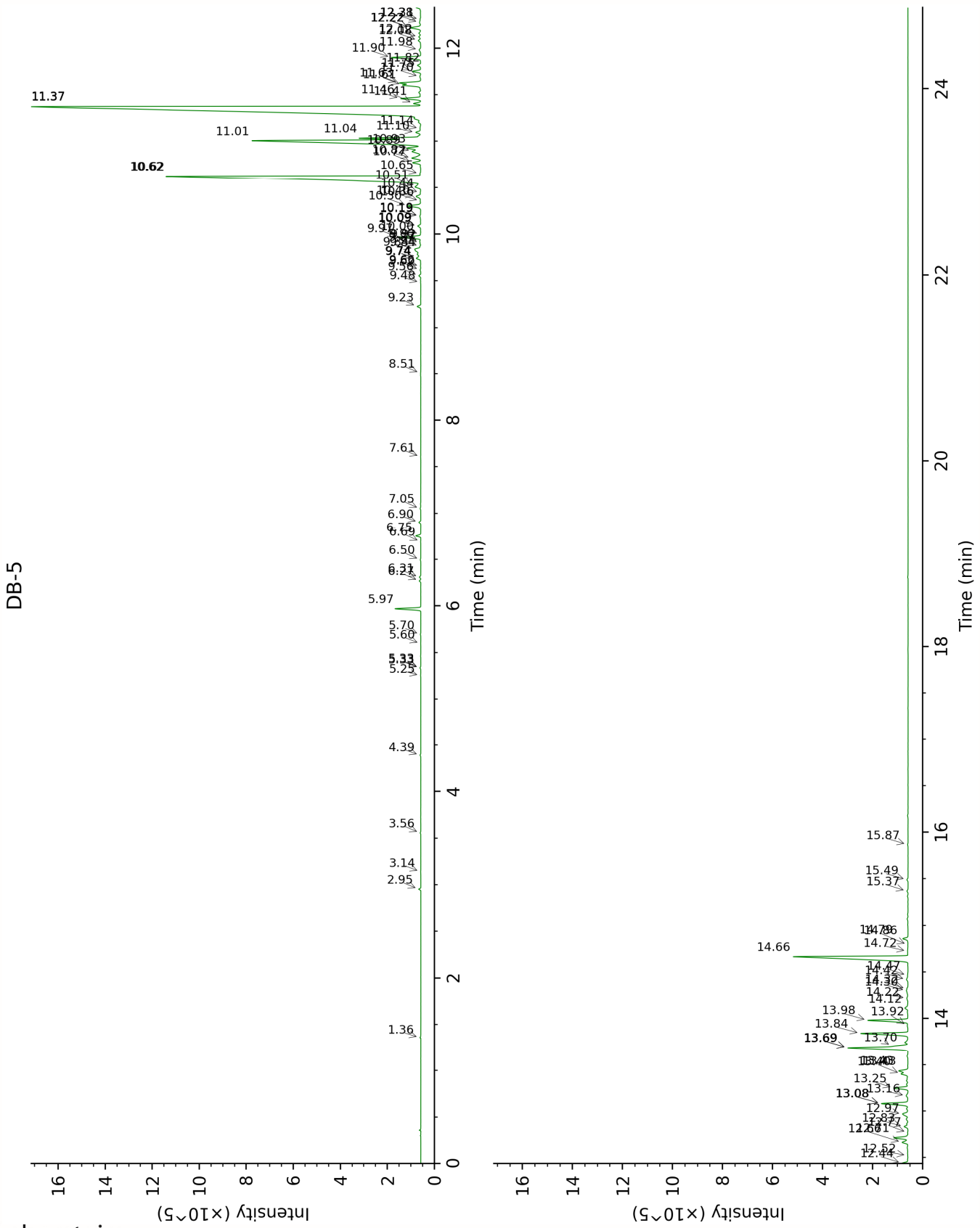
Unknowns: Unknown compounds' mass spectral data is presented in the "Full analysis data" table. The occurrence of unknown compounds is to be expected in many samples, and does not denote particular problems unless noted otherwise in the conclusion.

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

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DB-WAX
Time (min)
Intensity (×10^5)
9.99
9.71
9.73
9.53
9.37
9.08
8.87
8.71
8.62
8.33
8.12
8.07
7.95
7.86
7.60
6.85
6.46
5.87
4.39
3.28
2.47
2.18
1.77
1.43
16.46
20.55
20.40
18.77
18.53
18.08
15.73
15.68
15.53
15.32
15.25
14.83
14.72
14.50
13.96
13.86
13.57
13.28
12.94
12.70
12.61


DB-5
Time (min)
Intensity (×10^5)
11.37
11.01
11.04
10.62
14.66
15.87
15.49
15.37
14.72
13.98
13.92
13.84
13.70
13.69
13.25
13.16
13.08
12.97
12.52
12.44
5.97
4.39
3.56
3.14
2.95
1.36

FULL ANALYSIS DATA

Mesityl oxide	**Column DB-WAX**			**Column DB-5**		
	2.47	1093.6	0.03	1.36	798.3	0.02
α-Pinene	1.43	988.8	0.06	2.95	931.4	0.06
Camphene	1.78	1024.8	0.01	3.14	944.0	0.01
β-Pinene	2.18	1064.9	0.02	3.56	972.2	0.02
Limonene	3.28	1156.8	0.03	4.39	1027.1	0.02
para-Cresol	14.12	2018.0	0.05	5.25	1081.7	0.01
para-Cymenene	6.46	1390.1	0.02	5.34*	1086.9	[0.03]
Terpinolene	4.39	1239.3	0.01	5.34*	1086.9	[0.03]
Unknown CEDE I [m/z 95, 150 (45), 110 (35), 107 (23), 109 (21)]	5.87	1348.2	0.01	5.60	1103.5	0.01
Phenylethyl alcohol	12.24*	1845.6	[0.14]	5.70	1109.9	0.01
Limona ketone	7.95*	1498.1	[1.04]	5.97	1127.6	0.87
α,4-Dimethyl-3-cyclohexene-1-methanol				6.27	1146.9	0.05
α,4-Dimethyl-3-cyclohexene-1-methanol epimer				6.31	1149.5	0.05
Borneol	9.99*	1656.6	[38.84]	6.50	1161.5	0.02
Terpinen-4-ol	8.71	1556.0	0.01	6.69	1174.0	0.01
4-Methylacetophenone	10.59	1705.5	0.20	6.75	1178.1	0.17
α-Terpineol	9.99*	1656.6	[38.84]	6.90	1187.8	0.07
Unknown MISC XV [m/z 121, 43 (99), 91 (85), 77 (73), 93 (41), 136 (33)... 166 (3)]				7.05	1197.2	0.03
Unknown CEDE XXVIII [m/z 105, 145 (97), 160 (86), 119 (76), 91 (61)]				7.61	1234.5	0.01
para-Menth-1-en-9-ol	12.70	1886.0	0.01	8.51	1294.9	0.01
α-Longipinene	6.85	1418.0	0.14	9.23	1345.5	0.14
Longicyclene	7.18	1441.8	0.01	9.48	1363.6	0.01
α-Ylangene	7.12	1437.6	0.05	9.56	1368.8	0.08
Unknown CULO LV [m/z 105, 120 (38), 145 (37), 121 (34), 93 (28), 91 (26)...]	11.66*†	1795.6	[0.68]	9.62	1373.2	0.03
Unknown CULO IV	12.61	1878.2	0.01	9.66	1376.2	0.02

[m/z 119, 161 (36), 43 (33), 176 (26), 91 (24), 105 (22)]						
Unknown CEDE XXVII epimer I [m/z 131, 146 (36), 91 (22), 145 (19), 202 (18)]	8.33	1527.3	0.27	9.74*†	1382.1	[0.24]
(3*Z*)-Hexenyl (3*Z*)-hexenoate	10.24	1676.4	0.24	9.74*†	1382.1	[0.24]
Sativene	7.60	1472.3	0.07	9.84*	1388.9	[0.46]
Unknown CEDE XXVII epimer II [m/z 131, 146 (33), 91 (20), 202 (18)]	8.45	1536.5	0.43	9.84*	1388.9	[0.46]
β-Elemene	8.52*	1541.6	[0.33]	9.87	1390.8	0.03
β-Longipinene	7.86	1491.5	0.02	9.90	1393.5	0.03
Sibirene	7.95*	1498.1	[1.04]	9.92	1395.0	0.04
Longifolene	8.07	1507.4	0.76	9.97	1398.0	0.88
Unknown CEDE XXXIII [m/z 175, 190 (69), 147 (27), 133 (25), 161 (23)...]				10.00	1400.5	0.01
(*Z*?)-Vestitenone, or analog	11.87	1813.5	0.10	10.09*	1406.5	[0.14]
α-Cedrene	8.12	1511.6	0.02	10.09*	1406.5	[0.14]
β-Caryophyllene	8.52*	1541.6	[0.33]	10.19*	1414.5	[0.07]
Unknown CEDE II [m/z 105, 93 (61), 120 (55), 145 (54), 91 (52)...]	12.44	1862.9	0.05	10.19*	1414.5	[0.07]
Himachala-2,4-diene	8.62	1549.4	0.58	10.30	1422.6	0.59
Unknown CEDE III [m/z 91, 93 (90), 105 (72), 202 (71), 131 (68), 77 (63), 107 (55), 187 (54)]				10.36	1426.6	0.03
Unknown CEDE IV [m/z 105, 91 (70), 93 (65), 43 (61), 120 (57), 145 (50)... 204 (6)]				10.40	1430.3	0.24
trans-α-Bergamotene	8.52*	1541.6	[0.33]	10.44	1433.2	0.03
Himachala-2,4-diene isomer	8.87	1568.6	0.25	10.51	1438.0	0.39
(*E*)-Vestitenone	12.36	1856.4	0.53	10.62*	1446.7	[17.88]
α-Himachalene	9.08	1584.2	17.43	10.62*	1446.7	[17.88]

α-Humulene	9.37	1607.4	0.07	10.65	1448.9	0.04
Unknown CEDE V [m/z 187, 131 (78), 202 (76), 105 (74), 91 (74), 117 (53), 145 (52)]	10.08*†	1664.0	[0.58]	10.77	1457.8	0.34
(*E*)-β-Farnesene	9.71*†	1634.1	[10.41]	10.82	1461.6	0.47
Unknown CEDE VI [m/z 119, 91 (85), 93 (77), 105 (76), 79 (61), 134 (60), 94 (49), 204 (46)]	9.53	1620.0	0.47	10.89	1466.9	0.49
Unknown CEDE VII [m/z 131, 202 (78), 91 (74), 105 (68), 187 (68), 119 (53), 145 (52)]				10.93	1469.6	0.61
γ-Himachalene	9.71*†	1634.1	[10.41]	11.01	1475.6	9.97
11-αH-Himachala-1,4-diene	9.73*†	1636.2	[1.65]	11.04	1477.6	1.93
Unknown CEDE VIII [m/z 137, 43 (84), 138 (63), 109 (53), 95 (51), 93 (50), 207 (46)... 222 (21)]	10.29	1680.2	0.20	11.10	1482.2	0.22
Himachala-3(12),4-diene	10.06*†	1661.9	[0.44]	11.14	1485.2	0.06
(*Z*)-α-Bisabolene	10.44	1692.3	0.02	11.37*	1502.9	[38.22]
Cycloisolongifol-5-ol	10.94	1734.2	0.13	11.37*	1502.9	[38.22]
β-Himachalene	9.99*	1656.6	[38.84]	11.37*	1502.9	[38.22]
Unknown CEAT I [m/z 105, 119 (89), 91 (69), 159 (62), 131 (42), 93 (41), 202 (38)]				11.41	1505.4	0.25
α-Dehydro-ar-himachalene	11.66*†	1795.6	[0.68]	11.46	1509.6	0.73
γ-Dehydro-ar-himachalene	12.04	1828.4	0.71	11.60	1521.0	0.77
Unknown CEDE IX [m/z 131, 202 (28), 91 (22), 159 (16), 145 (16), 132 (15), 115 (14)]	11.20	1756.1	0.78	11.63	1522.8	0.77
Unknown CEAT II [m/z 93, 187 (70), 145				11.70	1528.1	0.06

(59), 119 (42), 131 (39), 202 (33)]						
ar-Himachalene	11.71*†	1799.9	[0.31]	11.75	1532.7	0.32
α-Calacorene	12.24*	1845.6	[0.14]	11.82	1537.7	0.15
(*E*)-α-Bisabolene	10.82	1724.8	1.14	11.90	1544.3	1.15
Unknown CEDE XXXV [m/z 216, 201 (98), 173 (47), 145 (42), 131 (25), 159 (19)]				11.98	1550.8	0.10
Unknown CEDE X [m/z 189, 91 (85), 43 (74), 105 (67), 133 (66), 107 (63), 135 (52)... 220 (20)]	14.10	2015.7	0.09	12.08	1558.8	0.13
(*E*)-Nerolidol	13.96	2002.9	0.10	12.12	1561.8	0.08
Himachalene epoxide	12.94	1907.8	0.28	12.22*	1569.5	[0.46]
Unknown CEDE XI [m/z 96, 95 (18), 83 (15), 125 (13), 119 (12), 55 (12), 41 (11)... 218? (tr)]	15.00*	2102.3	[0.39]	12.22*	1569.5	[0.46]
Unknown CEDE XII [m/z 177, 202 (79), 91 (76), 159 (75), 43 (65), 107 (59), 105 (57)...]	14.50	2053.7	0.08	12.28	1573.9	0.08
Unknown MISC CCXLII [m/z 161, 203 (0), 105 (34), 119 (32), 133 (29), 187 (29), 147 (27)...]				12.31	1576.9	0.03
Longiborneol	14.72	2075.3	0.26	12.44	1586.9	0.25
ar-Dihydroturmerone	14.06	2011.7	0.06	12.52	1593.5	0.02
β-Himachalene oxide	13.28	1939.2	0.26	12.66	1604.6	0.28
Unknown CEDE XIII [m/z 138, 110 (77), 137 (75), 107 (62), 91 (61), 93 (60), 109 (57)... 220 (34)]	13.57	1965.9	0.52	12.71	1608.5	0.57
α-Corocalene	13.86	1992.4	0.04	12.77	1613.2	0.03
Unknown CEDE XIV [m/z 137, 119 (69), 43 (51), 95 (50), 109)40)... 222 (1)]	15.00*	2102.3	[0.39]	12.83	1618.6	0.17
Unknown CEDE XV				12.97	1629.8	0.33

[m/z 119, 163 (80), 107 (64), 95 (61), 93 (57), 91 (53)... 220 (11)]						
Unknown CEDE XVI [m/z 119, 91 (44), 94 (36), 107 (35), 93 (29)... 202 (19)...]				13.08*	1639.1	[1.09]
Himachalol	15.32	2134.2	0.98	13.08*	1639.1	[1.09]
Unknown CEDE XLII [m/z 119, 57 (73), 133 (59), 105 (45), 122 (43), 203 (41)...]				13.16	1646.1	0.12
Allohimachalol	15.68	2170.1	0.58	13.25	1653.0	0.55
β-Atlantone	14.96	2098.2	0.24	13.40	1665.6	0.30
Unknown CULO LII [m/z 83, 55 (19), 119 (14), 120 (10), 84 (6)... 218 (1)]	15.00*	2102.3	[0.39]	13.43*	1668.3	[0.40]
(*E*)-10,11-Dihydroatlantone	14.83	2086.0	0.30	13.43*	1668.3	[0.40]
Deodarone epimer I	15.46*	2148.8	[2.31]	13.69*	1689.4	[2.42]
(*Z*)-γ-Atlantone	15.25	2127.4	1.72	13.69*	1689.4	[2.42]
Deodarone epimer II	15.53	2155.3	0.52	13.70	1690.7	0.30
(*E*)-γ-Atlantone	15.46*	2148.8	[2.31]	13.84	1702.2	1.84
Unknown CEDE XLIV [m/z 134, 119 (46), 218 (23), 91 (14), 105 (12)]				13.92	1709.3	0.05
(*Z*)-α-Atlantone	15.73	2175.9	1.52	13.98	1714.4	1.54
Unknown CEDE XVII [m/z 105, 119 (89), 59 (68), 120 (65), 43 (65), 93 (62), 121 (61)...]				14.12	1726.0	0.19
Unknown CEDE XVIII [m/z 91, 79 (83), 105 (68), 109 (63), 41 (590), 93 (58), 107 (57)...]	18.08	2426.6	0.08	14.22	1735.1	0.08
Unknown CEDE XIX [m/z 83, 91 (28), 105 (25), 55 (21), 43 (17), 119 (17)...]				14.30	1742.2	0.12
Unknown CEDE XX [m/z 43, 105 (99), 119				14.32	1744.0	0.05

(90), 91 (87), 147 (76), 41 (69), 93 (63)...]						
Unknown CEDE XXI [m/z 83, 55 (17), 91 (14), 105 (9), 216 (6)...]				14.42	1752.5	0.10
Unknown CEDE XXII [m/z 91, 105 (74), 93 (67), 79 (59), 133 (54), 41 (47), 107 (46)...]	18.53	2476.2	0.02	14.47	1756.5	0.03
(*E*)-α-Atlantone	16.46	2251.2	6.32	14.66	1773.9	6.25
Unknown CEDE XLVI [m/z 203, 143 (42), 161 (42), 218 (39), 119 (35)]				14.72	1779.0	0.03
Unknown CEDE XLVII [m/z 203, 161 (67), 69 (62), 143 (53), 218 (37)]				14.79	1785.0	0.01
Unknown CEDE XXIII [m/z 95, 43 (59), 69, (57), 67 (43), 163 (42), 94 (37), 107 (37)... 178 (26), 218 (2)]				14.86	1790.7	0.22
Unknown CEDE XXIV [m/z 83, 134 (28), 119 (19), 55 (18), 91 (14), 43 (11), 109 (10)... 216 (4), 249? (0)]	20.40	2698.9	0.02	15.37	1836.7	0.04
Unknown CEDE XXV [m/z 83, 134 (30), 119 (19), 55 (18), 91 (12)... 216 (4)...]	20.55	2718.0	0.02	15.49	1847.9	0.04
Unknown CEDE XXVI [m/z 173, 83 (83), 91 (80), 201 (79), 115 (65)... 216 (31)]	18.77	2504.6	0.02	15.87	1882.2	0.02
Total reported		96.06%			97.86%	

*: 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