



## Frankincense Serrata

*Boswellia serrata*

Produced, India, Batch No. IN-58763

<b>Monoterpenes</b>	<b>87.68%</b>	<b>Monoterpeneols</b>	<b>2.49%</b>	<b>Sesquiterpenes</b>	<b>2.17%</b>
hashishene	0.10	linalol	0.11	$\alpha$ copaene	0.17
$\alpha$ thujene	61.49	terpinen-4-ol	1.07	$\beta$ bourbonene	0.87
$\alpha$ pinene	5.18	$\alpha$ terpineol	0.09	1,5-diepi- $\beta$ -Bourbonene	0.07
camphene	0.06	myrtenol	0.02	$\beta$ elemene	0.02
$\alpha$ fenchene	0.01	thymol	0.03	sibirene	0.12
Thuja-2,4(10)-diene	0.01	carvacrol	0.03	$\beta$ caryophyllene	0.10
meta-cymene	0.06	borneol	0.05	$\beta$ ylangene	0.02
sabinene	5.90	cis-sabinene hydrate	0.22	$\beta$ copaene	0.10
$\beta$ pinene	0.41	trans-sabinene hydrate	0.20	trans $\alpha$ bergamotene	0.08
myrcene	0.75	cis-para-Menth-2-en-1-ol	0.15	isogermacrene D	0.07
$\alpha$ phellandrene	1.59	trans-sabinol	0.11	cis-Muurola-4(15),5-diene	0.02
$\Delta$ 3 carene	4.65	trans-pinocarveol	0.03	$\gamma$ -Muurolene	0.06
$\alpha$ terpinene	0.39	trans-verbenol	0.05	germacrene d	0.19
carvomenthene	0.02	$\alpha$ -phellandren-8-ol	0.02	$\alpha$ -Murolene	0.01
para cymene	2.37	cis-sabinol	0.21	$\gamma$ cadinene	0.04
limonene	2.23	meta-cymen-8-ol	0.02	$\delta$ cadinene	0.22
$\beta$ phellandrene	0.42	para-cymen-8-ol	0.04	zonarene	0.01
(Z) $\beta$ ocimene	0.50	trans-pipertol	0.03		
(E) $\beta$ ocimene	0.27	cis-carveol	0.01		
$\gamma$ terpinene	0.90				
para-cymenene	0.02				
terpinolene	0.33	<b>Ethers</b>	<b>0.51%</b>	<b>Sesquiterpenols</b>	<b>0.04%</b>
allo-ocimene	0.02	1,8 cineole	0.40	viridiflorol	0.01
		dehydro-1,8 cineole	0.01	guaiol	0.01
		epoxyterpinolene	0.01	10-epi- $\gamma$ -Eudesmol	0.02
<b>Phenols</b>	<b>3.8%</b>	$\alpha$ phellandrene epoxide	0.05		
toluene	0.01	verbenone	0.02	<b>Ketones</b>	<b>0.69%</b>
ortho-cymene	0.07	kessane	0.01	6-Methyl-5-hepten-2-one	0.01
methyl chavicol	3.41	Isocaryophyllene epoxide B	0.01	$\alpha$ thujone	0.07
methyl eugenol	0.25			$\beta$ thujone	0.47
elemicin	0.06			Dehydrosabinaketone	0.02
		<b>Esters</b>	<b>0.17%</b>	umbellulone	0.02
		trans-sabinene hydrate acetate	0.01	cryptone	0.03
<b>Aldehydes</b>	<b>0.03%</b>	linalyl acetate	0.03	carrotanacetone	0.02
$\alpha$ -Campholenal	0.01	bornyl acetate	0.05	piperitone	0.05
cuminal	0.02	$\alpha$ terpinyl acetate	0.08		
Raw Material: Frankincense Serrata		<b>Diterpenols</b>	<b>0.19%</b>	<b>Diterpenes</b>	<b>0.19%</b>
INCI Name: <i>Boswellia serrata</i>		cembreol	0.02	$\alpha$ -Phellandrene dimer I	0.01
Production Steam Dist., India, resin		serratol	0.17	$\alpha$ -Phellandrene dimer II	0.07
Date of Analysis: July, 2018		other constituents	0.94	$\alpha$ -Phellandrene dimer III	0.02
				$\alpha$ -Phellandrene dimer IV	0.01
				(3E)-Cembrene A	0.05
				Verticilla-4(20),7,11-triene	0.03

**Date :** July 12, 2018

**CERTIFICATE OF ANALYSIS – GC PROFILING**

**SAMPLE IDENTIFICATION**

**Internal code :** 18G04-NGA1-1-CC

**Customer identification :** Frankincense Serrata - India - IN-58763

**Type :** Essential oil

**Source :** *Boswellia serrata*

**Customer :** Nature's Gift Aromatherapy

**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 :** Sarah-Eve Tremblay, M. Sc. A., Chimiste

**Analysis date :** July 09, 2018

Checked and approved by :

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Sylvain Mercier, M. Sc., chimiste 2014-005

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#### *P*HYSICO*C*HEMICAL *D*ATA

**Physical aspect:** Clear liquid

**Refractive index:**  $1.4620 \pm 0.0003$  (20 °C)

#### *C*ONCLUSION

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

## ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Ethanol	0.04	0.03	Aliphatic alcohol
2-Methylfuran	0.01	tr	Furan
3-Methyl-2-butanone	tr	tr	Aliphatic ketone
Toluene	0.01	61.42*	Simple phenolic
Unknown	tr		Unknown
Santene	tr	tr*	Monoterpene
Unknown	tr	[tr]*	Monoterpene
Unknown	0.01		Unknown
Hashishene	0.10	5.24*	Monoterpene
Tricyclene	tr	0.01	Monoterpene
$\alpha$ -Thujene	61.49	[61.42]*	Monoterpene
$\alpha$ -Pinene	5.18	[5.24]*	Monoterpene
Unknown	0.57	0.57	Monoterpene
Camphepane	0.07*	0.07	Monoterpene
$\alpha$ -Fenchene	[0.07]*	0.01	Monoterpene
Thuja-2,4(10)-diene	0.01	5.91*	Monoterpene
meta-Cymene	0.06	0.82*	Monoterpene
Sabinene	6.31*	[5.91]*	Monoterpene
$\beta$ -Pinene	[6.31]*	0.41	Monoterpene
Pseudolimonene isomer	tr	0.02*	Monoterpene
6-Methyl-5-hepten-2-one	0.01	0.01	Aliphatic ketone
Myrcene	0.76*	[0.82]*	Monoterpene
Dehydro-1,8-cineole	[0.76]*	0.01	Monoterpenic ether
$\alpha$ -Phellandrene	1.59	1.59	Monoterpene
$\Delta^3$ -Carene	4.65	4.63	Monoterpene
$\alpha$ -Terpinene	0.39	0.38	Monoterpene
Carvomenthene	0.09*	[0.02]*	Aliphatic alcohol
ortho-Cymene	[0.09]*	2.42*	Simple phenolic
para-Cymene	2.37	[2.42]*	Monoterpene
Limonene	3.05*	2.23	Monoterpene
$\beta$ -Phellandrene	[3.05]*	0.42*	Monoterpene
1,8-Cineole	[3.05]*	[0.42]*	Monoterpenic ether
Unknown	[3.05]*	0.41*	Unknown
(Z)- $\beta$ -Ocimene	0.50	0.52	Monoterpene
Unknown	0.17		Unknown
(E)- $\beta$ -Ocimene	0.27	0.27	Monoterpene
Unknown	0.02		Unknown
$\gamma$ -Terpinene	0.90	0.88	Monoterpene
cis-Sabinene hydrate	0.22	0.23	Monoterpenic alcohol
Unknown	0.01	0.02	Oxygenated monoterpene
meta-Cymenene	tr	[0.41]*	Monoterpene
para-Cymenene	0.35*	0.39*	Monoterpene
Terpinolene	[0.35]*	0.33	Monoterpene
trans-Sabinene hydrate	0.20	0.19*	Monoterpenic alcohol
Unknown	tr	0.07*	Unknown
Linalool	0.27*	0.11	Monoterpenic alcohol
$\alpha$ -Thujone	[0.27]*	[0.07]*	Monoterpenic ketone
Unknown	tr	0.08*	Monoterpenic alcohol

Unknown	tr	0.01	Oxygenated monoterpane
β-Thujone	0.47	[0.39]*	Monoterpenic ketone
Unknown	0.01		Oxygenated monoterpane
Dehydrosabinaketone	0.17*	0.02	Normonoterpenic ketone
cis-para-Menth-2-en-1-ol	[0.17]*	0.20	Monoterpenic alcohol
α-Campholenal	0.01	0.01	Monoterpenic aldehyde
Unknown	0.02		Unknown
4-Hydroxy-4-methylcyclohex-2-enone	0.03	0.02	Aliphatic alcohol
allo-Ocimene	0.02	0.02	Monoterpane
cis-para-Menta-2,8-dien-1-ol	tr	0.01	Monoterpenic alcohol
trans-Sabinol	0.14*	0.11	Monoterpenic alcohol
trans-Pinocarveol	[0.14]*	0.03*	Monoterpenic alcohol
trans-Verbenol	0.05	0.05	Monoterpenic alcohol
Epoxyterpinolene	0.01	0.02	Monoterpenic ether
Unknown	0.01	0.03	Unknown
Unknown	0.01		Oxygenated monoterpane
Unknown	0.05		Oxygenated monoterpane
Borneol	0.05	0.30*	Monoterpenic alcohol
α-Phellandren-8-ol	0.02	0.01	Monoterpenic alcohol
Unknown	0.22*	tr	Oxygenated monoterpane
cis-Sabinol	[0.22]*	0.21*	Monoterpenic alcohol
Umbellulone	0.02	0.02	Monoterpenic ketone
Terpinen-4-ol	1.07	1.15	Monoterpenic alcohol
meta-Cymen-8-ol	0.02	0.02	Monoterpenic alcohol
Cryptone	0.03	[0.03]*	Normonoterpenic ketone
para-Cymen-8-ol	0.04	0.04	Monoterpenic alcohol
α-Terpineol	0.09	[0.30]*	Monoterpenic alcohol
Myrtenol	0.02	[0.21]*	Monoterpenic alcohol
Methylchavicol	3.41	3.43	Phenylpropanoid
α-Phellandrene epoxide	0.05	0.07	Monoterpenic ether
Unknown	0.05*	0.01	Oxygenated monoterpane
Verbenone	[0.05]*	0.02	Monoterpenic ketone
trans-Piperitol	0.03	0.02	Monoterpenic alcohol
Unknown	0.02		Unknown
cis-Carveol	0.01	tr	Monoterpenic alcohol
Cuminal	0.02	0.01	Monoterpenic aldehyde
Carvone	tr	0.05	Monoterpenic ketone
Carvotanacetone	0.02	0.04	Monoterpenic ketone
Piperitone	0.06*	0.21*	Monoterpenic ketone
Unknown	[0.06]*	0.01	Unknown
trans-Sabinene hydrate acetate	0.01	0.01	Monoterpenic ester
Linalyl acetate	0.03	0.03	Monoterpenic ester
Unknown	0.05		Oxygenated monoterpane
Bornyl acetate	0.05	0.05	Monoterpenic ester
Thymol	0.03	0.03	Monoterpenic alcohol
Carvacrol	0.03	0.02	Monoterpenic alcohol
Unknown	tr	tr	Unknown
Unknown	0.01	0.01	
α-Terpinal acetate	0.08	0.06	Monoterpenic ester
α-Copaene	0.17	0.18	Sesquiterpene
β-Bourbonene	0.95*	0.87	Sesquiterpene
1,5-diepi-β-Bourbonene	[0.95]*	0.07	Sesquiterpene

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β-Elemene	0.02	0.02	Sesquiterpene
Sibirene	0.12	[0.19]*	Sesquiterpene
Methyleugenol	0.25	0.24*	Phenylpropanoid
β-Caryophyllene	0.12*	0.10*	Sesquiterpene
β-Ylangene	[0.12]*	0.05	Sesquiterpene
β-Copaene	0.10	[0.10]*	Sesquiterpene
trans-α-Bergamotene	0.08	[0.08]*	Sesquiterpene
Isogermacrene D	0.07	0.04	Sesquiterpene
cis-Muurola-4(15),5-diene	0.02	0.01	Sesquiterpene
γ-Murolene	0.06	0.08	Sesquiterpene
Germacrene D	0.19	[0.30]*	Sesquiterpene
Unknown	0.19	[0.21]*	Sesquiterpene
α-Murolene	0.01	0.02	Sesquiterpene
γ-Cadinene	0.04	0.03*	Sesquiterpene
δ-Cadinene	0.23*	0.22	Sesquiterpene
Kessane	[0.23]*	0.01	Sesquiterpenic ether
Zonarene	[0.23]*	[0.03]*	Sesquiterpene
Isocaryophyllene epoxide B	0.01	0.01	Sesquiterpenic ether
Elemicin	0.06	0.05	Phenylpropanoid
Viridiflorol	0.01	0.01	Sesquiterpenic alcohol
Guaiol	0.01	0.01	Sesquiterpenic alcohol
10-epi-γ-Eudesmol	0.02	0.02	Sesquiterpenic alcohol
Unknown	0.01	0.01	Oxygenated sesquiterpene
α-Phellandrene dimer I	0.01	tr	Diterpene
α-Phellandrene dimer II	0.07	0.07	Diterpene
α-Phellandrene dimer III	0.02	0.01	Diterpene
α-Phellandrene dimer IV	0.01	[0.24]*	Diterpene
(3E)-Cembrene A	0.05	0.05	Diterpene
Verticilla-4(20),7,11-triene	0.03		Diterpene
Cembreanol	0.02	0.02	Diterpenic alcohol
Serratol	0.17	0.16	Diterpenic alcohol
<b>Total identified</b>	<b>98.18%</b>	<b>97.77%</b>	

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

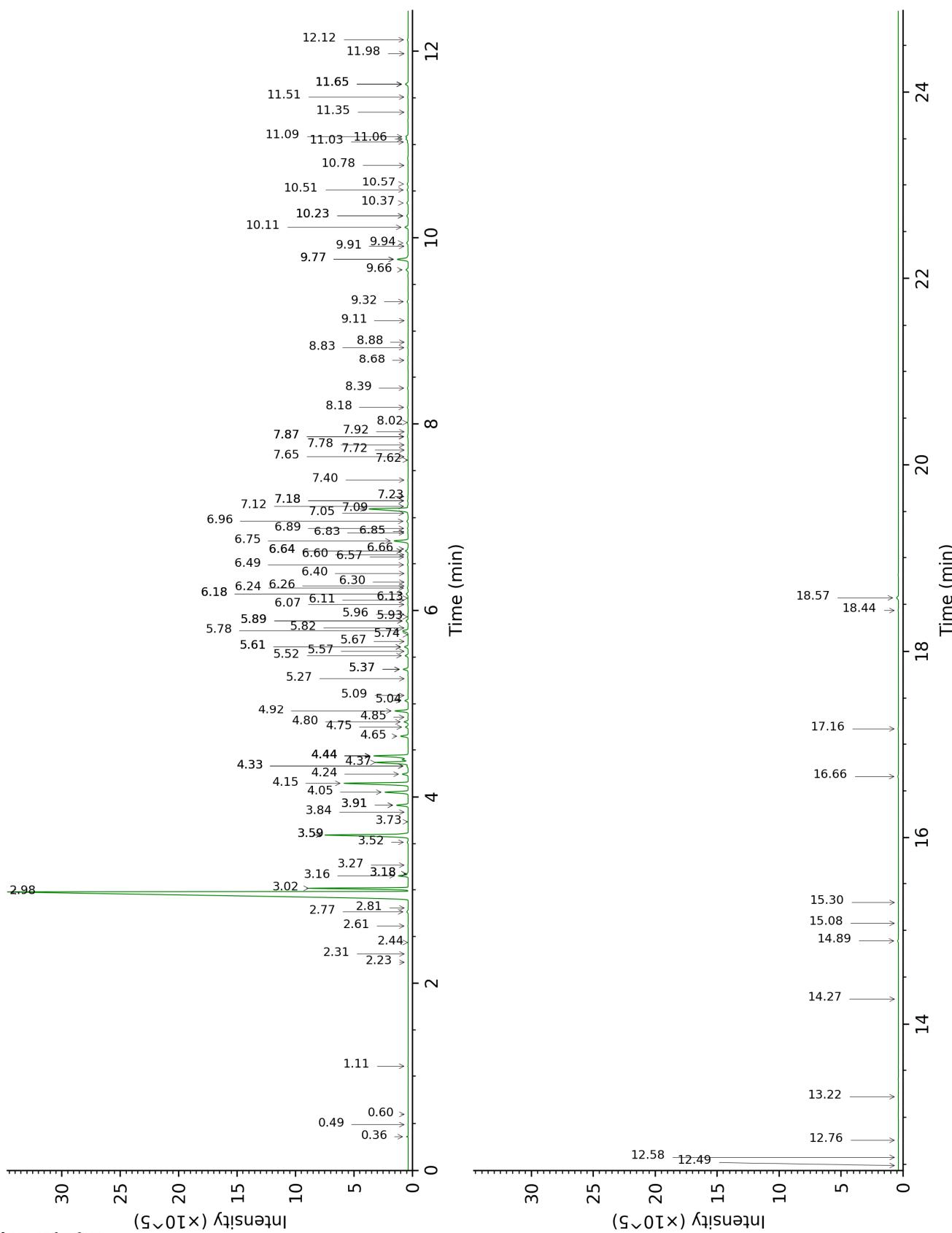
[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

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

Note: no correction factor was applied

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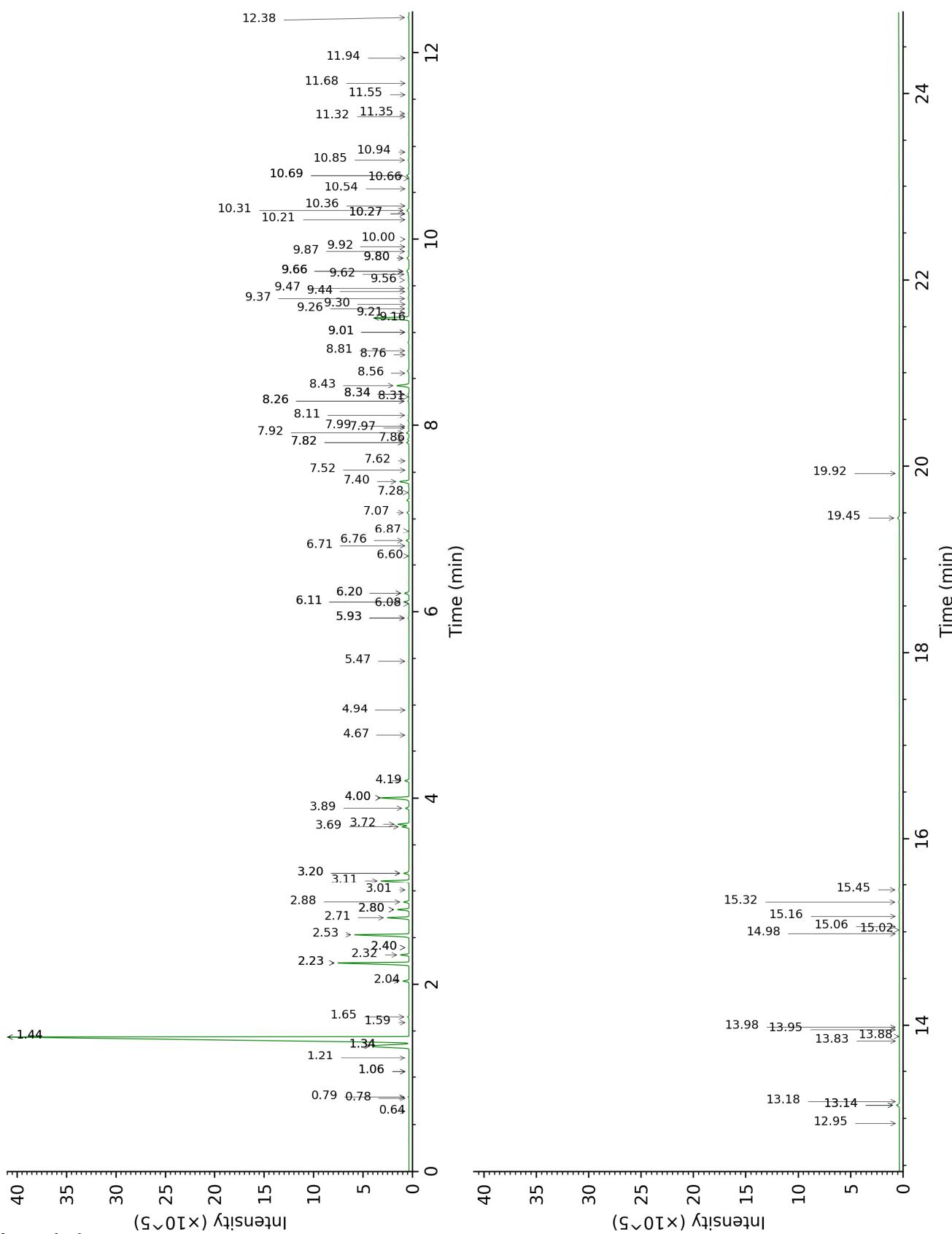
DB-5



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DB-WAX



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FULL ANALYSIS DATA

Identification	Column DB-5			Column DB-WAX		
	R.T	R.I	%	R.T	R.I	%
Ethanol	0.36	498	0.04	0.79	905	0.03
2-Methylfuran	0.49	606	0.01	0.64	849	tr
3-Methyl-2-butanone	0.60	645	tr	0.78	900	tr
Toluene	1.11	754	0.01	1.44*	1010	61.42
Unknown [m/z 79, 78 (45), 91 (28), 77 (28), 41 (13), 80 (12), 107 (11)... 122 (1)]	2.23	870	tr			
Santene	2.32	878	tr	1.06*	950	tr
Unknown [m/z 93, 91 (75), 121 (61), 77 (58), 79 (38), 92 (26), 43 (24), 41 (23), 105 (22), 107 (19), 136 (16)]	2.44	889	tr	1.06*	950	[tr]
Unknown [m/z 93, 91 (72), 121 (58), 77 (49), 79 (41), 43 (22), 105 (20), 107 (20), 41 (18), 136 (17), 92 (17)]	2.61	904	0.01			
Hashishene	2.76	914	0.10	1.34*	996	5.24
Tricyclene	2.81	916	tr	1.21	975	0.01
$\alpha$ -Thujene	2.98	928	61.49	1.44*	1010	[61.42]
$\alpha$ -Pinene	3.02	931	5.18	1.34*	996	[5.24]
Unknown [m/z 91, 92 (47), 65 (11)... 134 (1)]	3.16	940	0.57	2.32	1097	0.57
Camphene	3.18*	942	0.07	1.65	1032	0.07
$\alpha$ -Fenchene	3.18*	942	[0.07]	1.59	1026	0.01
Thuja-2,4(10)-diene	3.27	948	0.01	2.23*	1089	5.91
meta-Cymene	3.52	964	0.06	2.80*	1138	0.82
Sabinene	3.59*	970	6.31	2.23*	1089	[5.91]
$\beta$ -Pinene	3.59*	970	[6.31]	2.04	1070	0.41
Pseudolimonene isomer	3.74	979	tr	2.40*	1105	0.02
6-Methyl-5-hepten-2-one	3.84	986	0.01	4.94	1298	0.01
Myrcene	3.91*	991	0.76	2.80*	1138	[0.82]
Dehydro-1,8-cineole	3.91*	991	[0.76]	3.01	1154	0.01
$\alpha$ -Phellandrene	4.05	1000	1.59	2.71	1131	1.59
$\Delta$ 3-Carene	4.15	1007	4.65	2.53	1117	4.63
$\alpha$ -Terpinene	4.24	1013	0.39	2.88	1144	0.38
Carvomenthene	4.33*	1018	0.09	2.40*	1105	[0.02]
ortho-Cymene	4.33*	1018	[0.09]	4.00*	1230	2.42
para-Cymene	4.37	1021	2.37	4.00*	1230	[2.42]
Limonene	4.44*	1025	3.05	3.11	1162	2.23
$\beta$ -Phellandrene	4.44*	1025	[3.05]	3.20*	1168	0.42
1,8-Cineole	4.44*	1025	[3.05]	3.20*	1168	[0.42]
Unknown [m/z 109, 43 (58), 95 (26)... 137]	4.44*	1025	[3.05]	6.11*	1382	0.41

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(15)...						
(Z)- $\beta$ -Ocimene	4.65	1038	0.50	3.69	1207	0.52
Unknown (m/z 109, 43 (57), 91 (28), 67 (25), 93 (24), 95 (22), 77 (21), 137 (21), 41 (17), 79 (14)...)	4.75	1045	0.17			
(E)- $\beta$ -Ocimene	4.80	1048	0.27	3.89	1222	0.27
Unknown [m/z 109, 45 (67), 41 (40), 67 (39), 81 (33), 79 (27), 95 (24), 91 (23), 82 (21), 55 (21), 93 (20)...]	4.85	1051	0.02			
$\gamma$ -Terpinene	4.92	1056	0.90	3.72	1209	0.88
cis-Sabinene hydrate	5.04	1063	0.22	6.76	1430	0.23
Unknown [m/z 79, 93 (60), 43 (40), 94 (35), 137 (33), 77 (26), 91 (20), 152 (18)]	5.09	1066	0.01	4.67	1278	0.02
meta-Cymenene	5.27	1078	tr	6.11*	1382	[0.41]
para-Cymenene	5.37*	1084	0.35	6.20*	1389	0.39
Terpinolene	5.37*	1084	[0.35]	4.19	1243	0.33
trans-Sabinene hydrate	5.52	1093	0.20	7.82*	1510	0.19
Unknown [m/z 109, 43 (65), 95 (54), 119 (50), 91 (47)... 149 (8)...]	5.56	1096	tr	5.93*	1370	0.07
Linalool	5.61*	1099	0.27	7.86	1512	0.11
$\alpha$ -Thujone	5.61*	1099	[0.27]	5.93*	1370	[0.07]
Unknown [m/z 119, 109 (94), 43 (61), 95 (56), 91 (48), 77 (32), 152 (32), 137 (31), 134 (24)]	5.67	1103	tr	8.34*	1550	0.08
Unknown [m/z 109, 81 (54), 91 (32), 79 (22)...]	5.74	1108	tr	6.08	1381	0.01
$\beta$ -Thujone	5.78	1110	0.47	6.20*	1389	[0.39]
Unknown [m/z 109, 91 (57), 93 (47), 81 (44), 77 (40)... 154 (1)]	5.82	1112	0.01			
Dehydrosabinaketone	5.89*	1117	0.17	8.56	1568	0.02
cis-para-Menth-2-en-1-ol	5.89*	1117	[0.17]	7.92	1518	0.20
$\alpha$ -Campholenal	5.93	1120	0.01	6.87	1439	0.01
Unknown [m/z 111, 43 (22), 55 (14), 41 (12), 110 (11)...]	5.96	1122	0.02			
4-Hydroxy-4-methylcyclohex-2-enone	6.06	1128	0.03	13.88	2030	0.02

allo-Ocimene	6.11	1131	0.02	5.47	1336	0.02
cis-para-Mentha-2,8-dien-1-ol	6.13	1133	tr	9.30	1627	0.01
trans-Sabinol	6.18*	1136	0.14	9.62	1653	0.11
trans-Pinocarveol	6.18*	1136	[0.14]	9.01*	1603	0.03
trans-Verbenol	6.24	1140	0.05	9.36	1632	0.05
Epoxyterpinolene	6.26	1141	0.01	6.60	1418	0.02
Unknown [m/z 109, 124 (45), 119 (41), 43 (35), 91 (28), 95 (25)…]	6.30	1144	0.01	6.71	1426	0.03
Unknown [m/z 109, 81 (39), 41 (38), 95 (24)… 152 (1)]	6.40	1150	0.01			
Unknown [m/z 109, 43 (75), 137 (46), 67 (31), 93 (25)… 152 (4)]	6.49	1156	0.05			
Borneol	6.57	1161	0.05	9.66*	1656	0.30
α-Phellandren-8-ol	6.60	1163	0.02	10.00	1684	0.01
Unknown [m/z 95, 110 (43), 81 (28), 41 (15)… 152 (8)]	6.64*	1165	0.22	7.62	1495	tr
cis-Sabinol	6.64*	1165	[0.22]	10.69*	1741	0.21
Umbellulone	6.66	1166	0.02	8.76	1584	0.02
Terpinen-4-ol	6.74	1172	1.07	8.43	1557	1.15
meta-Cymen-8-ol	6.83	1178	0.02	11.32	1796	0.02
Cryptone	6.85	1179	0.03	9.01*	1603	[0.03]
para-Cymen-8-ol	6.89	1181	0.04	11.35	1798	0.04
α-Terpineol	6.96	1186	0.09	9.66*	1656	[0.30]
Myrtenol	7.05	1192	0.02	10.69*	1741	[0.21]
Methylchavicol	7.09	1194	3.41	9.16	1614	3.43
α-Phellandrene epoxide	7.12	1196	0.05	10.85	1756	0.07
Unknown [m/z 109, 91 (100), 81 (88), 94 (75), 119 (74), 96 (73), 41 (63)… 150 (2)]	7.18*	1200	0.05	10.66	1739	0.01
Verbenone	7.18*	1200	[0.05]	9.44	1638	0.02
trans-Piperitol	7.23	1203	0.03	10.21	1701	0.02
Unknown [m/z 43, 93 (73), 91 (40), 109 (31), 77 (28)…]	7.40	1215	0.02			
cis-Carveol	7.62	1229	0.01	11.55	1816	tr
Cuminal	7.65	1232	0.02	10.54	1729	0.01
Carvone	7.72	1236	tr	9.87	1673	0.05
Carvotanacetone	7.78	1240	0.02	9.26	1623	0.04
Piperitone	7.87*	1246	0.06	9.80*	1667	0.21
Unknown [m/z 43, 97 (69), 107 (46), 41 (28), 55 (21), 109 (20)…]	7.87*	1246	[0.06]	10.94	1763	0.01
trans-Sabinene hydrate acetate	7.92	1250	0.01	7.52	1487	0.01
Linalyl acetate	8.02	1256	0.03	7.99	1523	0.03

Laboratoire  
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Plus que des analyses... des conseils

Unknown [m/z 109, 41 (22), 81 (14), 43 (11)... 152 (4)]	8.18	1267	0.05			
Bornyl acetate	8.39	1281	0.05	8.11	1532	0.05
Thymol	8.68	1301	0.03	14.98	2138	0.03
Carvacrol	8.83	1311	0.03	15.16	2157	0.02
Unknown [m/z 111, 126 (93), 43 (90), 71 (60)...]	8.88	1315	tr	15.02	2142	tr
Unknown [m/z 43, 97 (99), 107 (47), 41 (35), 55 (30)...]	9.11	1331	0.01	13.18	1964	0.01
$\alpha$ -Terpinyl acetate	9.32	1346	0.08	9.56	1648	0.06
$\alpha$ -Copaene	9.66	1370	0.17	7.07	1453	0.18
$\beta$ -Bourbonene	9.77*	1378	0.95	7.40	1478	0.87
1,5-diepi- $\beta$ -Bourbonene	9.77*	1378	[0.95]	7.28	1469	0.07
$\beta$ -Elemene	9.91	1388	0.02	8.31	1548	0.02
Sibirene	9.94	1390	0.12	7.82*	1510	[0.19]
Methyleugenol	10.11	1402	0.25	13.14*	1960	0.24
$\beta$ -Caryophyllene	10.23*	1411	0.12	8.26*	1544	0.10
$\beta$ -Ylangene	10.23*	1411	[0.12]	7.97	1522	0.05
$\beta$ -Copaene	10.37	1421	0.10	8.26*	1544	[0.10]
trans- $\alpha$ -Bergamotene	10.51	1432	0.08	8.34*	1550	[0.08]
Isogermacrene D	10.58	1436	0.07	8.81	1587	0.04
cis-Muurola-4(15),5-diene	10.78	1452	0.02	9.21	1619	0.01
$\gamma$ -Muurolene	11.03	1471	0.06	9.48	1641	0.08
Germacrene D	11.06	1473	0.19	9.66*	1656	[0.30]
Unknown [m/z 91, 93 (92), 105 (71), 77 (69), 79 (68), 133 (63)... 204 (32)]	11.09	1475	0.19	9.80*	1667	[0.21]
$\alpha$ -Muurolene	11.35	1494	0.01	9.92	1677	0.02
$\gamma$ -Cadinene	11.51	1507	0.04	10.27*	1706	0.03
$\delta$ -Cadinene	11.65*	1518	0.23	10.31	1709	0.22
Kessane	11.65*	1518	[0.23]	10.36	1713	0.01
Zonarene	11.65*	1518	[0.23]	10.27*	1706	[0.03]
Isocaryophyllene epoxide B	11.98	1543	0.01	11.94	1851	0.01
Elemicin	12.12	1555	0.06	15.32	2172	0.05
Viridiflorol	12.49	1584	0.01	13.83	2025	0.01
Guaiol	12.58	1591	0.01	13.95	2037	0.01
10-epi- $\gamma$ -Eudesmol	12.76	1605	0.02	13.98	2040	0.02
Unknown [m/z 204, 161 (97), 59 (87), 189 (78), 105 (45)...]	13.22	1643	0.01	15.06	2146	0.01
$\alpha$ -Phellandrene dimer I	14.27	1731	0.01	11.68	1827	tr
$\alpha$ -Phellandrene dimer II	14.89	1786	0.07	12.38	1890	0.07
$\alpha$ -Phellandrene dimer	15.08	1802	0.02	12.95	1942	0.01

III						
α-Phellandrene dimer	15.30	1822	0.01	13.14*	1960	[0.24]
IV						
(3E)-Cembrene A	16.66	1948	0.05	15.45	2185	0.05
Verticilla-4(20),7,11-triene	17.16	1996	0.03			
Cembrenol	18.44	2123	0.02	19.92	2686	0.02
Serratol	18.57	2138	0.17	19.45	2628	0.16
<b>Total identified</b>	<b>98.18%</b>			<b>97.77%</b>		
<b>Total reported</b>	<b>99.37%</b>			<b>98.43%</b>		

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

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

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