



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: C70103

ESSENTIAL OIL: CEDARWOOD VIRGINIAN
BOTANICAL NAME: JUNIPERUS VIRGINIANA
ORIGIN: USA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CEDARWOOD VIRGINIAN OIL	%
α -CEDRENE	30.7
α -CEDROL	20.6
THUJOPSENE	17.9
β -CEDRENE	5.8
WIDDROL	3.4
β -CARYOPHYLLENE	1.8
β -HIMACHALENE	1.7
β -ALASKENE	1.7
trans- γ -BISABOLENE	1.5
CUPARENE	1.2
γ -HIMACHALENE	1.1

Comments from Robert Tisserand: Clean, pencil-woody odor profile. Five of six key ISO constituents are within range, with cuparene marginally low - not a concern.

Date : November 10, 2017

SAMPLE IDENTIFICATION

Internal code : 17K08-PTH5-1-CC

Customer identification : Cedarwood Virginian - USA - C7010373R

Type : Essential oil

Source : *Juniperus virginiana*

Customer : Plant Therapy

ANALYSIS

Method : PC-PA-001-15E06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).

Identifications double-checked by GC-MS

Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-11-10

Checked and approved by :

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

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IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
α -Pinene	3.42	927	0.13	0.12	948	1.15	Monoterpene
α -Cubebene	16.03	1332	0.07	0.08	1414	7.02	Sesquiterpene
diepi- α -Cedrene	17.92	1360	0.71	0.70	1436	7.57	Sesquiterpene
α -Duprezianene	18.26	1366	0.77	0.95	1452	7.92*	Sesquiterpene
Isolongifolene	18.53	1370	0.23	[0.95]	1452	7.92*	Sesquiterpene
β -Elemene	18.93	1376	0.30	6.71	1519	9.71*	Sesquiterpene
7-epi-Sesquithujene	19.21	1380	0.13				Sesquiterpene
Longifolene	19.34	1382	0.25	0.20	1473	8.43	Sesquiterpene
α -Cedrene	20.64	1401	30.69	30.88	1505	9.18	Sesquiterpene
β -Caryophyllene	20.77	1402	1.75	1.11	1511	9.42	Sesquiterpene
β -Cedrene	21.02	1405	5.83	[6.71]	1519	9.71*	Sesquiterpene
β -Copaene	21.21	1407	0.15	[6.71]	1519	9.71*	Sesquiterpene
Thujopsen	22.01	1417	17.88	18.31	1543	10.58*	Sesquiterpene
Aromadendrene	22.10	1418	0.17	[6.71]	1519	9.71*	Sesquiterpene
Seychellene	22.59	1424	0.09	[18.31]	1543	10.58*	Sesquiterpene
α -Himachalene	22.86	1427	0.26	[18.31]	1543	10.58*	Sesquiterpene
Thujopsadiene	23.31	1433	0.16	0.36	1590	12.31*	Sesquiterpene
α -Acoradiene	24.23	1443	0.27	[0.36]	1590	12.31*	Sesquiterpene
β -Acoradiene	24.50	1447	0.53	0.50	1597	12.60	Sesquiterpene
β -Chamigrene	24.90	1451	0.21	1.97	1626	13.98*	Sesquiterpene
γ -Himachalene	25.38	1457	1.14	1.42	1608	13.05*	Sesquiterpene
α -Chamigrene	26.26	1468	0.04	2.45	1640	14.66*	Sesquiterpene
α -Curcumene	26.64	1472	0.10	0.13	1695	17.57	Sesquiterpene
α -Cuprenene	26.95	1476	0.20				Sesquiterpene
β -Alaskene	27.18	1479	1.67	[2.45]	1640	14.66*	Sesquiterpene
β -Himachalene	27.47	1482	1.69	[1.97]	1626	13.98*	Sesquiterpene
α -Muurolene	27.54	1483	0.51	[2.45]	1640	14.66*	Sesquiterpene
Cuparene	28.20	1491	1.18	1.01	1715	18.75	Sesquiterpene
<i>cis</i> - α -Bisabolene	28.44	1494	0.61	0.60	1656	15.51	Sesquiterpene
7-epi- α -Selinene	29.02	1501	0.19	0.12	1670	16.27	Sesquiterpene
δ -Cadinene	29.20	1504	0.09	0.06	1677	16.62	Sesquiterpene
γ -Cuprenene	30.43*	1521	1.68	[1.42]	1608	13.05*	Sesquiterpene
<i>trans</i> - γ -Bisabolene	30.43*	1521	[1.68]	1.54	1685	17.02	Sesquiterpene
δ -Cuprenene	31.04	1529	0.31				Sesquiterpene
allo-Cedrol	34.79	1582	0.20	0.15	1978	35.51	Sesquiterp. alcohol
α -Cedrol	35.76*	1596	22.72	20.55	1994	36.24	Sesquiterp. alcohol
Widdrol	35.76*	1596	[22.72]	3.43	2027	37.55	Sesquiterp. alcohol
epi-Cedrol	36.20	1605	0.34				Sesquiterp. alcohol
α -Acorenol	36.63	1616	0.13	0.14	2007	36.82	Sesquiterp. alcohol
β -Acorenol	36.98	1624	0.14	0.11	2051	38.34	Sesquiterp. alcohol
β -Eudesmol	37.92	1647	0.06	0.05	2108	40.09	Sesquiterp. alcohol

α -Cadinol	38.14	1653	0.12	0.13	2122	40.50	Sesquiterp. alcohol
Cedr-8-en-15-ol?	38.21	1654	0.32	0.41	2209	42.77	Sesquiterp. alcohol
α -Bisabolol	39.48	1686	0.46	0.40	2128	40.65	Sesquiterp. alcohol
Thujopsenal?	39.85	1695	0.39				Sesquiterp. aldehyde
Total identified			94.87%	94.59%			

*: 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

OTHER DATA

Physical aspect : Faintly yellow liquid

Refractive index : 1.5050 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method.

17K08-PTH5-1-CC_BP5



