PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: C50101

ESSENTIAL OIL: CEDARWOOD HIMALAYAN
BOTANICAL NAME: CEDRUS DEODARA
ORIGIN: NEPAL

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CEDARWOOD DEODORA OIL	%
β-HIMACHALENE	37.0
α-HIMACHALENE	14.9
γ-ATLANTONE	9.7
γ-HIMACHALENE	9.0
HIMACHALOL	4.1
α-TURMERONE	2.4
β-TURMERONE	2.2
HIMACHALENE ISOMER	1.9
α-BISABOLENE	1.6
β-ATLANTONE	1.6
α-ATLANTONE	1.0

Comments from Robert Tisserand: This is a fine quality Himalayan cedarwood oil, high in himachalenes, which are found in very few essential oils.

CUSTOMER :

PLANT THERAPY
126 Locust Street South
Twin Falls, ID 83 301
USA

Sample nature:	ESSENTIAL OIL
Botanical species:	CEDRUS DEODORA
Reference name:	CEDARWOOD DEODORA
Batch number:	C50101
Origin:	NEPAL
Part:	WOOD
Pyrenessences reference:	F067
Date of reception:	10/02/2015
Date analysis:	10/15/2015
Packaging:	Brown flask of 5 ml – ambient temperature
Analysis:	Classic

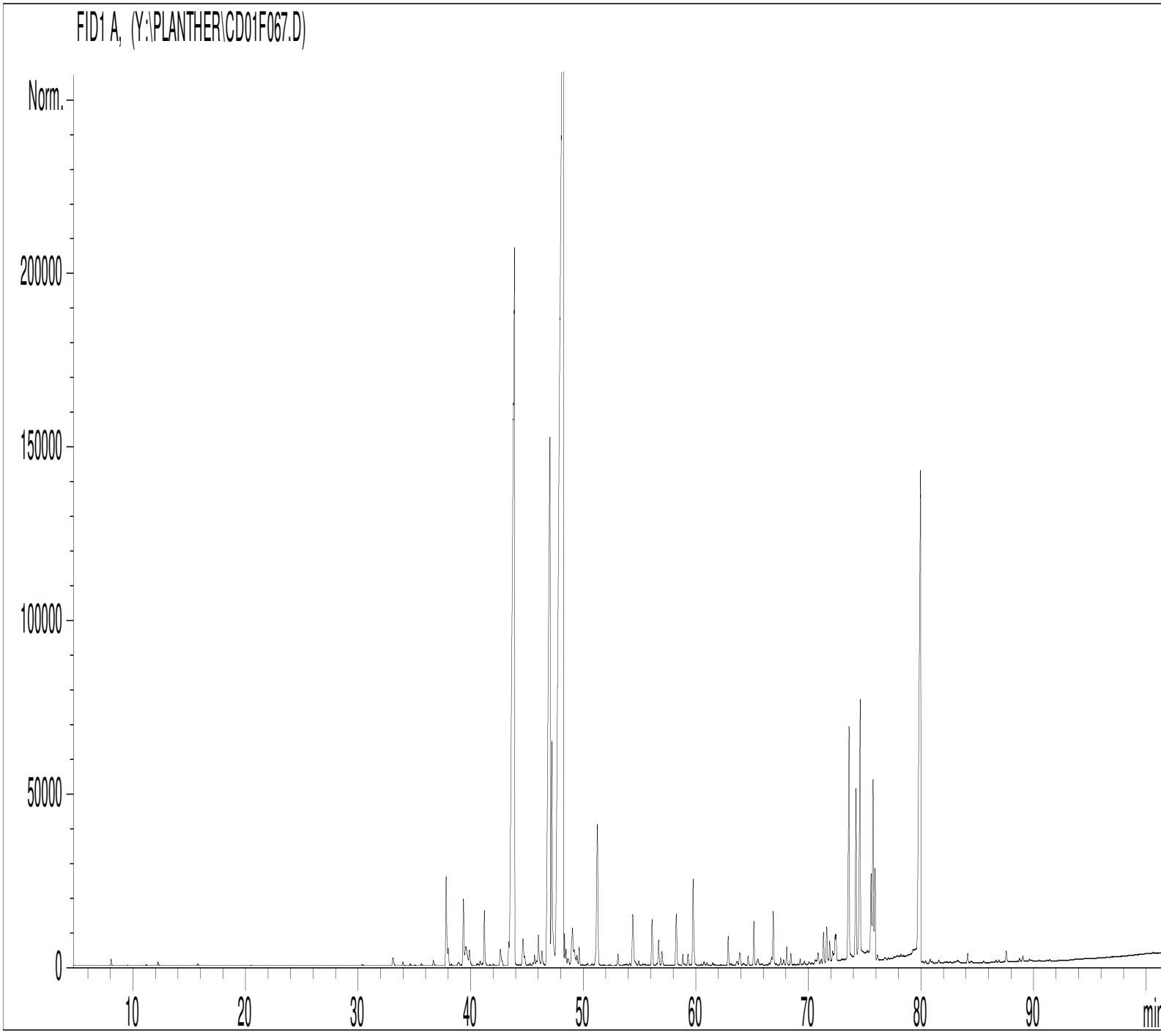
Validated report by : **Daniel DANTIN**

GAS CHROMATOGRAPHY norm NF ISO 11024

Analysis conditions :

CPG 7890 / MS 5975 – Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm
CPG 5890 FID - Column : HP INNOWAX polar 60 m × 0,25 mm × 0,5 µm
Temperature program : 6 mn to 60 °C –2 °C/mn→250 °C - 20mn to 250 °C
Carrier gas He : 23 psis/MS – 30 psis/FID
Sample injection / split : 1 µl of 10 % solution in hexane,
Mass range : 30 to 350, Oil compounds are identified by a combination of retention times (our own database) and mass spectra library NKS 75 000 records,
Percentages are calculated from GC/FID peaks areas without using corrections factors,

Chromatographic profile (GC/FID)



Identification results 1 : CEDARWOOD DEODORA BATCH N° C50101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	8,0	α-PINENE	0,05		
2	9,5	CAMPHENE	0,01		
3	11,2	β-PINENE	0,01		
4	12,2	4-METHYL-3-PENTEN-2-ONE	0,04		
5	15,7	LIMONENE	0,02		0,02
6	20,5	TERPINOLENE	0,01		
7	30,4	α,p-DIMETHYLSTYRENE	0,02		
8	33,1	LONGIPINENE	0,10		
9	33,9	YLANGENE	0,05		
10	34,6	α-COPAENE	0,02		
11	35,1	SESQUITERPENE	0,01		
12	35,6	CEDRENE ISOMER	0,02		
13	36,7	MAALIENE ISOMER	0,06		
14	37,8	1-METHYL-4-ACETYLCYCLOHEX-1-ENE	0,84		
15	38,0	SESUITERPENE	0,15		
16	38,2	CEDRENE ISOMER	0,02		
17	39,0	BERGAMOTENE ISOMER	0,05		
18	39,1	AROMATIC SESQUITERPENE Mw=202	0,01		
19	39,4	LONGIFOLENE	0,59		
20	39,5	EUDESMATRIENE ISOMER Mw=202	0,39		
21	39,9	BERGAMOTENE ISOMER	0,19		
22	40,5	SESQUITERPENE	0,02		
23	40,8	SESQUITERPENE	0,05		
24	41,0	SESQUITERPENE Mw=202	0,02		
25	41,2	HIMACHALENE ISOMER	0,45		
26	41,7	CEDRENE ISOMER	0,01		
27	42,0	HIMACHALENE ISOMER	0,02		
28	42,6	HIMACHALENE ISOMER	0,24		
29	43,3	SESQUITERPENE Mw=202	0,18		
30	43,8	**α-HIMACHALENE**	**14,85**		
31	44,6	E-β-FARNESENE + SESQUITERPENE	0,33		
32	44,8	SESQUITERPENE	0,09		
33	45,3	α-HUMULENE	0,03		
34	45,6	SESQUITERPENE	0,09		
35	46,0	HIMACHALENE ISOMER	0,32		
36	46,3	HIMACHALENE ISOMER	0,19		
37	47,0	**γ-HIMACHALENE**	**8,97**		
38	47,2	HIMACHALENE ISOMER	1,89		
39	47,3	SESQUITERPENE	0,35		
40	48,2	**β-HIMACHALENE**	**36,96**		
41	48,3	CHAMIGRENE ISOMER	0,16		
42	48,5	EUDESMA-3,5,11-TRIENE	0,15		
43	48,6	HIMACHALENE ISOMER	0,10		
44	49,0	HIMACHALENE ISOMER	0,53		
45	49,2	β-CURCUMENE	0,11		
46	49,3	EUDESMA-2,4-11-TRIENE	0,11		
47	49,5	SESQUITERPENIC EPOXIDE Mw=222	0,09		

Identification results 2 : CEDARWOOD DEODORA BATCH N° C50101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
48	49,6	SESQUITERPENE Mw=202	0,15		
49	51,2	α-BISABOLENE	1,62		
50	51,3	β-SESQUIPHELLANDRENE	0,10		
51	52,3	α-AMORPHENE	0,02		
52	53,1	SESQUITERPENE Mw=202	0,11		
53	54,1	COMPONENT Mw=202	0,02		
54	54,4	EUDESMA-2,4,11-TRIENE	0,61		
55	54,6	CALAMENENE	0,05		
56	64,9	SESQUITERPENE Mw=202	0,04		
57	56,1	OCTAHYDRO METHYLPHENANTHRENE ISOMER	0,46		
58	56,6	AROMATIC COMPONENT Mw=202	0,25		
59	57,0	CYCLOTERPENIC COMPONENT Mw=178	0,14		
60	58,3	OCTAHYDRO METHYLPHENANTHRENE Mw=200	0,54		
61	58,8	CYCLOTERPENIC COMPONENT Mw=178 ISOMER	0,08		
62	59,3	CALACORENE	0,10		
63	59,8	BENZOCYCLOHEPTENONE ISOMER Mw=178	0,88		
64	62,9	DIHYDROTURMERONE Mw=218	0,24		
65	63,6	SESQUITERPENOL	0,05		
66	63,9	SESQUITERPENE EPOXIDE	0,15		
67	64,6	AROMATIC COMPONENT	0,07		
68	65,2	SESQUITERPENE EPOXIDE Mw=220	0,35		
69	65,5	NEROLIDOL	0,10		
70	65,8	COMPONENT Mw=220	0,03		
71	66,6	AROMATIC COMPONENT	0,07		
72	66,8	SESQUITERPENIC EPOXIDE	0,47		
73	67,5	SESQUITERPENONE Mw=218	0,06		
74	68,1	OXYGENED COMPONENT Mw=220	0,15		
75	68,4	SESQUITERPENE EPOXIDE	0,11		
76	69,3	SESQUITERPENOL Mw=222	0,05		
77	70,5	SESQUITERPENOL	0,04		
78	70,8	SESQUITERPENOL	0,13		
79	71,3	SESQUITERPENONE Mw=218	0,25		
80	71,6	SESQUITERPENOL Mw=222	0,33		
81	71,9	SESQUITERPENIC EPOXIDE	0,16		
82	72,1	ATLANTONE ISOMER	0,09		
83	72,3	ATLANTONE ISOMER	0,21		
84	72,4	EPOXY SESQUITERPENE COMPONENT	0,18		
85	73,6	β-TURMERONE Mw=218	2,20		
86	74,0	**HIMACHALOL**	**4,08**		
87	74,6	α-TURMERONE Mw=218	2,43		
88	75,5	α-ATLANTONE	1,04		
89	75,7	β-ATLANTONE	1,58		
90	75,9	ALLO-HIMACHALOL	0,80		
91	76,1	Ar-TURMERONE	0,05		
92	76,7	SESQUITERPENIC COMPONENT	0,03		
93	78,2	COMPONENT Mw=216	0,02		
94	79,3	SESQUITERPENIC COMPONENT	0,05		

Identification results 3 : CEDARWOOD DEODORA BATCH N° C50101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
95	79,9	**γ-ATLANTONE**	**9,67**		
96	80,8	SESQUITERPENONE Mw=218	0,06		
97	81,0	CYPERONE ISOMER Mw=218	0,03		
98	84,1	SESQUITERPENIC COMPONENT	0,07		
99	86,7	AROMATIC COMPONENT	0,02		
100	87,6	OXYGENED COMPONENT Mw=220	0,10		
101	88,7	AROMATIC COMPONENT	0,02		
102	89,0	OXYGENED COMPONENT Mw=220	0,04		
		TOTAL	**99,72**		**0,02**