



# PLANT THERAPY

100% PURE ESSENTIAL OILS

## GC/MS BATCH NUMBER: J20101

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**ESSENTIAL OIL:** JUNIPER BERRY  
**BOTANICAL NAME:** JUNIPERUS COMMUNIS  
**ORIGIN:** INDIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF JUNIPER BERRY	%
$\alpha$ -PINENE	43.3
$\beta$ -MYRCENE	13.0
$\beta$ -PINENE	5.4
LIMONENE	5.0
SABINENE	4.6
TERPINEN-4-OL	3.7
$\beta$ -CARYOPHYLLENE	2.2
$\gamma$ -TERPINENE	2.1
GERMACRENE D	1.8
$\delta$ -CADINENE	1.6
$\alpha$ -TERPINENE	1.4
p-CYMENE	1.4
$\alpha$ -HUMULENE	1.2
TERPINOLENE	1.2
BORNYL ACETATE	0.2

Comments from Robert Tisserand: This is a very good quality juniperberry oil, and it conforms to the ISO standard.

**Customer :**

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

**Sample nature :** ESSENTIAL OIL  
**Botanical name :** JUNIPERUS COMMUNIS  
**Reference name :** JUNIPER BERRY  
**Batch number :** J20101  
**Origin :** INDIA  
**Part:** BERRY  
**Pyrenessences reference :** E011  
**Date of reception :** 06/15/2015  
**Date analysis :** 06/23/2015  
**Packaging :** Amber flask of 5 ml - ambient temperature  
**Analysis :** Classic analysis

**Report validated by :**

Daniel Dantin



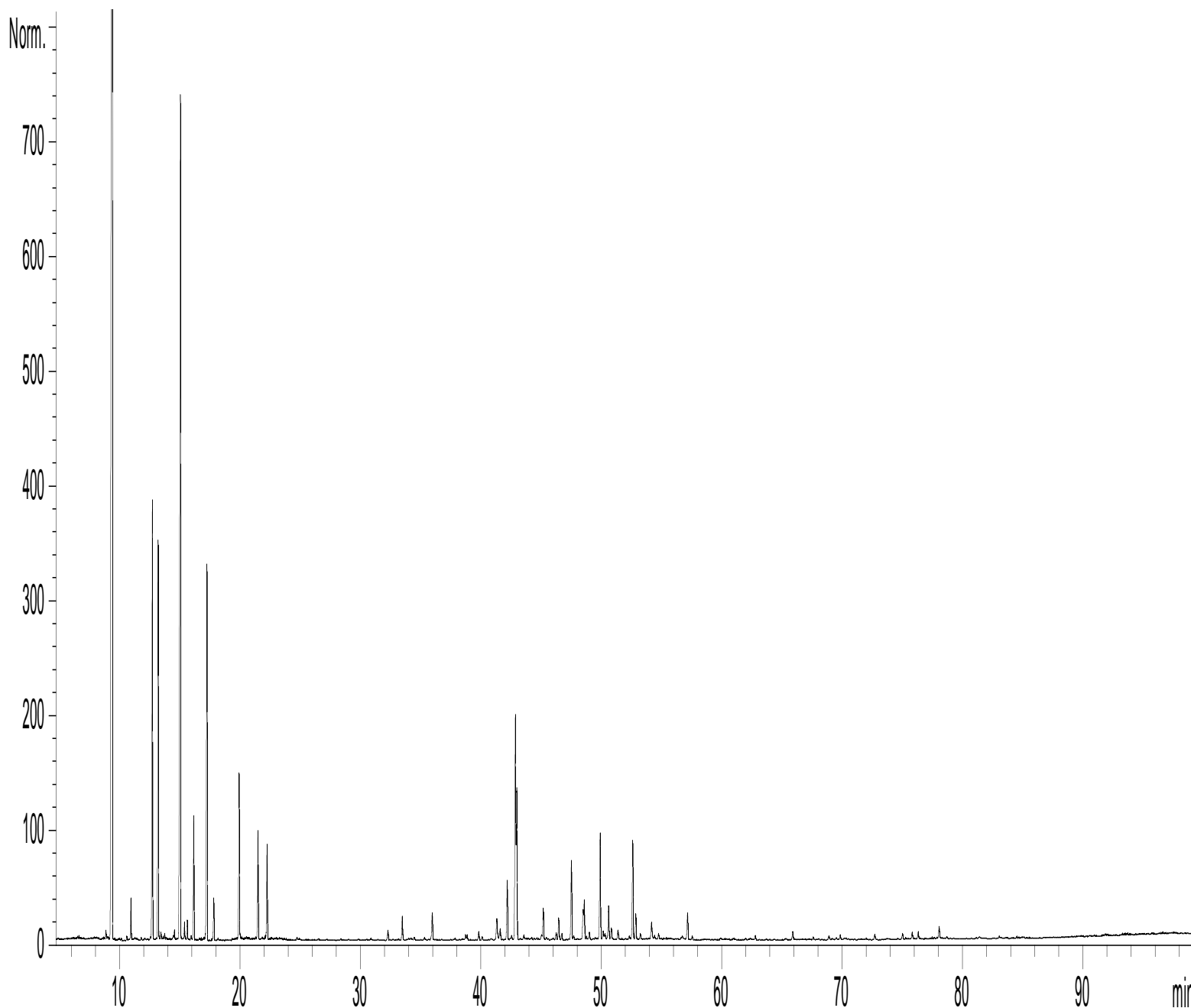
**GAS CHROMATOGRAPHY** (norm NF ISO 11024)

**Conditions :**

CPG 6890 / MS 5973 – Column : : HP INNOWAX polar 60 m × 0,25 mm × 0,5 µm  
CPG 6890 FID - Column : : VF WAX 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) :**

FID1 A, (Z:\PLANTHER\JC15E011.D)



**Identification results 1 – JUNIPER BERRY BATCH J20101**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	8,8	TRICYCLENE	0,10		
2	9,4	<b>α-PINENE</b>	<b>43,25</b>	<b>25,0 – 45,0</b>	
3	10,5	α-FENCHENE	0,05		
4	10,9	CAMPHENE	0,50		
5	11,8	HEXANAL	0,03		
6	12,7	<b>β-PINENE</b>	<b>5,35</b>	<b>1,0 - 12</b>	
7	13,2	<b>SABINENE</b>	<b>4,58</b>	<b>4,0 - 20</b>	
8	13,4	PINADIENE	0,09		
9	13,7	Δ2-CARENE	0,08		
10	14,5	Δ3-CARENE	0,17		
11	15,0	<b>β-MYRCENE</b>	<b>12,95</b>	<b>3,0 – 22,0</b>	
12	15,3	α-PHELLANDRENE	0,17		
13	15,6	ψ-LIMONENE	0,23		
14	15,9	1,4-CINEOLE	0,06		
15	16,1	α-TERPINENE	1,42		
16	17,2	<b>LIMONENE</b>	<b>5,03</b>	<b>2,0 – 8,0</b>	5,03
17	17,8	β-PHELLANDRENE	0,52		
18	18,2	MENTHATRIENE ISOMERE	0,02		
19	19,9	γ-TERPINENE	2,10		
20	20,0	Trans-β-OCIMENE	0,05		
21	21,2	m-CYMENE	0,03		
22	21,5	<b>p-CYMENE</b>	<b>1,37</b>		
23	22,2	TERPINOLENE	1,25		
24	24,7	PINOL	0,04		
25	30,8	PERILLENE	0,03		
26	32,2	α,p-DIMETHYLSTYRENE	0,17		
27	32,4	LINALOOL cis-OXIDE + 1-OCTEN-3-OL	0,02		
28	32,7	α-THUYONE	0,01		
29	33,2	6-METHYL-5-HEPTEN-2-OL	0,03		
30	33,4	α-CUBEBENE	0,33		
31	33,5	Trans-THUYANOL	0,02		
32	34,0	EPOXY-4,8-TERPINOLENE	0,02		
33	34,2	FENCHYL ACETATE	0,04		
34	34,5	α-LONGIPINENE	0,04		
35	35,3	YLANGENE	0,04		
36	35,9	α-COPAENE	0,44		
37	37,8	CAMPHOR	0,03		
38	38,7	β1-CUBEBENE	0,07		
39	38,8	LINALOOL	0,08		0,08
40	39,8	MAALIENE ISOMER	0,14		
41	39,9	Trans-p-MENTH-2-EN-1-OL	0,02		
42	40,1	METHYL CITRONELLATE	0,04		
43	40,8	SESQUITERPENE	0,03		
44	41,3	LONGIFOLENE	0,40		
45	41,4	ε-CADINENE	0,03		

**Identification results 2 – JUNIPER BERRY BATCH J20101**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
46	41,6	<b>BORNYL ACETATE</b>	<b>0,21</b>	<b>&lt; 0,6</b>	
47	42,2	$\beta$ -ELEMENE	0,90		
48	42,5	2-UNDECANONE + $\beta$ -CUBEBENE	0,10		
49	42,8	<b>TERPINENE-4-OL</b>	<b>3,69</b>	<b>1,0 – 6,0</b>	
50	42,9	<b><math>\beta</math>-CARYOPHYLLENE</b>	<b>2,16</b>	<b>1,5 – 5,0</b>	
51	43,5	AROMADENDRENE	0,09		
52	44,2	Cis-p-MENTH-2-EN-1-OL	0,05		
53	44,3	Cis- $\beta$ -TERPINEOL	0,03		
54	44,5	MYRTENAL	0,03		
55	45,0	CADINA-3,5-DIENE	0,09		
56	45,2	GERMACRENE B	0,49		
57	45,4	SESQUITERPENE	0,04		
58	46,0	TRANS-SABINYL ACETATE	0,03		
59	46,1	Trans-PINOCARVEOL	0,10		
60	46,2	CITRONELLYL ACETATE	0,03		
61	46,4	E- $\beta$ -FARNESENE	0,33		
62	46,7	ZONARENE	0,10		
63	47,5	<b><math>\alpha</math>-HUMULENE</b>	<b>1,25</b>	<b>1,0 – 4,0</b>	
64	47,6	Cis-4,5-MUROLADIENE	0,02		
65	47,7	$\gamma$ -SELINENE	0,06		
66	48,0	NERAL	0,02		0,02
67	48,2	MYRTENYL ACETATE	0,01		
68	48,4	$\gamma$ -MUUROLENE	0,40		
69	48,5	TERPENYL ACETATE	0,05		
70	48,6	$\alpha$ -TERPINEOL	0,54		
71	48,7	LEDENE	0,05		
72	48,9	BORNEOL	0,12		
73	49,8	<b>GERMACRENE D</b>	<b>1,76</b>	<b>1,0 – 5,0</b>	
74	50,0	CADIENE ISOMER	0,13		
75	50,3	MUROLADIENE ISOMER	0,09		
76	50,5	$\beta$ -SELINENE	0,18		
77	50,6	$\alpha$ -MUUROLENE	0,37		
78	50,8	$\alpha$ -SELINENE	0,18		
79	51,3	BICYCLOGERMACRENE	0,16		
80	51,4	Trans-PIPERITOL	0,01		
81	51,9	GERANYL ACETATE	0,02		
82	52,3	CITRONELLOL	0,06		0,06
83	52,5	<b><math>\delta</math>-CADINENE</b>	<b>1,55</b>	<b>1,0 – 3,5</b>	
84	52,8	$\gamma$ -CADINENE	0,41		
85	53,2	$\delta$ -SELINENE	0,09		
86	54,1	SELINA-3,7-DIENE + CADINA-1,4-DIENE	0,33		
87	54,4	MYRTENOL	0,05		
88	54,7	$\alpha$ -AMORPHENE	0,09		
89	56,7	Trans-CARVEOL	0,09		
90	57,1	GERMACRENE B	0,45		

**Identification results 3 – JUNIPER BERRY BATCH J20101**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
91	57,5	p-CYMENE-8-OL	0,05		
92	59,9	Epi-CUBEBOL	0,04		
93	62,0	$\alpha$ -CALACORENE	0,02		
94	62,8	CUBEBOL	0,06		
95	65,3	ISOCARYOPHYLLENE EPOXIDE	0,03		
96	65,8	CARYOPHYLLENE EPOXIDE	0,13		
97	67,6	NEROLIDOL	0,04		
98	68,8	EPOXY-6,7-HUMULENE	0,07		
99	69,5	EPI-CUBENOL	0,04		
100	69,8	CUBENOL	0,08		
101	72,0	SESQUITERPENOL Mw=220	0,02		
102	72,7	SPATHULENOL	0,09		
103	75,0	T-CADINOL	0,10		
104	75,8	$\alpha$ -MUUROLOL	0,11		
105	76,3	GERANYLGERANIADIENE ISOMER Mw=272	0,12		
106	78,0	$\alpha$ -CADINOL	0,20		
107	78,7	GERANYLGERANIADIENE ISOMER Mw=272	0,03		
		<b>TOTAL</b>	<b>99,71</b>		<b>5,19</b>