



# PLANT THERAPY

100% PURE ESSENTIAL OILS

## GC/MS BATCH NUMBER: G50101

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**ESSENTIAL OIL:** PINK GRAPEFRUIT  
**BOTANICAL NAME:** CITRUS PARADISI  
**ORIGIN:** USA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF GRAPEFRUIT OIL	%
LIMONENE	94.2
$\beta$ -MYRCENE	1.9
$\alpha$ -PINENE	0.5
SABINENE	0.5
OCTANAL	0.4
DECANAL	0.3
$\beta$ -CARYOPHYLLENE	0.2
$\beta$ -PINENE	0.1
NONANAL	0.1
NOOTKATONE	0.03
NERAL	0.03

Comments from Robert Tisserand: A delightful pink grapefruit that conforms with the 11 key constituents in the ISO standard.

**CUSTOMER :**

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

**Sample nature:** ESSENTIAL OIL  
**Botanical species:** CITRUS PARADISI  
**Reference name:** PINK GRAPEFRUIT  
**Batch number:** G50101  
**Origin:** USA  
**Part:** PEEL  
**Pyrenessences reference:** D477  
**Date of reception:** 04/07/2015  
**Date analysis:** 04/22/2015  
**Packaging:** Amber flask of 4 mL – ambient temperature  
**Analysis:** Classic analysis

**Validated report by :**

**Daniel DANTIN**



**GAS CHROMATOGRAPHY** norm NF ISO 11024

**Analysis conditions :**

CPG 6890 / MS 5973 – Column : VF WAX 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 – 20 mn to 250 °C

Carrier gas He : 23 psis/MS – 30 psis/FID

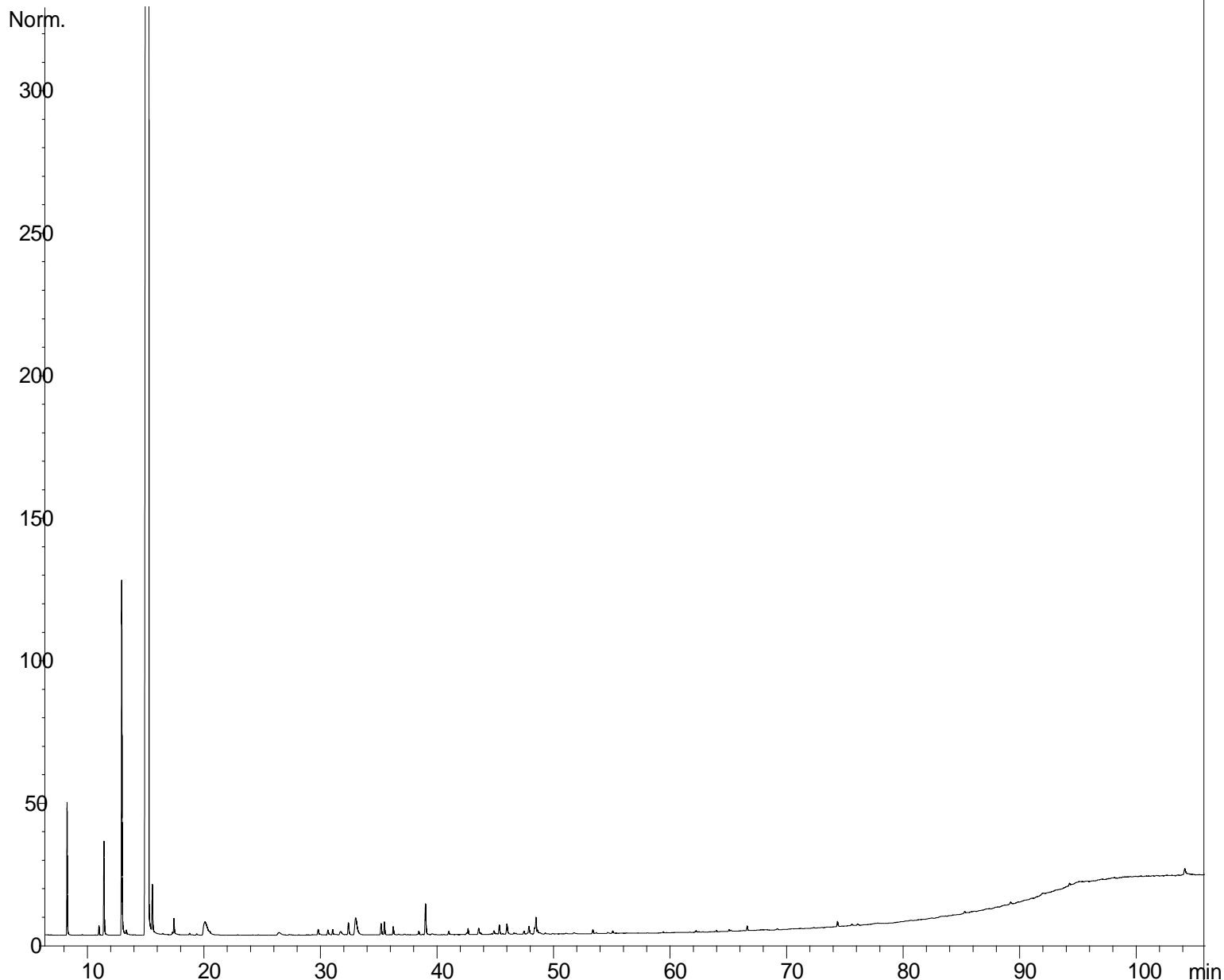
Sample injection / split : 1 µl of 10 % solution in hexane,

Mass range : 30 to 350, Oil components 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, (R:\PLANTHER\CP32D477.D)



**Identification results 1 : PINK GRAPEFRUIT USA BATCH G50101**

Peak	RT (min)	Component name	%	Norm (%)	Allergènes (%)
1	8,2	<b>α-PINENE</b>	<b>0,53</b>	<b>0,2 – 0,6</b>	
2	8,3	α-THUYENE	0,01		
3	11,0	<b>β-PINENE</b>	<b>0,05</b>	<b>0,05 – 0,2</b>	
4	11,4	<b>SABINENE</b>	<b>0,48</b>	<b>0,1 – 0,6</b>	
5	13,0	<b>β-MYRCENE</b>	<b>1,92</b>	<b>1,5 – 2,5</b>	
6	13,3	α-PHELLANDRENE	0,05		
7	15,3	<b>LIMONENE</b>	<b>94,21</b>	<b>92 - 96</b>	94,21
8	15,6	β-PHELLANDRENE	0,31		
9	16,5	Cis-β-OCIMENE	0,01		
10	17,3	γ-TERPINENE	0,01		
11	17,4	Trans-β-OCIMENE	0,09		
12	18,8	p-CYMENE	0,01		
13	19,4	TERPINOLENE	0,01		
14	20,1	<b>OCTANAL</b>	<b>0,37</b>	<b>0,2 – 0,8</b>	
15	26,4	<b>NONANAL</b>	<b>0,05</b>	<b>0,04 – 0,1</b>	
16	29,9	Cis-1,2-LIMONENE EPOXIDE	0,01		
17	30,6	trans-1,2-LIMONENE EPOXIDE	0,04		
18	31,0	OCTYL ACETATE	0,03		
19	31,7	CITRONELLAL	0,05		
20	32,4	α-COPAENE	0,09		
21	33,0	<b>DECANAL</b>	<b>0,30</b>	<b>0,1 – 0,6</b>	
22	35,2	LINALOOL	0,08		0,08
23	35,5	β1-CUBEBENE	0,08		
24	36,2	1-OCTANOL	0,05		
25	38,4	β-ELEMENE	0,03		
26	39,0	<b>β-CARYOPHYLLENE</b>	<b>0,22</b>	<b>0,2 – 0,5</b>	
27	41,0	Cis-p-MENTHA-2,8-DIEN-1-OL	0,02		
28	42,6	trans-p-MENTHA-2,8-DIEN-1-OL	0,01		
29	42,7	E-β-FARNESENE	0,04		
30	43,6	α-HUMULENE	0,05		
31	43,8	NONYL ACETATE	0,01		
32	44,9	<b>NERAL</b>	<b>0,03</b>	<b>0,02 – 0,04</b>	0,03
33	45,4	α-TERPINEOL	0,07		
34	45,6	GERANYL FORMIATE	0,01		
35	45,9	DODECANAL	0,01		
36	46,0	GERMACRENE D	0,08		
37	46,6	NERYL ACETATE	0,01		
38	46,8	α-MUUROLENE	0,01		
39	47,5	GERANIAL	0,02		0,02
40	47,9	BICYCLOGERMACRENE + CARVONE	0,06		
41	48,3	GERANYL ACETATE	0,04		
42	48,4	1-DECANOL	0,03		
43	48,5	δ-CADINENE	0,11		
44	49,3	PERILLALDEHYDE	0,01		
45	53,4	Trans-CARVEOL	0,03		

**Identification results 2 : PINK GRAPEFRUIT USA BATCH G50101**

Peak	RT (min)	Component name	%	Norm (%)	Allergens (%)
46	53,7	GERANIOL	0,01		0,01
47	54,6	PERILLYL ACETATE	0,01		
48	55,1	Cis-CARVEOL	0,02		
49	59,4	CUBEBOL	0,01		
50	62,2	LIMONENE-10-OL	0,01		
51	64,0	NEROLIDOL	0,01		
52	65,1	CAPRYLIC ACID	0,01		
53	66,6	ELEMOL	0,03		
54	69,2	HEXADECANAL	0,01		
55	74,4	β-SINENSAL	0,04		
56	89,2	<b>NOOTKATONE</b>	<b>0,03</b>	<b>0,01 – 0,8</b>	
57	104,2	PALMITIC ACID	0,06		
		<b>TOTAL</b>	<b>99,99</b>		<b>94,35</b>