



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: D10101

ESSENTIAL OIL: DILL WEED
BOTANICAL NAME: ANETHUM GRAVEOLENS
ORIGIN: USA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF DILL WEED OIL	%
CARVONE	45.4
LIMONENE	26.1
α -PHELLANDRENE	14.8
DILL ETHER	5.7
β -PHELLANDRENE	2.0
Trans-DIHYDROCARVONE	1.4
p-CYMENE	1.0

Comments from Robert Tisserand: This dill weed oil has a characteristic odor profile, and has good concentrations of limonene and carvone, important major constituents.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: ANETHUM GRAVEOLENS
Reference name: DILL WEED
Batch number: D10101
Origin: USA
Part: LEAF
Pyrenessences reference: C274
Date of reception: 12/15/2014
Date analysis: 12/22/2014
Packaging: Amber flask of 4 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 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 – 10 mn to 250 °C

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

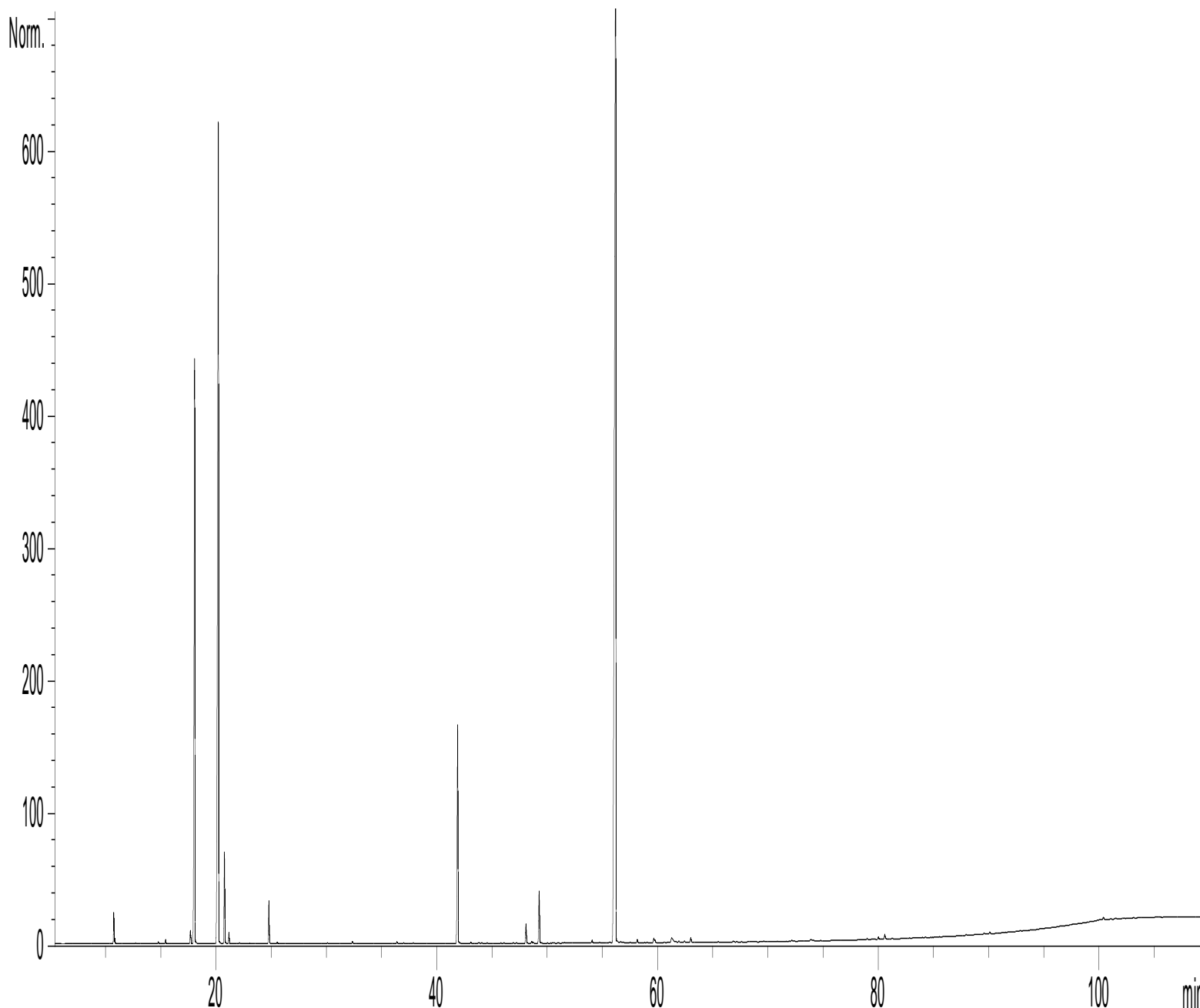
Sample injection / split : 1 µl of 10 % solution in hexane,

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, (Z:\PLANTHERIAGUSC274.D)



Identification results 1 : DILL WEED USA BATCH D10101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	10,7	α -PINENE	0,53		
2	10,8	α -THUYENE	0,09		
3	12,7	CAMPHENE	0,02		
4	14,8	β -PINENE	0,04		
5	15,4	SABINENE	0,09		
6	17,6	β -MYRCENE	0,36		
7	18,1	α -PHELLANDRENE	14,84		
8	18,8	α -TERPINENE	0,01		
9	20,2	LIMONENE	26,05		26,05
10	20,8	β -PHELLANDRENE	1,95		
11	21,2	MENTHATRIENE ISOMER	0,24		
12	22,1	Cis- β -OCIMENE	0,02		
13	23,0	γ -TERPINENE	0,01		
14	23,1	Trans- β -OCIMENE	0,01		
15	24,8	p-CYMENE	0,96		
16	25,5	TERPINOLENE	0,04		
17	30,1	1-HEXANOL	0,02		
18	32,3	3-HEXEN-1-OL	0,06		
19	36,4	α ,p-DIMETHYLSTYRENE	0,05		
20	37,0	LIMONENE cis-1,2-EPOXIDE	0,02		
21	37,9	LIMONENE trans-1,2-EPOXIDE	0,02		
22	41,9	DILL ETHER	5,71		
23	43,1	LINALOOL	0,03		0,03
24	44,1	ISOPINOCAMPHONE	0,02		
25	44,6	Trans-p-MENTH-2-EN-1-OL	0,01		
26	46,1	BORNYL ACETATE	0,01		
27	46,9	β -CARYOPHYLLENE	0,02		
28	47,2	TERPINENE-4-OL	0,02		
29	48,1	Cis-DIHYDROCARVONE	0,51		
30	48,6	BICYCLO OCTAN-3-ONE, ETHYLIDENE Mw=150	0,04		
31	48,7	Cis-p-2,8-MENTHADIEN-1-OL	0,03		
32	49,3	Trans-DIHYDROCARVONE	1,37		
33	50,6	E- β -FARNESENE	0,01		
34	51,6	Trans-p-2,8-MENTHADIEN-1-OL	0,03		
35	54,1	GERMACRENE D	0,08		
36	54,8	DIHYDROCARVEOL ISOMER	0,02		
37	56,2	CARVONE	45,35		
38	56,7	ISOPIPERITENOL	0,02		
39	57,5	CARVYL ACETATE	0,01		
40	58,2	DIHYDROCARVEOL ISOMER	0,08		
41	59,1	Trans-p-MENTHA-1,8-DIEN-2-OL	0,01		
42	59,7	DIHYDROCARVEOL ISOMER	0,12		
43	59,8	SABINOL ISOMER	0,07		
44	61,2	Trans-ANETHOL	0,17		
45	61,4	Trans-CARVEOL	0,07		

Identification results 2 : DILL WEED USA BATCH D10101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
46	61,9	CARVONE OXIDE	0,03		
47	62,4	ISOPIPERITENONE	0,03		
48	63,0	Cis-CARVEOL	0,11		
49	66,9	Cis-p-MENTHA-1,8-DIEN-2-OL	0,02		
50	69,6	α -PHELLANDRENE DIMERE	0,02		
51	72,2	TERPENIC ALCOHOL	0,03		
52	73,9	TERPENIC ESTER	0,05		
53	79,0	CYCLOALKYL KETONE	0,04		
54	80,0	CYCLOALKYL COMPOUND	0,07		
55	80,6	ACETYL KETONE COMPOUND	0,12		
56	81,3	CARVACROL	0,02		
57	88,0	CARVYL COMPOUND	0,03		
58	89,6	OXO KETONE COMPOUND	0,04		
59	90,1	ALIPHATIC ALCOHOL	0,05		
60	92,8	HYDROXYISOPROPYL-3-METHYLCYCLOHEXENONE	0,02		
61	100,4	SEDANOLIDE ISOMER Mw=194	0,07		
		TOTAL	99,99		26,08