



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: A20100

ESSENTIAL OIL: ANIS SEED

BOTANICAL NAME: PIMPINELLA ANISUM

ORIGIN: EGYPT

KEY CONSTITUENTS OF THIS BATCH OF ANISEED OIL	%
Trans-ANETHOLE	87.8
ESTRAGOLE	3.7
FOENICULINE	1.3
LINALOOL	1.0
ANISALDEHYDE	0.7
Trans- α BERGAMOTENE	0.6
Cis-ANETHOLE	0.4

Comments from Robert Tisserand: Trans-anethole is the main active constituent of Anise oil and this oil has a good amount at 87.8%. Very good odor. I would recommend this oil.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: PIMPINELLA ANISUM
Reference name: ANIS SEED
Batch number: A20100
Origin: EGYPT
Part: FRUIT
Pyrenessences reference: C282
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

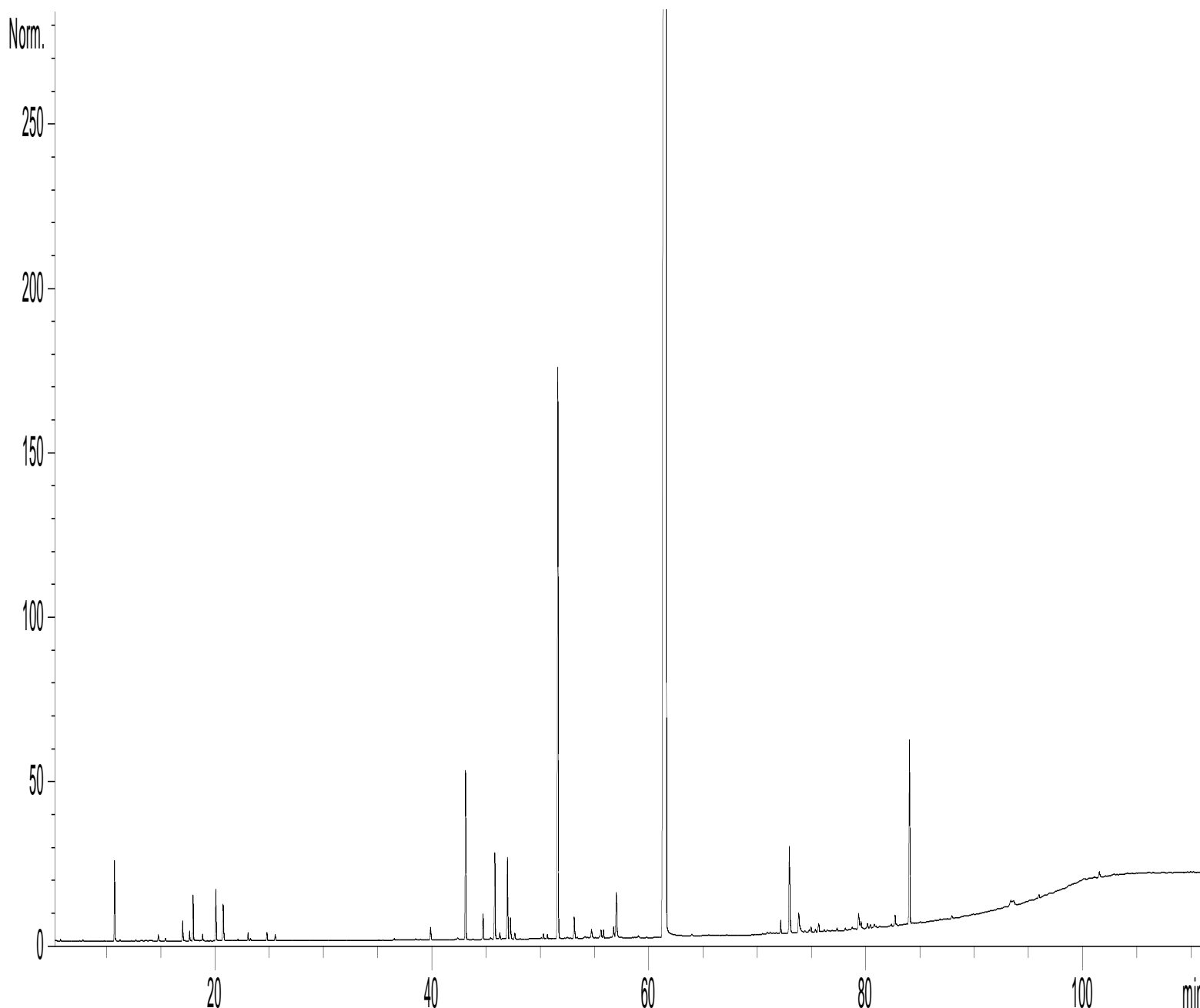
Sample injection / split : 1 µl of 10 % solution in hexane,

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:\PLANTHER\PAEGC282.D)



Identification results 1 : ANISE SEED EGYPT BATCH A20100

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	10,7	α -PINENE	0,38		
2	12,7	CAMPHENE	0,01		
3	14,8	β -PINENE	0,03		
4	15,4	SABINENE	0,01		
5	17,0	Δ 3-CARENE	0,11		
6	17,6	β -MYRCENE	0,05		
7	18,0	α -PHELLANDRENE	0,25		
8	18,2	Ψ -LIMONENE	0,01		
9	18,8	α -TERPINENE	0,04		
10	20,1	LIMONENE	0,30		0,30
11	20,7	β -PHELLANDRENE + 1,8-CINEOLE	0,29		
12	22,1	Cis- β -OCIMENE	0,01		
13	23,0	γ -TERPINENE	0,05		
14	23,3	Trans- β -OCIMENE	0,01		
15	24,8	p-CYMENE	0,05		
16	25,5	TERPINOLENE	0,04		
17	36,5	LINALOOL cis-OXIDE	0,01		
18	39,9	α -COPAENE	0,09		
19	42,3	α -GURJUNENE	0,02		
20	43,1	LINALOOL	1,02		1,02
21	44,7	α -Cis-BERGAMOTENE	0,18		
22	45,4	ϵ -CADINENE	0,01		
23	45,8	α -trans-BERGAMOTENE	0,60		
24	46,2	β -ELEMENE	0,04		
25	46,9	β -CARYOPHILLENE	0,60		
26	47,2	TERPINENE-4-OL	0,15		
27	47,6	AROMADENDRENE	0,04		
28	50,3	Z- β -FARNESENE	0,03		
29	50,6	E- β -FARNESENE	0,03		
30	51,6	ESTRAGOLE	3,73	0,5 – 3,0	
31	51,8	α -HUMULENE	0,03		
32	52,5	NERAL	0,01		0,01
33	53,4	LEDENE	0,01		
34	53,8	γ -HIMACHALENE	-	1,0 – 5,0	
35	53,1	α -TERPINEOL	0,17		
36	54,7	β -BISABOLENE	0,06		
37	54,8	GERANIAL	0,01		0,01
38	55,6	BICYCLOGERMACRENE	0,06		
39	55,8	α -FARNESENE	0,05		
40	56,8	δ -CADINENE	0,09		
41	57,0	Cis-ANETHOLE	0,36	0,1 – 0,4	
42	59,0	NEROL	0,02		
43	61,6	Trans-ANETHOLE	87,81	87 - 94	
44	64,0	NONADECANE	0,01		
45	72,2	NEROLIDOL	0,08		
46	73,0	ANISALDEHYDE	0,72	0,1 – 1,4	

Identification results 2 : ANISE SEED EGYPT BATCH A20100

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
47	73,8	E-CINNAMALDEHYDE	0,22		0,22
48	74,8	GLOBULOL	0,02		
49	74,9	ANETHOLE COMPOUND	0,04		
50	75,4	ANISATE p-METHYL	0,02		
51	75,7	CHAVICYL ESTER	0,07		
52	76,2	10-epi- γ -EUDESMOL	0,01		
53	77,4	SPATHULENOL	0,02		
54	78,1	ANETHOLE COMPOUND	0,02		
55	78,8	CINNAMYL ACETATE	0,02		
56	79,3	ANICETONE	0,15		
57	79,6	γ -EUDESMOL + T-CADINOL	0,07		
58	80,1	Trans-METHYLISOEUGENOL	0,04		
59	80,4	α -MUUROLOL	0,02		
60	80,8	CADINOL ISOMER	0,04		
61	82,4	α -EUDESMOL	0,02		
62	82,7	α -CADINOL	0,09		
63	84,0	FOENICULINE	1,31		
64	85,0	ANISIC ALCOHOL	0,01		
65	87,9	Trans-FARNESOL	0,02		0,02
66	93,4	ALIPHATIC ALCOHOL	0,03		
67	95,9	3-METHOXYCINNAMALDEHYDE	0,02		
68	101,5	BENZYL BENZOATE	0,05		0,05
69	-	ISOEUGENYL 2-METHYLBUTYRATE Mw=248	-	0,3 – 2,0	
		TOTAL	99,99		1,63