



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: T50100

ESSENTIAL OIL: TURMERIC
BOTANICAL NAME: CURCUMA LONGA
ORIGIN: INDIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF TURMERIC OIL	%
Ar-TURMERONE	51.2
β -TURMERONE	12.1
α -TURMERONE	11.8
α -CURCUMENE	3.4
β -SESQUIPELLANDRENE	3.1
γ -ATLANTONE	2.6
α -ZINGIBERENE	1.4
AROMATIC SESQUITERPENOL	1.0

Comments from Robert Tisserand: A wonderfully rich, complex example of turmeric CO2 extract, with key constituents in expected concentrations.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: CURCUMA LONGA
Reference name: TURMERIC CO2
Batch number: T50100
Origin: INDIA
Part: ROOT
Pyreñessences reference: B101
Date of reception: 01/08/2014
Date analysis: 06/08/2014
Packaging: Amber 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 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

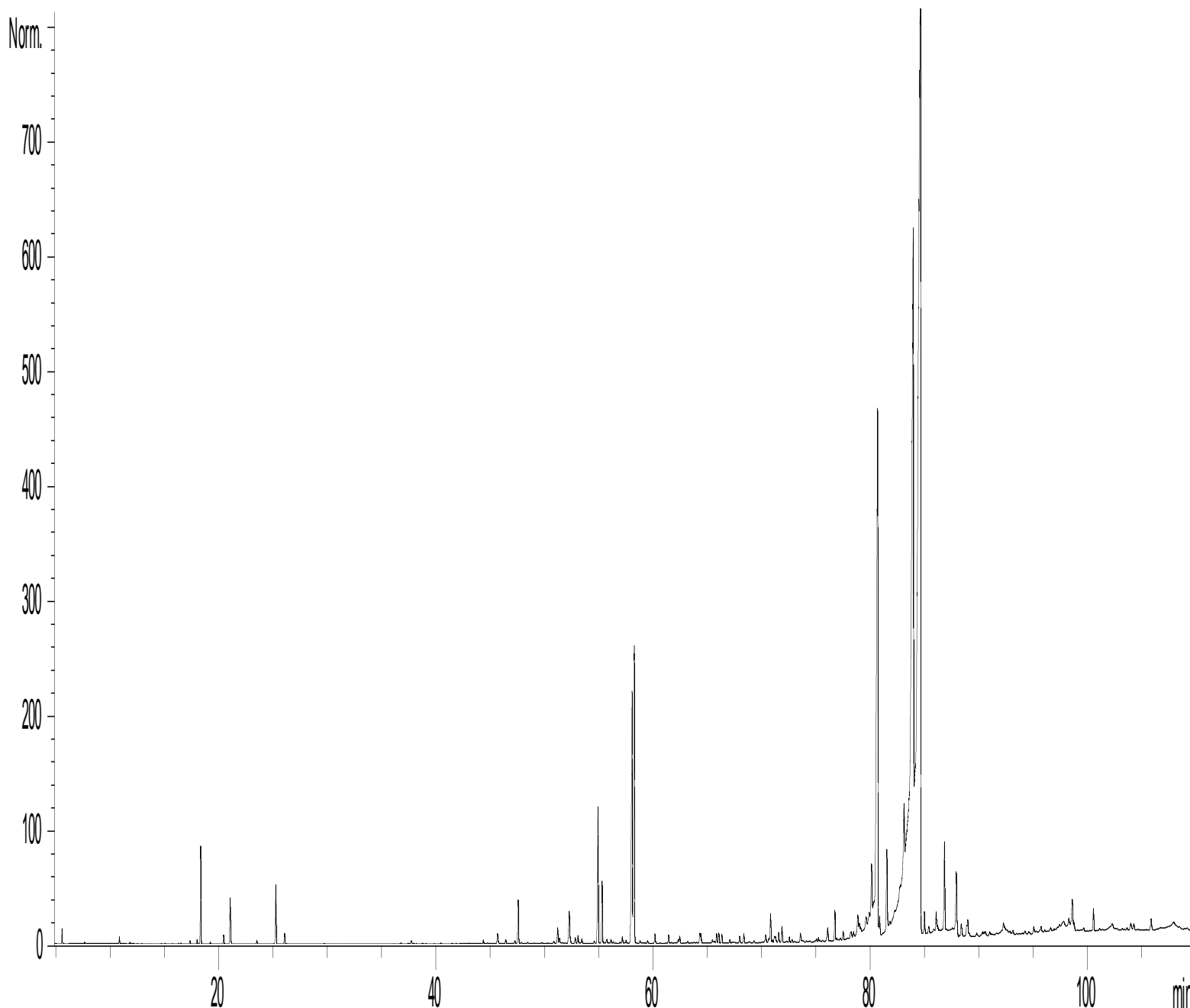
Sample injection / split : 1 µl of 10 % solution in hexane,

Mass range : 30 to 350, Oil 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:\PLANTHERIC\14B101.D)



Identification results 1 : CURCUMA LONGA CO2 BATCH T50100

Peak	RT (min)	Compound name	%	Norm	Allergens
1	5,5	ACETONE	0,07		
2	7,6	ETHANOL	0,01		
3	10,9	α -PINENE	0,05		
4	11,8	TOLUENE	0,01		
5	15,0	β -PINENE	0,01		
6	16,5	Δ 2-CARENE	0,01		
7	17,4	Δ 3-CARENE	0,03		
8	18,0	β -MYRCENE	0,04		
9	18,3	α -PHELLANDRENE	0,82		
10	19,2	α -TERPINENE	0,02		
11	20,5	LIMONENE	0,08		0,08
12	21,1	1,8-CINEOLE + β -PHELLANDRENE	0,46		
13	23,5	γ -TERPINENE	0,03		
14	25,3	p-CYMENE	0,54		
15	26,1	TERPINOLENE	0,10		
16	36,8	α ,p-DIMETHYLSTYRENE	0,01		
17	37,7	ACETIC ACID	0,03		
18	40,5	α -COPAENE	0,01		
19	44,4	BERGAMOTENE ISOMER	0,04		
20	44,8	1-METHYL-4-ACETYLCYCLOHEX-1-ENE	0,01		
21	45,7	α -SANTALENE	0,10		
22	45,8	α -CEDRENE	0,02		
23	46,4	α -trans-BERGAMOTENE	0,04		
24	47,2	CURCUMENE ISOMER Mw=202	0,03		
25	47,5	TERPINENE-4-OL	0,03		
26	47,6	β -CARYOPHYLLENE	0,43		
27	47,9	β -CEDRENE	0,01		
28	48,5	COMPOUND Mw=178	0,01		
29	49,7	Epi- β -SANTALENE	0,01		
30	50,6	β -SANTALENE	0,01		
31	50,8	PHOTOSANTALENE ISOMER	0,01		
32	51,1	CURCUMENE ISOMER	0,02		
33	51,2	E- β -FARNESENE	0,14		
34	51,4	α -ACORADIENE	0,06		
35	52,3	SESQUITERPENE Mw=202	0,36		
36	52,4	CURCUMENE ISOMER	0,08		
37	52,8	Z- β -FARNESENE	0,06		
38	53,1	γ -CURCUMENE	0,08		
39	53,4	α -TERPINEOL	0,05		
40	54,6	SESQUITERPENE Mw=202	0,03		
41	54,9	α -ZINGIBERENE	1,44		
42	55,3	β -BISABOLENE	0,63		
43	55,8	SESQUITERPENE Mw=202	0,05		
44	56,1	CURCUMENE ISOMER	0,04		
45	56,4	SESQUITERPENE Mw=204	0,02		

Identification results 2 : CURCUMA LONGA CO2 BATCH T50100

Peak	RT (min)	Compound name	%	Norm	Allergens
46	56,9	OXYGENED COMPOUND	0,01		
47	57,1	FARNESENE ISOMER	0,06		
48	57,5	δ-CADINENE	0,03		
49	58,1	β-SESQUIPELLANDRENE	3,14		
50	58,3	α-CURCUMENE	3,42		
51	58,8	p-METHYLACETOPHENONE	0,03		
52	59,5	TIGLIC ACID	0,03		
53	60,2	SABINOL ISOMER	0,10		
54	61,4	SESQUITERPENE Mw=202	0,08		
55	62,3	VALERIANIC ACID	0,02		
56	62,5	p-CYMENE-8-OL	0,04		
57	64,3	DEHYDROCURCUMENE	0,11		
58	64,4	COMPOUND Mw=202	0,08		
59	65,5	COMPOUND Mw=220	0,03		
60	65,9	SESQUITERPENONE ISOMER Mw=220	0,09		
61	66,1	SESQUITERPENONE ISOMER Mw=220	0,09		
62	66,3	SESQUITERPENONE ISOMER Mw=220	0,09		
63	67,1	PHENONE COMPOUND	0,04		
64	68,0	SESQUITERPENIC EPOXYDE Mw=220	0,07		
65	68,4	PENTANONE METHYL PHENYL ISO, Mw=176	0,09		
66	70,4	AROMATIC COMPOUND Mw=200	0,10		
67	70,8	CARYOPHYLLENE EPOXIDE	0,18		
68	70,9	TURMERONE ISOMER	0,17		
69	71,2	CURCUMENIC KETONE Mw=218	0,11		
70	71,5	SESQUITERPENOL Mw=220	0,09		
71	71,9	CURCUMENIC KETONE Mw=218	0,17		
72	72,6	NEROLIDOL	0,07		
73	72,8	SESQUITERPENOL	0,04		
74	73,6	SESQUITERPENONE Mw=218	0,08		
75	75,1	CURCUMENIC KETONE Mw=218	0,04		
76	75,2	CURCUMENIC KETONE Mw=218	0,05		
77	76,1	SESQUISABINENE HYDRATE ISOMER	0,17		
78	76,8	SESQUIPELLANDROL ISOMER	0,30		
79	77,5	CURCUMENIC KETONE Mw=218	0,09		
80	78,3	CURCUMENIC KETONE Mw=218	0,10		
81	78,5	SESQUITERPENOL	0,05		
82	78,9	SESQUITERPENOL Mw=220	0,19		
83	79,6	SESQUITERPENOL	0,11		
84	80,1	SESQUIPELLANDROL ISOMER	0,58		
85	80,7	α-TURMERONE Mw=218	11,78		
86	80,9	SESQUITERPENOL	0,24		
87	81,5	CURCUMENIC KETONE Mw=218	0,94		
88	83,1	SESQUITERPENOL Mw=220	0,62		
89	84,0	β-TURMERONE Mw=218 (CURLONE)	12,07		
90	84,6	Ar-TURMERONE Mw=216	51,22		

Identification results 3 : CURCUMA LONGA CO2 BATCH T50100

Peak	RT (min)	Compound name	%	Norm	Allergens
91	85,0	SESQUITERPENIC KETONE Mw=220	0,24		
92	86,1	CURCUMENIC KETONE Mw=218	0,23		
93	86,8	AROMATIC SESQUITERPENOL Mw=220	1,01		
94	87,8	γ-ATLANTONE	2,55		
95	88,4	CURCUMENIC KETONE Mw=218	0,20		
96	89,0	CURCUMENIC KETONE Mw=218	0,15		
97	89,1	ZINGIBEROL	0,17		
98	89,8	CURCUMENIC KETONE Mw=218	0,05		
99	90,4	CURCUMENIC KETONE Mw=218	0,03		
100	91,0	SESQUITERPENOL Mw=220	0,03		
101	92,3	AROMATIC KETONE Mw=218	0,06		
102	94,3	CURCUMENIC COMPOUND Mw=216	0,04		
103	94,6	AROMATIC COMPOUND Mw=232	0,05		
104	95,1	AROMATIC COMPOUND Mw=234	0,07		
105	95,7	AROMATIC COMPOUND Mw=232	0,09		
106	96,6	AROMATIC COMPOUND Mw=232	0,05		
107	97,8	POLYAROMATIC COMPOUND	0,12		
108	98,6	POLYAROMATIC COMPOUND	0,36		
109	100,6	CURCUMENIC KETONE Mw=218	0,25		
110	102,3	AROMATIC COMPOUND Mw=234	0,11		
111	104,0	AROMATIC COMPOUND Mw=234	0,09		
112	104,3	XANTHORRHIZOL Mw=218	0,07		
113	105,9	ZINGERONE	0,15		
114	107,9	AROMATIC COMPOUND Mw=234	0,15		
		TOTAL	99,67		0 08