

GC/MS BATCH NUMBER: CA0100

ESSENTIAL OIL: CINNAMON CASSIA
BOTANICAL NAME: CINNAMOMUM CASSIA
ORIGIN: CHINA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CINNAMON CASSIA OIL	%
(E)-CINNAMALDEHYDE	77.8
Trans-o-METHOXY-CINNAMALDEHYDE	9.6
CINNAMYL ACETATE	3.2
COUMARIN	2.3
PHENYLETHYL ALCOHOL	0.8
BENZALDEHYDE	0.7
2-METHOXYBENZALDEHYDE	0.6
O-METHOXYCINNAMYL ACETATE	0.3
(Z)-CINNAMALDEHYDE	0.2
EUGENOL	0.2
SALICYLALDEHYDE	0.1
STYRENE	0.1

Comments from Robert Tisserand: This is a very good Cassia oil organoleptically, and the key constituents are within the expected ranges.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: CINNAMOMUM CASSIA
Reference name: CASSIA
Batch number: CA0100
Origin: EGYPT
Part: BARK
Pyrenessences referenc: C285
Date of reception: 12/15/2014
Date analysis: 12/19/2014
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 - 20mn to 250 °C

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

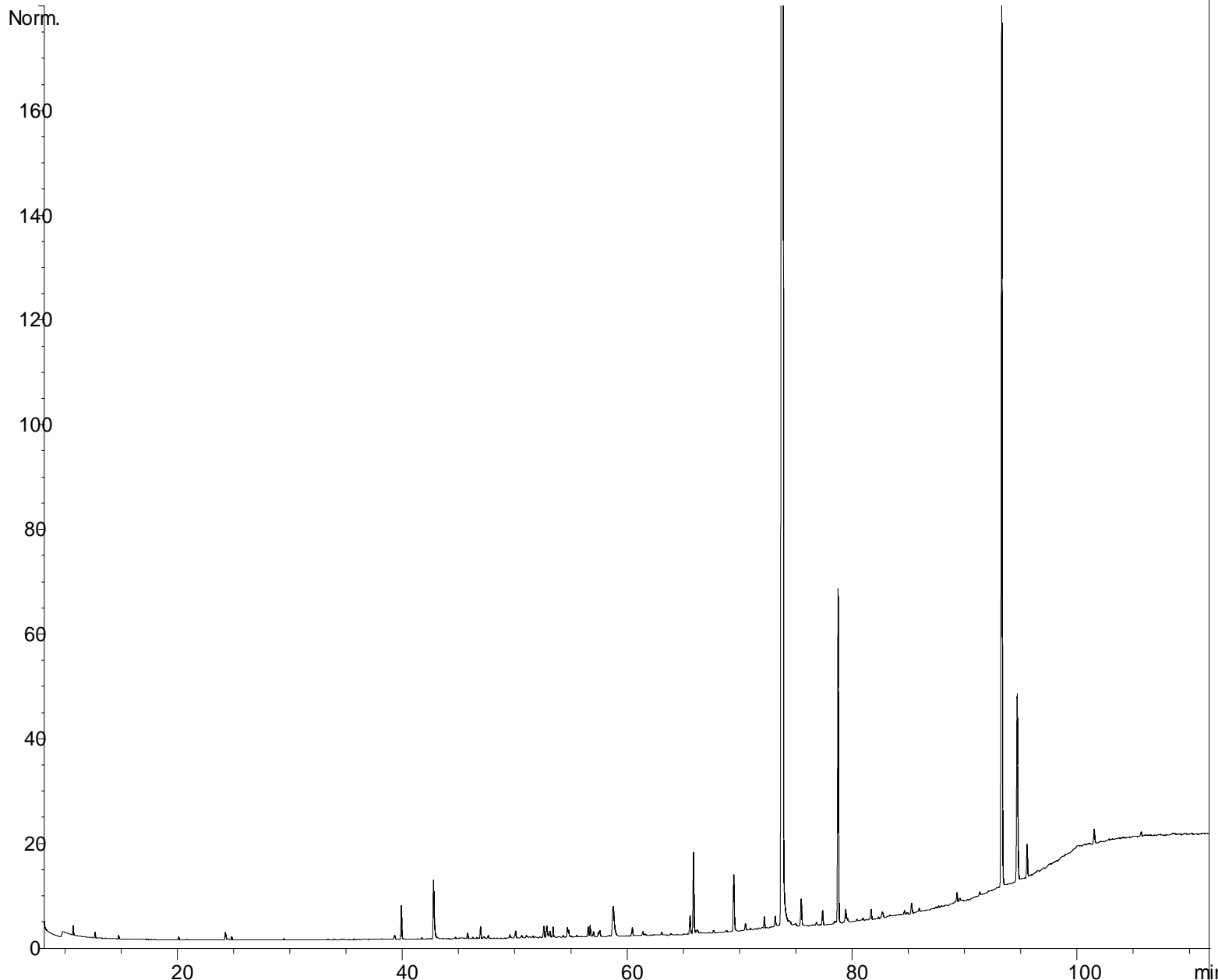
Sample injection / split : 1 µl of 10 % solution in Ethyl alcohol,

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, (X:\PLANTHER\CCEGC285.D)



Identification results 1 : CASSIA EGYPT BATCH CA0100

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	10,7	α-PINENE	0,06		
2	12,7	CAMPHENE	0,04		
3	14,8	β-PINENE	0,02		
4	20,1	LIMONENE	0,02		0,02
5	20,8	1-8-CINEOLE	0,01		
6	24,2	STYRENE	0,08		
7	24,8	p-CYMENE	0,03		
8	29,4	6-METHYL-5-HEPTEN-2-ONE	0,01		
9	39,3	YLANGENE	0,05		
10	39,9	α-COPAENE	0,28		
11	41,7	BENZOFURAN	0,01		
12	42,4	β-BOURBONENE	0,02		
13	42,7	BENZALDEHYDE	0,67		
14	45,8	α,cis-BERGAMOTENE	0,05		
15	46,9	β-CARYOPHYLLENE	0,10		
16	47,6	AROMADENDRENE	0,02		
17	49,6	STYRENE p-METHOXY	0,03		
18	50,1	ALLO-AROMADENDRENE	0,07		
19		ACETOPHENONE	-		
20	52,6	SALICYLIC ALDEHYDE	0,11		
21	52,9	γ-MUUROLENE	0,14		
22	53,1	α-TERPINEOL	0,06		
23	53,4	BORNEOL	0,10		
24	54,3	MUUROLADIENE ISOMER	0,01		
25	54,7	β-BISABOLENE	0,08		
26	54,8	α-MUUROLENE	0,06		
27	56,5	δ-CADINENE	0,09		
28	56,7	CINNAMALDEHYDE HYDROXY	0,11		
29	57,0	γ-CADINENE	0,05		
30	57,6	α-CURCUMENE	0,10		
31	58,8	PROPANAL BENZENE	0,59		
32	60,5	2-PHENYLETHYL ACETATE	0,09		
33	61,4	CALAMENENE	0,04		
34	63,1	MEQUINOL	0,03		
35	65,6	Z-CINNAMALDEHYDE	0,20		0,20
36	65,9	PHENYLETHYL ALCOHOL	0,80		
37	66,2	BENZYL ALCOHOL	0,06		0,06
38	69,5	2-METHOXY- BENZALDEHYDE	0,60		
39	70,5	CARYOPHYLLENE OXYDE	0,07		
40	72,2	NEROLIDOL	0,09		
41	73,2	BENZENE PROPANOL	0,08		
42	73,8	E-CINNAMALDEHYDE	77,80	70 - 88	77,80
43	75,0	EPOXY-6,7-HUMULENE	0,04		
44	75,5	PHENYLETHYL COMPOUND Mw=164	0,29		
45	76,8	PENTADECANONE TRIMETHYL	0,02		

Identification results 2 : CASSIA EGYPT BATCH CA0100

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
46	77,4	SPATHULENOL	0,14		
47	78,8	CINNAMYL ACETATE	3,17		
48	79,4	EUGENOL	0,18		0,18
49	80,4	T-CADINOL	0,02		
50	81,0	α -BISABOLOL	0,02		
51	81,7	RIMUENE Mw=272	0,11		
52	82,7	DITERPENE Mw=272	0,10		
53	84,7	Cis-o-METHOXYCINNAMALDEHYDE	0,05		
54	85,3	CINNAMIC ALCOHOL	0,11		0,11
55	86,0	CARYOPHYLLA-3,7-DIEN-6-OL	0,02		
56	89,3	DITERPENE Mw=272	0,10		
57	89,6	MANOYL OXYDE	0,04		
58	91,4	DITERPENE Mw=272	0,02		
59	93,3	Trans-o-METHOXY-CINNAMALDEHYDE	9,63		
60	94,7	COUMARIN	2,28		2,28
61	95,6	O-METHOXYCINNAMYL ACETATE	0,31		
62	101,5	BENZYL BENZOATE	0,16		0,16
63	105,7	2-PHENYLETHYL BENZOATE	0,05		
64	112,9	CINNAMIC ACID	0,20		
		TOTAL	99,99		80,81