

CUSTOMER :

**21 DROPS**  
**Cary CASTER**  
**290 SE 6<sup>th</sup> Ave,**  
**Suite 4**  
**DELRAY BEACH, FL 33483 USA**  
**cary@21drops.com**

**Sample nature :** ABSOLUTE  
**Botanical species :** ROSA SP.  
**Reference name :** ROSE  
**Batch number :** F2180 / 1114-1  
**Origin :** BIOLANDES  
**Part:** FLOWER  
**Pyrenessences reference :** C841

**Date of reception :** 02/16/2016                      **Date analysis :** 02/26/2016  
**Packaging :** Amber flask of 5 ml – ambient temperature  
**Analysis :** Absolute GC  
**Shelf life :** 3 year

**Comments and conclusions :**

**⇒ BATCH IN COMPLIANCE WITH THE NORM OF  
ROSA SP. ESSENTIAL OIL NORM**

**Validated report by :**

**Daniel DANTIN**



**GAS CHROMATOGRAPHY** norm NF ISO 11024

**Analysis conditions :**

GC FID 6890 / MS 5973 AGILENT- Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

GC FID 6890 - Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

Temperature program : 6 mn to 60 °C -2 °C/mn→250 °C - 60mn to 250 °C

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

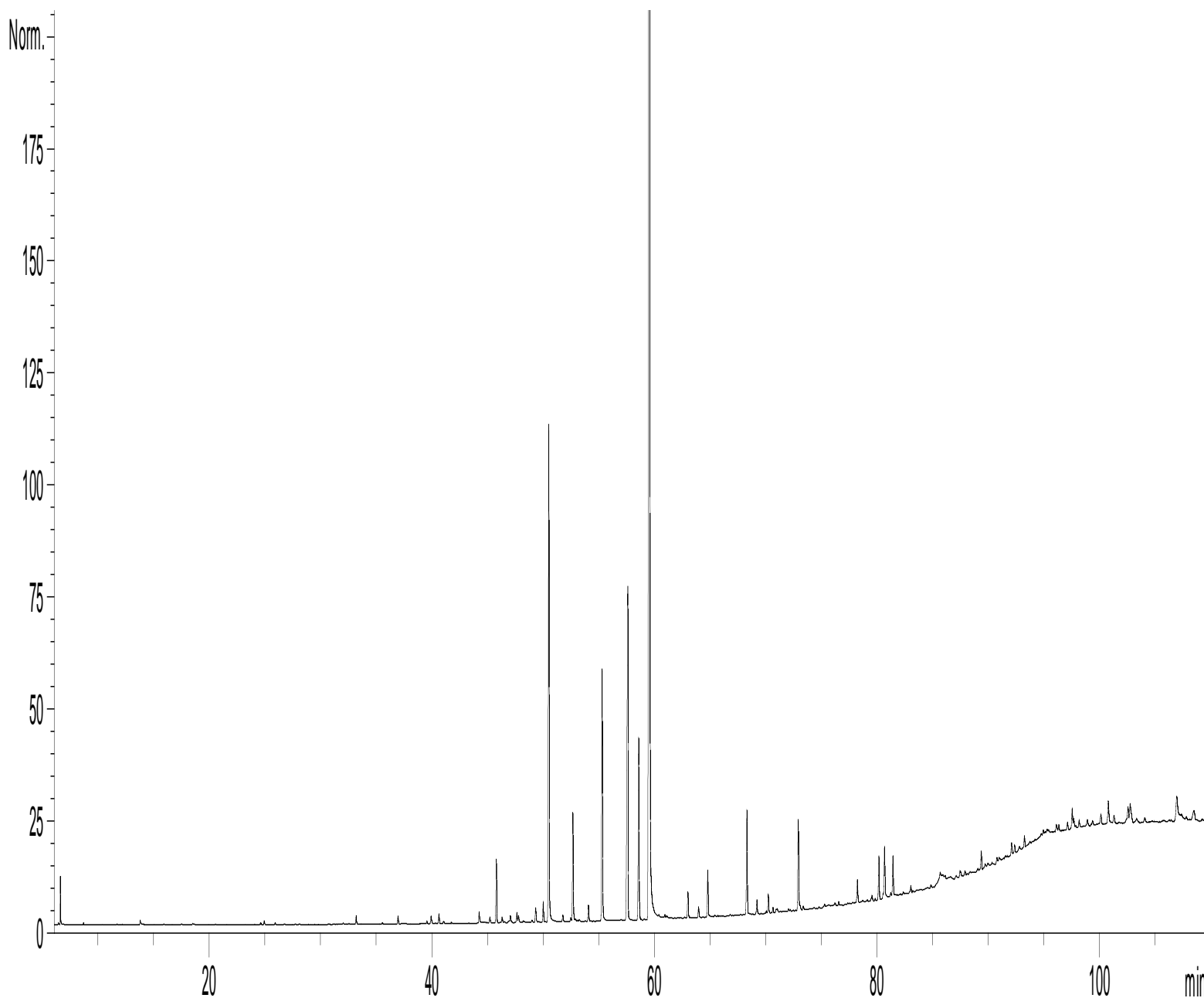
Sample injection / split : 1 µl of 10 % solution in hexane,

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:\21DROPS\RD41C841.D)



**Identification results 1 : ROSE ABSOLUTE F2180 BATCH N° 1114/1**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	6,6	ETHANOL	0,36		
2	8,7	$\alpha$ -PINENE	0,02		
3	11,7	$\beta$ -PINENE	0,01		
4	13,7	$\beta$ -MYRCENE	0,09		
5	15,9	LIMONENE	0,02		0,02
6	17,5	Cis- $\beta$ -OCIMENE	0,03		
7	18,4	$\gamma$ -TERPINENE	0,03		
8	18,6	Trans- $\beta$ -OCIMENE	0,01		
9	24,6	1-HEXANOL	0,03		
10	24,9	ROSE Cis-OXIDE	0,05		
11	25,9	ROSE Trans-OXIDE	0,06		
12	26,7	3-HEXEN-1-OL	0,03		
13	28,1	2-HEXEN-1-OL	0,03		
14	32,0	Trans-THUYANOL	0,03		
15	33,2	PENTADECANE	0,12		
16	35,5	$\beta$ -BOURBONENE	0,01		
17	35,6	BENZALDEHYDE	0,03		
18	37,0	LINALOOL	0,11		0,11
19	39,6	HEXADECANE C16	0,05		
20	39,9	$\alpha$ -GUAIENE	0,14		
21	40,6	$\beta$ -CARYOPHYLLENE	0,15		
22	41,1	TERPINENE-4-OL	0,03		
23	41,8	CITRONELLYL FORMIATE	0,02		
24	44,2	CITRONELLYL ACETATE	0,19		
25	44,4	$\alpha$ -HUMULENE	0,09		
26	45,2	NERAL	0,09		0,09
27	45,8	HEPTADECANE	0,96		
28	46,3	$\gamma$ -MUUROLENE	0,11		
29	46,5	$\alpha$ -TERPINEOL	0,04		
30	46,9	GERANYL FORMIATE	0,03		
31	47,0	ACIPHYLLENE	0,07		
32	47,2	1-HEPTADECENE C17	0,07		
33	47,6	GERMACRENE D	0,16		
34	47,8	$\alpha$ -BULNESENE	0,11		
35	48,1	MENTHADIENOL + ACETATE DE NERYLE	0,05		
36	49,0	$\alpha$ - MUUROLENE + $\beta$ -BISABOLENE	0,04		
37	49,3	GERANIAL	0,26		0,26
38	49,6	$\alpha$ -FARNESENE	0,02		
39	50,0	GERANYL ACETATE	0,28		
40	50,5	<b>CITRONELLOL</b>	<b>7,87</b>		<b>7,87</b>
41	51,8	METHYL SALICYLATE	0,11		
42	52,4	2-PHENYLETHYL FORMIATE	0,07		
43	52,6	NEROL	1,71		
44	52,9	Cis-ISOGERANIOL	0,07		
45	53,2	Trans-ISOGERANIOL	0,07		

**Identification results 2 : ROSE ABSOLUTE F2180 BATCH N° 1114/1**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
46	54,1	2-PHENYLETHYL ACETATE	0,26		
47	55,3	<b>GERANIOL</b>	<b>4,03</b>		4,03
48	57,4	BENZYL ALCOHOL	0,80		0,80
49	57,6	<b>NONADECANE C19</b>	<b>6,17</b>		
50	58,6	<b>9-NONADECENE C19</b>	<b>3,07</b>		
51	59,5	<b>β-PHENYLETHYL ALCOHOL</b>	<b>57,71</b>		
52	63,0	EICOSANE C20	0,41		
53	64,0	EICOSENE	0,17		
54	64,8	METHYLEUGENOL	0,73		
55	68,3	HENEICOSANE C21	1,69		
56	69,2	HENEICOSENE ISOMER	0,24		
57	70,2	HENEICOSENE ISOMER	0,29		
58	70,6	HENEICOSENE ISOMER	0,08		
59	71,0	HENEICOSENE ISOMER	0,10		
60	72,9	EUGENOL	1,71		1,71
61	73,4	PHENYLETHYL ESTER	0,12		
62	76,5	BULNESOL	0,06		
63	78,2	PHENYLETHYL ESTER	0,37		
64	79,5	FARNESOL ISOMER	0,11		0,11
65	80,2	TRICOSENE C23 Mw=322	0,68		
66	80,6	GERANIC ACID	0,96		
67	81,4	E,E-FARNESOL	0,64		0,64
68	82,4	TRICOSENE ISOMER	0,06		
69	83,0	PHENYLETHYL ESTER	0,14		
70	87,5	ALIPHATIC ESTER	0,15		
71	87,9	PHENYLETHYL ESTER	0,10		
72	89,4	METHOXY EUGENOL	0,28		
73	90,7	NONADECANAL	0,10		
74	92,1	CITRONELIC ESTER	0,20		
75	92,8	PHENYLETHYL ESTER	0,07		
76	93,3	TETRADECYL CAPRYLATE	0,16		
77	96,1	BENZYL BENZOATE	0,15		0,15
78	96,3	CARBOXYLIC COMPOUND	0,11		
79	97,5	GERANIC ESTER	0,35		
80	97,7	HEPTACOSENE ISOMER	0,18		
81	98,2	TETRADECYL PELARGONATE	0,12		
82	98,9	PENTADECYL CAPRYLATE	0,15		
83	99,3	2-PHENYLETHYL BENZOATE	0,12		
84	100,1	BENZYL ESTER	0,20		
85	100,8	DOCOSADIENE ISOMER	0,47		
86	101,3	HEPTACOSENE ISOMER	0,15		
87	102,6	PENTADECYL PELARGONATE	0,39		
88	102,7	HEXADECYL CAPRYLATE	0,58		
89	106,9	PALMITIC ACID	0,99		
90	108,5	ALIPHATIC ESTER	0,39		
		<b>TOTAL</b>	<b>99,94</b>		<b>15,79</b>