

Date : July 10, 2017

SAMPLE IDENTIFICATION

Internal code : 17G04-EAF1-1-DM

Customer identification : EOA Rose Abs - RoseA052517A

Type : Essential oil

Source : *Rosa x damascena*

Customer : Essential Oil Analysis Foundation

ANALYSIS

Method : PC-PA-001-15E06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).

Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-07-10

Checked and approved by :

Alexis St-Gelais, M. Sc., chimiste 2013-174

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IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
Ethanol	0.35	631	0.15	0.14	783	0.62	Monoterp. alcohol
Benzyl alcohol	5.67	1058	0.15	0.13	1773	20.08	Simple phenolic
Linalool	6.69	1109	0.02	0.02	1488	8.09	Monoterp. alcohol
Phenylethyl alcohol	7.56	1141	34.67	33.28	1810	22.49	Simple phenolic
Terpinen-4-ol	8.84	1188	0.02	0.03	1528	9.03*	Monoterp. alcohol
Nerol	10.60	1232	0.21	0.18	1730	17.52	Monoterp. alcohol
Citronellol	10.91	1239	1.33	1.24	1707	16.39*	Monoterp. alcohol
Neral	11.20	1245	0.01	0.01	1601	11.57	Monoterp. aldehyde
Geraniol	11.92	1261	0.68	0.59	1786	20.94	Monoterp. alcohol
Eugenol	17.60	1360	0.18	0.16	2054	36.93	Phenylpropanoid
β -Elemene	19.09	1382	0.02	[0.03]	1528	9.03*	Sesquiterpene
Geranyl acetate	19.38	1386	0.11	[1.24]	1707	16.39*	Monoterp. ester
β -Caryophyllene	20.61	1404	0.02	0.02	1523	8.90	Sesquiterpene
Methyleugenol	21.59	1416	0.09				Phenylpropanoid
α -Humulene	23.41	1438	0.01	0.01	1583	10.90	Sesquiterpene
δ -Guaiene	27.55	1487	0.02	0.01	1638	12.89	Sesquiterpene
Pentadecane	28.77	1503	0.01	0.01	1505	8.48	Alkane
Heptadecane	39.98	1704	0.07				Alkane
(2E,6E)-Farnesol	40.68	1726	0.07	0.07	2284	43.38	Sesquiterp. alcohol
<i>trans</i> -9-Nonadecene	45.11	1876	0.24	0.19	1920	30.02	Alkene
Nonadecane	45.90	1905	0.20	0.24	1929	30.70	Alkane
<i>trans</i> -10-Heneicosene	50.01	2076	0.02	0.02	2125	39.21	Alkene
Heneicosane	50.43	2094	0.02	0.02	2134	39.46	Alkane
Unknown phenylethyl ester I	62.29	2694	0.14				Phenolic ester
Unknown (m/z = 69, 123 (86), 138 (82), 81 (69), 95 (67), 41 (59), 55 (53)...)	62.81	2724	0.08				Monoterp. ester
Unknown geranyl ester I	63.44	2760	0.07				Monoterp. ester
Unknown (m/z = 105, 104 (37), 79 (35), 91 (26), 67 (20)...)	65.32	2872	0.25				Phenolic ester
Unknown (m/z = 69, 81 (75), 95 (66), 41 (55), 67 (48), 123 (44), 55 (41)...)	65.47	2881	0.30				Phenolic ester
Unknown phenylethyl ester II	65.70	2895	0.16				Phenolic ester
Unknown geranyl ester II	66.30	2932	0.21				Monoterp. ester
Unknown geranyl ester III	66.45	2941	0.18				Monoterp. ester
Unknown geranyl ester IV	66.83	2965	0.24				Monoterp. ester
α -Tocopherol	69.54	3138	0.46				Tocopherol

Unknown (m/z = 69, 41 (65), 109 (63), 93 (55), 95 (43), 55 (40), 107 (38), 205 (38)... 242 (25))	71.30	3253	0.16		Oxygenated triterp.
Unknown (m/z = 49, 69 (98), 55 (67), 41 (65), 95 (54)... 242? (13))	71.47	3264	0.29		Oxygenated triterp.
Unknown (m/z = 409, 69 (98), 55 (67), 41 (65), 95 (54)... 242? (13))	71.83	3288	0.95		Oxygenated triterp.
Unknown (m/z = 93, 109 (68), 69 (66), 95 (60), 121 (55), 41 (53), 107 (53)... 355 (16), 424 (23))	72.23	3311	1.49		Oxygenated triterp.
Unknown (m/z = 69, 163 (74), 411 (66), 41 (62), 55 (58), 105 (51), 95 (48), 191 (44)... 426? (15))	72.48	3324	2.01		Oxygenated triterp.
Unknown (m/z = 205, 68 (78), 218 (77), 107 (76), 81 (75)... 424 (42), 488 (8))	72.72	3337	1.30		Oxygenated triterp.
Unknown (m/z = 137, 324 (50), 312 (23), 91 (19), 325 (16), 488 (15))	72.95	3349	5.61		Oxygenated triterp.
Unknown (m/z = 69, 41 (62), 411 (61), 55 (49), 81 (49)... 393 (25), 426 (15))	73.04	3354	1.95		Oxygenated triterp.
Unknown (m/z = 218, 189 (61), 93 (59), 107 (57), 81 (56), 95 (55), 121 (51), 135 (51), 69 (50), 207 (50)... 426 (24))	73.40	3373	2.13		Oxygenated triterp.
Unknown (m/z = 55, 81 (94), 69 (89), 107 (89), 121 (87), 109 (87), 205 (85), 95 (83)... 424 (47))	74.54	3426	0.91		Oxygenated triterp.
Unknown (m/z = 121, 123 (84), 177 (76), 107 (56), 122 (55), 109 (49)... 205 (35), 424 (34))	74.79	3436	0.71		Oxygenated triterp.
Unknown (m/z = 119, 121 (100), 55 (93), 93 (85), 81 (85), 67 (82), 105 (80)... 207 (61), 422 (61))	75.08	3448	2.45		Oxygenated triterp.

Unknown (m/z = 121, 123 (68), 107 (60), 189 (58), 95 (55), 109 (52), 177 (51)... 207 (45), 426 (19))	75.51	3466	0.64				Oxygenated triterp.
Unknown (m/z = 109, 69 (79), 95 (44), 43 (41), 93 (35)... 207 (30), 426	76.45	3504	0.29				Oxygenated triterp.
Unknown (m/z = 109, 69 (60), 95 (41), 43 (33), 205 (32)... 424 (24))	76.74	3514	0.68	0.58	4131	73.34	Oxygenated triterp.
Unknown (m/z = 109, 69 (79), 95 (44), 43 (41), 93 (35)... 207 (30), 426 (15))	77.47	3538	12.44				Oxygenated triterp.
Unknown (m/z = 57, 43 (98), 55 (86), 69 (84), 95 (79), 123 (73), 81 (72), 71 (70)...))	77.87	3551	0.28				Triterpene
Total identified			38.78%	36.37%			

*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

Note: no correction factor was applied

OTHER DATA

Physical aspect : Bright red-orange liquid

Refractive index : 1.5198 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method.

17G04-EAF1-1-DM_BP5



