

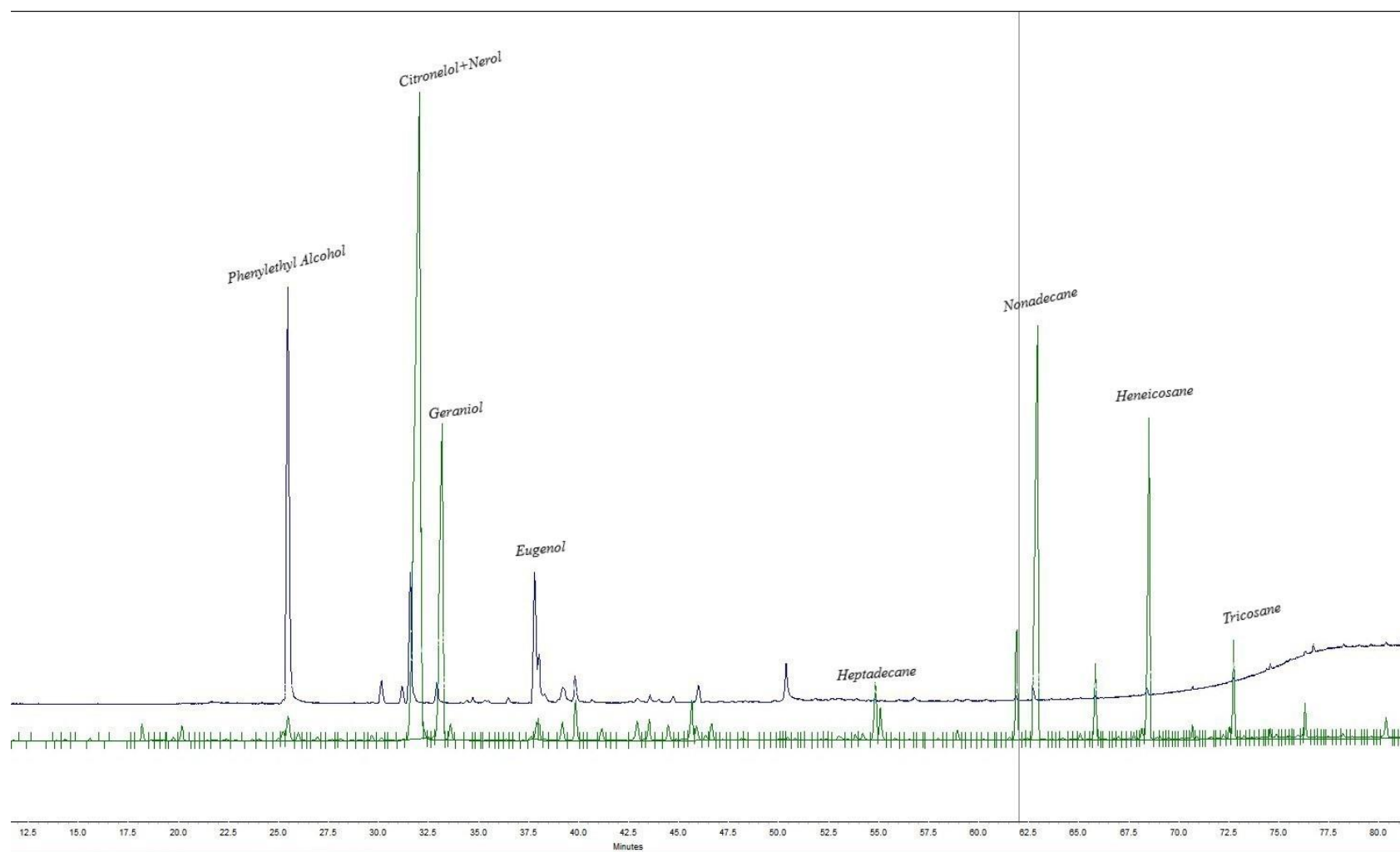
Figure S1. Location of the rose plantations in Kazanlak valley.

Table S1. Chemical composition of the rose oils from plantations in Kazanlak valley.

№	Compound	RI calc.	RI lit.	Main and character constituents, Rel. %							
				<i>R.damascena</i>	<i>R. alba</i>	<i>R.gallica</i>	<i>R.centifolia</i>	<i>Rosa</i> Raduga	<i>R. damascena</i> + <i>Rosa</i> Raduga	<i>Rosa</i> Krun	ISO 9842:2003
1	Ethanol	489	489	0.90 ± 0.07	0.15 ± 0.01	0.04 ± 0.00	tr	0.01 ± 0.00	0.10 ± 0.01	tr	≤2.00
2	α-Pinene	939	939	0.72 ± 0.02	0.01 ± 0.00	0.48 ± 0.05	0.57 ± 0.02	0.23 ± 0.01	1.19 ± 0.01	0.12 ± 0.01	-
3	Limonene	1031	1033	0.06 ± 0.00	0.03 ± 0.00	0.17 ± 0.03	0.03 ± 0.00	0.03 ± 0.00	0.11 ± 0.03	0.04 ± 0.00	-
4	Linalool	1097	1098	2.59 ± 0.01	1.67 ± 0.03	1.97 ± 0.05	1.17 ± 0.07	2.09 ± 0.05	0.74 ± 0.01	0.72 ± 0.02	-
5	Phenylethanol	1110	1110	0.43 ± 0.02	0.25 ± 0.02	0.41 ± 0.03	0.09 ± 0.01	0.22 ± 0.01	1.35 ± 0.05	0.55 ± 0.02	≤3.5
6	Cis-Rose oxide	1106	1106	0.32 ± 0.02	0.08 ± 0.02	0.06 ± 0.00	0.07 ± 0.00	0.01 ± 0.00	0.21 ± 0.01	0.26 ± 0.01	-
7	Trans-Rose oxide	1126	1126	0.14 ± 0.03	0.06 ± 0.00	0.01 ± 0.00	0.04 ± 0.00	0.02 ± 0.00	0.11 ± 0.02	0.13 ± 0.03	-
8	Citronellol	1229	1228	28.72 ± 0.75	12.21 ± 0.12	7.28 ± 0.20	6.70 ± 0.72	8.38 ± 0.92	20.09 ± 2.50	10.21 ± 0.12	20.0 - 34.0
9	Nerol	1226	1226	9.34 ± 0.09	10.10 ± 0.90	7.01 ± 0.92	5.80 ± 0.50	11.90 ± 0.78	11.01 ± 1.10	9.06 ± 0.30	5.0 - 12.0
10	Geraniol	1248	1246	15.85 ± 0.90	29.79 ± 0.10	24.96 ± 0.14	17.12 ± 0.80	34.02 ± 1.12	21.93 ± 1.40	15.95 ± 2.10	15.0 - 22.0
11	Eugenol	1348	1351	0.81 ± 0.08	1.12 ± 0.03	0.08 ± 0.01	0.74 ± 0.03	0.78 ± 0.04	0.79 ± 0.03	0.50 ± 0.06	-
12	Geranylacetate	1352	1352	1.13 ± 0.12	0.54 ± 0.03	1.23 ± 0.02	0.64 ± 0.03	0.85 ± 0.02	0.81 ± 0.07	0.82 ± 0.05	-
13	Methyl eugenol	1405	1405	1.69 ± 0.09	0.10 ± 0.02	0.02 ± 0.00	0.02 ± 0.00	0.61 ± 0.03	0.64 ± 0.03	0.57 ± 0.07	-
14	Heptadecane (C ₁₇)	1700	1700	1.96 ± 0.00	2.00 ± 0.03	3.28 ± 0.10	1.10 ± 0.03	2.24 ± 0.03	2.13 ± 0.02	2.27 ± 0.04	1.0 - 2.5
15	Farnesol	1712	1713	2.43 ± 0.30	2.98 ± 0.92	1.58 ± 0.10	3.50 ± 0.92	1.95 ± 0.05	3.06 ± 0.05	3.79 ± 0.30	-
16	Nonadecene	1880	1880	3.30 ± 0.10	4.35 ± 0.14	1.71 ± 0.07	2.77 ± 0.05	3.00 ± 0.10	5.01 ± 0.12	4.10 ± 0.10	-
17	Nonadecane (C₁₉)	1901	1901	11.70 ± 0.30	12.14 ± 0.05	17.98 ± 0.22	21.62 ± 1.10	10.90 ± 1.40	13.03 ± 0.01	16.07 ± 0.90	8.0 - 15.0
18	Eicosane	2000	2000	1.89 ± 0.07	1.01 ± 0.02	1.86 ± 0.07	1.86 ± 0.90	0.87 ± 0.07	2.27 ± 0.01	3.32 ± 0.05	-
19	Heneicosane (C₂₁)	2100	2100	5.02 ± 0.72	10.21 ± 0.9	12.38 ± 0.22	8.37 ± 0.06	2.95 ± 0.20	5.57 ± 0.05	14.03 ± 1.10	3.0 - 5.5
20	Tricosane (C ₂₃)	2300	2300	1.45 ± 0.03	1.94 ± 0.09	5.01 ± 0.10	5.92 ± 0.20	1.01 ± 0.03	1.58 ± 0.10	5.68 ± 0.50	-
21	Pentacosane	2500	2500	0.45 ± 0.02	0.91 ± 0.03	2.08 ± 0.05	4.70 ± 0.92	0.63 ± 0.03	0.60 ± 0.05	2.40 ± 0.22	-
22	Heptacosane	2700	2700	0.38 ± 0.03	0.52 ± 0.03	0.77 ± 0.02	2.18 ± 0.08	0.29 ± 0.09	0.48 ± 0.03	1.62 ± 0.07	-
Number of Total compounds				218	228	222	222	200	203	184	
Total identified compounds, %				91.28	96.14	90.37	85.01	82.99	92.81	92.21	

Legend: The RI indices applies to a EconoCap™ EC™-5 column.

tr – traces <0.01 %. Data expressed as mean ± SD.



Legend: Green line – essential oil; blue line – hydrosol.

Figure S2. Model of the essential oil and hydrosol GC chromatograms in parallel.