

## Comparative study of the yield and chromatographic profile of rose oils and hydrosols obtained by industrial plantations of oil-bearing roses in Bulgaria

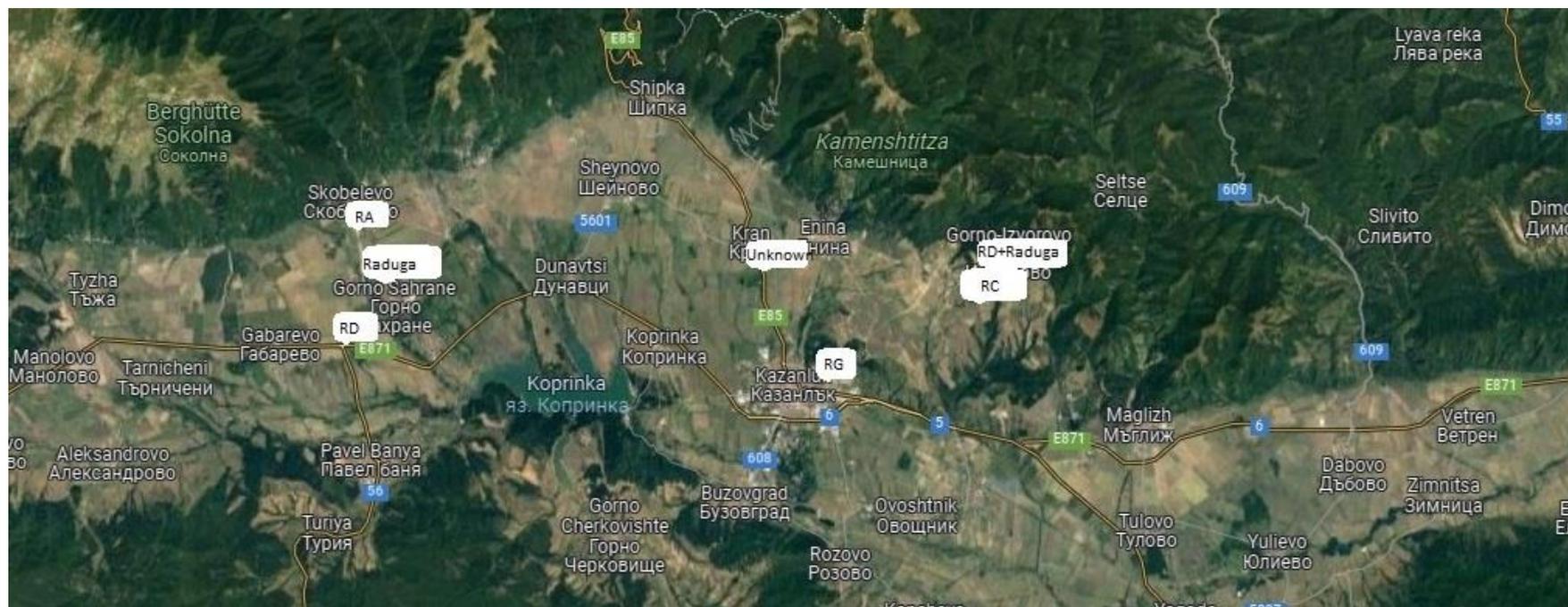
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Figure S1. Location of the rose plantations in Kazanlak valley.



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

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

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