

Table 1. Solubility of C₆₀ in various solvents at 293 K (the solubility data related to the temperatures different from 298 K are presented in table 1 additionally).

<i>Solvent</i>	<i>S/g/dm³</i>
linolic acid	0.244
oleic acid	0.109
linolenic acid	0.442
palm oil	0.161 (323 K)

Table 2. Solubility of C₇₀ in various solvents at 293 K (the solubility data related to the temperatures different from 293 K are presented in table 1 additionally).

<i>Solvent</i>	<i>S/g/dm³</i>
oleinic acid	1.867
oleic acid	1.664
linolenic acid	2.804
palm oil	0.108 (323 K)
essential oil of carnation	0.906

Table 3. Temperature dependences of solubility of light fullerenes (C₆₀ and C₇₀) in various solvents

<i>T/K</i>	<i>S/g/dm³</i>	<i>T/K</i>	<i>S/g/dm³</i>
	C ₆₀ – oleic acid		C ₇₀ – oleic acid
293.15	0.109	293.15	1.667
303.15	0.136	303.15	1.748
313.15	0.193	313.15	1.999
323.15	0.219	323.15	2.040
333.15	0.340	333.15	2.077
343.15	0.404	343.15	2.278
353.15	0.678	353.15	2.612
	C ₆₀ – oleinic acid		C ₇₀ – oleinic acid
293.15	0.244	293.15	1.867
303.15	0.315	303.15	2.099
313.15	0.449	313.15	2.235
323.15	0.621	323.15	2.323
333.15	0.733	333.15	2.411
343.15	1.109	343.15	2.919
353.15	1.486	353.15	3.526
	C ₆₀ – linolenic acid		C ₇₀ – linolenic acid
293.15	0.442	293.15	2.804
303.15	0.458	303.15	2.942
313.15	0.572	313.15	3.070
323.15	0.917	323.15	3.202
333.15	1.425	333.15	3.866
343.15	2.361	343.15	5.111
353.15	3.035	353.15	5.349

Table 6. Equilibrium liquid-solid phase composition in the ternary systems: C₆₀ – C₇₀ – (o-C₆H₄Cl₂) at 150°C*

<i>S^l (C₆₀)/</i> <i>g/dm³</i>	<i>S^l (C₆₀)/</i> <i>g/dm³</i>	<i>W^l (C₆₀)/ %</i> <i>wt</i>	<i>W^s (C₆₀)/ %</i> <i>wt</i>	solid phase
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14.4	0.00	1.000	1.000	C ₆₀
16.4	6.90	0.796	0.918	(C ₆₀) _x (C ₇₀) _{1-x} (1)
18.0	10.0	0.664	0.870	(C ₆₀) _x (C ₇₀) _{1-x} (1)
19.6	19.9	0.477	0.783	(C ₆₀) _x (C ₇₀) _{1-x} (1)
23.6	41.9	0.356	0.683	(C ₆₀) _x (C ₇₀) _{1-x} (1)+ (C ₆₀) _x (C ₇₀) _{1-x} (2)
14.1	40.9	0.264	0.145	(C ₆₀) _x (C ₇₀) _{1-x} (2)
7.19	40.0	0.182	0.076	(C ₆₀) _x (C ₇₀) _{1-x} (2)
0.00	40.0	0.000	0.000	C ₇₀

*(1), (2)-solid solutions enriched by C₆₀ and C₇₀ fullerenes correspondingly.

$C^l(C_{60})$, concentration of C₆₀ in solution; $C^l(C_{70})$, concentration of C₇₀ in solution; $W^l(C_{60})$, mass fraction of the C₆₀ fullerene in liquid solution; $W^s(C_{60})$, mass fraction of the C₆₀ fullerene in solid solution.

Table 7. Temperature dependences of solubility of the industrial fullerene mixture solubility (60-65 % wt. of C₆₀, 33-39 % wt. of C₇₀ and 1-2 % wt. of C₇₆–C₉₀) in various solvents*

Solvent	<i>T</i> /K						
	293.15	303.15	313.15	323.15	333.15	343.15	353.15
oleic acid	1.650	1.713	1.688	1.840	1.923	2.209	2.748
	1.215	1.277	1.844	1.903	2.467	2.648	3.075
oleinic acid	1.956	1.948	2.369	2.924	3.282	3.300	3.928
	1.711	1.899	2.015	2.063	2.117	2.431	3.044
linolenic acid	1.739	1.991	2.904	2.931	3.005	3.664	4.922
	2.157	2.517	2.787	2.859	2.931	3.576	5.376

*upper values correspond to solubility of C₆₀, lower values correspond to solubility of C₇₀, g/dm³