

1.23e-3 X
= 1%

7.24e-2 =
64%

Table 2

Experimental mole fraction solubilities (x_e) of crystalline vanillin in ten different environmentally benign solvents (S) at temperatures $T = (298\text{--}318)$ K and pressure $p = 0.1$ MPa^a (values in parentheses are standard deviations).

S	x_e						
	T = 298 K	25C = 77F	T = 303 K	30C = 86F	T = 308 K	T = 313 K	T = 318 K
Water	1.23 (0.01) $\times 10^{-3}$		1.54 (0.02) $\times 10^{-3}$		1.87 (0.02) $\times 10^{-3}$	2.19 (0.03) $\times 10^{-3}$	2.56 (0.04) $\times 10^{-3}$
Ethanol	7.94 (0.05) $\times 10^{-2}$	64%!	8.33 (0.06) $\times 10^{-2}$		8.61 (0.07) $\times 10^{-2}$	9.03 (0.07) $\times 10^{-2}$	9.36 (0.08) $\times 10^{-2}$
PG	7.15 (0.04) $\times 10^{-2}$		7.45 (0.04) $\times 10^{-2}$		7.75 (0.05) $\times 10^{-2}$	8.09 (0.06) $\times 10^{-2}$	8.55 (0.07) $\times 10^{-2}$
PEG-400	4.29 (0.01) $\times 10^{-1}$		4.42 (0.03) $\times 10^{-1}$		4.52 (0.02) $\times 10^{-1}$	4.66 (0.04) $\times 10^{-1}$	4.77 (0.06) $\times 10^{-1}$
Transcutol	2.38 (0.02) $\times 10^{-1}$		2.46 (0.02) $\times 10^{-1}$		2.54 (0.03) $\times 10^{-1}$	2.61 (0.04) $\times 10^{-1}$	2.68 (0.04) $\times 10^{-1}$
EG	7.54 (0.06) $\times 10^{-2}$		7.93 (0.06) $\times 10^{-2}$		8.34 (0.07) $\times 10^{-2}$	8.71 (0.08) $\times 10^{-2}$	9.09 (0.09) $\times 10^{-2}$
IPA	6.60 (0.03) $\times 10^{-2}$	53.7%	6.91 (0.04) $\times 10^{-2}$		7.25 (0.04) $\times 10^{-2}$	7.59 (0.05) $\times 10^{-2}$	7.89 (0.06) $\times 10^{-2}$
EA	1.23 (0.01) $\times 10^{-1}$		1.27 (0.01) $\times 10^{-1}$		1.31 (0.02) $\times 10^{-1}$	1.36 (0.02) $\times 10^{-1}$	1.40 (0.03) $\times 10^{-1}$
Butanol-1	6.47 (0.02) $\times 10^{-2}$		6.81 (0.01) $\times 10^{-2}$		7.15 (0.03) $\times 10^{-2}$	7.52 (0.04) $\times 10^{-2}$	7.86 (0.05) $\times 10^{-2}$
Butanol-2	8.79 (0.06) $\times 10^{-2}$		9.20 (0.07) $\times 10^{-2}$		9.64 (0.05) $\times 10^{-2}$	1.00 (0.04) $\times 10^{-1}$	1.04 (0.03) $\times 10^{-1}$

^a The standard uncertainties are $u(T) = 0.1$ K, $u(p) = 0.1\%$, $u(x_e) = 0.003$ MPa, and $u(x_e) = 1\%$.