

**TABLE 3**Solubility of nicotinic acid and isonicotinic acid in organic solvents and water, at  $T = 298.2$  K. = 77F

Solvent	Solubility/mol-dm <sup>-3</sup>	Ref.
<i>Nicotinic acid</i>		
Butan-1-ol	0.03325	This work
Pentan-1-ol	0.03028	This work
Hexan-1-ol	0.02895	This work
Butan-2-ol	0.03899	This work
Ethanol	0.0631	[6]
Diethyl ether	0.00764	[6]
Propanone	0.0194	[6]
Acetonitrile	0.00384	[6]
DMSO	0.9528	[6]
Water	0.138	[6]
<i>Isonicotinic acid</i>		
Pentan-1-ol	0.00483	This work
Butan-2-ol	0.00616	This work
Propanone	0.00483	This work
Tetrahydrofuran	0.0144	This work
Methanol	0.0152	[7]
Ethanol	0.00977	[7]
Propan-1-ol	0.0103	[7]
Propan-2-ol	0.00709	[7]
Water	0.0467	[8]

$$0.9528 / 0.138 = 6.9 \text{ mol}$$

$$\text{mw dms} = 78$$

$$\text{mw h}_2\text{o} = 18$$

$$\text{mw dms} / \text{h}_2\text{o} =$$

neutral to zwitterion equilibrium is 1.22 lg units. This corresponds to a shift of 1.22 units at the isoelectric point, in good agreement with the values obtained by Nagy and Takács-

Although we show in Table 3 the experimental values for nicotinic acid, a comparison of the experimental values with the values calculated from the given  $\log C_w$  values are derived from the given  $\log C_w$  values. The average value of  $-2.078$  for  $\log C_w$ , and the average error between the experimental and calculated values of the solubility is 0.004, the average standard deviation is 0.059 lg units. The accuracy of predicting further solubility values is high.

We used exactly the same procedure for the calculation of the solubility of isonicotinic acid, taking  $E$  and  $V$  as the same as for nicotinic acid. From the solubility data, there is a shift of 1.22 units of neutral isonicotinic acid to zwitterion equilibrium system [12]. As before,  $\log C_w$  is calculated to be  $-3.120$  lg units. The experimental values and the calculated and observed values of the corresponding  $\log C$  values are in good agreement with the observed values, the average error is 0.034 and the standard deviation is 0.059 lg units.