Erratum: The Solubility of Nitrogen and Air in Liquids [J. Phys. Chem. Ref. Data 13, 563 (1984)]

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Erratum: The Solubility of Nitrogen and Air in Liquids [J. Phys. Chem. Ref. Data 13, 563 (1984)]

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The following corrections are required in the original article[1] as detailed below:

1. In Eq. (40), the second term should be positive (rather than negative) to read:

$$\ln x_1 = -5.7645 + 3.9149/\tau + 0.077743(P/\text{MPa}) + 0.89104\ln(P/\text{MPa}). \quad (40)$$

2. Table 34 should have all of the numbers in the table changed to the ones below. Please note that these new numbers have been compared with one of the original sources and that they are all of comparable value considering the smoothing. The solubilities decrease with increasing temperature and increase with increasing pressure.

TABLE 34. Mole fraction nitrogen solubilities in liquid ethane according to Eq. (40)

T/K	0.101 MPa	1.0 MPa	5.0 MPa	10.0 MPa	13.5 MPa
100	2.06×10^{-2}	–[a]	–	–	–
125	0.940×10^{-2}	7.77×10^{-2}	0.445	–	–
150	0.557×10^{-2}	4.61×10^{-2}	0.264	0.772	–
175	0.384×10^{-2}	3.18×10^{-2}	0.217	0.497	0.853
200	0.290×10^{-2}	2.40×10^{-2}	0.137	0.376	0.645
225	0.234×10^{-2}	1.93×10^{-2}	0.111	0.303	0.519
250	0.196×10^{-2}	1.62×10^{-2}	9.29×10^{-2}	0.254	0.436
275	0.170×10^{-2}	1.41×10^{-2}	8.06×10^{-2}	0.221	0.378
300	0.151×10^{-2}	1.25×10^{-2}	7.16×10^{-2}	0.196	0.336

[a]Dash indicates calculated mole fraction greater than 1.0 or vapor pressure of nitrogen less than indicated pressure.

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References

[1]R. Battino, T. R. Rettich, and T. Tominaga, J. Phys. Chem. Ref. Data **13**, 563 (1984).

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