Letter to the Editor

Conversion of linear into logarithmic retention indices

Sir,

The use of the linear retention index (J) in isothermal gas chromatography was initially proposed in 1968[1]. The plot for the conversion of linear into logarithmic (I) retention indices was also given in the above paper. The equation

$$\frac{R^{\delta I/100} - 1}{R - 1} = \delta J \tag{1}$$

where $\delta I = I - 100\, z$ and $\delta J = J - z$, was given in 1971[2]; R is the relation of the adjusted retention times of neighbouring n-alkanes and z is the carbon number of the first n-alkane standard. In a book[3], a detailed table was given constructed according to the above equation. A review[4] included problems with the use of the linear retention index in gas chromatography.

Recently Mitra[5] rewrote eqn. 1 incorrectly, replacing δJ by J, and asserted that it was in that form that the above equation was given in ref. 2. Then Mitra made the corresponding "correction" and obtained finally an equation identical with eqn. 1. It is evident that if Mitra had read the earlier publications[2-4] more attentively he would not have felt the necessity to publish his note[5].

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2 M. S. Vigdergauz and A. A. Martynov, *Chromatographia*, 4 (1971) 463.
3 M. S. Vigdergauz, *Raschety v gazovoj khromatografii (Calculations in Gas Chromatography)*, Khimiya, Moscow, 1978 (in Russian).
4 M. S. Vigdergauz, *Zh. Anal. Khim.*, 31 (1976) 2222.
5 G. D. Mitra, *J. Chromatogr.*, 211 (1981) 239.

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