Editorial

Retention data are basic characteristics of the quality of a substance in chromatography. Gas chromatographic retention data can be measured with extraordinary accuracy and, therefore, these data are often used advantageously for the identification of gases and volatile materials.

Starting with this issue of the Journal of Chromatography, a selection of GC retention data for interesting groups of substances will be published monthly. The ideal situation would be if data obtained by different authors were unified to acquire an absolute applicability, *i.e.* to be universal and ready to compile. Some time ago, it seemed perhaps possible to attain the above situation by gradually standardizing the procedures and using appropriate methods for the formal processing of retention data. It is evident, nowadays, that even in cases where the data have been measured reliably and accurately, a number of factors (*e.g.* the influence of the support, non-ideality of the gaseous phase, etc.) exist, and, unfortunately will go on existing, which render it impossible to maintain perfectly identical conditions for measurements carried out at various places, on various instruments, and under various experimental conditions, and which inevitably impair the universality of the data.

However, if one is aware of these limitations, particularly the more comprehensive sets of data may be nearly always utilized for the qualitative estimation of the elution sequence of substances studied and, frequently, also for detailed identification of them. Moreover, data concerning some groups, particularly hydrocarbons, actually approach the desired ideal state.

This and certain popularity of the retention data obtained by paper chromatography, by thin-layer chromatography, and by other related methods make the opening of a new retention data section worthwhile, at least for a trial period. The data will be listed in tables to attain the closest correlation with the practice of the retention data sections already existing in the *Journal of Chromatography*. I would like to ask the authors to facilitate my task of selection of the most interesting and reliable data from the current scientific production of many authors by sending material (as complete as possible) to my address, or, if need be, by drawing my attention to especially interesting data. It is to be expected that in the course of time a useful collection of the most important sets of GC retention data will be established, from which desired information obtained by this important method can be effectively drawn.

As soon as I can determine an optimum presentation for the material, I shall apply to the authors of selected published data for their authorization and, if need be, request their completion of the data to avoid any uncertainty due to our taking over the material, and possible staleness, and also to ensure that the information is transformed into the most convenient form. It would be especially felicious if this rationalizing tendency of the GC Retention Data Section had a positive influence on the consequentiality in publishing GC retention data and encouraged the authors to publish all the parameters necessary for processing and checking their data. This is not always observed, despite the recommendations[1].

In my opinion, every transformation of data from one form into another without cooperation with the respective author may be a source of serious inaccuracies and, sometimes, cannot even be performed at all without complementary data. Therefore, I shall present the data as published for the time being, *i.e.* either as relative retention

data supplemented by absolute data on the reference substance (if possible), further, as Kováts' indices supplemented by the necessary parameters, such as the quantity *b*, or at least the retention time of some of the components (if possible), further, as data on retention times only (if there is no other possibility), or in the form of the constants of Antoine's equation, though it is a less frequent way (*e.g.* ref. 2, p. 8). As a supplement, the main working parameters will be quoted which are important for the appreciation of the data (*e.g.* column temperature, solid support, stationary phase and its percentage, carrier gas and its flow rate and mean pressure, sample size, type of detector, etc.).

Readers of this journal and those who use the section are kindly requested to address their comments and suggestions to: The Institute of Instrumental Analytical Chemistry, Czechoslovak Academy of Sciences, Brno, Czechoslovakia.

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1 E. R. ADLARD *et al.*, in A. GOLDUP (Editor), *Gas Chromatography 1964*, Institute of Petroleum, London, 1965, pp. 348, 355, and 359; *J. Gas Chromatog.*, 3 (1965) 298.
2 F. A. VANDENHEUVEL AND A. S. COURT, *J. Chromatog.*, 39 (1969) 1.