

Editorial

Education in Chromatography?

Separation techniques, and chromatography in particular, play an increasingly important role in many a scientific discipline, in research, and in quality control laboratories. The use of chromatographic techniques is presently gaining tremendous momentum.

In parallel to this development, there is an increased demand for trained chromatographers in the industrial environment and in academic research institutes. This is definitely a positive evolution not only because the market value of the chromatographer is increasing. Chromatography is finally obtaining the appreciation it has deserved for so many years. Rather than a service to "real chemists", chromatography is establishing its value as a decision-making discipline.

Unfortunately, the present demand for trained multidisciplinary chromatographers cannot be met: they are just not available. As a consequence, companies "educate" their own personnel, either in-house or by external training at courses, workshops, seminars, *etc.* Neither of these solutions is optimal. In-house training is often obscured by productivity requirements, restricting the time for experimenting. External courses, on the other hand, even though many of them are at a high level, suffer from a lack of continuity: they constitute a momentary impulse which often fades away too quickly.

An important role in this respect has to be played by technical schools and universities. Education in separation sciences needs to be intensified, and not only on a theoretical basis: students should be given the opportunity to obtain practical experience, to acquire a feeling for chromatography. Moreover, the educational program should be multidisciplinary in its set-up: GC, LC, SFC, CZE, *etc.* should be dealt with in detail (injection, detection, spectroscopic methods).

Whereas theoretical aspects can be taught fairly easily, the situation is more complex when it comes to "practical" training of students. There are two reasons for this. On the one hand, gaining experience is, by its very nature, a time-consuming process. Secondly, a sound experimental training requires the availability of a broad range of instruments. In this respect, chromatography is definitely not inexpensive. Even though these considerations might at first seem discouraging, this should not keep us from looking for a solution. What can be done?

The existing programs at technical schools and universities can be changed fit current needs more clo-

sely. *E.g.* is it justified to have students carrying out dozens of titrations, only because the equipment required is so much cheaper than chromatographic instrumentation?

Instrument manufacturers should be made to realize that they too can benefit from a proper education program, thus making it worth their while to manufacture/make available cheaper instrumentation for training purposes.

Changing an educational system is a slow process. Structures need to be adjusted, attitudes must be changed, new perspectives must be opened up.

The final goal for chromatographic education is to transform the program into a post-graduate course of study. A year of specialization, accessible to chemists, pharmacists, medical dieticians, agricultural specialists, and civil engineers. A year to get acquainted with chromatography, in theory and in practice.

This year without income for the student would be largely compensated by his prospects in industry when he can present himself as a trained multidisciplinary chromatographer. We believe it is our responsibility to sit down and think about the future: what should be our goals, and what can we do in the meantime to ensure that we attain them as soon as possible?

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