

VOL. 372 NO. 2 APRIL 16, 1986

Bibliography Section

Period.

JOURNAL OF

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0021-9673/86/\$03.50

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JOURNAL OF CHROMATOGRAPHY

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## Editorial

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This issue contains the 200th bibliography of chromatography and electrophoresis, which is published as a supplement to the *Journal of Chromatography* under the title *Bibliography Section*. Moreover, this year we commemorate that it is a quarter of a century ago that this section was conceived. In this period, 158 872 references to publications dealing with various chromatographic and electrophoretic techniques were covered. We feel that this double jubilee justifies at least a brief look at the beginning of the Bibliography Section and a short evaluation of these 25 years.

The explosive growth of both column and planar chromatographic techniques in the 1950s created a need for books covering this then fairly new and rapidly expanding area of science. Some of the books that appeared indeed contained an almost complete bibliography of the particular technique they were dealing with. In the area of column liquid techniques the book of Zechmeister<sup>1</sup> that contained ca. 3000 references is certainly worthy of note. Further, one recalls the books of E. Lederer<sup>2</sup> and M. Lederer<sup>3</sup>, of which also a combined, revised edition in English appeared<sup>4</sup>. The 1954 edition<sup>4</sup> contains 2243 references on both column and planar techniques. In paper chromatography, the books edited by Hais and Macek<sup>5,6</sup> covered 3795 references and the two separate bibliography volumes by Macek and co-workers<sup>7,8</sup> listed 10 290 and 8292 references, respectively.

In the area of thin-layer chromatography, the monograph by Stahl<sup>9</sup> should be mentioned, and in electrophoresis that of M. Lederer<sup>10</sup>, which lists 369 references. Gas chromatography was covered by two bibliographies<sup>11,12</sup>.

This was the situation when Professor Michael Lederer came up with the idea (on June 24th, 1961, during the *First International Meeting on Some General Problems of Paper Chromatography*, Liblice, Czechoslovakia) to publish a bibliography of paper chromatography at regular (monthly) intervals as a part of the *Journal of Chromatography*. His suggestion reached fruition in May 1962, when the first issue of the Bibliography Section appeared (*J. Chromatogr.*, Vol. 8, No. 1). The complete bibliography was then prepared by the Chromatography Section of the Czechoslovak Chemical Society, the project being headed by K. Macek. In September 1963 (*J. Chromatogr.*, Vol. 12, No. 1), the section was extended by including entries referring to thin-layer and gas chromatography. The gas chromatography part was handled by J. Janák. Column liquid chromatography was added in 1968 (*J. Chromatogr.*, Vol. 33, No. 3) and electrophoresis in 1969 (*J. Chromatogr.*, Vol. 42, No. 3), both parts being edited by Z. Deyl.

As the information available from these periodically appearing bibliographies was somewhat less comprehensive (especially with regard to the compounds separated) than the data collected in the preceding bibliography books<sup>7,8</sup>, six Supplementary Volumes

to the *Journal of Chromatography* were published in the years 1968-1976<sup>13-18</sup>. The main points in which the Supplementary Volumes differed from the regular Bibliography Sections were (1) the more detailed classification (400 compared to 35 sub-sections; especially the application part was subdivided further), (2) introduction of cross-references, (3) introduction of a List of Compounds Chromatographed (ca. 20 000 entries in each volume) and (4) introduction of an Author Index. The Supplementary Volumes contained ca. 50% more papers than were published in the corresponding Bibliography Sections.

The steadily increasing number of papers led to abolishing the practice of Supplementary Volumes: since 1974, individual entries have been numbered, which has enabled the use of cross-references. The classification gradually became more detailed (currently there are 139 sub-sections) and a Subject Index and Index of Types of Compounds Chromatographed were published (also from 1974 on) at the end of each year.

TABLE I  
NUMBER OF ENTRIES PUBLISHED IN THE BIBLIOGRAPHY SECTION IN THE YEARS 1962-1986

Period	Total	Planar chromatography	Column liquid chromatography	Gas chromatography	Electrophoresis
1962-1966	14 422	9 430*	-	4 992*	-
1967-1971	22 404	9 775	4 535*	6 212	1 882*
1972-1976	29 892	8 080	8 705	6 541	6 566
1977-1981	32 383	7 323	13 056	5 764	6 240
1982-Apr. 1986	41 172	6 011	19 187	9 398	6 576
Total	140 273	40 619	45 483	32 907	21 264

\* Figures cannot be compared with those for further periods, as abstracting started within this period.

The number of papers quoted in the Bibliography Section over all these years is considerable (Table I). In the 200 Sections published there are 140 273 references, 45 483 of which deal with column liquid chromatography, 40 619 with planar techniques, 32 907 with gas chromatography and 21 264 with electrophoresis and related electromigration techniques. The six Supplementary Volumes comprise 52 308 references of which 18 599 were not published in the corresponding Bibliography Sections. Hence, the total number of references published reaches the figure of 158 872 mentioned in the opening paragraph.

The advantages of our Bibliography Section compared to bibliographies published in books or in *Chemical Abstracts* can be summarized as follows. First, the reduced delay in publishing the information. Currently, the abstracts from the most important chromatographic and analytical journals appear on average within 4 to 6 months after their original publication. Further, our indexes are arranged (in contrast to, e.g., *Chemical Abstracts*) from a chromatographer's point of view; they give the information

on all types of compounds separated in a particular paper. We also refer to those application papers in which chromatography is not considered (by the authors) to be the main topic; these papers cannot be found in the *Chemical Abstracts* indexes, although they are frequently of considerable value for the separation or isolation of a particular compound.

Preparation of the Bibliography Section is not (and cannot be) a job for one man. A team of specialists, not only in chromatography and electrophoresis but also in other branches of chemistry and even in biology, works on the Section behind the scenes. Over 50 co-workers have participated in preparing the Bibliography Section in these 25 years. In this respect we should like to mention especially I.M. Hais, whose initiative stood at the beginning of the bibliography services. Also the help of those co-workers who assisted in editing the Supplementary Volumes (see refs. 13-18) has been of paramount importance in developing the Section to an extensive and reliable bibliography source.

Currently, the Bibliography Section is compiled by a team of 25 co-workers. Quite a few of these have been with the Section almost from its beginning. Their meticulous and fast work should be acknowledged here - without their efforts no Bibliography Section would exist!

Prague and Brno (Czechoslovakia)

February 1986

KAREL MACEK

ZDENĚK DEYL

JAROSLAV JANÁK

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## 18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS

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#### 19. PROTEINS

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**21. PURINES, PYRIMIDINES, NUCLEIC ACIDS AND THEIR CONSTITUENTS**

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#### 21b. Nucleic acids, RNA

See 987.

#### 21c. Nucleic acids, DNA

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### 33. INORGANIC COMPOUNDS

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See 723.

## 28. ANTIBIOTICS

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30b. *Chloroplast and other natural pigments*

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32a. *Synthetic drugs*

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*32f. Clinico-chemical applications and profiling body fluids*

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**35. SOME TECHNICAL PRODUCTS AND COMPLEX MIXTURES***35c. Food analysis*

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*35d. Various technical products*

See 433.

*35e. Compounds with distinct biological activity and diverse chemical nature*

- 732 Jürgens, D., Shalaby, F.Y.Y.I. and Fehrenbach, F.J.: Purification and characterization of CAMP-factor from *Streptococcus agalactiae* by hydrophobic interaction chromatography and chromatofocusing. *J. Chromatogr.*, 348 (1985) 363-370.

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## PUBLICATION SCHEDULE FOR 1986

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The renaissance of liquid chromatography, provoked by the spectacular development of gas-liquid chromatography, took place in the late 1960's and early 1970's. The first edition of this book published in 1977 describes the detectors that were available at that time and which provided a performance matching that of the contemporary equipment with which they were associated. It is interesting to note that the most popular detectors then, the UV detector, the refractometer detector, the fluorescence detector and the electrical conductivity detector are still the most commonly used detectors today, nearly a decade later. Detector design, however, has changed very significantly over the intervening years. Modern high-efficiency columns provide very narrow peaks and very fast separations, and thus the physical design of the detectors had to change to meet these new challenges. In 1977, there was little real understanding of the important role played by the detector in the overall function of the chromatographic system and although some of the factors were pointed out in the first edition of this book, in retrospect they appeared to be little understood.

This second edition gives an entirely new presentation of the subject of liquid chromatography detectors. It contains sections dealing with the fundamental aspects of the interaction between columns and detectors and the interaction between ancillary equipment and the detector. It brings the reader up-to-date with new designs and novel detecting systems that have been developed since 1977 and extends significantly the subject of the association of the liquid chromatography detector with spectroscopic techniques. In particular the book now explores the association of liquid chromatography with nuclear magnetic resonance spectroscopy, infrared spectroscopy and atomic absorption spectroscopy. This book not only gives a comprehensive treatment of the subject of liquid chromatography detectors and provides a rational procedure for defining their performance and so permit valid comparisons, but also discusses detector performance in relation to the whole of the chromatographic system.

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-7 WPA 2520 1 NOV 1986