

**Methods for the Examination of Waters and Associated Materials.**

Standing Committee of Analysts (to review Standard Methods for Quality Control of the Water Cycle); Department of the Environment, National Water Council. HM Stationery Office.

A Survey of Multielement and Related Methods of Analysis for Waters, Sediments and Other Materials of Interest to the Water Industry, 1980. Pp. 46. 1981. Price £3.20. ISBN 0 11 751529 9.

Dissolved Potassium in Raw and Potable Waters, Tentative Methods (1980 Version). Pp. 17. 1981. Price £2.40. ISBN 0 11 751545 0.

Zinc in Potable Waters by Atomic Absorption Spectrophotometry, 1980. Pp. 10. 1981. Price £1.70. ISBN 0 11 751541 8.

Dissolved Sodium in Raw and Potable Waters, Tentative Methods (1980 Version). Pp. 17. 1981. Price £2.40. ISBN 0 11 751546 9.

Chloro- and Bromo- Trihalogenated Methanes in Water, 1980. Pp. 16. 1981. Price £2.40. ISBN 0 11 751544 2.

Bromide in Waters, High Level Titrimetric Method, 1981 (Tentative). Pp. 8. 1981. Price £1.40. ISBN 0 11 751543 4.

This series of booklets is intended to provide recommended methods for the determination of water quality. The booklets are short reviews of the more important analytical techniques of interest to the water and sewage industries. The techniques have been well tried and tested in other branches of industry, which may also be useful for certain analytical problems in the water industry.

The series will be published as individual methods, thus allowing for the replacement or addition of methods as quickly as possible without the need for waiting for the next edition of a complete book, which was the case with the "Analysis of Raw, Potable and Waste Waters."

**Luminescence.**

E. V. Anufrieva, K. P. Ghiggino, Yu. Ya. Gotlib, D. Phillips and A. J. Roberts. *Advances in Polymer Science. Volume 40.* Pp. vi + 174. Springer-Verlag. 1981. Price DM82; \$37.30. ISBN 3 540 10550 6; 0 387 10550 6.

Volume 40 of this series consists of two reviews. The first, Investigation of Polymers

## Publications Received

**Pesticide Analysis.**

Edited by K. G. Das. Pp. xviii + 467. Marcel Dekker. 1981. Price SwFr138. ISBN 0 8247 1087 8.

The recent advances in chromatographic, polarographic, spectral and confirmatory methodologies are combined into this volume for the benefit of analytical chemists working in industry, agriculture, public health and medicine, pesticide chemists and students just entering these fields.

The contributors are all well known experts in the field and they cover each technique and its basic principles, instrumentation and applications to all the major pesticide groups in detail. A chapter on confirmatory tests gives alternative methods for verifying the results of an initial analysis. The limitations and merits of the techniques are compared so that researchers can select and adopt the most suitable methods for their particular analytical problems.

in Solution by Polarized Luminescence, contains sections on: polarised luminescence of macromolecules with conjugated luminescence markers; methods for the preparation of polymers with covalently attached luminescent markers of the anthracene structure; investigation of polymer solutions by polarised luminescence; and dynamic theory of the motions of macromolecules and polarised luminescence.

The second review, on Time-Resolved Fluorescence Techniques in Polymer and Bipolymer Studies, contains sections on: experimental techniques; fluorescence from synthetic polymers; and time-resolved depolarisation in macromolecules. Both reviews contain extensive reference lists.

**The International Pharmacopoeia.** Third Edition. **Volume 2, Quality Specifications.** Pp. 342. World Health Organization. 1981. Price SwFr36. ISBN 92 4 154151 2.

The International Pharmacopoeia is published by the World Health Organization by virtue of a resolution of the Third World Health Assembly, its purpose being to improve the quality control of all drugs and pharmaceutical substances.

The First Edition was published in two volumes (1951 and 1952), followed by a supplement in 1959. The Second Edition appeared in a single volume in 1967, again followed by a supplement in 1971. This Third Edition will appear in five volumes. The first volume was published in 1979 and contained descriptions of 42 general methods of analysis.

Volume 2 contains quality specifications for 126 individual pharmaceutical substances, for some of which no international quality specifications have previously been used. This collection of recommended methods and specifications is not intended to have a legal status as such in any country, unless expressly introduced for that purpose by appropriate legislation, but is intended to serve as a reference so that national requirements can be established on a similar basis in any country. It is expected that they will be applied by many developing countries to pharmaceuticals used by their health services. Further specifications are to be published at intervals in the three remaining volumes.

**Biological Magnetic Resonance. Volume 3.** Edited by Lawrence J. Berliner and Jacques Reuben. Pp. xx + 268. Plenum. 1981. Price \$35. ISBN 0 306 40612 8.

The third volume in the series explores new applications of multiple irradiation techniques

to the NMR of biomolecules, particularly haemoproteins, and the ESR of some haemoproteins in the single crystal, including discussions of techniques and methods for single-crystal ESR of paramagnetically intrinsic and spin-labelled protein crystals. Other topics covered include current applications of the results of electron spin echo spectroscopy studies of several metalloproteins, two ESR spin probe techniques, methods and applications of vanadyl(IV) to several systems, and phase separations in mixed and model membranes with the nitroxide spin probe technique. One chapter has an Appendix featuring computer programs for the calculation of *g* factors and the hyperfine and orientation factors of paramagnetic metals in metalloprotein crystals.

### **Mycobacteria.**

Maureen V. Chadwick. *Institute of Medical Laboratory Sciences Monographs.* Pp. 114. Wright. 1981. Price £5. ISBN 0 7236 0595 5. In the Third World, tuberculosis is still a disease of major proportions and this is the reason, along with the now-identified large numbers of diseases producing mycobacteria, for this book. Not every laboratory will cover all aspects of mycobacterial identification, but help is given in this book for those who need to progress beyond the microscopy of acid-fast bacilli. The topics covered include tuberculosis, mycobacteriaceae, safety precautions, culture media, treatment of specimens, sensitivity testing for mycobacteria and anti-tuberculosis drugs.

### **Steroid Analysis by HPLC. Recent Applications.**

Edited by Marie P. Kautsky. *Chromatographic Science Series. Volume 16.* Pp. xiv + 397. Marcel Dekker. 1981. Price SwFr135. ISBN 0 8247 1324 9.

It is only with the recent, widespread use of HPLC that steroid purification and analysis have been possible. The reviews in this book are by leading chromatographers, who describe in precise detail the methods used in their laboratories, information that will enable scientists, clinicians and technicians to analyse and separate steroids and related compounds.

It is a guide to the analysis of specific groups and to the use of HPLC problems common to all steroid-like compounds, including cardiac glycosides, adrenal and testicular steroids, and sterol intermediates in cholesterol biosynthesis. An Appendix identifying various types of column packing will be helpful to scientists unfamiliar with the new column nomenclature.

**Medical Laboratory Statistics.**

Paul W. Strike. *Institute of Medical Laboratory Sciences Monographs*. Pp. 203. Wright. 1981. Price £5.75. ISBN 0 7236 0582 3.

Although written primarily for medical laboratory scientists of all grades and specialisations, this statistical manual presents a balanced blend of principle and practice and will be of interest to anyone involved in laboratory measurement. Topics covered include probability, clinical reference values, quality control, inference, relationships, multivariate analysis and method comparison studies.

**Treatise on Analytical Chemistry. Second Edition. Part I: Theory and Practice. Volume 7: Section H; Optical Methods of Analysis.**

Edward J. Meehan, James W. Robinson, Richard D. Sacks, W. Rudolf Seitz, A. Lee Smith and Augusta Syty. Pp. xxviii + 816. Wiley-Interscience. 1981. Price £48. ISBN 0 471 07996 0.

The Second Edition of the comprehensive work on analytical chemistry is now appearing and Volume 7 of Part I (Theory and Practice) covers most aspects of optical methods of analysis. The sections are: Optical Methods; Emission and Absorption of Radiant Energy; Fundamentals of Spectrophotometry; Spectroscopic Apparatus and Measurements; Luminescence Spectrometry (Fluorimetry and Phosphorimetry); Infrared Spectroscopy; Emission Spectroscopy; Flame Emission Spectrometry; and Atomic Absorption Spectroscopy.

**Lasers in Chemical Analysis.**

Edited by Gary M. Hieftje, John C. Travis and Fred E. Lytle. *Contemporary Instrumentation and Analysis*. Pp. xiv + 310. The Humana Press. 1981. Price £29. ISBN 0 89603 027 X. The articles presented in this volume are enhanced and edited lectures prepared for the ACS Division of Analytical Chemistry 1979 Summer Symposium, and give a broad introduction to the principles of lasers, their optics and radiation and to their diverse applications in chemical and biochemical analysis. The first section, on Lasers and Laser Optics, includes several chapters on laser fundamentals. The rest of the book is divided into Methods Based on Absorption of Laser Radiation, Methods Based on Laser-Induced Fluorescence and Lasers in Analytical Instrumentation.

**Applications of Glass Capillary Gas Chromatography.**

Edited by Walter G. Jennings. *Chromato-*

*graphic Science Series, Volume 15*. Pp. viii + 629. Marcel Dekker. 1981. SwFr186. ISBN 0 8247 1223 4.

Glass capillary gas chromatography offers advantages that the packed column cannot provide and this volume is an illustrated reference and working laboratory manual. It features the work of 20 leading experts in the field who explain the special requirements for various areas of application. Detailed examples of the uses of the technique in a wide variety of fields are given and include food, flavour and beverage analysis and clinical, forensic and environmental analysis.

**Analytikum: Methoden der analytischen Chemie und ihre theoretischen Grundlagen. Fifth Edition.**

Edited by K. Doerffel and R. Geyer. Pp. 615. VEB Deutscher Verlag für Grundstoffindustrie. 1981. Price DM55. ISBN 541052 1. (In German.)

The chapters in this book include: Fundamentals of Analytical Techniques; Methods Based on Chemical Reactions; Electroanalytical Methods; Applied Spectroscopy; Diffraction Methods; Radiometric Analytical Methods; Mathematical Methods in Analysis; Aspects of Automation; and Analytical Problems.

**Traité de Manipulation et d'Analyse des Gaz. Deuxième Édition.**

Henri Guérin. Pp. xiv + 666. Masson. 1981. ISBN 2 225 701 70 9. (In French.)

The six sections in this book are: Gas Analysis History; Basic Properties of Gases; Gas Handling; General Methods of Gas Analysis, which includes standardisation of methods, methods with separations, combustion analysis, ionisation methods, physical methods and microanalysis; Study of Principal Gases and Vapours; and Gas Analysis Applications, covering chemical research, the petroleum industry, the chemical industry, metallurgy, the glass industry, combustible gases analysis, industrial hygiene and toxicology and biological chemistry.

**Chemical Derivatization in Analytical Chemistry. Volume 1: Chromatography.**

Edited by R. W. Frei and J. F. Lawrence. *Modern Analytical Chemistry Series*. Pp. xii + 344. Plenum. 1981. Price \$39.50. ISBN 0 306 40608 X.

Chemical derivatisation is an established approach used in gas chromatography. The first section of the first volume in this series deals with derivatisation for the purpose of

making compounds amenable to gas chromatography, and concentrates on pesticides. Next, gas chromatographic and mass spectrometric improvement of certain compounds (cyclic boronates as derivatisation reagents) is explored. The third section deals with pre-chromatographic (pre-column) techniques, examples being given from the pharmaceutical area; also discussed are optical isomers and ion-pair formation. Finally, post-column reaction detectors in liquid chromatography are discussed. Reaction detectors, theoretical aspects, tubular reactions with segmented and non-segmented streams and bed reactors are investigated. The technical aspects are grouped according to detection modes, and a critical assessment of development potential and trends is presented.

**13. Spektrometertagung. Düsseldorf, 29.9. bis 1.10.1980, veranstaltet vom Deutschen Arbeitskreis für Spektroskopie in der Fachgruppe Analytische Chemie der Gesellschaft Deutscher Chemiker.**

Edited by Karl-Heinz Koch and Hans Massmann. Walter de Gruyter. Pp. xvi + 426. 1981. Price DM140. ISBN 3 11 008456 2. (In German).

The papers presented at this meeting have been divided into six chapters: Emission Spectrophotometry with Sparks and Glow Discharges (four papers); Electronic Data Processing and Automation (five papers); Emission Spectrometry with Plasmas (nine papers); X-ray Spectrometry (three papers); Atomic Absorption and Plasma Emission (five papers); and Identification Tests and Tests of Interchanges (four papers). A subject index is also included.

**Elementary Organic Stereochemistry and Conformational Analysis.**

B. A. Marples. *The Royal Society of Chemistry Monographs for Teachers Number 34*. Pp. iv + 82. The Royal Society of Chemistry. 1981. Price £5 (RSC members £3.50). ISBN 0 85186 303 5.

**Coulter Counter: Industrial Bibliography, 1980. (1209 references.) Coulter Counter: Medical and Biological Bibliography, 1981. (2455 references.)**

Coulter Electronics Limited.

These two bibliographies contain all the authors, titles and bibliographic details of all publications involving the use of the Coulter Counter.

**Water Vapour Line Parameters from Microwave to Medium Infrared. (An Atlas**

**of H<sub>2</sub><sup>16</sup>O, H<sub>2</sub><sup>17</sup>O and H<sub>2</sub><sup>18</sup>O Line Positions and Intensities Between 0 and 4350 cm<sup>-1</sup>).**

J.-M. Flaud, C. Camy-Peyret and R. A. Toth. *International Tables of Selected Constants, Volume 19*. Pp. xvi + 259. Pergamon Press. 1981. Price \$75; £31.25; Fr416. ISBN 0 08 026181 7.

This atlas of water vapour line parameters from microwave to medium infrared was compiled using the latest experimental data together with new theoretical methods to obtain vibration-rotation line positions and intensities. The general theory of the vibration-rotation for XY<sub>2</sub> non-linear molecules is described with special emphasis on quantum numbers, energy levels, wave functions and transition moments. All the relevant information for the general user is given, followed by the list of 17 200 line positions, intensities and assignments for the three isotopic species H<sub>2</sub><sup>16</sup>O, H<sub>2</sub><sup>17</sup>O and H<sub>2</sub><sup>18</sup>O. The text is in English and French throughout.

**Progress in Analytical Atomic Spectroscopy. Volume 3.**

Edited by C. L. Chakrabarti. Pp. vi + 390. Pergamon Press. 1981. Price \$105; £45. ISBN 0 08 029081 7.

The following nine chapters are included in this volume: Analysis of Nuclear Energy Materials, by G. Baudin; Thermodynamic Study of Gaseous Monocyanides by Electrothermal Atomic Absorption Spectrometry, by B. V. L'Vov and L. A. Pelieva; Multielement Atomic Fluorescence Spectroscopy, by A. H. Ullman; Analytical Atomic Spectroscopy of Metallurgical Materials—II: Non-ferrous Alloys, by K. J. Doolan and C. B. Belcher; Analytical Capabilities of Atomic Spectrometric Methods Using Tunable Lasers: A Theoretical Approach, by H. Falk; Analytical Applications of Spectra of Diatomic Molecules, by K. Dittrich; Chemical Reactions in Atom Reservoirs Used in Atomic Absorption Spectroscopy, by W. Frech, J.-A. Persson and A. Cedergren; and Zeeman Effect Atomic Absorption, by K. Yasuda, H. Koizumi, K. Ohishi and T. Noda.

**Nature, Aim and Methods of Microchemistry. Proceedings of the 8th International Microchemical Symposium, Organized by the Austrian Society for Microchemistry and Analytical Chemistry, Graz, Austria, August 25–30, 1980.**

Edited by H. Malissa, M. Grasserbauer and R. Belcher. Pp. viii + 340. Springer-Verlag. 1981. Price Sch790; DM110. ISBN 3 211 81653 4; 0 387 81653 4.

About 20 Plenary and Keynote papers presented

at the Symposium are collected in this volume. After two introductory papers on general and historical aspects, the book is divided into the following sections: Microchemistry in Arts and Archaeology (1 paper); Microchemistry in Life Sciences (4 papers); Microchemistry in Environmental Sciences (4 papers); Microchemistry in Material Sciences (4 papers); and Instrumentation, Methods and Automation in Microchemistry (4 papers).

### Modern Hot-Atom Chemistry and Its Applications.

Takeshi Tominaga and Enzo Tachikawa. *Inorganic Chemistry Concepts, Volume 5*. Pp. viii + 154. Springer-Verlag. 1981. Price DM98; \$41.70. ISBN 3 540 10715 0; 0 387 10715 0.

The chapters are Experimental Techniques; Characteristics of Hot-atom Reactions; and Applications of Hot-atom Chemistry and Related Topics. The first chapter includes a section on radiogas chromatography and the last includes a section on applications in inorganic and analytical chemistry.

### Handbook of High Resolution Multinuclear NMR.

C. Brevard and P. Granger. Pp. xxii + 229. John Wiley. 1981. Price \$18.15. ISBN 0 471 06323 1.

Part one (4 chapters, 77 pages) provides information on NMR parameters (acquisition parameters, relaxation times, NOE effects, chemical shifts, coupling constants) together with details of the Fourier transform method, spectrum recording and dynamic measurements. Part two (133 pages) presents isotope NMR fingerprints for a large number of isotopes and is intended to give all the information needed to start experiments on a given nucleus.

**Rock and Mineral Analysis.** Second Edition. Wesley M. Johnson and John A. Maxwell. *Chemical Analysis, Volume 27*. Pp. xiv + 489. John Wiley. 1981. Price \$38.85. ISBN 0 471 02743 X.

This Second Edition emphasises instrumental methods to complement the First Edition's wet methods. The first part explores preliminary considerations such as equipment, reagents, standard reference materials, sampling theory, sample preparation and decomposition. An Appendix provides a compilation and discussion of data on 80 international standard reference materials. Part II describes methods for determining those commonly requested analytes that require individual methods of preparation or detection. Parts III and IV are devoted to the

determination of major, minor and trace elements by atomic-absorption and X-ray fluorescence spectroscopy. Part V explores the application of such other methods as fire assay, neutron activation, emission spectrographic and electron microprobe analysis. This new edition also includes a discussion of the difficult problem of sample decomposition, coverage of some advances made over the last 10 years and a discussion of the preparation and use of synthetic standards.

### Electron Capture—Theory and Practice in Chromatography.

Edited by A. Zlatkis and C. F. Poole. *Journal of Chromatography Library, Volume 20*. Pp. xii + 429. Elsevier. 1981. Price \$76.50; Dfl180. ISBN 0 444 41954 3.

This text covers all aspects of the electron capture detector, and considers ancillary techniques of selective electron-capture sensitisation, atmospheric pressure ionisation and plasma chromatography. Each chapter has been prepared by experts in the field. Practical sections are devoted to such topics as the construction and operating principles of the detector, including instrument design criteria, and different methods of derivatisation. There is a review by J. E. Lovelock on the development of the technique and chapters on trace analysis in environmental and biomedical research. All pertinent data concerning the use of electron capture in gas and liquid chromatography have been tabulated.

### Pearson's Chemical Analysis of Foods. Eighth Edition.

Harold Egan, Ronald S. Kirk and Ronald Sawyer. Pp. xii + 591. Churchill Livingstone. 1981. ISBN 0 443 02149 X.

As in previous editions a balance has been kept between the different fields of food analysis. The choice of material has been increasingly influenced by the effect of international organisations, particularly the EEC, on methods and standards. The analyses are not restricted to chemical processes, as this new edition includes physical techniques, such as chromatography. A new chapter is introduced on general instrumental methods. Many sections of the book have been revised to take account of new requirements and recommendations, and the text has been amplified by references for more detailed or specialised interests.

### Studies of Food Microstructure.

Edited by D. N. Holcomb and M. Kalab. Pp. x + 342. Scanning Electron Microscopy



Inc. 1981. Price \$49 (U.S. delivery); \$52 (elsewhere). ISBN 0 931288 223.

Beginning in 1979, programmes on food micro-structure have taken place at annual SEM meetings. The papers presented have been published in the respective volumes of *Scanning Electron Microscopy*. Thirty-six of those papers have been compiled in this book. The papers included (together with discussions with the reviewers at the end of each paper) are divided into general applications of microscopy in food sciences (5 papers), meat foods (7 papers), milk products (13 papers) and food of plant origin (11 papers).

### Laboratory Control of Antibacterial Chemotherapy.

M. C. Bryant. *Institute of Medical Laboratory Sciences Monographs*. Pp. x + 140. Wright, PSG. 1981. Price £5.50. ISBN 0 7236 0594 7.

The three main sections in this book are antibiotics in common use, antibiotic sensitivity testing and antibiotic assays in blood and body fluids. Some difficult questions on antibacterial resistance and resistance transfer are discussed.

### Atmospheric Chemistry; Fundamental Aspects.

E. Meszaros. *Studies in Environmental Science*, 11. Pp. 201. Elsevier. 1981. Price \$41.50; Dfl85. ISBN 0 444 99753 9 (Volume 11); 0 444 41696 X (Series).

The discussion in this book is centred around the formation, chemical transformation and removal of constituents of our atmosphere. Besides the main components the properties and atmospheric cycle of trace gases and aerosol particles are discussed. Substances such as ozone, sulphur, nitrogen and carbon compounds whose cycles have been modified by global air pollution are also included, together with a review of the theories concerning the relation between atmospheric pollution and climate variation. The effects caused by anthropogenic carbon dioxide, supersonic aircraft emissions and halocarbons are also covered.

### Modern Fluorescence Spectroscopy.

Edited by E. L. Wehry. *Modern Analytical Chemistry, Volumes 3 and 4*. Pp. xx + 354 (volume 3); Pp. xvi + 282 (volume 4). Plenum. 1981. \$39.50 (volume 3); \$35 (volume 4). ISBN 0 306 40690 (volume 3); 0 306 40691 8 (volume 4).

Reporting important research advances that have taken place since the publication of the first volumes in this series, Volumes 3 and 4

present incisive, self-contained chapters written by experts in particular fields. They explore the current status of their respective specialties and provide informed speculation on future trends in each area.

Included are discussions of breakthroughs in both the techniques and applications of molecular luminescence. Developments resulting from the application of laser excitation to molecular fluorimetry, the use of electronic array detectors and microcomputer techniques for processing fluorescence data are covered. Applications of these systems to biological systems are offered, and advances that enhance the analytical chemist's capability for studying multi-component samples are discussed. Specific topics addressed in Volume 3 include structural interpretation of spectra by automated file searching, detection in liquid and gas chromatography, reaction rate methods, fluoro-immunoassay, studies on biologically important complexes, quantification of specific chemical species in single cells and application of microspectrofluorimetric procedures to biological systems.

Volume 4 includes applications of lasers in analytical molecular fluorescence spectroscopy, a linear response theory approach to time-resolved fluorimetry, probe ion techniques for trace analysis, array detectors and excitation-emission matrices in multi-component analysis, synchronous excitation, low-temperature fluorimetry and the use of luminescence spectroscopy in oil identification.

### Oxides of Nitrogen.

Edited by Colin Y. Young for the International Union of Pure and Applied Chemistry. *Solubility Data Series, Volume 8*. Pp. xviii + 369. Pergamon. 1981. Price £50; \$100. ISBN 0 08 02394 2.

Users of this volume will find the experimental solubility data of gaseous nitrous oxide and nitric acid in liquids as reported in the scientific literature, tables of smoothed mole fraction solubility values for a limited number of systems that have been studied over a temperature range, and critical evaluations of the experimental data, with a limited number of tables of either tentative or recommended solubility data, when two or more laboratories reported data over the same range of temperature and pressure for a system. Literature up to the end of 1979 and some papers from 1980 are cited.

### Methods for the Determination of Hazardous Substances.

Committee on Analytical Requirements; Health and Safety Executive Directorate of Informa-

tion and Advisory Services, (IAS 5), Baynards House, 1 Chepstow Place, London, W2 4TF. 50 pence each.

MDHS 1. Acrylonitrile in Air. Laboratory method using charcoal adsorption tubes and gas chromatography. March 1981. Pp. 4.

MDHS 2. Acrylonitrile in Air. Laboratory method using porous polymer adsorption tubes, and thermal desorption with gas chromatographic analysis. March 1981. Pp. 4.

MDHS 3. Generation of Test Atmospheres of Organic Vapours by the Syringe Injection Technique. Portable apparatus for laboratory and field use. March 1981. Pp. 4.

MDHS 4. Generation of Test Atmospheres of Organic Vapours by the Permeation Tube Method. Apparatus for laboratory use. April 1981. Pp. 3.

MDHS 5. On-site Validation of Sampling Methods. April 1981. Pp. 2.

MDHS 6. Lead and Inorganic Compounds of Lead in Air. Laboratory method using atomic absorption spectrometry. May 1981. Pp. 3.

MDHS 7. Lead and Inorganic Compounds of Lead in Air. Laboratory method using X-ray fluorescence spectrometry. May 1981. Pp. 4.

MDHS 8. Lead and Inorganic Compounds of Lead in Air. Colorimetric field method using sym-diphenylthiocarbazone (dithizone). May 1981. Pp. 4.

MDHS 9. Tetra Alkyl Lead Compounds in Air. Personal monitoring method. July 1981. Pp. 4.

MDHS 10. Cadmium and Inorganic Compounds of Cadmium in Air. Laboratory method using atomic absorption spectrometry. June 1981. Pp. 3.

MDHS 11. Cadmium and Inorganic Compounds of Cadmium in Air. Laboratory method using X-ray fluorescence spectrometry. June 1981. Pp. 3.

MDHS 12. Chromium and Inorganic Compounds of Chromium in Air. Laboratory method using atomic absorption spectrometry. June 1981. Pp. 3.

MDHS 13. Chromium and Inorganic Compounds of Chromium in Air. Laboratory method using X-ray fluorescence spectrometry. June 1981. Pp. 3.

Each publication in this new series of methods published by the Health and Safety Executive describes a method considered by the Executive to be suitable for sampling and analysing a particular substance or group of substances. This supersedes the series "Methods for the Determination of Toxic Substances in Air."

The first five of these methods were listed in *Analytical Proceedings*, 1981, volume 18, page

283, and the remaining eight methods are now available.

**Recent Developments in Mass Spectrometry in Biochemistry, Medicine and Environmental Research, 7. Proceedings of the 7th International Symposium on Mass Spectrometry in Biochemistry, Medicine and Environmental Research, Milan, 16-18 June, 1980.**

Edited by Alberto Frigerio. *Analytical Chemistry Symposia Series, Volume 7*. Pp. x + 360. Elsevier. 1981. Price \$72.25; Dfl170. ISBN 0 444 42029 0 (Volume 7); 0 444 41786 9 (Series). This symposium, organised by the Italian Group for Mass Spectrometry in Biochemistry and Medicine in cooperation with the International Scientific Center, provided an opportunity for specialists in different branches of mass spectrometry to discuss their research findings and exchange ideas; 32 papers are included, 8 of which were plenary lectures.

The main topics covered are the applications of mass spectrometric techniques in drug metabolism, the metabolism of other substances, the identification and/or quantitation of endogenous compounds, studies involving respiratory gases and environmental studies. Advances in methodology are also included.