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Cumulative Author, Subject and Techniques Indexes Volumes 141–150

# ANALYTICA CHIMICA ACTA

International journal devoted to all branches of analytical chemistry



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# ANALYTICA CHIMICA ACTA

*International journal devoted to all branches of analytical chemistry*
*Revue internationale consacrée à tous les domaines de la chimie analytique*
*Internationale Zeitschrift für alle Gebiete der analytischen Chemie*

**PUBLICATION SCHEDULE FOR 1983**

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# INFORMATION FOR AUTHORS

*Analytica Chimica Acta* publishes original papers, short communications, preliminary communications, and reviews dealing with every aspect of modern chemical analysis, both fundamental and applied.

Reviews are written by invitation of the editors, who welcome suggestions for subjects. Short communications are usually complete descriptions of limited investigations, and should generally not exceed four printed pages. Preliminary communications of important urgent work can be printed within 4 months of submission, if the authors are prepared to forego proofs.

*Submission of papers*

Authors should submit three copies of the manuscript in double-spaced typing on one side of the paper only, with a margin of 4 cm, on pages of uniform size. If any variety of machine copying is used (e.g., xerox), authors should ensure that all copies are easily legible and that the paper used can be written on with both ink and pencil. Authors are advised to retain at least one copy of the manuscript. Manuscripts should be preceded by a sheet of paper carrying (a) the title of the paper, (b) the name and full postal address of the person to whom proofs are to be sent, (c) the number of pages, tables and figures.

Manuscripts should be sent to the editorial addresses given on the covers of current issues; submission to the publisher leads to delays. Submission of a manuscript implies that the work described has not been, and will not be, published elsewhere (except as an abstract, or as part of a lecture, review or academic thesis). Upon acceptance of the manuscript, the author(s) resident in the U.S.A. will be asked to transfer the copyright of the article to the publisher. This transfer will ensure the widest possible dissemination of information under the U.S. Copyright Law. For articles by authors not resident in the U.S.A., the copyright passes to the publisher upon acceptance of the manuscript, if it has not been previously reserved by a government institution or company.

The preferred language of the journal is English, but French and German manuscripts are also acceptable. For authors whose first language is not English, French or German, linguistic improvement is provided as part of the normal editorial processing.

*Notes on the preparation of manuscripts*

Authors are given every latitude, consistent with clarity and brevity, in the style and form of their papers. Very useful advice is provided in the Handbook for Authors issued by the Chemical Society and American Chemical Society.

*Title and initial layout.* All manuscripts should be headed by a concise but informative title. This is followed by the names of the authors, and the address of the laboratory where the work was carried out. The author to whom correspondence should be addressed must be indicated by an asterisk (without a footnote). If the present address of an author is different from that mentioned, it should be given in a footnote. Acknowledgements of financial support should not be made in footnotes, but at the end of the paper.

*Summary.* Research papers and reviews begin with a Summary (50–250 words) which should comprise a brief factual account of the contents of the paper, with emphasis on new information. Short communications and preliminary communications require summaries, which should not exceed 50 words. Uncommon abbreviations, jargon and reference numbers must not be used. The Summary should be suitable for use by abstracting services without rewriting. Papers in French or German require a Résumé or Zusammenfassung preceded by a Title and Summary in English; authors are encouraged to provide translations where necessary.

*Introduction.* The first paragraphs of the paper should contain an account of the reasons for the work, any essential historical background (as briefly as possible and with key references only) and preliminary experimental work.

*Experimental.* The experimental methods may be described after the introductory material, or after the discussion of results, depending on the nature of the paper. Detailed experimental descriptions should, however, be restricted to one section of the paper, and not scattered throughout the text. Working procedures should be given in the imperative mood; sufficient detail should be given to allow any reasonably experienced worker to carry out the procedure. Detailed descriptions of well-known techniques and equipment are unnecessary, as are simple preparations of reagents or solutions, and lists of common chemicals. Manufacturers should be named only if the product differs essentially from that of other manufacturers. Local suppliers for multi-national concerns should not be named. In writing, complete sentences should be used, and procedural steps should not be numbered.

*Results and discussion.* These may be treated together or separately. In discussing results, unnecessary repetition of experimental detail, unsupported elaboration of hypotheses, and verbose exposition of ideas should be avoided. Chemical formulae should not be used in the text unless confusion is likely to arise from the use of names. Formulae should, however, be used for brevity in tables and figures. Calculations well known to specialists are unnecessary. Conclusions should be added only if needed for interpretation; they should not be used as extended summaries nor should they duplicate the summary.

*Acknowledgements.* These should be kept as short as possible, and placed, without a heading, at the conclusion of the text.

*References*

The references should be collected at the end of the paper, numbered in the order of their appearance in the text (*not* arranged alphabetically), and typed on a separate sheet. If the paper forms part of a series, the reference to the previous part should appear as the first reference, the number being cited at the title of the paper. References given in tables should be numbered according to the position of the table in the text. Every reference listed must be cited in the text. Reference numbers in the text are set in square brackets on the line. Numerals referring to equations are placed in parentheses, e.g., Eqn. (1).

In the list of references, the following forms should be adopted.

*Journals*

1 W. Lund and M. Salberg, Anal. Chim. Acta, 76 (1975) 131.

2 M. McDaniel, A. D. Shendrikar, K. D. Reizneir and P. W. West, Anal. Chem., 48 (1976) 2240.

The title of the journal must be abbreviated as in the Bibliographic Guide for Editors and Authors.

*Books*

1 D. D. Perrin, Masking and Demasking of Chemical Reactions, Interscience—Wiley, New York, 1970, p. 188.

2 S. Hofmann, in G. Svehla (Ed.), Wilson and Wilson's Comprehensive Analytical Chemistry, Vol. 9, Elsevier, Amsterdam, 1979, p. 89.

Titles of papers are unnecessary. Citations of reports which are not widely available (e.g., reports from government research centres) should be avoided if possible. Authors' initials should not be used in the text, unless real confusion could be caused by their omission. If the reference cited contains three or more names, only the first author's name followed by et al. (e.g., McDaniel et al.) should be used in the text; but the reference list must contain the initials and names of *all* authors.

*Tables, computer programs, and figures*

Tables and figures must be essential for the clear and concise presentation of the material. The same information should not be given in tables and figures, and material from the published literature should not be reproduced.

*Tables.* All tables should be numbered with Arabic numerals, and have brief descriptive headings; they should be typed on separate pages. The layout should be given serious thought, so that the significance of the results can be grasped quickly. Column headings should be brief.

Tables with only two or three headings are best printed horizontally, e.g.,

| | | | | |
|---|---|---|---|---|
| $Hg^{2+}$ added ($\mu$g) | 1.0 | 2.0 | 3.0 | 5.0 |
| Extraction (%) | 95.0 | 99.8 | 99.5 | 89.0 |

Experimental information which is relevant to all the results in the table is best given in parentheses immediately after the heading. No column should contain the same number or unit throughout its length. Footnotes to tables are denoted by superscript a, b, c... The units used should be clearly stated. Confusion can arise from the use of powers in column headings. The following usage is recommended: e.g., if molar absorptivities are listed, the heading should be $\epsilon(10^4\ \mathrm{l\ mol^{-1}\ cm^{-1}})$ so that a number 2.32 in the column signifies 23 200.

Alphanumeric computer output is usually unsuitable for reproduction and should therefore be retyped and presented as tables; capitals can be used to simulate computer output if such simulation is essential for illustration.

*Computer programs.* Algorithms should be described clearly and concisely by means of a suitable algorithmic notation, although a standard high-level programming language may also be used. Complete program listings are not normally admissible. Flow charts should be avoided in favour of a textual or tabulated description of the program or data flow. Statements on the portability of the software described to other computer systems, as well as on its availability to interested readers, should be given.

*Figures.* Figures should be prepared in black waterproof drawing ink on drawing or tracing paper of the same size as that on which the manuscript is typed. One original (or sharp glossy print) and two photostat (or other) copies are required. Attention should be given to line thickness, lettering (which should be kept to a minimum) and spacing on axes of graphs, to ensure suitability for reduction during printing. Axes of a graph should be clearly labelled, along the axes, and outside the graph itself.

The following standard symbols should be used in graphs:

▼ ▽ ■ □ + X ● ○ ▲ △

Simple straight-line graphs are not acceptable, because they can readily be described in the text by means of an equation or a sentence. Claims of linearity should be supported by regression data that include slope, intercept, standard deviations of the slope and intercept, standard error, and the number of data points; correlation coefficients are optional. Explanatory information should be placed not in the figure, but in the legend, which should be typed on a separate sheet of paper. All figures should be numbered with Arabic numerals, and require descriptive legends.

Photographs should be glossy prints and be as rich in contrast as possible; colour photographs cannot be accepted. In general, line diagrams are more informative and less liable to dating than photographs of equipment, which are therefore not usually acceptable.

Computer outputs for reproduction as figures must be good quality on blank paper, and should preferably be submitted as glossy prints.

*Nomenclature, abbreviations and symbols*

In general, the recommendations of the International Union of Pure and Applied Chemistry (IUPAC) should be followed, and attention should be given to the recommendations of the Analytical Chemistry Division in the journal *Pure and Applied Chemistry* (see also *IUPAC Compendium of Analytical Nomenclature*, 1978).

Basic SI and other accepted metric nomenclature are given in the Appendix. In accordance with IUPAC rules, the mass number, atomic number, number of atoms and ionic charge should be designated by a left upper index, a left lower index, a right lower index and a right upper index, respectively, placed round the atomic symbol. For example, the phosphate ion should be designated as $PO_4^{3-}$ (*not* $PO_4^{-3}$ or $PO_4^{---}$), and phosphorus-32 as $^{32}P$ (*not* $P^{32}$ or P-32).

The Stock notation for the indication of stoichiometric valency states (and indirectly the proportion of the constituents) should be used. Examples are iron(III) chloride rather than ferric chloride, and potassium hexacyanoferrate(II) rather than potassium ferrocyanide. These rules are valid for French and German as well as English usage.

The use of nanometre (nm) and micrometre ($\mu$m) for the expression of analytical wavelengths has long superseded m$\mu$ or Å or $\mu$, all of which should be avoided, although Å is sensibly retained in crystallographic work.

Natural or Naperian logarithms should be denoted by ln and decadic logarithms by log.

Molarity (mol $l^{-1}$ or M) is the preferred concentration unit, but normality (N) can be used for convenience if it does not introduce ambiguity.

Unusual abbreviations require definition when first used. Abbreviations for long chemical names (e.g., EDTA, HEDTA, TBAH, en, pn, Tris) are useful, especially in equations, tables or figures. For ease of distinction, well-known techniques may be abbreviated by using lower-case letters and full stops, such as, g.c.-m.s., u.v., i.r., a.a.s., $^{13}$C-n.m.r., a.s.v., d.p.p., etc. In the interests of clarity, however, excessive use of abbreviations is not encouraged.

Ambiguity in expressing dilution can be avoided by the use of, e.g., (1 + 2) rather than 1:2 which could mean either one part diluted with two parts or one part diluted to twice its volume.

Symbols, formulae and equations should be written with great care, capitals and lower-case letters being distinguished where necessary. Greek letters and unusual symbols should be defined by name in the left-hand margin beside their first appearance in the paper. Wherever possible, mathematical expressions should be typed on one line, by using brackets, e.g. {[()]}, and the solidus, e.g., $A/b = x^{1/2}/(u + v)^{5/6}$; this is valuable in conserving vertical space. Particular attention should be given to the correct sequence of brackets and to the correct placing of superscripts and subscripts in complicated equations; careful proof-reading of such equations is essential. Short equations should not be numbered unless required for subsequent reference.

Decimal points should be indicated by full stops in papers written in English and by commas in French and German papers. All decimal numbers smaller than unity should include a leading zero (e.g., 0.11).

## *Appendix*

### *Basic SI units*

| | | | |
|---|---|---|---|
| metre | m | candela | cd |
| kilogram | kg | mole | mol |
| second | s | (an Avogadro number of | |
| ampere | A | particles such as atoms, | |
| degree Kelvin | K | molecules, ions, electrons.) | |

### *Derived SI units*

| | | | | | |
|---|---|---|---|---|---|
| joule | J | kg m$^2$ s$^{-2}$ | farad | F | A s V$^{-1}$ |
| newton | N | J m$^{-1}$ | weber | Wb | V s |
| watt | W | J s$^{-1}$ | henry | H | V s A$^{-1}$ |
| coulomb | C | A s | tesla | T | V s m$^{-2}$ |
| volt | V | J A$^{-1}$ s$^{-1}$ | hertz | Hz | s$^{-1}$ |
| ohm | Ω | V A$^{-1}$ | degree Celsius | °C | K − 273.15 |

### *Other units*

| | | | | | |
|---|---|---|---|---|---|
| litre | l | $10^{-3}$ m$^3$ | hour | h | $3.6 \times 10^3$ s |
| gram | g | $10^{-3}$ kg | dyne | dyn | $10^{-5}$ N |
| poise | P | $10^{-3}$ m$^{-1}$ s$^{-1}$ | atmosphere | atm | 101.325 kN m$^{-2}$ |
| electron volt | eV | $1.6021 \times 10^{-19}$ J | molar | M | mol l$^{-1}$ |
| calorie | cal | 4.184 J | molal | *m* | mol kg$^{-1}$ |
| minute | min | 60 s | curie | Ci | $3.7 \times 10^{10}$ s$^{-1}$ |

Prefixes to abbreviations for the names of units indicating

| Multiples | | Sub-multiples | | | |
|---|---|---|---|---|---|
| tera ($\times 10^{12}$) | T | milli ($\times 10^{-3}$) | m | pico ($\times 10^{-12}$) | p |
| giga ($\times 10^{9}$) | G | micro ($\times 10^{-6}$) | $\mu$ | femto ($\times 10^{-15}$) | f |
| mega ($\times 10^{6}$) | M | nano ($\times 10^{-9}$) | n | atto ($\times 10^{-18}$) | a |
| kilo ($\times 10^{3}$) | k | | | | |

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