

APPENDIX

IUPAC Publications on Nomenclature and Symbolism

1.0 Compilations

1.1 Nomenclature of Organic Chemistry, a 550-page hardcover volume published in 1979, available from Pergamon, Oxford.

- Section A: Hydrocarbons
- Section B: Fundamental heterocyclic systems
- Section C: Characteristic groups containing carbon, hydrogen, oxygen, nitrogen, halogen, sulphur, selenium, and tellurium
- Section D: Organic compounds containing elements not exclusively those referred to in the title of Section C
- Section E: Stereochemistry
- Section F: General principles for the naming of natural products and related compounds
- Section H: Isotopically modified compounds

1.2 Nomenclature of Inorganic Chemistry, a 110-page hardcover volume published in 1970, available from Pergamon, Oxford.

- Chapter 1: Elements
- Chapter 2: Formulae and names of compounds in general
- Chapter 3: Names for ions and radicals
- Chapter 4: Iso- and hetero-polyanions
- Chapter 5: Acids
- Chapter 6: Salts and salt-like compounds
- Chapter 7: Co-ordination compounds
- Chapter 8: Addition compounds
- Chapter 9: Crystalline phases of variable composition
- Chapter 10: Polymorphism
- Chapter 11: Boron compounds

1.3 Biochemical Nomenclature and Related Documents, a 220-page softcover manual published in 1978 by The Biochemical Society for IUB, and available from the Biochemical Society Book Depot, P.O. Box 32, Commerce Way, Colchester, Essex CO2 8HP. The contents are as follows:

General

- Nomenclature of organic chemistry. Section E: Stereochemistry (1974)
- Nomenclature of organic chemistry. Section F: Natural products and related compounds (1976)
- Nomenclature of organic chemistry. Section H: Isotopically modified compounds (1977)
- Isotopically labelled compounds: common biochemical practice
- Recommendations for measurement and presentation of biochemical equilibrium data (1976)
- Abbreviations and symbols for chemical names of special interest in biological chemistry (1965)
- Abbreviations and symbols: a compilation (1976)
- Citation of bibliographic references in biochemical journals (1971)
- Amino acids, peptides and proteins*
- Nomenclature of α -amino acids (1974)
- Symbols for amino-acid derivatives and peptides (1971)
- Rules for naming synthetic modifications of natural peptides (1966)

- Abbreviated nomenclature of synthetic polypeptides or polymerized amino acids (1971)
- A one-letter notation for amino-acid sequences (1968)
- Abbreviations and symbols for the description of the conformation of polypeptide chains (1969)
- Nomenclature of peptide hormones (1974)
- Recommendations for the nomenclature of human immunoglobulins
- Protein data bank. A computer-based archival file for macromolecular structures (1977)
- Nomenclature of multiple forms of enzymes (1976)
- Nucleotides and nucleic acids*
- Abbreviations and symbols for nucleic acids, polynucleotides and their constituents (1970)
- Lipids*
- Nomenclature of lipids (1976)

- Nomenclature of steroids (1967)
- Nomenclature of quinones with isoprenoid side chains (1973)
- Tentative rules for the nomenclature of carotenoids (1970). Amendments (1974)
- Nomenclature of tocopherols and related compounds (1973)
- Carbohydrates, etc.*
- Tentative rules for carbohydrate nomenclature. Part 1 (1969)
- Nomenclature of cyclitols (1973)
- Phosphorus-containing compounds*
- Nomenclature of phosphorus-containing compounds of biochemical importance (1976)
- Miscellaneous*
- Trivial names of miscellaneous compounds of importance in biochemistry (1965)
- Nomenclature and symbols for folic acids and related compounds (1965)
- Nomenclature for vitamins B-6 and related compounds (1973)
- Nomenclature of corrinoids (1973)

1.4 Compendium of Analytical Nomenclature, a 222-page volume published in 1978, available in hardcover and softcover from Pergamon, Oxford.

- Chapter 1: Recommendations for the presentation of the results of chemical analysis
- Chapter 2: Recommendations for terminology to be used with precision balances
- Chapter 3: Recommended nomenclature for scales of working in analysis
- Chapter 4: Recommendations on nomenclature for contamination phenomena in precipitation from aqueous solution
- Chapter 5: Recommended nomenclature for automatic analysis
- Chapter 6: Recommendations for nomenclature of thermal analysis
- Chapter 7: Recommendations for nomenclature of mass spectrometry

INSTRUCTIONS FOR AUTHORS (1987)

- Chapter 8: Recommended nomenclature for titrimetric analysis
- Chapter 9: Report on the standardization of pH and related technology
- Chapter 10: Practical measurements of pH in amphiprotic and mixed solvents
- Chapter 11: Recommended symbols for solution equilibria
- Chapter 12: Recommended nomenclature for liquid-liquid distribution
- Chapter 13: Recommendations on nomenclature and presentation of data in gas chromatography
- Chapter 14: Recommendations on nomenclature for chromatography
- Chapter 15: Recommendations on ion-exchange nomenclature
- Chapter 16–18: Nomenclature, symbols, units and their usage in spectrochemical analysis. I, General atomic emission spectroscopy. II, Data interpretation. III, Analytical flame spectroscopy and associated non-flame procedures
- Chapter 19: Classification and nomenclature of electroanalytical techniques
- Chapter 20: Recommendations for sign conventions and plotting of electrochemical data
- Chapter 21: Recommendations for nomenclature of ion-selective electrodes
- Appendix: Recommendations on the usage of the terms 'equivalent' and 'normal'

2.0 Documents not included in the compilations

2.1 Nomenclature of Elements and Compounds

2.1.1 Amino acids and Peptides

Nomenclature and symbolism for amino acids and peptides (*Pure Appl. Chem.*, 1984, **56**, 595; *Eur. J. Biochem.*, 1984, **138**, 9).

2.1.2 Analytical Reagents

Guide to trivial names, trade names, and synonyms for substances used in analytical chemistry (*Pure Appl. Chem.*, 1978, **50**, 339).

2.1.3 Boron Compounds

Nomenclature of inorganic boron compounds (*Pure Appl. Chem.*, 1972, **30**, 681).

2.1.4 Carbohydrates

Conformational nomenclature for five- and six-membered ring forms of monosaccharides and their derivatives (provisional) (*Pure Appl. Chem.*, 1981, **53**, 1901; *Eur. J. Biochem.*, 1980, **111**, 295).

Abbreviated terminology of oligosaccharide chains (provisional) (*Pure Appl. Chem.*, 1982, **54**, 1517; *J. Biol. Chem.*, 1982, **257**, 2347).

Polysaccharide nomenclature (provisional) (*Pure Appl. Chem.*, 1982, **54**, 1523; *J. Biol. Chem.*, 1982, **257**, 3352).

Nomenclature of unsaturated monosaccharides (provisional) (*Pure Appl. Chem.*, 1982, **54**, 207; *Eur. J. Biochem.*, 1981, **119**, 1; errata *Eur. J. Biochem.*, 1982, **125**, 1).

Nomenclature of branched-chain monosaccharides (provisional) (*Pure Appl. Chem.*, 1982, **54**, 211; *Eur. J. Biochem.*, 1981, **119**, 5; errata *Eur. J. Biochem.*, 1982, **125**, 1).

Symbols for specifying the conformation of polysaccharide chains (provisional) (*Pure Appl. Chem.*, 1983, **55**, 1269; *Eur. J. Biochem.*, 1983, **131**, 5).

2.1.5 Elements

Recommendations for the names of elements of atomic number greater than 100 (*Pure Appl. Chem.*, 1979, **51**, 381).

2.1.6 Enzymes

Enzyme Nomenclature (1984), published by Academic Press in hardcover and softcover editions.

2.1.7 Heterocyclic Compounds

Revision of the extended Hantzsch-Widman system of nomenclature for heteromonocycles (*Pure Appl. Chem.*, 1983, **55**, 409).

2.1.8 Isotopically Modified Compounds

Nomenclature of inorganic chemistry. Part II. 1. Isotopically modified compounds (*Pure Appl. Chem.*, 1981, **53**, 1887).

2.1.9 Lambda Convention

Treatment of variable valence in organic nomenclature (*Pure Appl. Chem.*, 1984, **56**, 769).

2.1.10 Nitrogen Hydrides

Nomenclature of hydrides of nitrogen and derived cations, anions, and ligands (*Pure Appl. Chem.*, 1982, **54**, 2545).

2.1.11 Nucleotides

Abbreviations and symbols for the description of conformations of polynucleotide chains (provisional) (*Pure Appl. Chem.*, 1983, **55**, 1279; *Eur. J. Biochem.*, 1983, **131**, 9).

2.1.12 Numerical Terms

Extension of Rules A-1.1 and A-2.5 concerning numerical terms used in organic chemical nomenclature (provisional) (*Pure Appl. Chem.*, 1983, **55**, 1463).

2.1.13 Polymers

Nomenclature of regular single-strand organic polymers (*Pure Appl. Chem.*, 1976, **48**, 373).

Nomenclature for regular single-strand and quasi single-strand inorganic and co-ordination polymers (*Pure Appl. Chem.*, 1985, **57**, 149).

Source-based nomenclature for copolymers (*Pure Appl. Chem.*, 1985, **57**, 1427).

Stereochemical definitions and notations relating to polymers (*Pure Appl. Chem.*, 1981, **53**, 733).

List of standard abbreviations (symbols) for synthetic polymers and polymer materials (*Pure Appl. Chem.*, 1974, **40**, 473).

Basic definitions of terms relating to polymers (*Pure Appl. Chem.*, 1974, **40**, 477).

2.1.14 Retinoids

Nomenclature of retinoids (provisional) (*Pure Appl. Chem.*, 1983, **55**, 721; *Eur. J. Biochem.*, 1982, **129**, 1).

2.1.15 Tetrapyrroles

Nomenclature of tetrapyrroles (provisional) (*Pure Appl. Chem.*, 1979, **51**, 2251).

2.1.16 Tocopherols

Nomenclature of tocopherols and related compounds (*Pure Appl. Chem.*, 1982, **54**, 1507; *Eur. J. Biochem.*, 1982, **123**, 473).

2.1.17 Vitamins

Nomenclature of Vitamin D (provisional) (*Pure Appl. Chem.*, 1982, **54**, 1511; *Eur. J. Biochem.*, 1982, **124**, 223).

2.1.18 Zeolites

Chemical nomenclature and formulation of compositions of synthetic and natural zeolites (*Pure Appl. Chem.*, 1979, **51**, 1091).

2.2 Terminology, Symbols, and Units, and Presentation of Results

2.2.1 General

Glossary of terms used in physical organic chemistry (*Pure Appl. Chem.*, 1983, **55**, 1281).

Manual of symbols and terminology for physicochemical quantities and units (*Pure Appl. Chem.*, 1979, **51**, 1, also available from Pergamon, Oxford, as a 40-page softcover booklet).

2.2.2 Analytical

Nomenclature, symbols, units, and their usage in spectrochemical analysis. Part IV, X-Ray emission spectroscopy (*Pure Appl. Chem.*, 1980, **52**, 2543). Part V, Radiation sources (*Pure Appl. Chem.*, 1985, **57**, 1453). Part VI, Molecular luminescence spectroscopy (*Pure Appl. Chem.*, 1984, **55**, 231). Recommendations for nomenclature, standard procedures, and reporting of experimental data for surface analysis techniques (*Pure Appl. Chem.*, 1979, **51**, 2243). Glossary of terms used in nuclear analytical chemistry (provisional) (*Pure Appl. Chem.*, 1982, **54**, 1533). Recommendations for publication of papers on a new analytical method based on ion exchange or ion-exchange chromatography (*Pure Appl. Chem.*, 1980, **52**, 2555). Recommendations for presentation of data on compleximetric indicators. 1. General (*Pure Appl. Chem.*, 1979, **51**, 1357). Recommendations for publishing manuscripts on ion-selective electrodes (*Pure Appl. Chem.*, 1981, **53**, 1907). Recommendations on use of the term amplification reactions (*Pure Appl. Chem.*, 1982, **54**, 2553). Recommendations for the usage of selective, selectivity, and related terms in analytical chemistry (*Pure Appl. Chem.*, 1983, **55**, 553). Proposed terminology and symbols for the transfer of solutes from one solvent to another (*Pure Appl. Chem.*, 1978, **50**, 589). Nomenclature, symbols and units recommended for *in situ* microanalysis (provisional) (*Pure Appl. Chem.*, 1983, **55**, 2023).

2.2.3 Clinical

Physicochemical quantities and units in clinical chemistry with special emphasis on activities and activity coefficients (*Pure Appl. Chem.*, 1984, **56**, 567). Quantities and units in clinical chemistry (*Pure Appl. Chem.*, 1979, **51**, 2451). Quantities and units in clinical chemistry: nebulizer and flame properties in flame emission and absorption spectrometry (provisional) (*Pure Appl. Chem.*, 1984, **56**, 1499). List of quantities in clinical chemistry (*Pure Appl. Chem.*, 1979, **51**, 2481).

2.2.4 Colloids and Surface Chemistry

Definitions, terminology, and symbols in colloid and surface chemistry. I (*Pure Appl. Chem.*, 1972, **31**, 577). II, Heterogeneous catalysis (*Pure Appl. Chem.*, 1976, **46**, 71). Part 1.14: Light scattering (provisional) (*Pure Appl. Chem.*, 1983, **55**, 931). Reporting experimental pressure-area data with film balances (*Pure Appl. Chem.*, 1985, **57**, 621). Reporting physisorption data for gas/solid systems with special reference to the determination of surface area and porosity (*Pure Appl. Chem.*, 1985, **57**, 603). Reporting data on adsorption from solution at the solid/solution interface (*Pure Appl. Chem.*, 1986, **58**, 967).

2.2.5 Electrochemistry

Nomenclature for transfer phenomena in electrolytic systems (*Pure Appl. Chem.*, 1981, **53**, 1827). Electrode reaction orders, transfer coefficients, and rate constants—amplification of definitions and recommendations for publication of parameters (*Pure Appl. Chem.*, 1980, **52**, 233). Recommended terms, symbols, and definitions for electroanalytical chemistry (*Pure Appl. Chem.*, 1985, **57**, 1491). Classification and nomenclature of electroanalytical techniques (*Pure Appl. Chem.*, 1976, **45**, 81). Recommendations for sign conventions and plotting of electrochemical data (*Pure Appl. Chem.*, 1976, **45**, 131). Electrochemical nomenclature (*Pure Appl. Chem.*, 1974, **37**, 499). Recommendations on reporting electrode potentials in non-aqueous solvents (*Pure Appl. Chem.*, 1984, **56**, 461).

Definition of pH scales, standard reference values, measurement of pH and related terminology (*Pure Appl. Chem.*, 1985, **57**, 531).

Interphases in systems of conducting phases (*Pure Appl. Chem.*, 1986, **58**, 437).

The absolute electrode potential: an explanatory note (*Pure Appl. Chem.*, 1986, **58**, 955).

2.2.6 Kinetics

Symbolism and terminology in chemical kinetics (provisional) (*Pure Appl. Chem.*, 1981, **53**, 753).

2.2.7 Photochemistry

Recommended standards for reporting photochemical data (*Pure Appl. Chem.*, 1984, **56**, 939).

2.2.8 Quantum Chemistry

Expression of results in quantum chemistry (*Pure Appl. Chem.*, 1978, **50**, 75).

2.2.9 Reactions

Nomenclature for straightforward transformations (provisional) (*Pure Appl. Chem.*, 1981, **53**, 306).

2.2.10 Rheological Properties

Selected definitions, terminology, and symbols for rheological properties (*Pure Appl. Chem.*, 1979, **51**, 1215).

2.2.11 Spectroscopy

Recommendations for publication of papers on methods of molecular absorption spectrophotometry in solution (*Pure Appl. Chem.*, 1978, **50**, 237).

Nomenclature and spectral presentation in electron spectroscopy resulting from excitation by photons (*Pure Appl. Chem.*, 1976, **45**, 221).

Recommendations for the presentation of infrared absorption spectra in data collections. A, Condensed phases (*Pure Appl. Chem.*, 1978, **50**, 231).

Definition and symbolism of molecular force constants (*Pure Appl. Chem.*, 1978, **50**, 1709).

Recommendations for symbolism and nomenclature for mass spectrometry (*Pure Appl. Chem.*, 1978, **50**, 65).

Nomenclature and conventions for reporting Mössbauer spectroscopic data (*Pure Appl. Chem.*, 1976, **45**, 211).

Recommendations for the presentation of NMR data for publication in chemical journals. A, Proton spectra (*Pure Appl. Chem.*, 1972, **39**, 625). B, Spectra from nuclei other than protons (*Pure Appl. Chem.*, 1976, **45**, 217).

Presentation of Raman spectra in data collections (*Pure Appl. Chem.*, 1981, **53**, 1879).

Names, symbols, definitions and units of quantities in optical spectroscopy (*Pure Appl. Chem.*, 1985, **57**, 105).

2.2.12 Thermal Analysis

Nomenclature of thermal analysis. I (*Pure Appl. Chem.*, 1974, **37**, 439). II, DTA and TG apparatus and technique. III, DTA and TG curves (*Pure Appl. Chem.*, 1980, **52**, 2387). IV (*Pure Appl. Chem.*, 1985, **57**, 1737).

Calorimetric measurements on cellular systems: recommendations for measurements and presentation of results (provisional) (*Pure Appl. Chem.*, 1982, **54**, 671).

2.2.13 Thermodynamics

A guide to procedures for the publication of thermodynamic data (*Pure Appl. Chem.*, 1972, **39**, 395).

Assignment and presentation of uncertainties of the numerical results of thermodynamic measurements (*Pure Appl. Chem.*, 1981, **53**, 1805).

Notation for states and processes; significance of the word 'standard' in chemical thermodynamics and remarks on commonly tabulated forms of thermodynamic functions (*Pure Appl. Chem.*, 1982, **54**, 1239).

JOURNALS OF THE ROYAL SOCIETY OF CHEMISTRY

Refereeing Procedure and Policy (1987)

1.0 Contributions to Dalton, Perkin, and Faraday Transactions, The Analyst, J. Anal. At. Spectrom. and J. Chem. Research

1.1 Introduction

This document summarises the procedure used for assessing papers submitted to the five *Transactions*, *The Analyst*, *J. Anal. At. Spectrom.*, and *J. Chem. Research*, and provides guidelines for referees engaged in this assessment.

1.2 Subject matter

Papers are submitted to the various journals according to subject matter. If a referee feels that a paper would be published more appropriately in an RSC journal other than the one suggested by the author, he should inform the Editor. The topics covered by the various journals are as follows:

Dalton Transactions (Inorganic Chemistry). All aspects of the chemistry of inorganic and organometallic compounds, including bioinorganic chemistry and solid-state inorganic chemistry; the applications of physicochemical techniques to the study of their structures, properties, and reactions, including kinetics and mechanism; new or improved experimental techniques and syntheses.

Faraday Transactions I (Physical Chemistry in Condensed Phases). Colloid and interface science, surface science, physisorption and chromatographic science, chemisorption and heterogeneous catalysis, zeolites and ion-exchange phenomena. Electrode processes, liquids and solutions: experimental and theoretical. Solid-state chemistry: microstructures and dynamics. Reactions in condensed phases, physical chemistry of macromolecules and polymers. Biophysical chemistry and radiation chemistry.

Faraday Transactions II (Molecular and Chemical Physics). Gas-phase reaction kinetics and dynamics: experimental and theoretical; molecular beam kinetics and spectroscopy. Photochemistry and photophysics, energy transfer and relaxation processes. Laser-induced chemistry. Spectroscopies of molecules, molecular ensembles, and gas-phase complexes. Quantum theory of molecular structure. Statistical mechanics of gaseous molecules and complexes; statistical mechanics and quantum theory of the condensed phase. Computational chemistry; molecular dynamics.

Perkin Transactions I (Organic Chemistry). All aspects of organic and bio-organic chemistry. These include synthetic organic chemistry of all types, organometallic chemistry, chemistry and biosynthesis of natural products, the relationship between molecular structure and biological activity, the chemistry of polymers and biological macromolecules, and

medicinal and agricultural chemistry where there is originality in the science.

Perkin Transactions II (Physical Organic Chemistry). Physicochemical aspects of organic, organometallic, and bio-organic chemistry, including kinetic, mechanistic, structural, spectroscopic, and theoretical studies. Such topics include structure-activity relationships and physical aspects of biological processes and of the study of polymers and biological macromolecules.

The Analyst (Analytical Chemistry). Theory and practice of all aspects of analytical chemistry, fundamental and applied, inorganic and organic, including chemical, physical, and biological methods.

Journal of Analytical Atomic Spectrometry. The development and analytical application of atomic spectrometric techniques.

Journal of Chemical Research. All areas of chemistry. The format of this journal (one- or two-page printed synopsis in Part S, plus microform version of authors' full text typescript in Part M) makes it particularly suitable for papers containing lengthy experimental sections or extensive data tabulations.

1.3 Procedure

Each manuscript is considered independently by two referees. The referees' reports constitute recommendations to the appropriate Editorial Board, which is empowered to take final action on manuscripts submitted. The Editor, acting for the Editorial Board, is responsible for all administrative and executive actions, and is empowered to accept or reject papers. It is his duty to see that, as far as possible, agreement is reached between authors and referees; although he may need to consult referees again concerning an author's reply to comments, he will try, in general, to avoid further reference to them.

1.3.1 *Adjudication of disagreements*. If there is a notable discrepancy between the reports of the two referees, or if the difference between authors and referees cannot be resolved readily, a third referee may be appointed as adjudicator. In extreme cases, differences may be reported to the appropriate Editorial Board for resolution.

When a paper is recommended for rejection by referees, the Editor will inform the authors and return the top copy of the manuscript. Authors have the right to appeal to the Editorial Board if they regard a decision to reject as unfair. The Editor may refer to the Editorial Boards any papers which have been recommended for acceptance by the referees, but about which the Editor himself is doubtful.

1.3.2 *Anonymity.* The anonymity of referees is strictly preserved, and reports should be couched in terms which do not disclose the identity of the writer. A referee should never communicate directly with an author, unless and until such action has been sanctioned by the Society, through the Editor.

1.3.3 *Confidentiality.* A referee should treat a paper received for assessment as confidential material. Information acquired by a referee from such a paper is not available for citation until the paper is published.

1.4 Policy

The primary criterion for acceptance of a contribution for publication is that it should advance scientific knowledge significantly. Papers that do **not** contain new experimental results may be considered for publication **only** if they either reinterpret or summarise known facts or results in a manner presenting an advance in chemical knowledge. Papers in interdisciplinary areas are acceptable if the chemical content is considered satisfactory.

Papers reporting results regarded as **routine** or **trivial** are not acceptable in the absence of other, desirable attributes.

Although short papers are acceptable, the Society strongly discourages the **fragmentation** of a substantial body of work into a number of short publications; such fragmentation is likely to be grounds for rejection.

The **length** of an article should be commensurate with its scientific content; however, authors are allowed every latitude (consistent with reasonable brevity) in the **form** in which their work is presented. Figures and flow-charts can often save space as well as clarify complicated arguments, and should not be excised unless they are unhelpful or really extravagant.

If a paper as a whole is judged suitable for the *Journal*, minor criticisms should not be unduly emphasised. It is the responsibility of the Editor to ensure the use of reasonably brief phraseology, and to assist the author to present his work in the most appropriate format.

However, referees should not hesitate to recommend rejection of papers which appear incurably badly composed.

It should be clearly understood that referees' reports are made in confidence to the Editor, who will transmit comments to the author at his discretion. To assist the Editor, referees are requested to indicate which comments are designed only for consideration, as distinct from those which, in the referee's view, require specific action or an adequate answer before the paper is accepted.

Referees may ask for sight of **supporting data** not submitted for publication, or for sight of a previous paper which has been submitted but not yet published. Such requests must be made to the Editor, not directly to the author.

1.4.1 *Authentication of new compounds.* Referees are asked to assess, as a whole, the evidence in support of the homogeneity and structure of all new compounds. No hard and fast rules can be laid down to cover all types of compounds, but the Society's policy is that evidence for the unequivocal identification of new compounds should wherever possible include good elemental analytical data; for example, an accurate mass measurement of a molecular ion does not provide evidence of purity of a compound and must be accompanied by independent evidence of homogeneity. Low-resolution mass spectrometry must be treated with even more reserve in the absence of firm evidence to distinguish between alternative molecular formulae. Where elemental analytical data are not available, appropriate

evidence which is convincing to an expert in the field may be acceptable.

Spectroscopic information necessary to the assignment of structure should normally be given. Just how complete this information should be must depend upon the circumstances; the structure of a compound obtained from an unusual reaction or isolated from a natural source needs much stronger supporting evidence than one derived by a standard reaction from a precursor of undisputed structure.

Referees are reminded of the need to be exacting in their standards but at the same time flexible in their admission of evidence. It remains the Society's policy to accept work only of high quality and to permit no lowering of standards.

1.5 Titles and summaries

Referees should comment on Titles and Summaries with the following points in mind.

Titles of papers are used out of context by several organisations for current awareness purposes. To enable such systems to serve chemists adequately, titles must be written around a sufficient number of scientific words carefully chosen to cover the important aspects of the paper.

Summaries should be couched in such a way as to indicate to the reader whether or not he may wish to read the papers in full. They should preferably be self-contained, so that they can be understood without reference to the main text.

1.6 Speed of Refereeing

The Editorial Boards are anxious to maintain and to reduce further if possible the publication times now being achieved. In this connection, referees should submit their reports with the minimum of delay, or return manuscripts immediately to the Editor if long delay seems inevitable.

1.7 Suggestion of Alternative Referees

The Editor welcomes suggestions of alternative referees competent to deal with particular subject areas. Such suggestions are particularly helpful in cases where a referee considers himself ill-equipped (in terms of specialist knowledge) to deal with a specific paper, and in highly specialized or new areas of research where only a limited number of experts may be available. If, in such a case, the alternative and the original referee work in the same institution, the manuscript may be passed on directly after informing the Editor.

1.8 Notes (Short Papers) and Letters

'Notes' are published in *Dalton* and *Faraday Transactions*; the corresponding format in *The Analyst* and *J. Anal. At. Spectrom.* is referred to as a 'Short Paper'. These articles are intended for the description of essentially complete pieces of work which are not of the length to justify a full paper. They are **NOT** preliminary communications, nor in any way an alternative to *Chemical Communications*, for which there are additional criteria of novelty and urgency. The quality of material contained in a Note (Short Paper) should be the same as that in a full paper. Investigations arising out of some larger project but not prosecuted to the same degree are particularly appropriate for this format.

A Note (Short Paper) should not normally exceed in length about 8 pages of typescript, including figures, tables, *etc.* It should comprise a short abstract (except in *The Analyst* and *J. Anal. At. Spectrom.*) and Discussion, but adequate experimental details are required.

In *J. Chem. Research*, a 'Short Paper' is essentially of the same type. As a consequence of its length, it appears in full in Part S with no microform version in Part M.

'Letters', published only in *Dalton Transactions*, are a medium for the expression of scientific opinions and views normally concerning material published in that journal; it is intended that contributions in this format should be published rapidly. The Letters section is for scientific discussion, and is not intended to compete with media for the publication of more general matters such as *Chemistry in Britain*.

Only rarely should a Letter exceed one printed column in length (about 1—2 pages of typescript). Where a Letter is polemical in nature, and if it is accepted, a Reply will be solicited from other parties implicated, for consideration for publication alongside the original Letter.

1.9 Relationship with Communications Journals

In cases where a preliminary report of the work described has appeared (for example in *Chemical Communications*), referees should alert the editor to any excessive and unnecessary repetition of material; this can arise in connection with communications journals whose restrictions on length and the reporting of experimental data are less severe than those of *Chemical Communications*. Furthermore, the acceptability of the full paper must be judged on the basis of the significance of the additional information provided, as well as on the criteria outlined in the foregoing sections.

2.0 Contributions to Chemical Communications

Chemical Communications is intended as a forum for preliminary accounts of original and significant work, in any area of chemistry that is likely to prove of wide general appeal or exceptional specialist interest. Such preliminary reports should be followed up in most cases by full papers in other journals, providing detailed accounts of the work. It is Society policy that only a fraction of research work warrants publication in *Chemical Communications*, and strict refereeing standards should be applied. The benefit to the reader from the rapid publication of a particular piece of work before it appears as a full paper must be balanced against the desirability of avoiding duplicate publication. The needs of the reader, not the author, must be considered, and priority in publication should not be allowed to determine acceptability. Acceptance should be recommended only if, in the opinion of the referee, the content of the paper is of such urgency that rapid publication will be advantageous to the progress of chemical research.

The length of Communications is strictly limited; only in exceptional circumstances should it exceed one printed page (two-and-a-half to three A4 pages of typescript) and referees should be particularly critical of manuscripts longer than this. Communications do not contain extensive spectroscopic or other experimental data, but referees may ask for sight of such data before reaching a decision.

The refereeing procedure for Communications is the same as that for full papers, except that rapidity of reporting is crucial in order to maintain rapid publication. The Journals Committee functions as the Editorial Board of *Chemical Communications* and as such acts as final arbiter in cases of dispute.

3.0 Communications submitted to *The Analyst* and *J. Anal. At. Spectrom.*

Criteria for acceptance of Communications submitted to *The Analyst* and *J. Anal. At. Spectrom.* are similar to those for contributions to *Chemical Communications*, except that they should be concerned specifically with analytical chemistry.

However Communications to *The Analyst* and *J. Anal. At. Spectrom.* are not subjected to refereeing in the usual way; a decision whether or not to publish rests with the Editor, who may or may not obtain advice from a referee.

4.0 X-Ray Crystallographic Work

4.1 Crystallographic papers are of two types:

(A) The majority, which contain definitive data on completely refined determinations.

(B) A minority which include brief accounts of structures containing feature(s) of unusual interest and where the structure solutions are clear but where (for any of a variety of reasons) the full refinement has not been completed. These are then regarded as preliminary publications, at least so far as the X-ray results are concerned.

Both types of publication are appropriate for *Chem. Comm.*; only those of type (A) should normally appear in *Dalton* or *Perkin Transactions*.

4.2 Papers of type (A) in *Dalton* and *Perkin Transactions* should normally contain the information in their titles that an X-ray structure determination has been carried out; this is often appropriate in *Chem. Comm.* also, but not obligatory. Papers of type (B) need not do so if the X-ray determination forms only a minor part. *Summaries* should always contain this information unless the paper is of type (B) and the structure determination is not a main point of the communication.

4.3 All papers containing crystallographic determinations will be refereed by two referees, one a structural chemist. If the editor considers it advisable, the paper may also be sent to a crystallographer for comment. Referees will not normally be expected to check values of structural parameters for publication (e.g. bond lengths and angles against atomic coordinates; this will be done after publication by CCDC or Bonn), but should still pay attention to the quality of the experimental crystallographic work. However their primary concern should be such new chemistry as is involved in the structure.

4.4 On occasions *Chem. Comm.* will publish preliminary accounts [type (B)] of crystal structures of unusual chemical interest. By 'preliminary' is meant that the data have not yet been fully refined. Sufficient supplementary data must be provided for the referee to judge whether the 'not-fully-refined' structure does indeed prove the desired point, and care should be taken by the referees to ensure that the authors do not overstate the case they have—for example by reporting bond lengths to very high degrees of apparent precision when they have poor R-factors. Such papers will always be refereed by a professional crystallographer. Authors must indicate in the paper or the supplementary data the justification for publishing without full refinement and referees should comment on whether the case for publication is convincing.

4.5 In many cases the structure referred to in *Chem. Comm.* will be fully refined. The *Chem. Comm.* can then be considered to fulfil the archival function, and the structure determination may not require further detailed refereeing when presented as part of a full paper. In the full paper, the author's purpose will then be served by a simple reference back to the original communication. However, if the crystallography is discussed again

at any length in the full paper, the data should be re-presented to the referees in full, and re-published if considered necessary.

4.6 There may be other cases when an author wishes to publish a paper in *Dalton* or *Perkin* in which the result of a crystal structure determination is discussed, but where he does not wish to include details or extensive discussion. He may not even wish to include the crystallographer as co-author (for example when the determination is carried out by a commercial

company). If the author is able to show the referees that this procedure is appropriate, it will be allowed provided that it does not lead to unnecessary fragmentation. However, the author must provide, as supplementary information, sufficient data relating to the crystal structure determination to allow a referee to make sure that the point made is correct, and co-ordinates *etc.* will be deposited with CCDC (or Bonn). The brief published description of the determination should be supplemented by appropriate reference to 'unpublished work'.
