

PHYTOCHEMISTRY

INSTRUCTIONS TO AUTHORS—1974

1 INTRODUCTION

1.1 PHYTOCHEMISTRY is intended to cover research on all aspects of pure and applied plant biochemistry, especially that which leads to a deeper understanding of the factors underlying the growth, development and differentiation of plants and the chemistry of plant products. The Journal is divided into five sections, *Biochemistry*, *Biosynthesis*, *Chemotaxonomy*, *Phytochemistry* and *Phytochemical Reports*. Within each section, like papers are, as far as possible, grouped together.

2 SUBMISSION OF CONTRIBUTIONS

2.1 Contributions must be original and must not have been submitted simultaneously elsewhere. If all or part of the results have been reported previously in any form whatsoever, a copy of that publication must accompany the manuscript on submission. They will only be accepted if they fall within the scope of the Journal as outlined in paragraph 1.1. Papers which deal only with either analytical methods or the synthesis of organic compounds will not be published. Authors should avoid using trivial names whenever possible but if they do so they should give reasons for their choice.

2.2 Contributions will be accepted in English, French or German, either as Full or Short Papers, or as Phytochemical Reports. Reviews which survey important areas of plant biochemistry will also be considered, but Authors must consult the Editors before preparing such articles. The contents of papers are the sole responsibility of the Authors, and publication does not imply the concurrence of Editors or Publishers.

2.3 Manuscripts of contributions intended as Full or Short Papers should be submitted to Dr J. B. HARBORNE, Department of Botany, The University of Reading, Whiteknights, Reading RG6 2AS, Berkshire, England. Phytochemical Reports and Reviews should be sent to Dr T. SWAIN, Royal Botanic Gardens, Richmond, Surrey TW9 3DS, England.

3 EDITORIAL AUTHORITY

The Editors reserve the right to make alterations in manuscripts submitted for publication. Such alterations will be made if manuscripts do not conform with accepted scientific standards or if they contain matter which in the opinion of the Editors is unnecessarily verbose or repetitive. If Authors wish to see such alterations before their paper is accepted for press, they *must* so indicate when their manuscript is submitted. Alterations may be queried at the proof stage, but this will inevitably delay publication and should only be done if the scientific meaning has been seriously upset. Where papers need extensive alteration, they will be returned to the Authors for checking and re-typing. Unless such papers are returned to the Editors within one month, they will be deemed to be new papers, and given a revised date of receipt.

4 FORM OF CONTRIBUTIONS

4.1 All manuscripts intended for publication must be submitted on good quality paper typed throughout with double-spacing between lines with adequate margins (4 cm) and liberal space at the top and bottom of each page

Full and Short Papers

4.2.1 The content of manuscripts intended as Full Papers must be arranged as follows

- (1) A *Title*
- (2) Authors name(s) and address(es)
- (3) A *Key Word Index*
- (4) An *Abstract*, in which the essential contents are briefly stated
- (5) The *Introduction*, the *Results* and the *Discussion*. Although these three sections may be separated by headings, they should, as far as possible, form one continuous narrative and only include such details which are essential to the argument presented
- (6) The *Experimental* which should include brief details of the methods used such that a competent operator may repeat the work

(7) *Acknowledgements*

(8) *Figures, Formulae, Tables and References*

4.2.2 *Titles* must be as brief as possible, consistent with clarity and should never exceed ten words in length. Uninformative phrases such as "Chemical examination of", "Studies on", "Experiments on", "Extractives of", "Constituents of" will be deleted. The taxonomic authority after a plant name must be omitted from the title. If a paper is part of a series, this must not be given in the heading, but referred to in a footnote in the form *Part IX in the series "The Alkaloids of *Papaver somniferum*". For Part VIII see BLOGGS, A. (1848) *Phytochemistry* 77, 117

4.2.3 *Authors names*. One of the forenames of each author must be given in full. This is to enable more exact computerized indexing and information retrieval.

4.2.4 *Key Word Index*. Authors must give from three to ten 'key words' or phrases which identify the most important subjects covered by the paper. These are to assist in the computerized retrieval of the information contained in the paper. They should be placed at the beginning of the manuscript [see *Phytochemistry* **13**, 45 (1974)], e.g. Plant name, family, (common epithet, where applicable), type of investigation, class of compound, compound(s). For example **Key Word Index** - *Musa sapientum*, Musaceae, banana, biosynthesis, phytosterols, cyclooeucalenol.

4.2.5 *Abstracts*. Abstracts must briefly describe the results obtained and conclusions reached, *not* the methods used, speculations or any other matter. They are not expected to be a complete summary but only an outline of the main findings. An abstract in English must be provided, papers in French or German may also carry a version in the language of the paper.

4.2.6 *Results*. Papers must give only those essential results which have led the authors to a definite conclusion, speculative or otherwise. Much illustrative data, which used to be required as supporting evidence, can now be taken for granted and quoted in abbreviated form. For example, it is sufficient to quote the λ_{\max} of a UV curve rather than give the whole curve itself. Long historical introductions, speculative discussions not related to the conclusions, unnecessary diagrams and figures and excessive experimental detail will be regarded as extraneous and usually be eliminated since it occupies space which prevents more worthwhile matter from being published.

4 2 7 Figures, diagrams, formulae, and tables of the following type will *not* be accepted for publication

(1) Diagrams or photographs of chromatograms (both PC and TLC), electrophoretic separations, or recorder traces of GLC data which are given *merely* to prove identification (much of this data can either be left out altogether or inserted in the text or in tabular form)

(2) Straight-line graphs (if necessary, the data for a single point or of a constant (e.g. K_m) derived from the graph can be inserted in the text for illustrative purposes)

(3) Generalized pH and temperature-denaturation curves of enzymes (it is sufficient to give the pH range of activity or the temperature for 50% denaturation under standard conditions)

(4) Illustrations of IR, UV, NMR or MS (v_{\max} , λ_{\max} , τ values or m/e values can be quoted in the text)

(5) Flow sheets illustrating isolation of compounds

(6) Formulae of well-known compounds or reaction schemes

(7) Tables either giving single values which could be easily quoted in the text or repeating data shown elsewhere

4 2 8 *Figures, schemes and chemical formulae* for publication which do not come in the above categories should be drawn on separate sheets and *not* included in the typescript. Chemical formulae must be made absolutely clear, printers are not chemists and much delay is caused by sloppy drawing. Aromatic rings must be drawn with alternate double bonds and conformation of single bonds shown by thickened or dashed lines according to convention. Structures should be numbered consecutively in *arabic* numerals. Figures and schemes should first be drawn on graph paper and then transferred to separate sheets of good quality tracing paper using black waterproof ink. They should be drawn twice the size finally required, that is not more than either 12 or 25 cm wide depending on whether they are to appear side by side [see *Phytochemistry* **13**, 48 (1974)] or as a whole page spread [see *Phytochemistry* **13**, 50 (1974)], and in either case should not be more than 30 cm high. Lettering should be in initial capital—small *sans-serif* style and drawn using any suitable stencil or added from a transfer sheet. The letters should be 3–4 mm high with a line thickness of 0.3–0.5 mm. Lines on graphs should be 0.5–0.6 mm thick and should not pass through the symbols used as datum points. The symbols used and their size for half reduction are ○ ● ▲ □ ■ × +. All graphs must have a border all round 0.3–0.4 mm thick, and the scales, which must be clearly shown, should be marked outside this. Each curve in a graph must be clearly identified, either by a caption within the border or in the descriptive legend. Each scheme and graph must be clearly identified with the authors name, abbreviated title of the paper and the figure number. Descriptive legends which must include a title, should be collected together on a separate sheet.

4 2 9 *Half-tone photographs* can only be submitted by prior arrangement with the Editors. They must have good contrast and be either 12 or 25 cm wide and not more than 30 cm high.

4 2 10 *Tables* must be typed on separate sheets and arranged to be viewed vertically. They must be so constructed as to be intelligible *without* reference to the text. Every table must have a title and each column must be provided with an explanatory heading. Results should be cited only to the degree of accuracy justified on the basis of the errors of the method and **usually** only to three significant figures. Units must always be clearly indicated and chosen so as to avoid excessively high (>1000) or low (<0.001) values. The figure zero should precede the decimal point for all numbers below one (e.g. 0.1).

4.2.11 *References* must be numbered consecutively in the text and should be typed in order on a separate sheet. Only essential references should be included and these should be given in the correct format: i.e. the Authors, followed by initials in sequence, the year of publication in parenthesis, the title of the journal (abbreviated in accordance with *Chemical Abstracts*) and underlined once, the volume number, squiggly line underneath, and the first page number as in the following examples which correspond with agreed IUB practice

HARBORNE, J. B. and WILLIAMS, C. A. (1972) Phytochemistry 11 1741

LOWRY, O. H. ROSEBROUGH, N. J., FARR, A. L. and RANDALL, R. I. (1951) J. Biol. Chem. 193 265

SWAIN, T. and BATE-SMITH, E. C. (1962) Flavonoid Compounds in Comparative Biochemistry (FLORKIN, M. and MASON, H. S. eds) Vol. III pp. 755-809 Academic Press, New York

4.2.12 *Experimental* The Experimental must be concise and extensive use of abbreviations is essential (see 5.5 *General conventions*). Experimental details which must be omitted, unless novel procedures are involved, are

(1) Method of preparation of common chemical derivatives such as acetates, methyl ethers, etc.

(2) Excessive details of separation of compounds by chromatography e.g. preparation of columns, TLC plates, column and fraction size

(3) Commercial source of chemicals and biochemicals, unless it is known that materials from different manufacturers vary critically in their properties

(4) Types of instruments used, unless not widely available or have novel features

Subtitles in the Experimental should be italicized (underlined) and inserted as *part of* the first line of the text to which they apply

PHYTOCHEMICAL REPORTS

4.3.1 When reporting the isolation of *known* but rare compounds from new plant sources or of new substances which are closely related to known compounds, Authors must present the results in the abbreviated form of the Phytochemical Report. Reports must represent substantial contributions to knowledge, those listing the isolation of several common compounds from one species only *will* be rejected. Examples of such compounds are: all products of primary metabolism – carbohydrates, amino acids, organic acids of the citric acid and related cycles, C-16 and C-18 fatty acids, alkanes with C₂₀–C₃₄ structures, the plant sterols sitosterol, stigmasterol and campesterol, the carotenoids β -carotene and lutein, the flavonols kaempferol, quercetin and myricetin and their 3-glucosides or 3-rhamnoglucosides, the cinnamic acids *p*-coumaric, caffeic, ferulic and sinapic acids, cyanidin and its 3-mono- and 3,5-di-glucoside, compounds which while not universal are expectable in a given group of plants, such as α - or β -pinene in *Pinus*, usnic acid in lichens and so on.

The format to be followed is: *Title* mentioning specific name of plant examined and the *class* of compound (or individual substance if only one) isolated. Authors' names (one forename in full) and addresses, *Key Word Index*, **No Abstract**. The body of the paper arranged as follows:

Plant (insert specific names and authorities for each plant followed by voucher accession number and Herbarium where deposited). Papers may not be accepted unless voucher

specimens have been made, see 5.2), *Source* (insert where obtained), *Uses* (if none known, omit), *Previous work* (list references only, e.g. On leaves,^{1,2} on *X. poori*³), *Plant part examined* (i.e. leaf, bark, etc.) brief experimental details of method of extraction, separation, isolation, and identification of compounds found, with extensive use of abbreviations (see 5.5 *General conventions*). If more than one plant part is examined the format can be repeated. *Biological significance* this should be stated very briefly at the end of the report. Plants from different families must be treated separately. References must be quoted in normal format and kept to a minimum.

5 OTHER MATTERS

Proofs and Reprints

5.1.1 *Proofs* will be sent to Authors for checking before publication. Proofs of text, and illustrations which cannot be set in type, will be despatched together. Proofs are normally sent to the first-named Author at the address given at the head of the manuscript. Authors *must* indicate on the *manuscript* any other arrangement required. Corrections to the proof must be marked clearly. Any substantial alterations other than printer's errors will be charged to the Author. Two reprint order forms will accompany the proofs and one copy should be returned along with them.

5.1.2 *Errata and addenda* to published articles will, at the discretion of the Editors, be incorporated in the June and December issues of the Journal.

Documentation of Plant Materials

5.2 In **all cases** when papers contain references to whole plants or parts therefrom, to crude drugs, or to any other plant material from which identifiable chemical substances have been obtained for the first time, they must also include, when at all possible, reference to voucher specimen(s) of the plants or other material examined. In any case, authors must quote the name and address of the authority who undertook the identification of each non-cultivated plant investigated. Such specimens should be deposited in a major regional herbarium where the collection is maintained by state or private institution and which permits the loan of such materials.

Greek Letters and Related Matters

5.3 *Typographical correctness* in the final printing is best assured by observing the following instructions. Letters to be set in Greek type must be *clearly* indicated in the margin. Confusion between the letter l and the numerical 1 when standing alone can be avoided by looping the letter l (ℓ) when typewritten. Similar differentiation between the O (or o) and zero 0 is advisable. Subscripts $\hat{\lambda}$ and superscripts $\check{\nu}$ should be clearly indicated. Primes (as p') must be written or identified so that they will not be interpreted as the superior figure 1 (p¹). Equations and formulae should be clearly and carefully written, taking care to have all figures and symbols, especially in fractions and equations, in the alignment in which they are to be printed.

Nomenclature

5.4.1 *Chemical nomenclature*, abbreviations and symbols must follow IUPAC rules. Radioactive substances should be written with the correct chemical name of the compound followed by the position and type of radioatom (¹⁴C, ³H or T, ³²P, ³⁵S, etc.) placed

in square brackets after, e.g. L-serine-[U- ^{14}C], D-glucose-[3- ^3H], colchicine-[ring C methoxyl- ^3H], adenosine-5'-triphosphate-[γ - ^{32}P]

5.4.2 *Terms in biological chemistry* should follow, (a) the *Instructions to Authors of the Biochemical Journal* (revised annually), or the notes given at the beginning of each number of the *Journal of Biological Chemistry*, (b) the IUPAC rules on biological chemistry nomenclature. Where there is any difference in recommendations the Editors will follow the latest publication.

5.4.3 *Specific names* (genus, species, authority for the binomial) of all experimental plants must be given at first mention according to the *Index Kewensis* or similar authority, and preferably be in the form recommended by the *International Code of Botanical Nomenclature*. Named varieties of cultivars are given as, e.g. *Lactuca sativa* cv. Grand Rapids.

5.4.4 *Analytical results* for compounds which have been adequately described in the literature must be given in the form (Found C, 62.9, H, 5.4. Calc. for $\text{C}_{13}\text{H}_{13}\text{O}_4\text{N}$ C, 63.2, H, 5.3%). *New compounds* must be indicated by giving analytical results in the form (Found C, 62.9, H, 5.4. $\text{C}_{13}\text{H}_{13}\text{O}_4\text{N}$ requires C, 63.2, H, 5.3%).

5.4.5 *Weights and linear measurements* must be expressed in metric units, other measurements should be given in analogous units (e.g. lx, not ft-c). Lists of SI units, with their equivalents, are given in the Royal Society publication *Metrication in Scientific Journals* (1968). All non-standard abbreviations must be defined on first mention.

5.5 General conventions

5.5.1 Names of apparatus called after their originators must commence with a capital letter (e.g. Soxhlet, Warburg, Kjeldahl).

5.5.2 Hyphens must be inserted in phrases such as 9-day-old plants (which means plants which were 9 days old, not 9 plants one-day old).

5.5.3 Except in the Experimental, sentences must not begin with a numeral. Measurements can be expressed in brackets after the nouns to which they refer [e.g. 'Samples (10g) were extracted'].

5.5.4 Italics are used for the Generic and specific names of plants (but not for Families, Orders or Divisions), for o-(ortho), m- (meta) and p- (para), ca for circa (about), cis-, trans-, iso-, for O-(oxygen), N- (nitrogen), S- (sulphur) in combination (as in O-methyl), for g (force due to gravity), m.e. K_m, tRNA, for Latin abbreviations and phrases, in vitro, in vivo, et al. for subtitles and journal names. Each word to be put in italics should be underlined as in these examples.

5.5.5 Trivial names for enzymes can be used provided that reference is made at the beginning of the manuscript to the Enzyme Commission (E.C.) number when one has been allocated [see *Enzyme Nomenclature* Elsevier, New York (1965)].

5.5.6 *Examples of accepted abbreviations* (Note that the stop is only rarely used after abbreviations.) French and German Authors should use equivalent abbreviations where possible (see Instructions to Authors—1973).

6 THE PUBLISHING PROCESS

6.1 Refereeing and editing

Each submitted manuscript is considered by at least one expert Referee. Where necessary the Referee's observations are passed to the Author for comment, but it should be noted that the Editors take the sole responsibility for deciding whether or not a manuscript is suitable for publication in *Phytochemistry*. Manuscripts which are deemed

inappropriate for *Phytochemistry* are always considered by at least two Editors and clear reasons for rejection are given to the Authors. Accepted manuscripts are always edited by one of the Executive Editors (see paragraph 3.1) who take into account, where necessary, both Referee's and Author's comments.

6.2 Publication

Under normal circumstances, Refereeing takes 4–6 weeks, Editing 2 weeks, Proof production 6–8 weeks and the final stage of production and binding 4 weeks. The overall production time from receipt to publication is then 16–20 weeks. It should be noted that *Phytochemistry* is published 3–4 weeks before the month appearing on the front cover to allow for dispatch time.

(Copies of these instructions can be obtained from the Editors.)