

EDITING ORGANIC ABSTRACTS FOR CHEMICAL ABSTRACTS*

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Abstracts of both journal articles and patents are published by Chemical Abstracts and, in general, require the same kind of editorial attention and present similar problems. Abstracts must be of an informative nature, but they must also be noncritical. The abstractor is asked to present the author's conclusions without expressing his own opinion of the work. This fact is kept in mind by the editor, who at the same time must not edit from a biased viewpoint. Critical editing is allowed only to the extent of rejecting articles obviously valueless as chemical contributions. Judgment as to the relative importance of articles is left to the users of the journal.

Abstracts for all of the sections of Chemical Abstracts are edited for chemical accuracy, length, proper technical language, clearness of expression, and the use of standard forms. Correlation of abstracts, involving Chemical Abstracts references, and classification as to section of the journal, including the use of cross-references, also receive editorial attention.

Every attempt is made to assign each abstractor work in his own fields of special interest and experience. However, there are variations in experience in abstracting and in skill of concise expression. It is all too easy to miscopy or mistranslate a few words or to omit a step in a process and by doing so, lessen the value of an abstract.

Abstractors sometimes have difficulty reconciling brevity with the use of good idiomatic English and may use a telegraphic style. An expression such as "the solid was heated with an acid chloride in the presence of a tertiary base" reads much better than "solid heated with acid chloride in presence of tertiary base." This style of writing is no more desirable than the following verbose example: "In a similar manner, valeric acid ethyl ester was saponified during a period of two hours at a temperature of 50° to lead to the production of valeric acid in a yield of 80% of theoretical." This sentence is improved by condensation to "Similarly, Et valerate was saponified during 2 hr. at 50° to give valeric acid in 80% yield."

Two space-saving devices which are used extensively are Roman numerals and formulas. A Roman numeral, in boldface type, may be entered parenthetically following the first appearance in the body of an abstract of a recurring name and then substituted for that name throughout the remainder of the abstract. Roman numerals are used strictly to replace repeated words and not to indicate chemical relationships between substances. They should not be used as

substitutes for substances for which the names or formulas are relatively short, as urea and CS₂. It is particularly important that the numerals be introduced in consecutive order without skipping. This practice is necessary, because, in order to determine the meaning of a given numeral, it is necessary to refer to the point of its introduction. In an abstract which includes a large number of Roman numerals, as many do, it is very difficult to identify a given numeral unless it has been introduced in consecutive order.

Formulas are often great space and time savers. In the Organic Section, molecular, semistructural, and structural formulas are used. Molecular formulas list the elemental composition of a substance. A semistructural formula is a breakdown of a molecular formula, since the basic nucleus, substituting groups, and numerical positions of such groups are given. For example, 2,4-dibromobenzoic acid can be represented by the molecular formula C₇H₄O₂Br₂, and by the semistructural formula 2,4-Br₂C₆H₃CO₂H. From the semistructural formula, the reader can supply the arrangement of atoms in the compound. In a structural formula the actual arrangement is drawn, and the points of attachment of the substituents are indicated. In many cases the space relationship between the substituents is shown. A semistructural formula is preferred if it is considerably shorter than the name of the compound and if the transformation of the name into the formula is not time-consuming.

Chemical names are not changed, as a rule, to names used in the indexes and conforming to IUPAC regulations. The nomenclature of the author is maintained in abstracts of his work for several reasons: (1) This policy keeps the Organic Section in step with the journal as a whole. Organic chemistry is not peculiar to the Organic Section, and the other sections retain the original nomenclature in most cases. (2) By maintaining a record of new and unusual nomenclature in the text of Chemical Abstracts, the process of identifying a structure with a given name often is quickened. Such information often is required in working with the original publication, and it is desirable to have it located in a single reference work, Chemical Abstracts. (3) It makes easier the organization of titles under a given author's name in the author index. (4) It avoids errors, since every change made from the original increases the possibility of a mistake. (5) It saves a considerable amount of editorial time.

The Organic Section is divided into ten sections. The sections are, in order of their

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appearance: general organic chemistry, aliphatic compounds, a combination of carbohydrates, amino acids, fats, and proteins, alicyclic compounds, benzene derivatives, polynuclear condensed carbocyclic compounds, heterocyclic compounds, alkaloids, terpenes, and steroids. These start with compounds of relatively simple structures and proceed to more complicated ones. Within each section, journal abstracts are placed first, followed by patent abstracts. The abstract is classified by section after editing. An abstract which treats of compounds of a variety of structures is placed in the section containing the most complicated structure.

While the abstract is certainly not designed or intended to be a substitute for the original article, it is supposed to report or make specific reference to all the new material of chemical interest that the article contains. This includes new measurements, observations, methods, apparatus, theory, and compounds, as well as previously-known substances for which new data are given.

In relation to this aspect of completeness, every effort is made to include in the abstract references to previously published abstracts of papers on the same or related subjects. These references include that to the preceding contribution for abstracts of a numbered series appearing under a general subject, as well as references to earlier work of the author or others. If a Chemical Abstracts reference to earlier related work is not available, the original journal or patent reference is supplied.

Editorial experience, in time, provides a sort of sixth sense which tells the editor when he should consult the original to safeguard abstracts from omissions or mistakes. As an example, the editor may suspect that some compounds prepared have been omitted from an abstract, or that a melting point has been mis-copied. The editor does not routinely consult the original article for each abstract. He cannot, since he lacks time to do so. Moreover, the journal itself may not be available to him. If the editing process uncovers a need for consulting the article and it is not available, the original may sometimes be obtained on an interlibrary loan. In some cases, the abstract is returned to the abstractor for clarification. In either case, a delay in publication results.

Errors in the abstract originating from errors in the original article also cause editorial problems. What was intended in the article may be obvious, and the mistake can be corrected by the abstractor or editor. If such is not the case, the expression involved is printed as it is given, either in quotation marks, or followed by the parenthetical word "sic" as an

indication that the expression is taken verbatim from the original.

Both the editor and abstractor may be beset with language difficulties, the editor with the language of the original article, and the abstractor with English. Either one, or a combination of them, can complicate the editing process a great deal.

Patents present not only the problems already given, but also additional ones, because of differences in style and point of view or presentation. Among the pitfalls present is the question of what to include in the abstract, since there may not be a clear-cut distinction as to work which has been done and that which may or can be done. The language sometimes obscures important chemical information.

For each subdivision of the Organic Section there is at least one "section editor," a specialist in the particular field from outside the Chemical Abstracts office. The section editors play an important part in controlling the quality of the section. From their examination of proof, they check the abstracts for chemical soundness. Their advice helps to generate and administer policies of the section.

The material sent to the printer differs from most of the printer's raw manuscript in that the editor has changed the abstractor's final copy perhaps considerably. The printer may have very rough and, from the viewpoint of form, very unfinished material with which to work. The abstracts the printer receives have not been retyped, with very few exceptions.

The printer sends galley proof for the entire section to the Chemical Abstracts office and proof for each subdivision to the section editor. The office proof is read by the editors for chemical sense, errors in form, grammar, spelling, and the like. Special workers check the proof against copy for the spellings of author names, references, numerical data, and like items which cannot be judged by the editor on the basis of his chemical and other knowledge. The editor evaluates and incorporates corrections by these special workers and by the section editor in his own proofreading before returning the galley proof to the printer. With this step, the editor's job is complete, for one number.

In summation, it is the duty of the editor to catch slips in translation, in technical language, in clear expression, and in adequate coverage. Particularly for Organic chemistry, he must see to it that a large amount of detailed information is compressed into a small space. The abstract is the device used for covering the world's chemical literature. It is the responsibility of the editor that it be complete, accurate, and concise.