Book Reviews

Dictionary of Common Names/Trivialnamen-Handbuch. Edited by Fachinformationszentrum Chemie. VCH: Weinheim; 1993, 2464 pp., hardback. DM 2100. ISBN 3-527-29020-6.

The Dictionary of Common Names (DCN) or Trivialnamen-Handbuch is a revised and expanded version of VCH's card index of Common names (Trivialnamenkartei) consisting of three volumes containing 28 000 trivial or common names of 22 000 organic compounds. Each alphabetized entry in volumes 1 and 2 comprises of: (1) common name in English and German; (2) database reference number: (3) structural formulae with appropriate stereochemical details; (4) molecular formulae; (5) CAS registry number; (6) additional stereochemical information; (7) bibliographic data i.e. citations of original papers or, in some cases, ChemInform abstract numbers referring to citations of patents or handbooks. As there is only one entry for each compound represented in volumes 1 and 2, an alphabetical synonym index is given in volume 3 (English and German).

That the DCN is database-derived is immediately apparent to the reader, each entry is presented in a card index or 'window' form; this necessarily limits the number of entries per page to ten. The compound name and database reference numbers are displayed on the top left- and right-hand sides of each 'window', respectively, neither are highlighted in any way, by the use of a larger or bold print, and this leads to a certain lack of visual emphasis and confusion when searching.

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The structural formulae are presented in the central portion of each 'window', though here the 'window' format has another distinct disadvantage in book form; the allocation of space is the same regardless of the formula size, hence, an extremely large formula such as antibiotic 67-121C (p 133) uses the same amount of space as allylene (p 81). Stereochemistry is clearly indicated in the formulae by the use of bold or dashed lines and the CIP assignment; for large structures this information is given as additional stereochemical information, together with the remaining information fields at the bottom of the 'window'.

The database derivation of the DCN is its main limitation, the format provides no variation for the presentation of entries, hence, entries, such as allene, cannot be minimized by giving the correct systematic name only. Likewise, derivatives (e.g. amine hydrochlorides), enantiomers or racemates of main entries cannot be given as a sub-entry to the main entry and hence must each be given an individual entry, if this often useful information, is to be presented; this leads to wasted space in a book which essentially defines names and is not a comprehensive listing of compounds. Another disadvantage of the structural formulae is that they do not display the numbering of that particular skeleton, this is extremely useful information when working with complex natural products that one does not wish to name systematically but instead prefix or suffix to modify the core name.

It should also be emphasized that the DCN does not provide the correct IUPAC or Chemical Abstracts systematic name, nor does it recommend the common name in general use; this can lead to some confusion particularly for those inexperienced in a field, i.e. those people most likely to consult such a work. For example, the compound humulene is listed in the synonym index under the main entry alpha-caryophyllene, this may lead to the assumption that the correct common name is alpha-caryophyllene, in fact the reverse is true, alpha-caryophyllene is the older, now little used, name for humulene.

The selection of entries is uneven, the inclusion of biologically unimportant compounds, such as humulane and caryophyllane, is questionable, these could better have been included, particularly for terpenes, in a separate index of common names of parent-structure types. Whether each field of organic common names is representatively covered is difficult to assess; on examination of a selection of entries I found an alarmingly high percentage of errors.

In future, we will see reference books designed as reference books which are adapted during writing and production to give databases, an existing example is the CHCD Dictionary of Organic Compounds 10th ed available in book form and on CD-ROM. There will also be databases, which have amassed data according to the needs of the database itself, the spin-off for which may be a book; in this case, unless the information provided by the database is stringently refined, modified and edited, the book should be sold at minimum price. The Dictionary of Common Names, which could be described more accurately as a 'compendium of trivial names of organic compounds' falls into the latter category, at a price of DM 2100, a market may be difficult to find.

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