

**Pharmaceutical Substances, Syntheses, Patents, Applications**, 5th ed. by A. Kleeman, J. Engel, B. Kutscher and D. Reichert. Thieme: Stuttgart, 2009. ISBN 978-3-13-558405-8. Hardback. pp 1722 (including indices).

The fourth edition of *Pharmaceutical Substances* was printed in 2001, and in the intervening time the authors note there have been significant changes in the pharmaceutical sector with once well-known vendors having disappeared or changed names. In addition, a vast number of brand names have disappeared or changed, drugs have been withdrawn or sold to another vendor, and many drugs have become generic after their patents expired. The authors also make the point that there is an electronic version (which I have previously reviewed), and although that version is constantly updated (for instance, version 3.0, updated in June 2007, was the seventh update since its launch in November 2003), many users approached the authors and publishers to request an updated printed version. In response, this new edition is now available with 165 new monograph entries, revisions to existing entries, and countless changes to vendor and trade names. This edition contains about 1300 active pharmaceutical ingredients (APIs) with a very useful alphabetical list of monographs in the opening section wherein those included in the printed version are highlighted in bold-face print and additional entries in the electronic version are included in light-face print. This is a very helpful means to show the contents and illustrate the two sources of information available to users.

The following information is given in each monograph: chemical structure, synthetic route, intermediates, nomenclature (INN standard, trivial names, synonyms), CAS registry number, ATC codes, medical applications/therapeutic category, toxicological data, patent information (number, origin, holder and application date), commercial information such as trade names.

To the rear of the book is a second very useful set of indices. The first lists trade names of the contained APIs, and thus complements the previously mentioned API names index. A second index I've found very useful is a list of intermediates, giving the drugs in which they are used. Finally, the index of substance classes can also be very helpful.

I have used this specific edition of the text consistently for a couple of months now, and it is on the basis of this continual use that I have compiled this review. Overall, it is an excellent text full of useful information which is very readily accessed. It can be used on its own or in concert with the electronic version where more general searching can be performed using keywords. Thank you to the authors and publishers for this updated printed version which I use as the first point of reference to very quickly check information about an API whose name I know.

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