
COMPUTER SOFTWARE REVIEWS

Merck Index—12th Edition on CD-ROM—for the MacintoshDana Lincoln Roth[‡]

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The Merck Index (12th edition on CD-ROM, Version 12: 1, 1996) for the Apple Macintosh requires a Macintosh with PowerPC (PPC) or 68040 processor, a color monitor (at least 640 × 480 pixels, and 256 colors), a quad speed CD-ROM drive, 8 Mb RAM and 12 Mb hard disk space), and a System 7.5 (or higher) operating system. Installation of the software, although both poorly documented and not intuitively obvious, appears fairly Macintosh standard. In the absence of a local systems support staff, toll free numbers and an e-mail connection are available from the publisher.

The Merck Index on CD-ROM is a joint production of Chapman and Hall and Merck & Co. and provides access to the more than 10K monographs that appear in the familiar print copy. For the uninitiated, each monograph describes a single substance or a small group of related compounds (e.g., human and veterinary drugs, biologicals, natural products, agricultural compounds, commercial and laboratory chemicals, and environmentally significant compounds).

The Headfast/CD search software is relatively easy to use and provides fast retrieval of both the monograph and associated chemical structure diagram (albeit with a second menu click). Searchable terms include all the words and numerical data in the monographs as well as the ability to perform substructure searching of chemical structures, either separately or in combination.

Search options include the following:

1. **QUICK SEARCH**—which is restricted to searching for text or data in one of the following fields:

All **NAMES** or **TITLE NAMES**—chemical, common, generic and brand names are both phrase and word indexed and can be searched using internal, left- and right-hand truncation;

ALL TEXT—individual words and character strings in the text of the monograph;

PROPERTIES—boiling point, molecular weight, refractive index, toxicity data, etc. Range searching is also possible;

THERAPEUTIC CATEGORY—e.g., antiprotozoal, antibacterial, etc.;

USE—i.e., nonmedical or veterinary therapeutic uses;

CAS REGISTRY NUMBER—e.g., 50-00-0 (Formaldehyde);

MOLECULAR FORMULA—which must be searched using upper case letters.

Boolean operators include the following: &(and), /(or) and |(not). Left, right, and internal truncation as well as wild cards are also allowed: *(a string of characters), ?(a single letter within a word). For example, searching on **DIABET*/INSULIN*&WOM?N** in the **ALL TEXT** field would retrieve

all monographs that contain the words Diabetic, Diabetes, Insulin, or Insulins in combination with women or woman. When you click on a **QUICK SEARCH** field, the index for that field is displayed. You can either type in the first few letters of the search term and select the term (or terms) from the index or type the term/s directly into the Search Terms Box at the bottom of the screen.

2. **MENU SEARCH** allows you to refine a search by combining a term or terms from different fields. The initial search screen offers a default menu that allows you to search on terms from a variety of fields (e.g., all names, molecular formula, therapeutic category, etc.) in any Boolean combination (i.e., and/or/not). In addition, clicking on any of the field names gives you an optional list of fields to search. These additional fields include the following: Boiling Point, Drug Code, Toxicity, UV maxima, etc.

3. **COMMAND SEARCH** is used for building complex search strategies that can also be modified and stored for future use. This is analogous to searching on Dialog or STN.

4. **STRUCTURE SEARCH** can be used on its own or to refine the results of a text search (e.g., all analgesics with an aromatic group). The Merck Index CD-ROM uses the PsiBase software from Hampden Data Services for searching, retrieving, and displaying chemical structures.

The Merck Index CD-ROM is both beneficial and challenging. While it provides an almost bewildering variety of access points to the data in the monographs, I found the search tool bars, however, almost too cute by half. Each search screen (by necessity) displays a long row of icons whose use, in time, will presumably become intuitively obvious. This problem, unfortunately, is exacerbated in the **STRUCTURE SEARCH** option which additionally includes pencil, ring, chain, eraser, and lasso tools to create chemical structure diagrams. Although balloon help on the Macintosh is distracting, one must enable it, in self-defense, in hope of gaining a clue as to the nature of the multitude of buttons.

On a positive note, I was favorably impressed with the inclusion of a Character Keypad which allows for the inclusion of Greek letters, reaction symbols, and multiple bonds in search terms.

It seems unfortunate that a product as worthwhile as the Merck Index could not have been offered on a more widely used platform, such as STN. Given the ease of use of STN's Messenger Software and the enormous number of experienced users, Merck would have been much better served in STN's family of databases.

My sense is that a network version of the Merck Index CD-ROM could be a very useful tool for quickly accessing monographs from offices and laboratories. Libraries could also find it essential for those infrequent, virtually impossible

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to answer, questions such as “I am looking for compounds that boil between 180 and 200 °C and have an UV maxima in the range 350–400 millimicrons” (there are two: Phytofluene and Pyrrobutamine, although both boiling points were at different reduced pressures).

While providing excellent new access points to the content of the Merck Index, a confusing interface will likely prevent this tool from developing a productive niche in end-user services.

The Merck Index 12th Edition on CD-ROM is available in both Windows and Macintosh formats, for single users at

\$250, from Chapman and Hall (<http://epd.chapmanhall.com/chaphall/epd/merckidx.html>).

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