ChemWindow

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ChemWindow is one of a number of programs, such as ChemDraft, ChemPrint, etc., for drawing molecules and chemical equations on a PC as opposed to a MacIntosh (Mac). ChemIntosh, the version for the Mac, was reviewed in *J. Am. Chem. Soc.* **1991**, *113*, 2342. The current version is made to run under Windows 3.1, and users of Windows 3.0 need to install a type manager. The program is easily installed even by a relatively inexperienced user of Windows. The ChemIntosh was also very easy to install on a Mac. There are many good features of ChemWindow, but at the same time there are some points which one should consider.

When ChemWindow is started, there is the usual template of tools common to most of the drawing programs. A ruler is presented on the top and sides to aid in positioning the drawing on the page. Bond lengths are all equal and bond angles are fixed in 15° increments which makes the drawing of an idealized structure proceed quickly. The constraints on bond distances and angles are easily overridden by the shift and/or control keys. The ability to override the fixed values is very useful in drawing structures of complex inorganic molecules. Labels can be positioned and moved easily to any desired position. Consequently, a two-dimensional molecule can be easily drawn in a short time.

The Tutorials supplied are not well written, rather confusing, and in some cases incorrect. When the Album Template was chosen in Tutorial 4, a completely different template appeared. Technical support said that indeed that was correct and the rather interesting looking Album Template was not available. However, I was told that a series of templates will be made available (at an unspecified cost) in the near future. At another point you are told to put labels on a structure that you have never drawn!

Drawings for a publication are usually done in the Reports style, but there is also a Presentations style which has larger lines and labels. Either of the two default styles can be changed by editing and a new style created and saved in a new file. However, the two default styles seem to be adequate for most drawings.

Exporting the drawing via the Windows clipboard or as *.WPG file to a Wordperfect 5.1 document, and presumably other word processors as well, was very easy. Overheads made using the Presentations style were very good, but did show some distortion of the lettering.

Molecular rotation is limited to two dimensions although some three-dimensional effects can be generated by distorting the molecule. One annoying feature involves the rotation of a molecule drawn by removing some of the distance and angle constraints. One has to be careful to group the molecule together before making any movements, otherwise you may leave bonds behind. However, attempting to group the structure was not as straight forward as was stated in the User's manual.

The technical support was very good, and I always received a satisfactory answer and explanation to any of my questions. On the other hand, there is apparently no 800 number so that any questions involve spending your "nickel". Considering the cost of the package, the lack of a toll free technical support number seems inappropriate.

In essence if you are running Windows and want a simple chemical drawing program, then ChemWindow is not a bad choice. On the other hand, the problems with the Tutorial, the lack of three-dimensional rotation, the cost of the package, and the lack of toll free support might encourage you to look at other similar packages before making a purchase.

REFERENCES AND NOTES

(1) ChemWindow is available from SoftShell International, 715 Horizon Dr., Suite 390, Grand Junction, CO 81506-8727. List Price, $499; Academic and Government, $399; Student, $99. Free Demo.