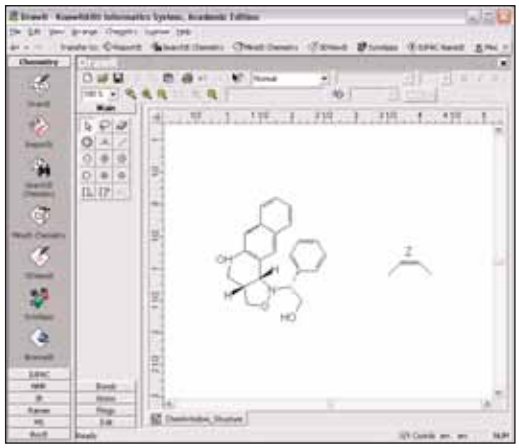
KnowItAll® Academic Edition Brochure

BIO-RAD

The Most Integrated Chemistry Software for Learning.

Bio-Rad is pleased to offer their KnowItAll® Academic Edition for free to students and teachers worldwide! This software includes tools to draw chemical structures, publish reports, import, process, & interpret spectra, calculate molecular weight, point groups, bond lengths, & angles, convert mole to mass, perform MS fragmentation, access *Sadtler's famous spectral handbooks*, and more!

Find out how these unique and powerful tools for can be incorporated into your chemistry curriculum, including general, organic and analytical chemistry classes.



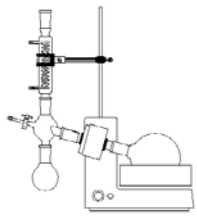
Structure Drawing.

2-D chemical structure drawing program.

With the Academic Edition, you can draw any chemical structure with just a few clicks and drags. It has all the tools you need to draw rings, bonds, atoms, chains, arrows, and chemical symbols. With programmable hot keys, you can quickly label common groups by typing a single key or bring in a partial or common structure you use often with a single click.

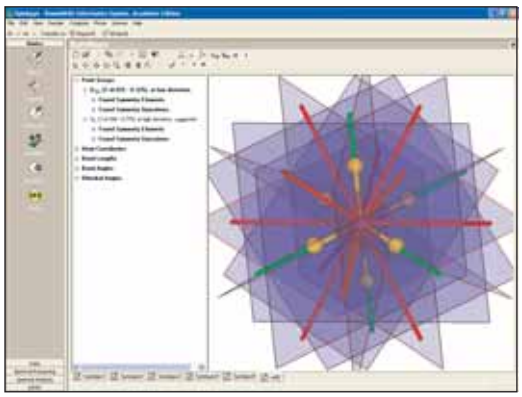
Clearly illustrate experiments and engineering processes.

If you have ever had to describe a laboratory experiment, you know that it is nearly impossible to do without illustrations. The Laboratory Glassware Collection contains more than 130. All pieces are drawn to scale and snap together at joints for easy construction and quick reporting.



The Chemical Engineering Collection offers more than 250 Process Flow Symbols including furnaces, filters, compressors, coolers, exchangers, and more. You'll find everything you need to draw realistic process flow diagrams.

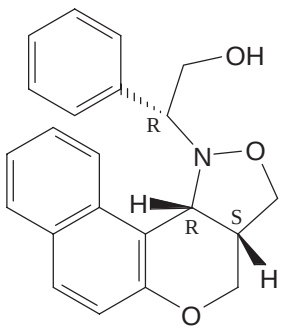
Top Quality 3-D Presentations, 3-D Modeling, and Publishing



KnowItAll also includes SymApps™, a professional symmetry analysis and 3-D molecular rendering program, designed for desktop visualization and publishing. A modified MM2 force field minimization module converts 2-D structure drawings to 3-D in just seconds! SymApps calculates, displays, and animates the symmetry for a molecule including rotation axis, mirror planes, and inversion centers. You can also create movies for three basic rotations and export them as .avi files that will run in any Windows application that supports this format. SymApps also allows you to calculate crucial information such as point groups, bond lengths, angles, and dihedral angles for all atoms in the structure.

Stereochemical Recognition.

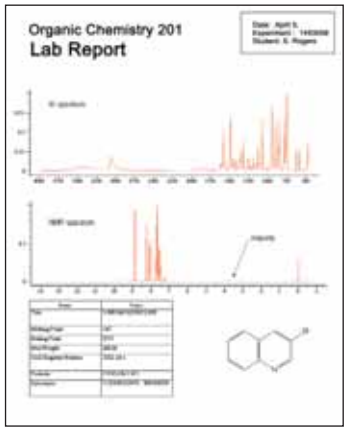
KnowItAll recognizes stereochemistry and automatically specifies R/S centers and E/Z double bonds. Complex mixtures of diastereomers including relative and absolute stereochemistry can be represented with a single structure.



Professional Lab Reports.

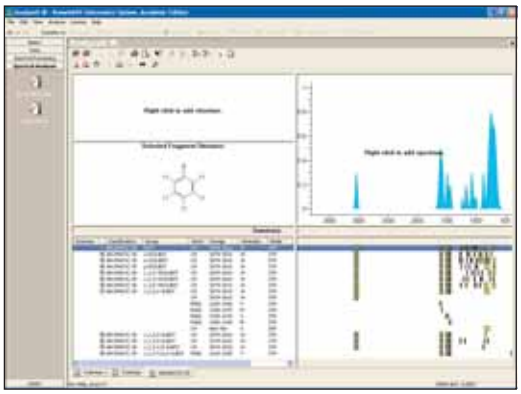
Communicate knowledge according to your needs.

In addition to the most sophisticated structure drawing available, you can publish professional reports complete with structures, spectra, chromatograms, chemical reactions, lab experiment setups, chemical engineering diagrams, data tables, and more. Reports are easy to lay out by using one of many predefined templates or creating one of your own. Includes in place editing from MS Office programs.



Learn IR & Raman Functional Group Analysis.

Interpret infrared and Raman spectra. The Academic Edition also includes a one-year subscription to AnalyzeIt IR and Raman. AnalyzeIt can be used to help interpret the bands in an infrared or Raman spectrum. Simply load a spectrum and click on a peak of interest to generate a list of all functional groups possible at that frequency. AnalyzeIt features over 200 functional groups and hundreds of interpretation frequencies.



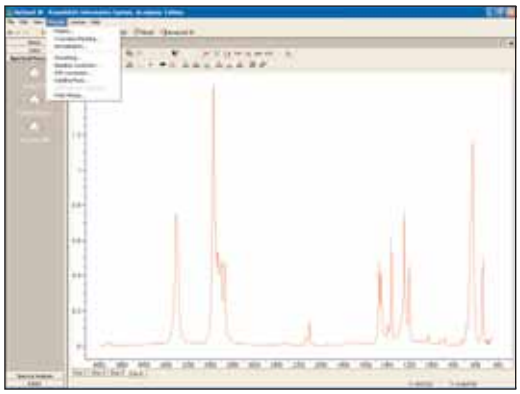
Correlate from a structure.

This powerful feature helps you determine whether a structure matches your infrared or Raman spectrum. Simply draw a structure and AnalyzeIt will break the structure into its component functional groups to overlay with your spectrum.

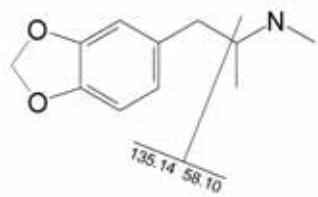
Process Spectral Data.

The RefineIt IR and Raman applications provide a variety of tools useful in processing spectral data such as smoothing, baseline correction, and spectral subtraction. RefineIt can be used to improve the quality of your search results and the overall look of your reports.

With KnowItAll's ProcessIt NMR you can seamlessly import process NMR spectra from various sources. ProcessIt NMR is easy to use, yet offers a comprehensive set of processing features to correct experimental artifacts and improve the appearance for you spectra. ProcessIt also saves valuable processor time at the instrument, thereby improving sample throughput.



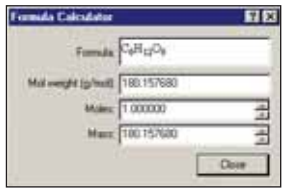
MS Fragmentation & Documentation Tool.



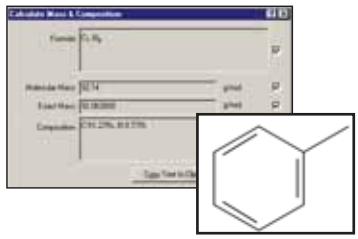
The MS Fragmentation Tool is the fastest way to determine whether your proposed structure matches your mass spectral data. This tool draws a movable fragmentation line through the proposed structure, displays the formula and mass for the fragments on either side of the line, and lets you fragment the structure. Another MS tool has been designed specifically for documentation. This tool creates a fragmentation line and displays the masses of the two fragments.

Calculation Tools...

Easy mole-to-mass conversion.



Calculate mass from structure.



Multi-Technique Demo Database.

The KnowItAll Academic Edition includes access to a sample multi-technique spectral database of 10 compounds to provide examples of cross-referenced spectra.

BrowseIt.™

With this application, gain access to an exclusive community for KnowItAll users with useful links, user discussion board, articles, tips, technical information and tutorials that save valuable time time in the classroom.

The KnowItAll Analytical Edition also includes limited access to the following applications:

IUPAC NameIt™	Automatically returns the systematic IUPAC name for structures with up to ten non-hydrogen atoms. Gain full functionality by purchasing the IUPAC NameIt application.
IUPAC DrawIt™	Automatically generates a structure of up to ten non-hydrogen atoms when a systematic IUPAC name is provided. Gain full functionality by purchasing the IUPAC DrawIt application.

Minimum System Requirements: Windows-compatible PC, CD-ROM Drive, Windows 2000, Windows XP Home, or Windows XP Professional operating systems, Pentium III (or equivalent) processor, 128 MB of RAM, 100 MB of free hard disk space (Additional disk space required for HaveItAll® databases.) When using Windows 2000 or Windows XP Professional, log on with Local Administrator privilege when you install Academic Edition. Activation of the Academic Edition with the Product Registration Code which has been emailed to you also requires that you are logged on with Local Administrator privilege. KnowItAll will not work on Windows 95, Windows 98, Windows 98 SE, Windows ME or Windows NT 4.0 There is no Macintosh version of this software.

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Informatics Division
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