How to use Chime

adapted from: http://www.chem.niu.edu/IJC/Text/chime.html

What is Chime?

Chime is a plug-in for web browsers that allows for the visualization of molecular structures on web pages. It is a product of MDL, Incorporated, and is based on the program RasMol written by Roger Sayle.

Obtaining Chime

Chime is available for free from the MDL web site. Chime is available for the Macintosh and Power Macintosh, Windows 95, Windows NT, Windows 3.1 and SGI computers. Download the correct version for your system (http://www.mdli.com/chemscape/download/chime). Follow the instructions provided on the Chime pages for installing the plug-in correctly on your platform. After the plug-in has been installed, you are ready to use it. Simply launch your browser and take a look at the following examples.

WORKING WITH CHIME

Rotating a molecule

Molecules can be rotated within Chime simply by left-clicking and dragging the mouse over the structure.

Changing the size of a molecule

Molecules can be resized by holding down the shift key while left-clicking and dragging the mouse. Dragging to the upper right causes the molecule to shrink, while dragging to the bottom left causes the molecule to enlarge.

Translating a molecule

Molecules can be translated vertically and/or horizontally by holding down the control key while left-clicking and dragging the mouse.

Altering the display type

A molecule is displayed as the author chose, but Chime offers other possibilities. To change the display type, place the mouse cursor somewhere in the Chime display area and right-click and hold down the right mouse button. A pop-up menu will appear. Move down to the Display selection and a new menu will appear to the side. Drag the mouse to one of these display options, such as stick or spacefill (van der Waals) and notice the changes.

Standard CPK colors:

Carbon	Gray
Nitrogen	Blue
Oxygen	Red
Phosphorus	Gold
Sulfur	Yellow
Zinc	Red-brown

Other Menu Selections

The pop-up menu affords you some additional features. The rotation selection will start/stop automatic rotation of the molecule, a sort of animation of the molecule. The options selection provides the ability to remove hydrogens, disulfide bonds, add a dot surface representing the van der Waals radii, etc. The color selection allows one to change the colors of the atoms. It is best just to play with these features and see what happens.

Select and Restrict Buttons

Chime pages may include buttons that enable you to limit operations to defined portions of a molecule.

The select button leaves all current items in view and selects the indicated atoms for the next operation. For example on a protein you can click backbone select, and then change the display of the backbone while leaving all non-backbone atoms unchanged. If atoms were not visible before the select button was clicked, they may not become visible until a display mode is selected.

The restrict button causes all atoms except those chosen to be hidden from view. Make a selection from the display menu to determine how the atoms are to be seen. If atoms were not visible before the restrict button was clicked, they may not become visible until a display mode is selected.

RasMol

Some of you may also be interested in **RASMOL**, the parent program of Chime. [The Windows version is called RasWin.] This is a stand alone program that does not require html (the web computer language). It has a command window that gives you much greater ability to manipulate the image. It is also available as freeware from MDL, Inc. It is included in the Chem 341 Proteins Folder along with a guide card (RasGuide) and the manual (RasMan). Adventurous soles should try it out by clicking directly on a file with a .pdb extension.