

1 About XyMTeX

1.1 Introduction

To typeset chemical documents containing structural formulas within the TeX/LaTeX processing environment, Shinsaku Fujita developed and distributed the XyMTeX system (first version was released in 1993), where the LaTeX picture environment was used as a tool for drawing. Thereafter, the XyMTeX Version 2.00 (1998) supported the XyM Notation which were proposed as a linear notation of structural formulas. The XyMTeX Version 3.00 (2000) supported the size reduction of structural formulas, which expanded the scope of the XyMTeX system.

1.2 Getting XyMTeX

You can download the latest XyMTeX package here:

<http://imt.chem.kit.ac.jp/fujita/fujitas3/xymtex/indexe.html>

1.3 Installing XyMTeX

After having unzipped the xymtex archive, copy the xymtex directory to your texmf-path. Under Mac OS X and DarwinPorts it is `/opt/share/texmf-dist/tex/latex/`, under Debian Linux it is the directory `/usr/share/texmf-tetex/tex/latex/`.

In the parent directory (`/opt/share/texmf-dist` in Mac OS X and `/usr/share/texmf-tetex` in Debian Linux) you'll have to run `mktexlsr` afterwards to get the xymtex package listed.

Simply add `usepackage{xymtex}` to your latex-header and you're finished.

2 Typesetting chemical formulas

2.1 Glucose

You can draw glucose in two conformations. You can either use heterocycles (which is really complex) or you can use the pyranose function which comes with xymtex.

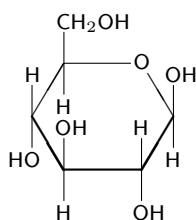


Abbildung 1: β -D-Glucose

There's also a second way to display glucose, the fischer projection. You can use the function `tetrahedral` for that. I encountered the problem that the formula was somehow shifted. By using `raisebox{?pt}` you can shift the function in its correct position.

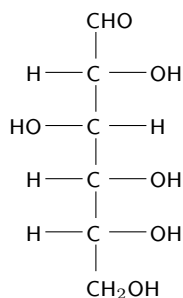


Abbildung 2: β -D-Glucose

2.2 Purine Nucleobases

XyMTeX also has predefined functions for purines and pyrimidines.

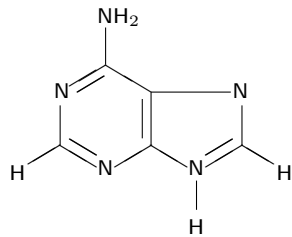


Abbildung 3: Adenine

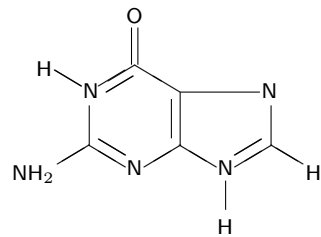


Abbildung 4: Guanine

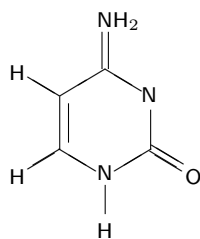


Abbildung 5: Cytosine

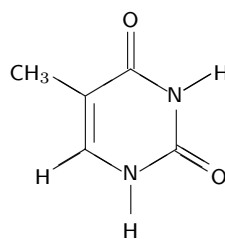


Abbildung 6: Thymine

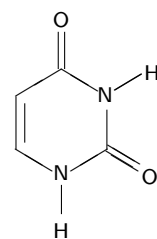


Abbildung 7: Uracil

2.3 Nucleotides

You can substitute functions via adding (y1) to the position where the new substituent of the formula should be connected. Duplicate nesting is possible.

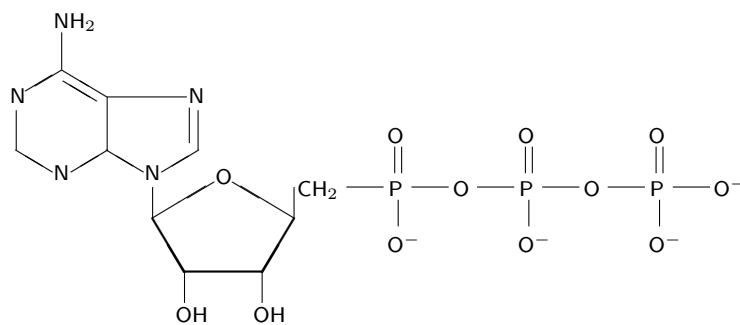


Abbildung 8: ATP (Adenosintriphosphate)