

Online NMR Practice Problems and Resources.

Some good resources to practice NMR problems and combined spectral problems (ones that have proton, carbon, and sometimes IR and MS data) are listed below.

<http://www.chem.ucla.edu/~webspectra/>

<http://www.nd.edu/~smithgrp/structure/workbook.html>

<http://www.nmrdb.org/predictor>

The first site has tons of practice problems at all levels, from beginning to advanced. Try to avoid looking at the answers until you have considered all of the data and have come up with a consistent structure.

The second site has only combustion analysis to find the molecular formula, so review the method for calculating empirical and molecular formulas from this information.

The third site can be used to predict the NMR from a structure that you draw in the web-based program.

One of the problems from the first website might be on the Laboratory Final Exam.

A website that has an enormous amount of NMR chemical shifts and detailed background information is at the following website:

<http://www.chem.wisc.edu/areas/reich/chem605/index.htm>

The site listed below has some very good visual demonstrations of the underlying principles of NMR. It's a little cumbersome to use (and you might have to load the Shockwave plug-in), but the overall picture of NMR is very accurate.

<http://faculty.ccc.edu/cabrams/projects/nmrtutor/>

For the "official" guide to interpreting complex splitting patterns, see:

http://matematicas.udea.edu.co/~carlopez/practical_guide_nmr_1994_2002.pdf