NMR TRAINING (youtube: http://youtu.be/Ik9H4nY7rxc)

Training includes how to arrive with a sample and leave with a NMR spectrum. All training is by appointment with an NMR facility manager. Each lesson is approximately 45 minutes, and you may schedule from 1-2 lessons per week.

The first lesson is a demonstration. For the second lesson you will operate the spectrometer under the guidance of a facility manager. After completing your hands-on lesson, you may work independently to acquire ^{1}H spectra on the Bruker DPX200. You may also receive, by request only, a password to work with the automated (Bruker AVIII-400) NMR spectrometer.

To progress and receive training beyond acquisition of a survey ^{1}H spectrum on the DPX200, you will be asked to demonstrate to the facility managers that you have achieved a basic level of competence and vocabulary based on your first lessons. You are welcome to do so at any time that you feel ready, including your first day in the NMR lab. This is done by completing both a practical and a theoretical "exam" which is described in detail on our website (nmrlab.technion.ac.il) under Training and then Training Guide.

In particular we want you to show us that you have grasped five key parameters that apply to all instruments and NMR experiments.

These are: (1) d1, the first delay with a default in seconds, (2) o1p, which sets the center frequency of your spectrum in ppm (3) sw, which sets the spectral width in ppm- which will automatically determine dw, the digitization rate according to 1/2swh, (4) td, the number of digitization points, which you'll adjust to control the time that the detector is on, and (5) ns, the number of FIDs to be signal averaged to improve the signal to noise ratio.

We have a list of basic experimental parameters available on line. Choose “Training” from the main menu and click on the listing named “Basic Experimental Parameters.”

After you complete the NMR training exams, please let us know what you would like to learn next, according to the demands of your particular research question. In essence, each additional lesson adds one or two new parameters to the five that you have already learned. Each lesson after you've completed your exams will run about 15 minutes.

In general our approach is to let you set the pace and direction of your training. For the initial training, everyone is required to have a facility manager by their side the first time that they operate one of our NMR spectrometers. And, although after that you will be given permission to work independently, you are still welcome to request further assistance within the training framework. We are happy to answer one or two questions on the fly while we are doing other tasks, but if you have more than a few short questions, please schedule an appointment so that we are available to give you proper attention.