Varian Gemini2000 (300 MHz) NMR Check-Out Procedure for Year 2000 May 15th—June 3rd, 2000

1. Become familiar with the operation of the instrument with an authorized user.
   (An authorized user must be present at all times while you are training)

2. Contact Tanase (tel 20-3399, tanase@cc.nara-wu.ac.jp) to schedule a check-out.

3. Demonstrate at the check-out that you can run a 1D 1H spectrum of a test sample and that you have a basic familiarity with the following procedures.
   You can see the manual by Dr. Mikata and related ones.

Check-Out List

1) Inserting and spining the sample.

2) Loading the correct parameter file for your sample.

3) Locking and shimming:
   a) Centering the lock signal and locking
   b) Adjusting lock phase
   c) Optimizing the Z1 and Z2 zhims.
   d) Loading a standard shim file.
   etc

4) Modifying the acquisition parameters:
   a) be familiar with pulse sequence
   b) change acquisition time (why and how)
   c) change pulse width (why and how)
   d) change the relaxation delay (why and how)
   e) change observation window (why and how)
   etc

5) Obtaining FID and spectrum
   a) adjusting the receiver gain (why and how)
   b) check FID data (why and how)
   c) weighting Fourier transfomation
   d) phasing the spectrum
   e) setting the chemical shift reference
   f) integrating the peaks
   g) plotting
   etc

6) Saving and loading the FID data.

7) Ejecting the sample and setting up the machine for a next user.

Good luck!!

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What you can do as routine measurements with Gemini2000

1D	1H	Nondecoupling (standard)	o <recommended>
		Homo Spin Decoupling	o
		Homo Gated Doupling	o
	13C	Broad Band Decoupling (standard)	o <recommended>
		Offresonance Decoupling	o (not good)
		Gated Decoupling	o
		Inverse Gated Decoupling	o
		Attached Proton Test (like Dept135)	o <recommended>
		DEPT	o(not good)
	31P	Inverse Gated Decoupling (standard)	o
	19F	Nondecoupling (standard)	not checked
2D	cosy	HH Cosy(AV)	o <recommended>
	dqcosy	Double Quantum Trans. HH Cosy (PS)	o
	noesy	HH Noesy(PS)	o
	cosyps	HH Cosy(PS)	not checked
	hetcor	CH Cosy(AV)	o (not good)
	hmqc	HC	not checked
	hmbc	HC long range correlation	x
VT	high temp	vttype=0 5~100 °C	o
	low temp	vttype=2 -80 ~ 5 °C	o

2000.5 by TT