

Technical Bulletin L0020 - Carbon Pulse Width Calibration (Varian)

15 Jan 04, AGW; MRM

Start with standard proton s2pul experiment with correct transmitter power of 40 and calibrated proton 90° pulse width. Simply run the pwxcal experiment as below. This experiment can easily be done on the 5% CHCl₃ in acetone-d₆ lineshape sample.

PWXCAL experiment

- Type pwxcal
 - Enter 1 for 13C
- Type jC13=215
- Type dpwr=40 (or whatever your tpwr was calibrated to be during installation)
- Enter the dof value (This dof value is window specific. To calculate, take a dummy spectra of ¹³C while locked and make sure solvent type and referencing is correct. Type dg to see what your new dof and enter into your pwxcal.)
- Type array('pwx1',12,2,1)
- Type d1=45
- Type 'go'. This should generally take 6-10 minutes.
- Process with 'lb=2 wft'.

Expand the window to view only the lineshape peak and the carbon satellites. Type 'dssh' to display the array horizontally and you should expect the carbon satellites to have one up and one down. The difference will start to decrease as the pulse width increased until the carbon satellites reached a null. That null is your carbon pulse width.

Hint: Use lb=2 hz with dssh when viewing results

Hint: Have gain set as high as possible (gain=60)