PLEASE NOTE: This document assumes the user has a basic understanding of how to run 1H and 13C experiments on the Bruker 400 and 401.

This is the simplest presaturation method. It may or may not work for your sample.

1. Create a new experiment and load the “1H-dcif” parameter set.

2. Insert your sample. Lock, tune, and shim, but do not turn the spin on. This experiment should be run with the sample non-spinning.

3. Run a quick 1D 1H to get the approximate value of the peak (o1) you want to suppress.

4. In the AcqPar tab, change the pulse program (PULPROG) to zgpr. If you click the button with the three periods (…) next to the PULPROG window, it will open the list of available pulse programs.

5. Set \( o_1 \) to the value you determined in your basic 1D 1H experiment.

6. Set \( d_1 \) to a value between 1 and 2 seconds. You may need to adjust this as needed.

7. \( p19 \) is the power level. If you increase \( p19 \), you can get better suppression, but it will suppress a larger range.

8. Set \( rg \) for a value greater than 64. You can start out with 64, and adjust as needed.

9. Set \( ds \) (dummy scans) to at least 4.

10. Type \( gs \). This opens gs mode, which allows for real time adjustment and optimizations of various parameters. It runs one scan over and over (there is a delay, so be patient). Select the Offset tab, and using the vertical slide bar, optimize the \( o_1 \) value. Adjust \( o_1 \) until you see the smallest (least signal) FID. Note this value in the little box below the slide bar. When you are done, click the stop sign in gs mode. TopSpin will ask you if you want to save this new value. Click ok, then click on the Spectrum tab.

11. Set \( ns \) to a low number (4 or 8), and acquire a spectrum. If your peak needs more or less suppression, make the necessary adjustments. Rerun as needed.