

## Watergate – water suppression - Avance 500

- (1) Follow the basic  $^1\text{H}$  NMR instructions to get a basic  $^1\text{H}$  NMR signal  
It is sufficient to use ns 1 and ds 0  
tune&match, lock, shim, rga, zg, ft, apk
- (2) Place the water signal on-resonance:  
click on utilities  
click on the button “o1”  
place the cursor on the water peak  
click with the middle mouse button  
click with the left mouse button
- (3) Check that the water signal is indeed on-resonance  
zg  
ft, apk  
click on the “walls” button ( |◀▶| ) to center the spectrum  
click the “expand” button ◀▶ several time to expand from the center  
if the peak is not centered – repeat steps 2 and 3 until it is.  
(note: there is also a variation using gs, if desired)
- (4) Keeping the water signal in the center (equal to o1), optimize sw and aq  
(remember:  $AQ = TD * DW$  and  $DW = (2SW)^{-1}$ )
- (5) Change the pulse program to Watergate water suppression, which used gradients to eliminate the center frequency:  
pulprog p3919gp <enter>  
ns 8  
ds 2  
rga  
zg  
lb 0.3  
ef  
phase (may need manual phasing)  
you may want to adjust the extent of processing with the bc\_mode (probably already set to qfil) by adjusting the bcfw value.