

Protocol for ¹³C NMR at AM400 (AV III HD 400 NanoBay)

Version 001
June 24, 2019 set up by Fu Chen

Book time and log in computer as usual

Ac13cpd

30 degree pulse angle for routine C-13 with H-1 decoupling

Procedure:

Open Topspin 3.6.1

run H-1 NMR prior to C-13 NMR (Ah1): follow the basic procedure from your basic H1 training.

run C-13 NMR with H-1 decoupling

A. Under "Start",

1. create dataset: name; exp #; pro #; solvent; directory (D:\group name\user name\yrmo)
2. rpar Ac13* (select Ac13cpd)

B. Under "Acquire",

3. no eject sample (ej)/no insert sample (ij)
4. no lock
5. tune (atma)
6. no spinning
7. no shim (topshim)
8. prosol (getprosol)
9. gain (rga)
10. check: ns, ds, d1
11. go (zg)

C. Under "Process",

12. efp;apk
13. adjust phase if necessary
14. calibrate spectrum
15. pick peaks
16. integrate
17. advanced if necessary

D. Under "Analyse"

18. eject sample (ej); take sample; ij to close air
19. close topspin
20. log off
21. **put cap back on magnet**

d1 is relaxation time in seconds

ds is dummy scans for warming up the spin system

ns is number of scans

Remark:

" lock and shim well

" tune probe

" no spinning

" no pulse cal in automation

" optimize offset (o1p) and SW (ppm) for advanced applications