

500 HCN Cold Probe Default Parameters

- **Tuning for Ubiquitin**
 - $^1\text{H} \sim 55$
 - $^{13}\text{C} \sim 65$
 - $^{15}\text{N} \sim 95$
- **Offsets**
 - tof ~ 172.0 (~ 4.77 ppm at 25 deg C)
 - dof (^{13}C) \sim (~ 174 ppm)
 - dof2 (^{15}N) ~ 1051 (~ 119 ppm)
- **Pulse widths**
 - ^1H : pw = 8.0 at tpwr = 55
 - ^{13}C : pwC = 13.8 at pwClvl = 60
 - ^{15}N : pwN = 29.5 at pwNlvl = 58
 - ^2H : H2pwd = 102.1 at H2pwdlvl = 49
- **Deuterium decoupling using channel 4 (assumes garp1 or waltz with pwD90 of 250 usec)**
 - H2dpwr3D = 42
 - H2dmf3D = 4000
 - H2pw90(CH4) = 102.1 at 49 dB
 - H2seq = garp1
 - H2dres3D = 1
- **Amplifier compressions**
 - compH = 0.98
 - compC = 0.85
 - compN = 0.94
- **Maximum Power Limits (set in ghn_co)**
 - Channel 1: 56dB
 - Channel 2: 61 dB
 - Channel 3: 59 dB
 - Channel 4: 50 dB
- **BioPack Power Limits (set in ghn_co)**
 - BPpwrlimits = 1
 - BPspinlock = 6000
 - ^1H observe = 56 dB
 - ^{13}C decoupling = 47 dB
 - $^1\text{H}/^{13}\text{C}$ spinlock = 6000
 - ^{15}N decoupling = 42 dB
 - ^2D decoupling = 42 dB

- **Gradients**
 - $gzlvl1 = 18000$, $gzlvl2 = 18220$ (ratio 0.988)
- **Lock level values for lineshape sample**
 - Lock power =
 - Lock gain =
 - Lock level when shimmed well >
- **Gain**
 - Gain values should always be > 18 . Values between 20 and 25 are typically good values.