Test protocol

Proton sensitivity in protein

Use sample 2 – Ubiquitin 13C-labeled in 90%H2O/10%D2O, 20°C, non-spinning

Pulse sequence: presaturation -single hard pulse - acquisition

Acquisition parameters

Transmitter frequency: water resonance (around 4.7 ppm, optimize)

Spectral width: 20 ppm

Number of points in FID: 4k (real)

Number of scans: 16

Number of dummy scans: 4

Presaturation time: 2 s

Presaturation power: no more than 65 Hz

Receiver gain: optimize

Processing parameters

Window function: cosine square

Number of points in spectrum: 16k (real)

Phase correction: automatic or manual

Base line correction: yes

Evaluation

Evaluate signal-to-noise ratio for the largest of the isolated methyl proton signals between 0.2 and −0.7 ppm, choose 2 ppm noise area from the region between -1 and -3 ppm. Use the formula

Where *Imax* is the maximal signal intensity and *npp* is the peak-to-peak value in the noise region.