Test protocol

31P sensitivity in organic solvent

Use sample 7 - OP(OSiMe3)3 at 20°C, in benzene-d6, non-spinning

Pulse sequence: relaxation delay -single hard pulse – acquisition

Acquisition parameters

Transmitter frequency: −30 ppm

Spectral width: 100 ppm (20 to −80 ppm)

Number of points in FID: 32k (real)

Number of scans: 1

Number of dummy scans: 0

Relaxation delay: 300 s

Receiver gain: optimize

Processing parameters

Window function: exponential, line broadening 1 Hz, i.e. exp(-π t)

Number of points in spectrum: 64k (real)

Phase correction: automatic or manual, adjust signals to pure absorption

Base line correction: yes

Evaluation

Evaluate signal-to-noise ratio for the PO4 signal (between −15 and −35 ppm referenced to 85% H3PO4), choose 30 ppm noise area from the region between −40 and −70 ppm. Use the formula



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