

Figures of Merit^a

(Taken from *Spin Choreography* by Ray Freeman, p. 225)

$$\Xi = 2\pi\Delta F/\gamma B_2$$

Ξ is the figure of merit, ΔF is the effective decoupling bandwidth, B_2 is the effective field generated by a 90° pulse.

Decoupling Sequences	Ξ
MLEV-16	1.5
WALTZ-16	1.8
GARP-1	4.8
STUD ^b	10.9
WURST ^b	16.7

^aEffective bandwidth ΔF^* measured between 80% points, with a 1.5 Hz line-broadening on the observed resonances (S).

^bThe figure of merit of adiabatic schemes depends on the B_2 level.

To calculate the effective field (B_2) of a 90° pulse:

$$B_2 = 1/4 * \nu_{90}$$

where ν_{90} is the 90° pulse length in seconds.

For a $100\mu\text{s}$ 90° pulse the effective field B_2 would equal 2500 Hz and using the figure of merit for the GARP-1 sequence the effective decoupling bandwidth (ΔF) would equal 14,500 Hz.