Redfield equations

Dipolar coupling constant



Larmor angular frequency

$$\frac{1}{T_{1}} = \frac{d_{\text{NH}}^{2}}{20} [J(\omega_{\text{H}} - \omega_{\text{N}}) + 3J(\omega_{\text{N}}) + 6J(\omega_{\text{H}} + \omega_{\text{N}})]$$

$$\frac{1}{T_{2}} = \frac{1}{2} \frac{d_{\text{NH}}^{2}}{20} [4J(0) + J(\omega_{\text{H}} - \omega_{\text{N}}) + 3J(\omega_{\text{N}}) + 3J(\omega_{\text{H}}) + 6J(\omega_{\text{H}} + \omega_{\text{N}})]$$

$$NOE = 1 + \frac{d_{\text{NH}}^{2}}{20} [J(\omega_{\text{H}} + 6J(\omega_{\text{H}} + \omega_{\text{N}})] \frac{\gamma_{\text{H}} T_{1}}{\gamma_{\text{N}}}$$