

Table 4. Paramagnetic relaxation enhancements used in the structure calculation of the metal site of A.v. plastocyanin

Nucleus	R_{1p} , ms^{-1} *	ν , MHz	k_{prlx}^{\pm} †
His-39 H $^{\beta_1}$	0.62 ± 0.09	800	500
His-39 H $^{\epsilon_1}$	3.30 ± 0.20	800	50
His-39 H $^{\delta_2}$	0.31 ± 0.02	800	500
Asn-40 H $^{\alpha}$	0.12 ± 0.02	800	500
Cys-89 H $^{\alpha}$	1.53 ± 0.23	800	500
Cys-89 H $^{\text{N}}$	$0.36 \pm 0.12^{\ddagger}$	500	500
His-92 H $^{\epsilon_1}$	3.30 ± 0.20	800	50
His-92 H $^{\delta_2}$	0.31 ± 0.02	800	500
Met-97 H $^{\gamma_1}$	0.70 ± 0.04	800	500
Met-97 H $^{\gamma_2}$	0.30 ± 0.02	800	500
Cys-89 H $^{\beta_2}$	$64 \pm 10^{\S}$	800	50

* Obtained from the relaxation recoveries (e.g. Fig. 6) in signal eliminating relaxation filter (SERF) experiments (1), as described previously (2), except for Cys-89 H $^{\text{N}}$ and Cys-89 H $^{\beta_2}$, see text and below. The uncertainties used in the structure calculation correspond to approximately three times the uncertainty obtained from the experimental data, however larger than 0.020 ms^{-1} . This lower limit prevents overflow in the structure calculation during the high temperature dynamics.

† The force constant used for the different restraints. The unit is $\text{kcal}\cdot\text{mol}^{-1}$ for k_{prlx}^{-} while $\text{kcal}\cdot\text{mol}^{-1}\cdot\text{\AA}^{-2}$ for k_{prlx}^{+} .

‡ This restraint was obtained previously from one-dimensional NMR experiments on a partly oxidized sample (3).

§ This value corresponds to the dipolar transverse paramagnetic relaxation enhancement R_{2p} , which is obtained from Fig. 4.

1. Hansen, D. F. & Led, J. J. (2001) *J. Magn. Reson.* **151**, 339–346.
2. Hansen, D. F. & Led, J. J. (2004) *J. Am. Chem. Soc.* **126**, 1247–1253.
3. Jensen, M. R., Hansen, D. F. & Led, J. J. (2002) *J. Am. Chem. Soc.* **124**, 4093–4096.