Equations used in the fit of the magnetic moment and susceptibility of complex 7

$$\chi_{\parallel}(3/2) = \frac{N g_{3/2}^2 \beta^2}{kT} \frac{1 + 9\exp(\frac{-2D}{kT})}{4(1+\exp(\frac{-2D}{kT}))} \qquad \chi_{\perp}(3/2) = \frac{N g_{3/2}^2 \beta^2}{kT} \frac{4 + (\frac{3kT}{D})(1-\exp(\frac{-2D}{kT}))}{4(1+\exp(\frac{-2D}{kT}))}$$

$$\chi_D(3/2) = \frac{1}{3}(\chi_{\parallel}(3/2) + 2\chi_{\perp}(3/2))$$

$$\chi_{D\text{-}J}(3/2) = \frac{\chi_D(3/2)}{1 - (\frac{2zJ_{3/2}}{N g_{3/2}^2 \beta^2})\chi_D(3/2)}$$

$$\chi(1/2) = \frac{2N g_{1/2}^2 \beta^2}{kT(3+\exp(-zJ/kT))}$$

$$\chi = P\chi(1/2) + (1-P)\chi(3/2) + TIP$$