MODELLING BIOLOGICAL MACROMOLECULES IN SOLUTION: THE GENERAL TRI-AXIAL ELLIPSOID

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Appendix I Elliptic Integrals used in this study

$$\alpha_o = \int_o^\infty \frac{d\lambda}{(a^2 + \lambda)\Delta} \quad ; \quad \beta_o = \int_o^\infty \frac{d\lambda}{(b^2 + \lambda)\Delta} \quad ; \quad \gamma_o = \int_o^\infty \frac{d\lambda}{(c^2 + \lambda)\Delta}$$

where λ is the positive root of

$$\frac{x^2}{a^2 + \lambda} + \frac{y^2}{b^2 + \lambda} + \frac{z^2}{c^2 + \lambda} = 1$$

and $\Delta = \{(a^2 + \lambda)(b^2 + \lambda)(c^2 + \lambda)\}^{\frac{1}{2}}$.

Also

$$\alpha_o' = \int_o^\infty \frac{d\lambda}{(b^2 + \lambda)(c^2 + \lambda)\Delta} \qquad \alpha_o'' = \int_o^\infty \frac{\lambda d\lambda}{(b^2 + \lambda)(c^2 + \lambda)\Delta}$$

$$\beta_o' = \int_o^\infty \frac{d\lambda}{(c^2 + \lambda)(a^2 + \lambda)\Delta} \qquad \beta_o'' = \int_o^\infty \frac{\lambda d\lambda}{(c^2 + \lambda)(a^2 + \lambda)\Delta}$$

$$\gamma_o' = \int_o^\infty \frac{d\lambda}{(a^2 + \lambda)(b^2 + \lambda)\Delta} \qquad \gamma_o'' = \int_o^\infty \frac{\lambda d\lambda}{(a^2 + \lambda)(b^2 + \lambda)\Delta}$$