

Copy of a printed graph referenced as "Determination of sedimentation constant-calculation"

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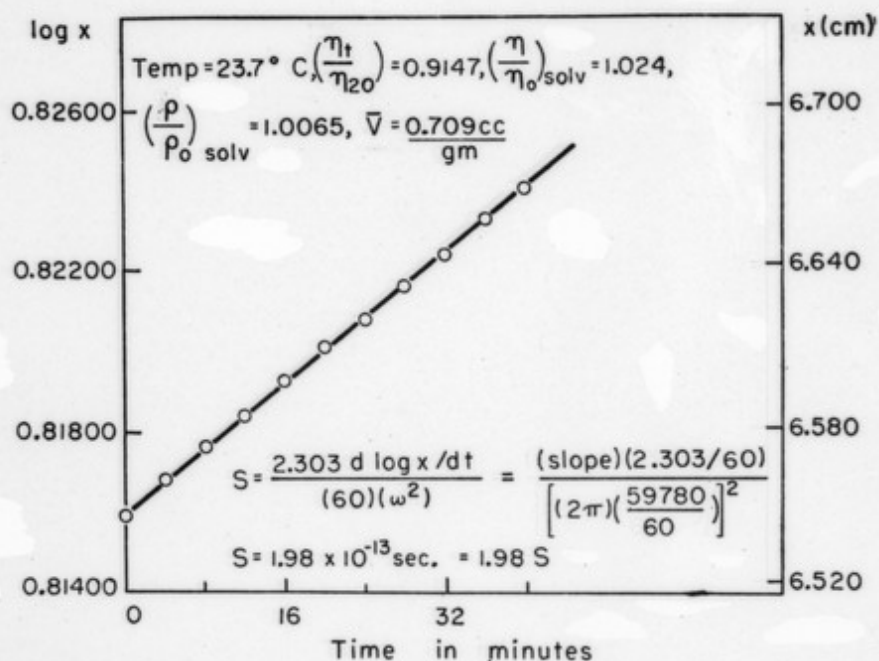
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sedimentation coefficients for each time interval and correct them independently for temperature, assuming a linear change in temperature. For maximum use of the data, the averaging of the resulting sedimentation coefficients should be performed in the manner suggested by Kegeles and Gutter.⁷ Alternatively, the times between photographs can be corrected for the variation of the viscosity of water with temperature, as suggested by Oncley,⁹ and then $\log x$ can be plotted against the corrected times.



Determination of sedimentation coefficient of ribonuclease from a plot of $\log x$ (x is the distance of boundary to axis of rotation) versus t (t is the time in minutes).

Sedimentation coefficients are generally reported as $s_{20,w}$, the value the material would have in a solvent with the density and viscosity of water at 20°. Corrections of the observed sedimentation coefficient, $s_{\text{obs.}}$, to this standard state are made according to the equation

$$s_{20,w} = s_{\text{obs.}} \left(\frac{\eta_t}{\eta_{20}}\right) \left(\frac{\eta}{\eta_0}\right) \left(\frac{1 - \bar{V}\rho_{20,w}}{1 - \bar{V}\rho_t}\right) \quad (6)$$

where (η_t/η_{20}) is the principal correction factor corresponding to the viscosity of water at t° relative to that at 20°, (η/η_0) is the relative