FORMATION KINETICS OF INSULIN-BASED AMYLOID GELS AND THE EFFECT OF ADDED METALLOPORPHYRINS

by

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Supplemental File

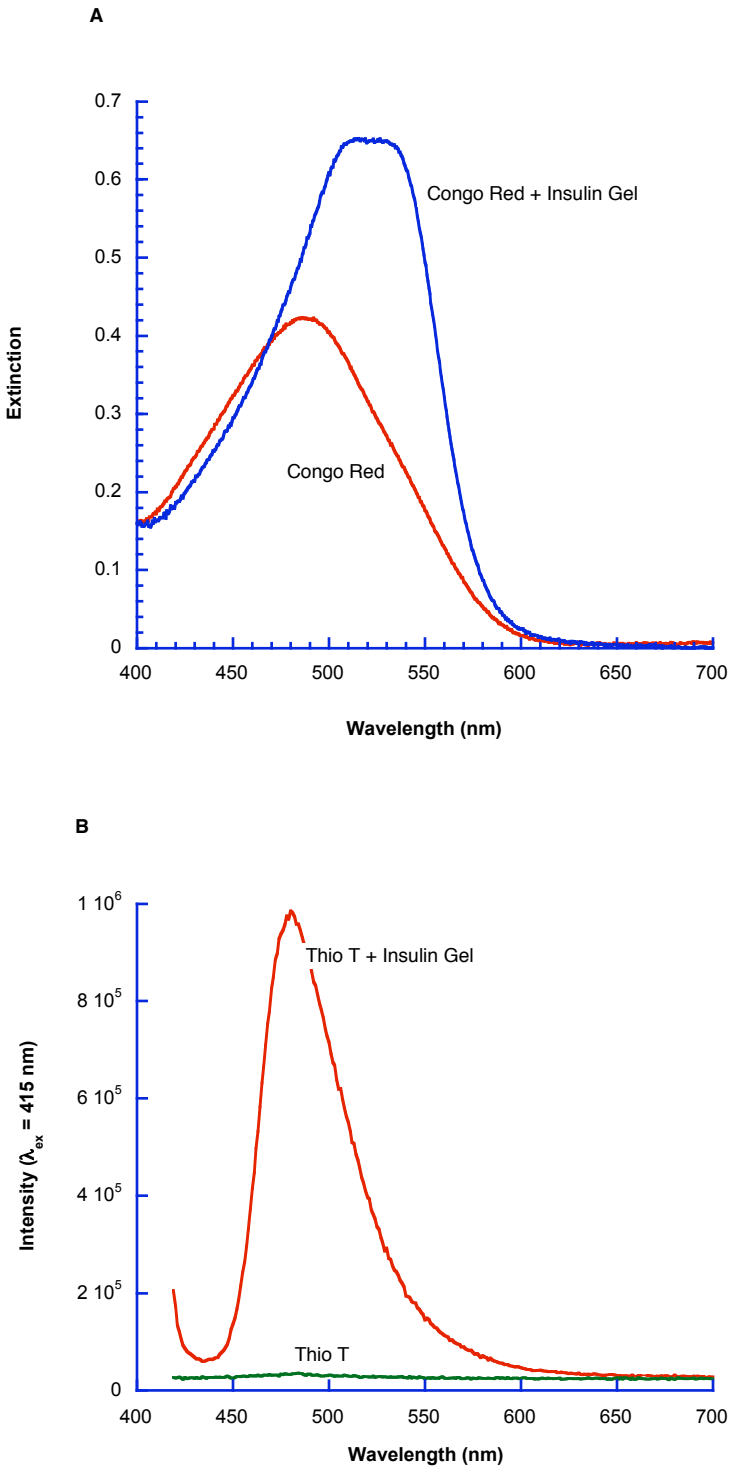

Figure S1: (A) Extinction spectra of Congo Red in solution and in the presence of insulin gel, pH 7.3. For the latter spectrum, a sample of insulin gel mixture was placed in the reference cell compartment. (B) Emission spectra of Thioflavin T in solution at pH 1.3 and in the presence of insulin gel (λ_{ex} = 415 nm).

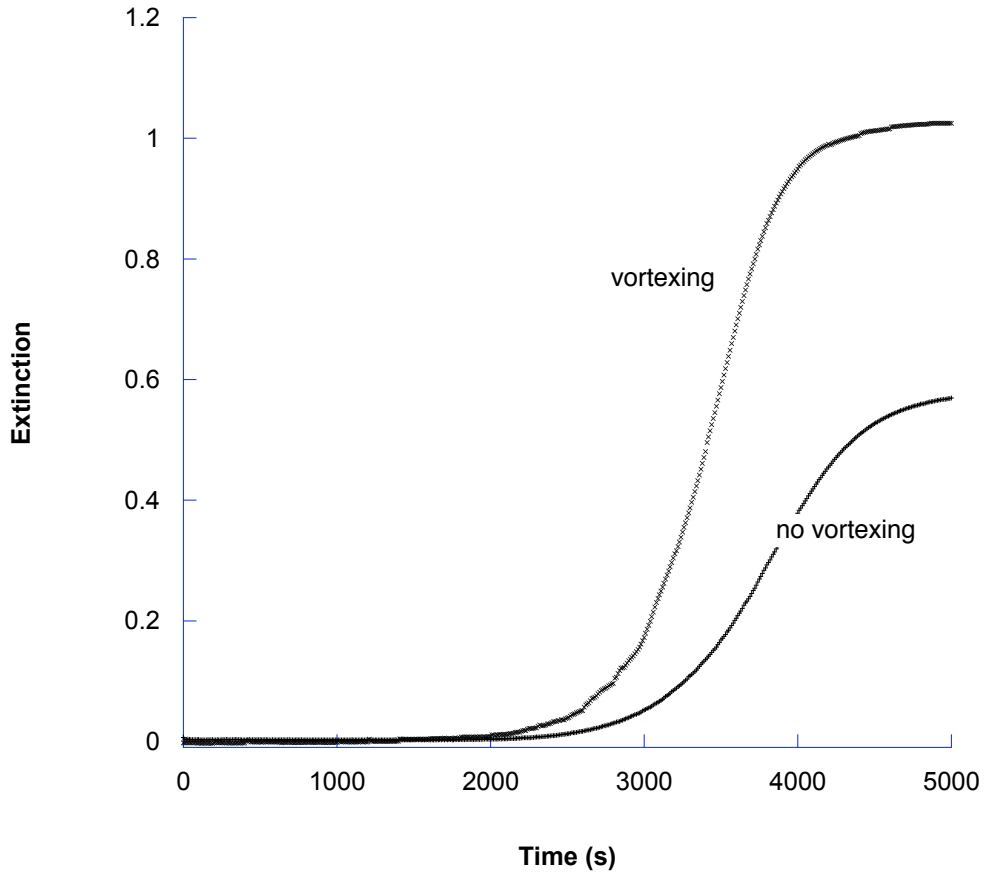

Figure S2: Kinetic profiles for a reaction mixture that was vortexed every 200 s during the aggregation process and one that was unagitated after the initial mixing of reagents (pH 1.3, 200 μM insulin, 67.4°). Applying equation (3) [see text], we obtain $k_c = 3.4 \pm .2 \times 10^{-4}$ s^{-1} and n = 9.0±.3 for the two runs.

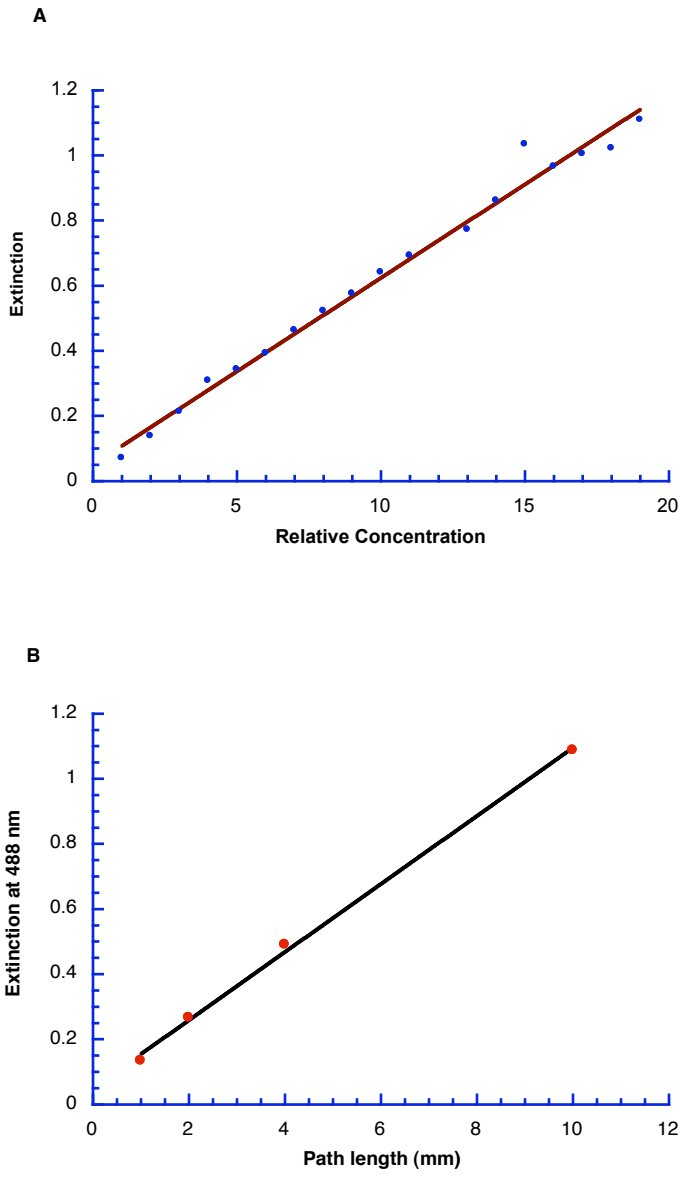

Figure S3: (A) Extinction at 500 nm *vs.* volume of agitated, concentrated gel added to pH 1.3 HCl to a final volume of 3.0 mL (shown as relative concentration). Similar linear plots were obtained at six wavelengths in the visible range from 400 to 650 nm. In all cases linearity was maintained through an extinction of at least one. (B) Extinction at 488 nm vs. path length (mm) for an insulin gel suspension. That the plot is linear is an indication that forward scattering does not significantly affect extinction measurements for this system.