Supplemental Information for: Structure, Rheology, and Microrheology of Wormlike Micelles Made of PB-PEO Diblock Copolymers

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Additional images

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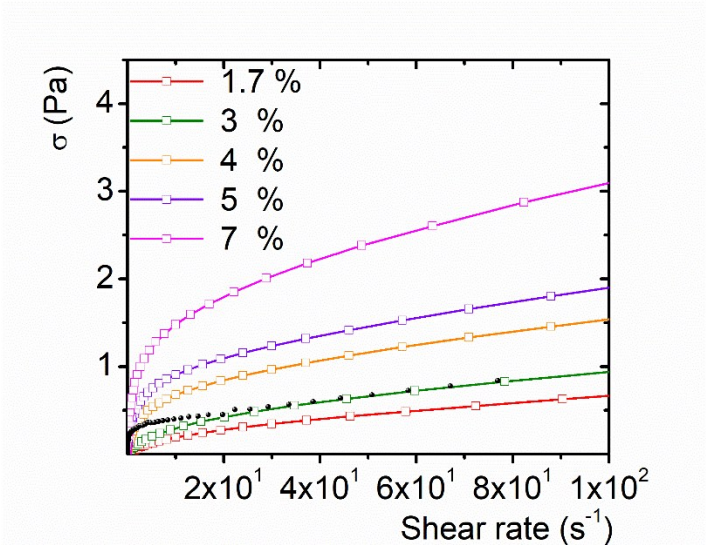


Fig 1. σ vs. $\dot{\gamma}$ curves for micellar solutions of PBPEO57 at different concentrations (open symbols) in linear scale. For comparison, we also included the micellar solution of PBPEO45 at *2 wt %* (full black symbols).

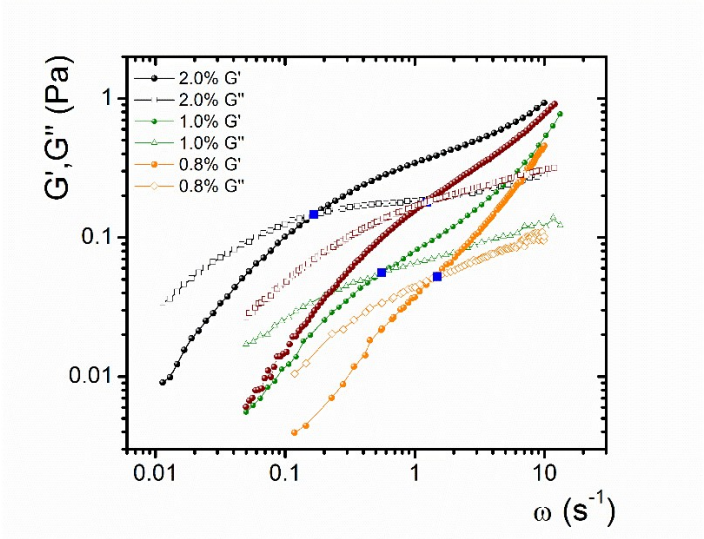


Fig. 2. The viscoelastic spectra for the PBPEO45 system at different concentrations.

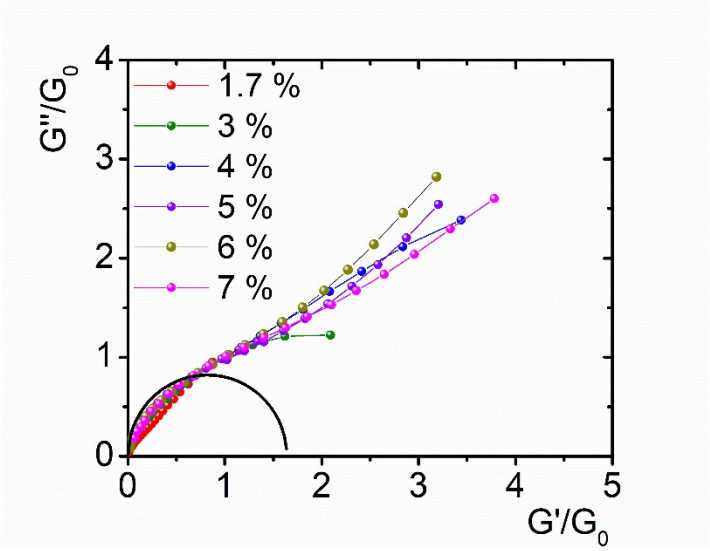


Fig. 3. A Cole-Cole plot for the PBPEO57 WLMs solution showing that it is not a Maxwellian fluid.

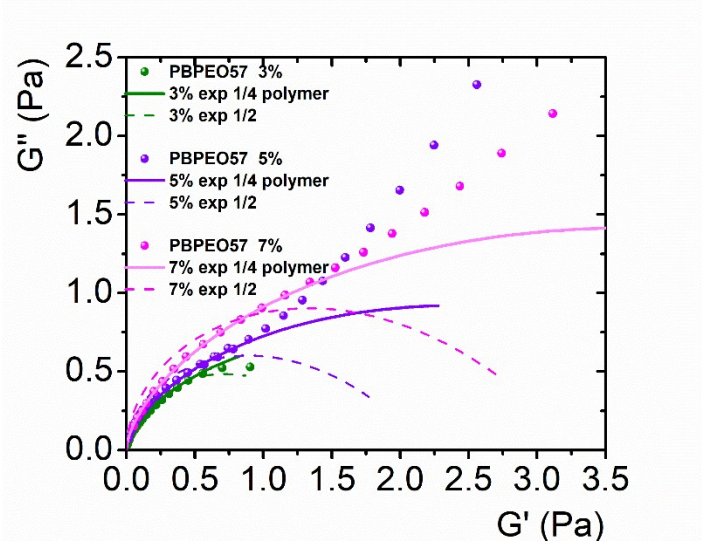


Fig. 4. Cole-Cole plot for the cases when $G(t) \sim exp(-(t/\tau_R)^{1/4})$ and $G(t) \sim exp(-(t/\tau)^{1/2})$. Points are experimental results.

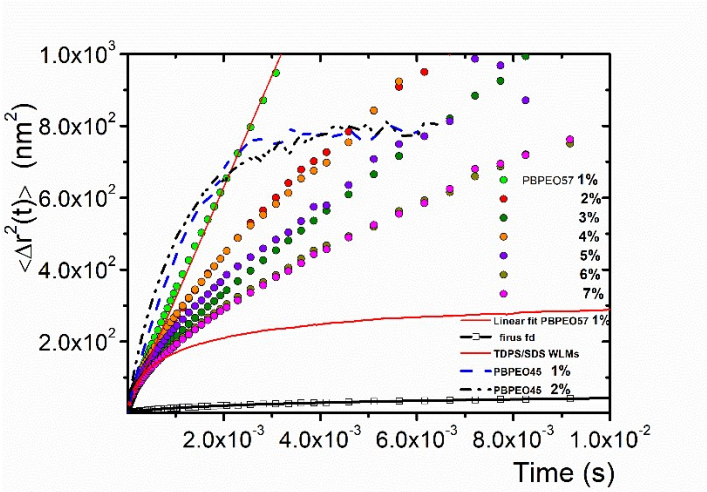
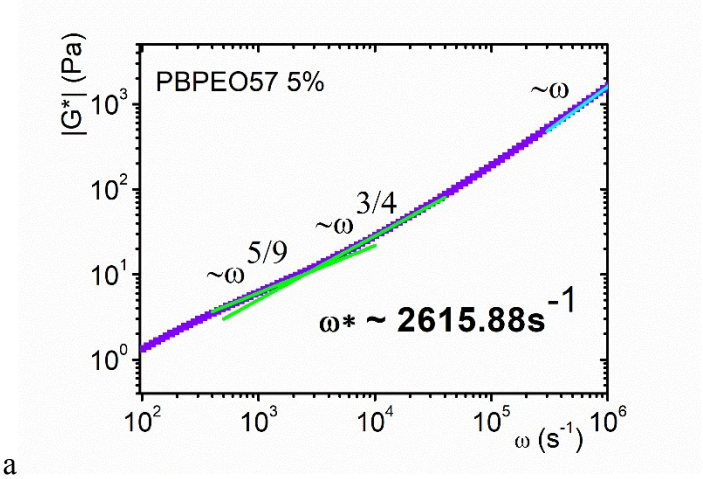
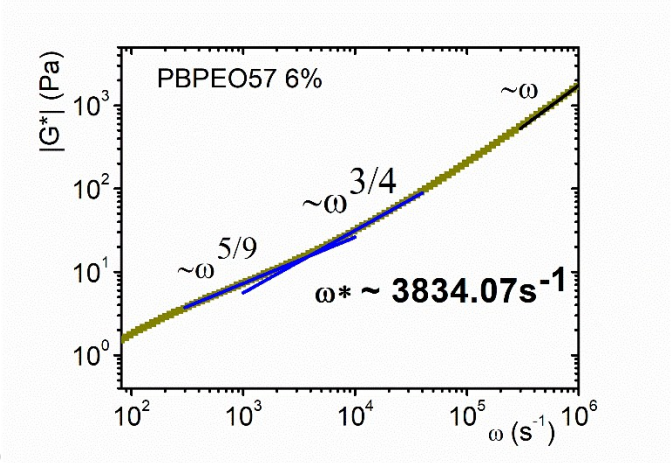


Fig. 5. The same $<\Delta r^2(t)>$ vs. t curves as in Fig 8 of the paper, but in a linear scale. Particle diffusion is diffusive in the PBPEO57 micellar solution at *1 wt %.*



a



b

Fig.6. Power law behavior of $|G^*| \sim \omega^v$ for PBPEO57 WLMs at high frequencies. First, it is dominated by the Rouse-Zimm modes, then as ω increases by the internal relaxation of individual Kuhn segments, and finally by the viscous water. a) $C_{PBPEO57} = 5$ and b) *6 wt %.*

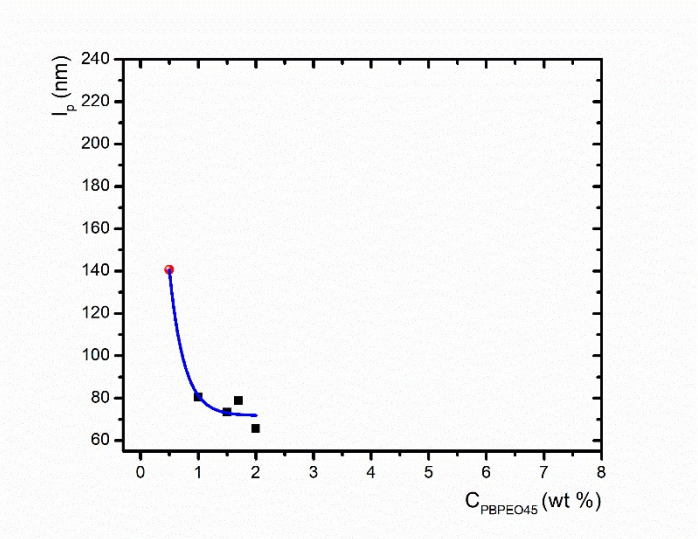


Fig. 7. l_p as a function of concentration for the PBPEO45 WLMs obtained with microrheology. The red dot corresponds to l_p value found by SANS. The concentration range, in this case, is limited because WLMs are below *2.5 wt %*, therefore the comparison with Fig. 11b of the paper is also limited.