J. Braz. Chem. Soc., Vol. 24, No. 11, S1-S2, 2013.
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0103 - 5053 $6.00+0.00

Supplementary Information

Polyelectrolyte and Non-Polyelectrolyte Polyacrylamide Copolymer Solutions: the Role of Salt on the Intra- and Intermolecular Interactions

Ana M. S. Maia,[a] Marcos A. Villetti,[b] Redouane Borsali[c,d] and Rosangela C. Balaban*[,a]

[a]Laboratory of Petroleum Research, Instituto de Química, Universidade Federal do Rio Grande do Norte, PO Box 1662, 59078-970 Natal-RN, Brazil

[b]Laboratório de Espectroscopia e Polímeros, Departamento de Física, Universidade Federal de Santa Maria, 97105-900 Santa Maria-RS, Brazil

[c]Centre de Recherches sur les Macromolécules Végétales (CERMAV-CNRS), BP 53, F-38041 Grenoble Cedex 9, France

[d]Laboratory of Chemistry of Organic Polymers, Ecole nationale supérieure de chimie et de physique de Bordeaux (ENSCPB), Bordeaux I University, Pessac Cedex, France

The critical concentration (C*) was calculated using the following equation:

$$c^*_{R_g} = \frac{3M_W}{4\pi N_A R_g^3} \qquad \text{(Equation S1)}$$

where M_w is the molecular weight, N_A is the Avogadro number and Rg is the radius of gyration.

Representative examples of the normalized field autocorrelation functions:

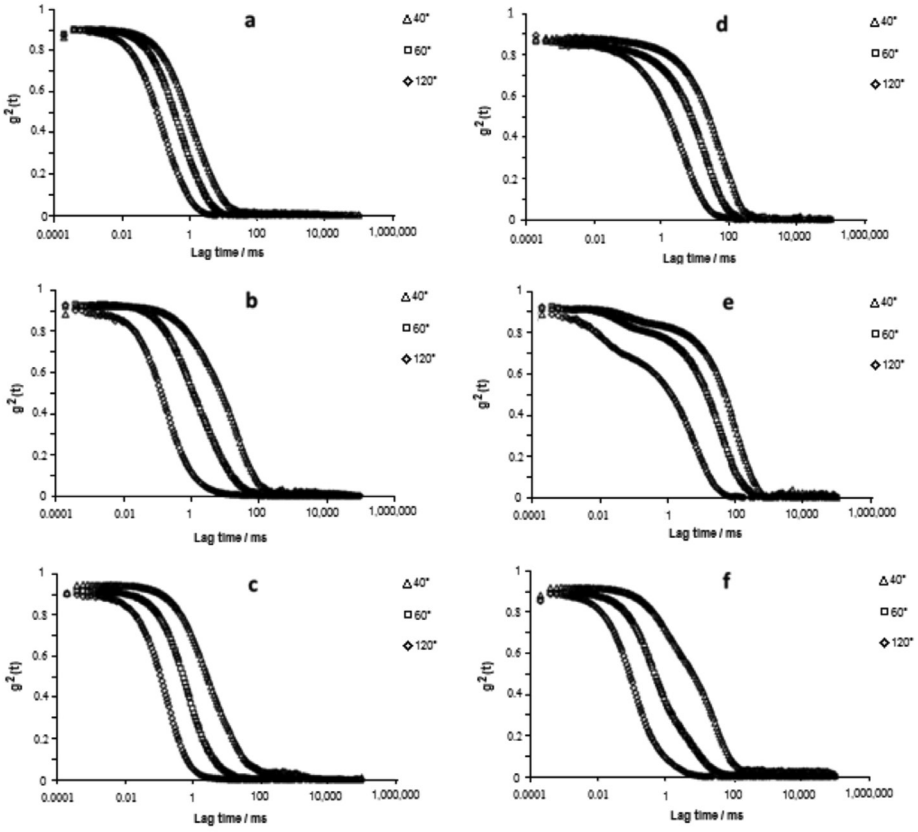

Figure S1. Normalized autocorrelation functions for (a), (b) and (c) PAHM-0 and (d), (e) and (f) PAHM-21, at ionic strength of (a) and (d) 0; (b) and (e) 2.7×10^{-3} (9.0×10^{-4} $CaCl_2$); (c) and (f) 2.0×10^{-1} mol L^{-1} (2.0×10^{-1} NaCl). Polymer concentration: 2 g L^{-1}.

*e-mail: balaban@supercabo.com.br

Dependence of Γ on q^2 for PAHM-0 in absence of salt. (a) fast mode and (b) slow mode. Full symbols indicate the data used to calculate the $D_{q\to 0}$:

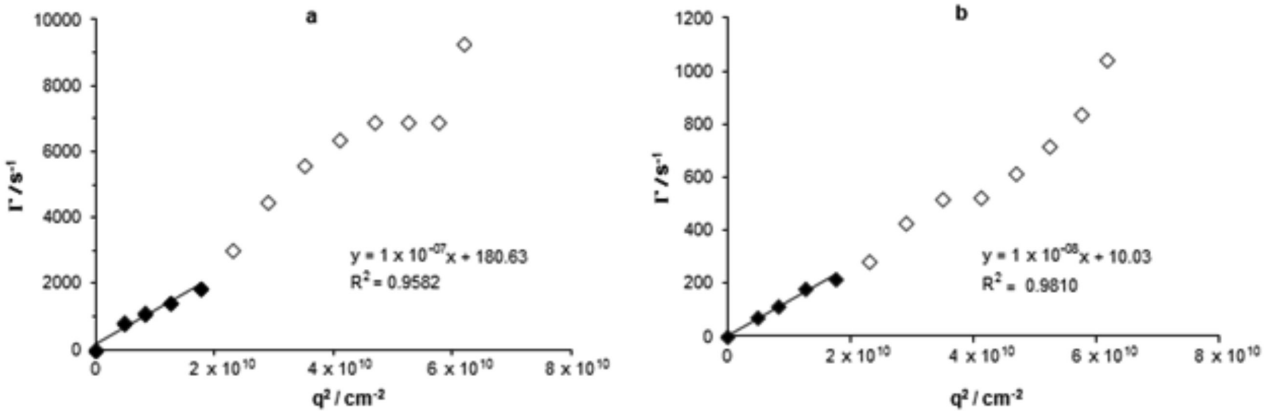

Figure S2. Dependence of G on q^2 for PAHM-0 at 2 g L^{-1} in distilled water: (a) fast mode and (b) slow mode.

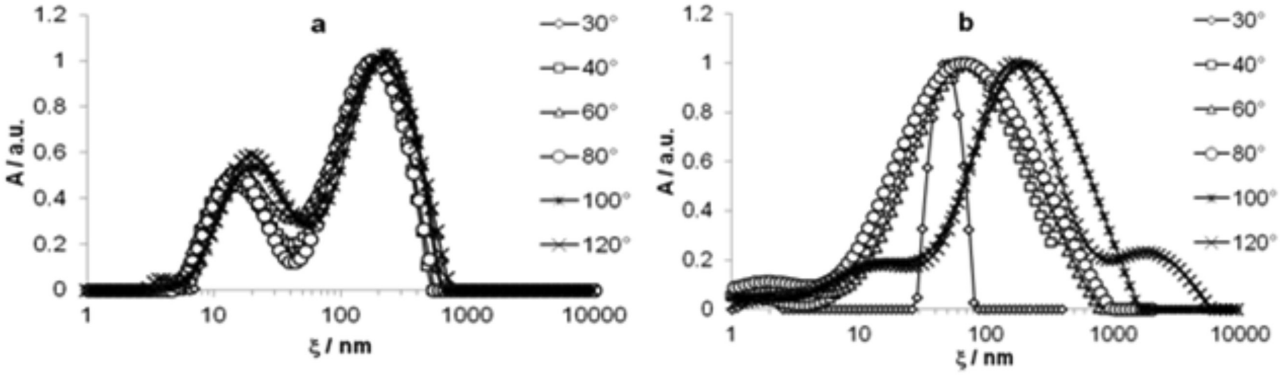

Figure S3. Correlation length distributions as a function of the scattering angle for (a) PAHM-0 and (b) PAHM-21, at 2 g L^{-1} in distilled water.

The nominal wall shear rate in capillary viscometers may be calculated using the following equation:

$$\dot{\gamma}_{wn} = \frac{32Q}{\pi D^3} \qquad \text{(Equation S2)}$$

where Q is the flow rate and D is the capillary diameter. The values calculated to the solutions analyzed in this work are between 1259 s^{-1} and 2269 s^{-1}.