

SORPTION AND SLOW RELEASE KINETICS OF PAAM GELS AT VARIOUS TEMPERATURES

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ABSTRACT

Small molecule sorption and slow release in and out of polyacrylamide (PAAm) gels were studied by using steady state fluorescence (SSF) technique. Pyranine (P_y) dissolved in water used as a probe. Fluorescence emission intensity, I_p from P_y was used to monitor for studying sorption and slow release processes at various temperatures. Sorption and slow release processes were analyzed by using Fickian diffusion model and coefficients were obtained. Related activation energies were also calculated for the corresponding physical processes.

Keywords: Polyacrylamide (PAAm), Fluorescence, sorption, slow release, temperature

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