

Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Specific heat at the micellization and phase transitions in a triblock copolymer-water system¹ LORENZO DUMANCAS, DAVID SIMPSON, D.T. JACOBS, The College of Wooster — The triblock copolymer (“unimer”) of PPO-PEO-PPO (commercially known as 17R4) has hydrophobic ends and a hydrophilic center. When placed in water, a network of unimers can self-assemble at higher concentrations or temperatures to form micelles of different geometries. We have measured the micellization line marking the transition from only unimers in solution to some micelles. There is also a one- to two-phase transition at higher temperatures that is an Ising-like, LCST critical point. Specific heat measurements from our adiabatic calorimeter provide the enthalpy, entropy and free energy of micellization along the micellization line at different prepared compositions.

¹We acknowledge the support from Research Corporation, NSF-REU grant DMR 0649112, and The College of Wooster.

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Date submitted: 17 Nov 2010

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