

Abstract Submitted
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Crystallization Trends of PEO-b-PCL with Solvent and Temperature Effects KRISTI ALLEN, ALLISON CARANDANG, RYAN VAN HORN, Allegheny College — There is a great deal of interest in being able to selectively modify properties of certain polymers. This increases the amount of control that can be exercised over end products in terms of the hydrophobicity or hydrophilicity, transparency, and brittleness and is highly valued in the biomedical industry. In this case, the crystallization trends of the diblock co-polymer poly(ethylene-oxide)-b-poly(ϵ -caprolactone) (PEO-b-PCL) were observed with the manipulation of solvent and drying temperatures in a variety of samples. The solvents utilized included tetrahydrofuran, chloroform, and toluene. The crystallized samples were scanned via infrared spectroscopy. Results showed highest amounts of PEO crystallization compared to PCL crystallization in toluene while the lowest values were seen in samples in tetrahydrofuran. The chloroform samples fell in the middle. Moderate differences were observed in different molecular weight samples.

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