

Sample Name:

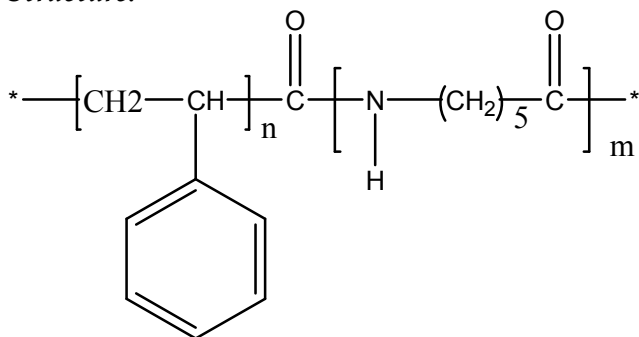
Poly(styrene-b- Nylon 6) block copolymer

Solubility:

Polymer 5 mg in 3ml phenol/tetrachloroethan (8/2 v/v) dissolved and form a highly thick solution. It can also be solubilized (cloudy solution) in hot DMSO.

Sample #: P8012-SNY6

Structure:



References for further information:

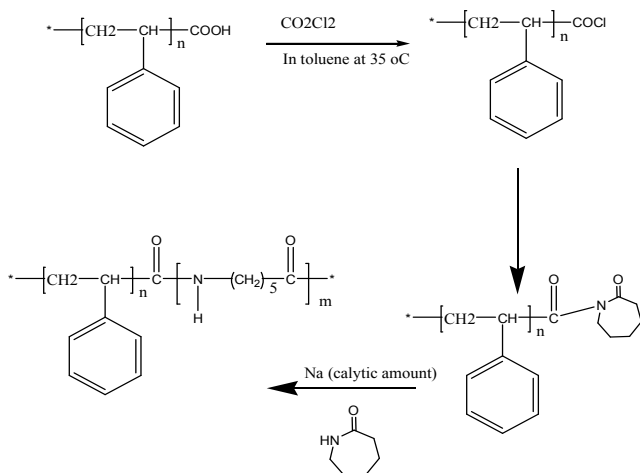
1. Qu.L et al. *Macromolecules* 2005, 38,10328.

Composition:

Mn x 10 ³ S-b-Nylon-6	PDI
4.7-b-4.7	-

Synthesis Procedure:

Poly(styrene-b-Nylon 6) is prepared by the modification of COOH terminated Polystyrene (COOH end functionalized polystyrene was synthesized by anionic living polymerization). The out line of the reaction path is illustrated as follows:



Characterization:

The characterization of the polymer is not possible by the conventional techniques. The obtained polymer was Soxhlet in THF to remove any trace amount of polystyrene un-reacted. It was found that the un-reacted polystyrene was less than 2%. This indicates the high functionality of polystyrene bearing COOH end group. From the conversion and the amount of Polystyrene with caprolactam it is presumed that the composition is 5:5, therefore Mn : 4700-b-5000 as expected in the living polymerization process.