

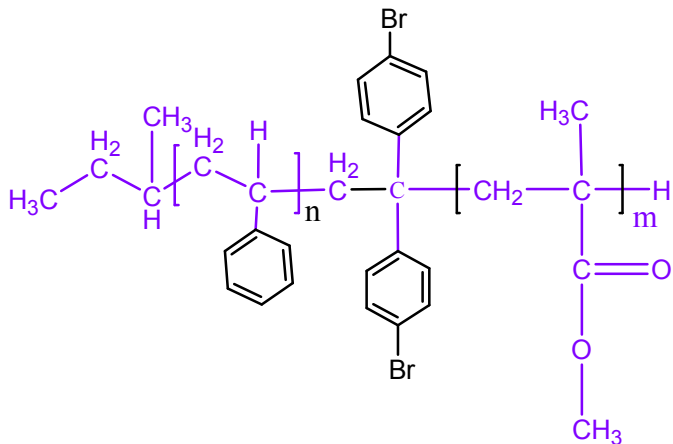
Sample Name:

Poly(styrene-b-methyl methacrylate) bearing 4,4'-dibromodiphenylmethane moiety at the junction of diblock

(polymethylmethacrylate rich in syndiotactic contents > 78%)

Sample #: P10292-SMMA2BrDPE

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
30.0-b-24.0	1.18
T _g for PS block: 107°C	

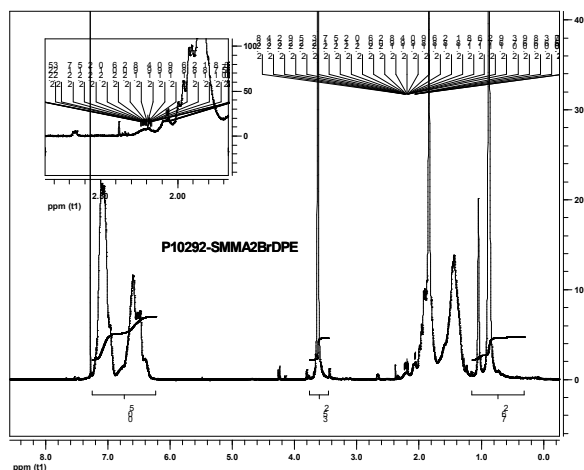
Synthesis Procedure:

Poly(styrene-b-methyl methacrylate) bearing at the junction dibromo diphenyl unit was prepared by living anionic polymerization in THF.

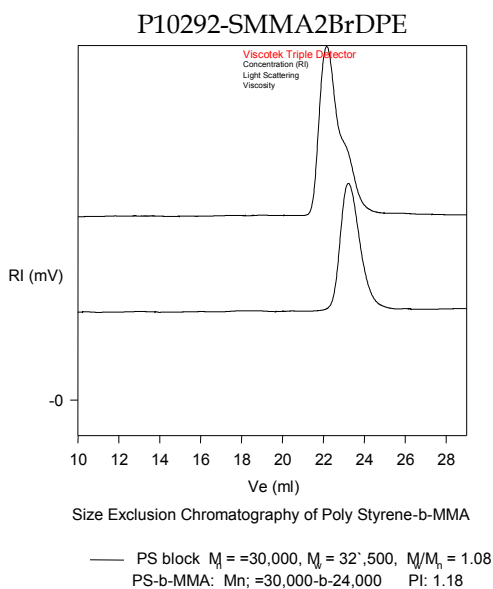
Characterization:

Polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ¹H-NMR spectroscopy by comparing the peak area of the poly(methyl methacrylate) protons (eg. -OCH₃ at 3.6ppm) with of aromatic protons of polystyrene at 6.3-7.2 ppm. Copolymer PDI is determined by SEC.

¹H-NMR Spectrum of SMMA:



SEC of Sample



References for further information:

1. S. K. Varshney, R. Fayt, Ph. Teyssie, and J.P. Hautekeer US Patent 5,264,527 (1993)
2. Ph. Teyssie, Ph. Bayard, R. Jerome, S. K. Varshney, and J. S. Wang, 35th IUPAC International Union of Pure & Applied Chemistry International Symposium on Macromolecules" 1994, 67.
3. Ph. Teyssie, R. Fayt, J. P. Hautekeer, C. Jacobs, R. Jerome, L. Leemans and S. K. Varshney Makromolekular Chemie, Macromol. Symp., 1990, 32,61-73.
4. S. K. Varshney, J. P. Hautekeer, R. Fayt, R. Jerome, and Ph.Teyssie Macromolecules, 1990, 23, 2618-2622.