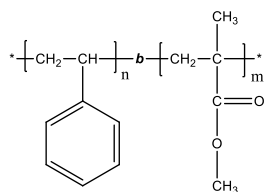


Sample Name: Poly (styrene-*b*-methyl methacrylate)
(PMMA block is predominantly syndiotactic, >78%)

Sample #: P42389P-SMMA

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
140.0-60.0	1.01

T _g for PS block:	103°C
T _g for PMMA block:	103°C

Synthesis procedure:

The polymer was synthesized by anionic polymerization process.

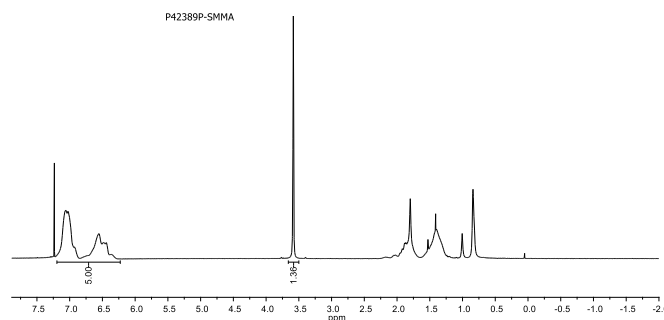
Characterization:

The molecular weight and polydispersity index of the polymer were determined by size exclusion chromatography (SEC). The ratio between blocks was calculated from ¹H NMR spectrum.

Solubility:

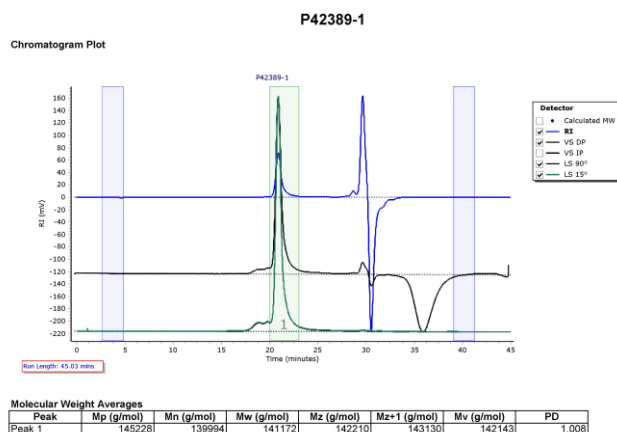
Poly(styrene-*b*-methyl methacrylate) is soluble in THF, toluene, dioxane, chloroform; and it precipitates from methanol, ethanol, hexanes, water.

¹H NMR spectrum of the polymer:



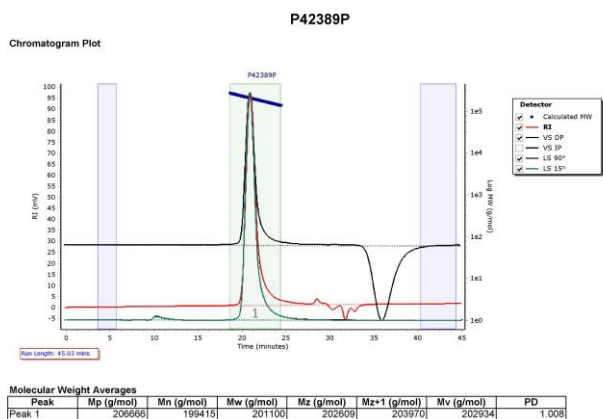
SEC elugram of the Styrene block:

Agilent GPC/SEC Software



SEC elugram of the polymer:

Agilent GPC/SEC Software



References:

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.