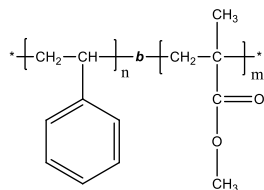


Sample Name: Poly (styrene-*b*-methyl methacrylate)
(PMMA block is predominantly syndiotactic, >78%)

Sample #: P41900P-SMMA

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
20.5-b-59.0	1.04

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

Synthesis procedure:

The polymer was synthesized by anionic polymerization process.

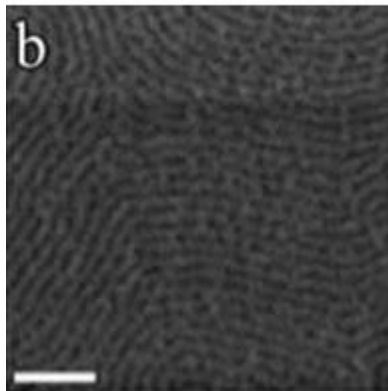
Characterization:

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.

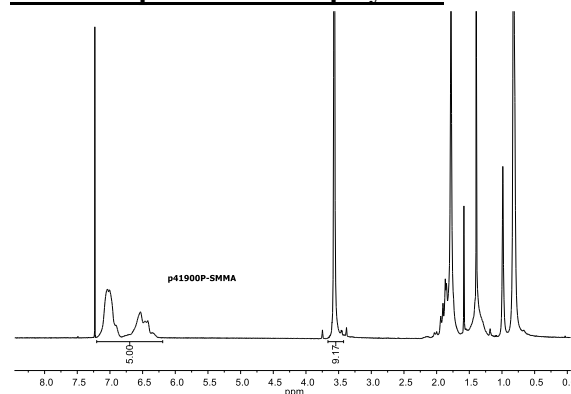
Solubility:

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

Morphology of such polymer:

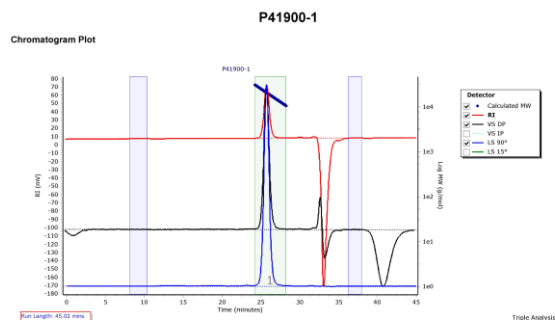


¹H NMR spectrum of the polymer:



SEC elugram of the Styrene block:

Agilent GPC/SEC Software

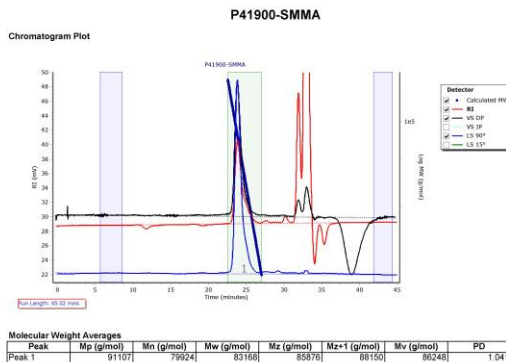


Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	20976	20575	20835	21066	21279	21059	1.013

Processing Parameters
Method: RI
Concentration Detector Used in Analysis: 100.00
Injection volume (μL): 1.00
Flow rate (mL/min): 0.184
Concentration options: Calculate Sample Concentration from Entered Sample Properties
Entered dn/dc (mL/g): 0.184

SEC elugram of the polymer:

Agilent GPC/SEC Software



Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	91107	79924	83168	85976	88150	86248	1.041

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.

(v. R-01)