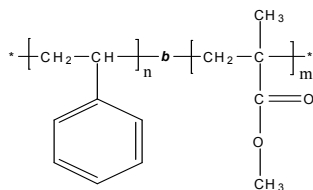


Sample Name: Poly (styrene-*b*-methyl methacrylate)
(PMMA block is predominantly syndiotactic, >78%)

Sample #: P40167-SMMA

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
4.0-42.0	1.08
T _g for PS block:	103°C
T _g for PMMA block:	103°C

Synthesis procedure:

The polymer was synthesized by anionic polymerization.

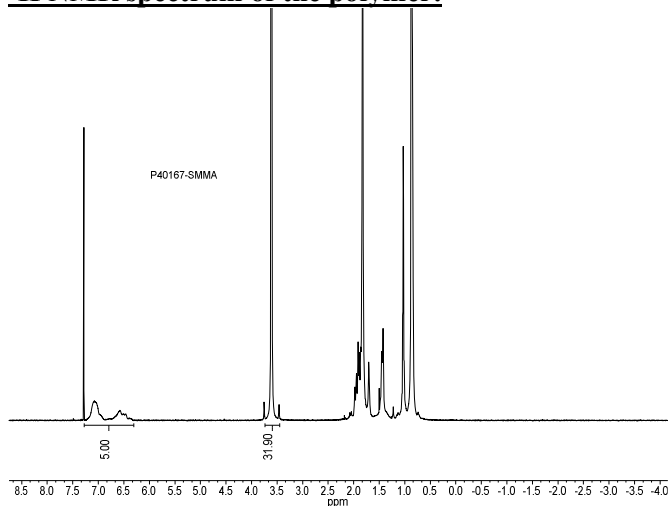
Characterization:

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.

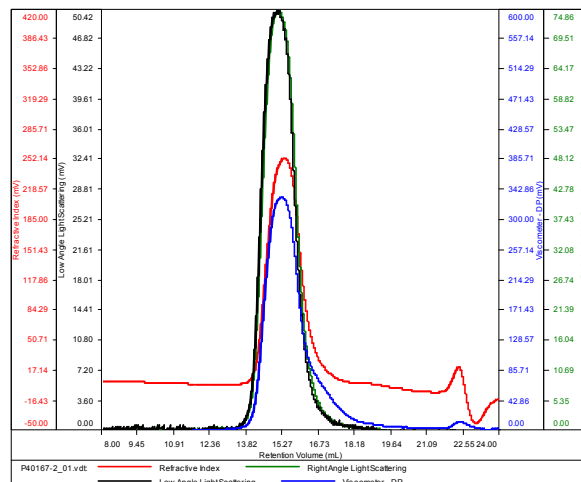
¹H NMR spectrum of the polymer:



SEC elugram:

P40167-SMMA

Conc (mg/mL)	17.9191
dn/dc (mL/g)	0.1350
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40167-2_01.vdt	45,960	50,045	47,282	1.089	0.7119

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.