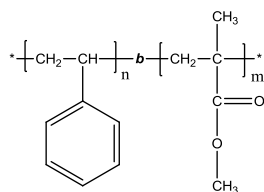


Sample Name: Poly (styrene-*b*-methyl methacrylate)
(PMMA block is predominantly syndiotactic, >78%)

Sample #: P40591-SMMA

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
52-b-173.0	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.

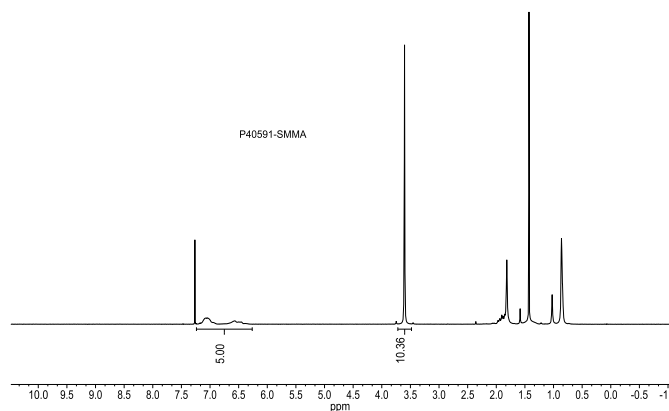
Characterization:

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.

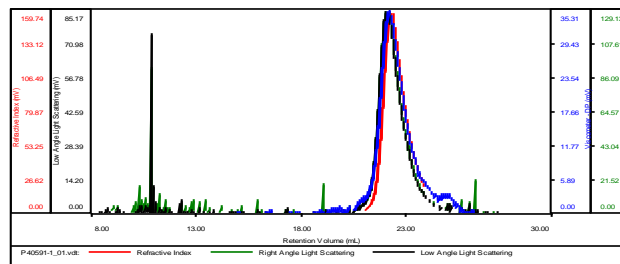
¹H NMR spectrum of the polymer:



SEC elugram of the Styrene block:

P40591-S

Concentration (mg/mL)	2.0025
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-Feb2017-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

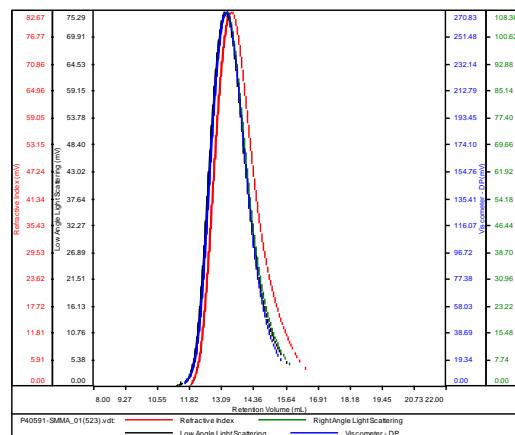


Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40591-1_01.vdt	52,375	56,845	1.085	1.0009	56,455

SEC elugram of the Polymer:

P40591-SMMA

Conc	9.9078
dn/dc	0.1075
Solvent	DMF w 0.023MLiBr
Flow Rate	0.7000
Method	PS80K-May2017-0000.vcm



Sample	MW Number Average	MW Weight Average	MW at Peak	Polydispersity	Intrinsic Viscosity
P40591-SMMA_01(523).vdt	225,477	244,564	236,180	1.085	0.4985

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.