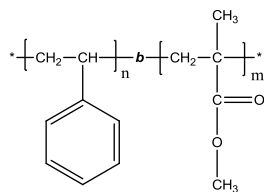


Sample Name: Poly (styrene-*b*-methyl methacrylate)
(PMMA block is predominantly syndiotactic, >78%)

Sample #: P40653-SMMA

Structure:



Composition:

$M_n \times 10^3$ S- <i>b</i> -MMA	PDI
42.0- <i>b</i> -127.0	1.20

T_g for PS block:	103°C
T_g for PMMA block:	103°C

Synthesis procedure:

The polymer was synthesized by anionic polymerization.

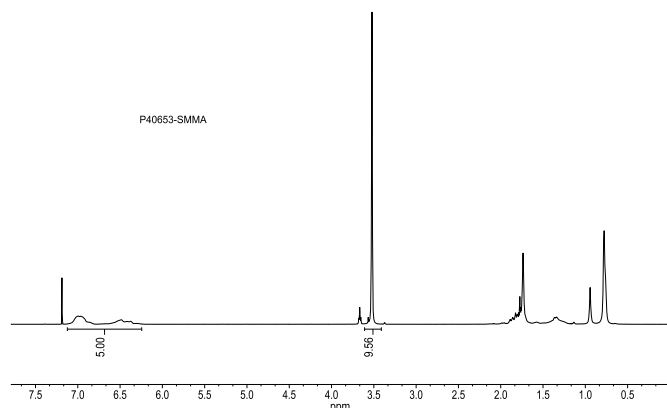
Characterization:

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.

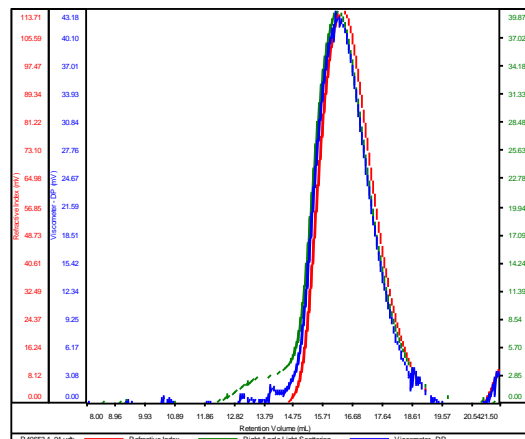
^1H NMR spectrum of the polymer:



SEC elugram of the Styrene block:

P40653-1

Conc	10.1794
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-May2017-0000.vcm

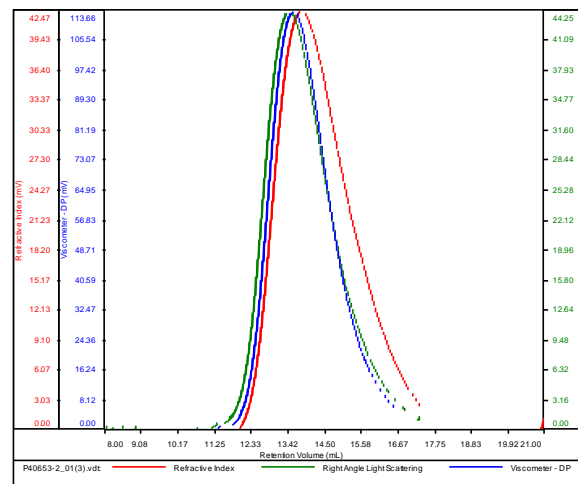


Sample	M_n	M_w	M_p	M_w/M_n	IV
P40653-1_01.vdt	42,059	44,799	41,280	1.065	1.0000

SEC elugram of the polymer:

P40653-SMMA

Conc	4.9951
dn/dc	0.0900
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2017-July-05-0000.vcm



Sample	M_n	M_w	M_p	M_w/M_n	IV
P40653-2_01(3).vdt	168,861	204,243	218,568	1.210	1.0000

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)