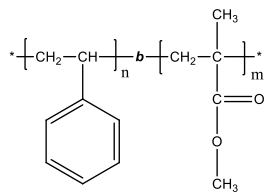


Sample Name: Poly (styrene-*b*-methyl methacrylate)
(PMMA block is predominantly syndiotactic, >78%)

Sample #: P41342-SMMA

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
23.0-b-60.0	1.02

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

Synthesis procedure:

The polymer was synthesized by anionic polymerization.

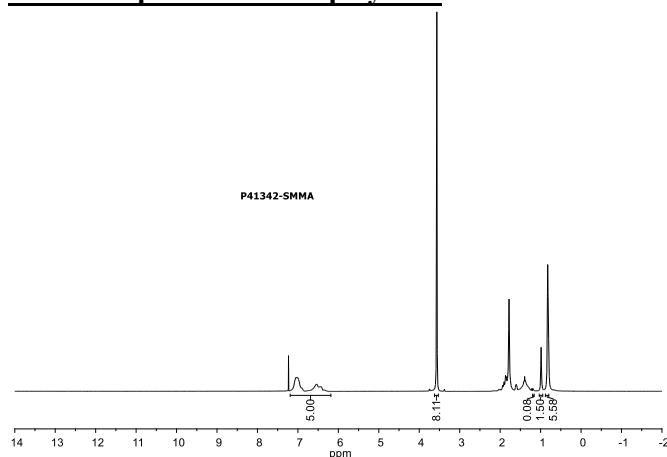
Characterization:

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.

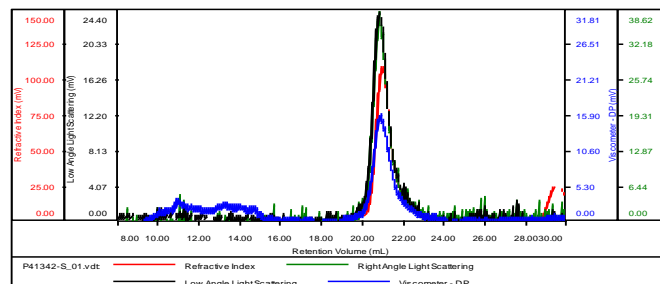
¹H NMR spectrum of the polymer:



SEC elugram of the Styrene block:

P41342-S

Concentration (mg/mL)	3.7547
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-sept-2018-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

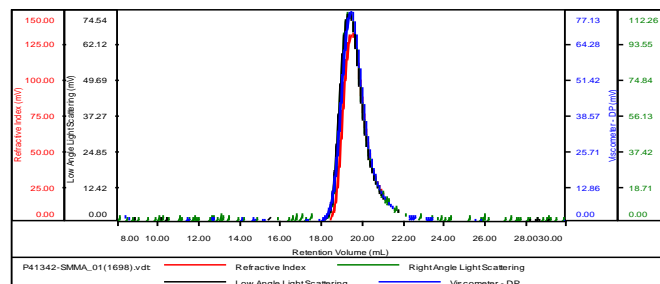


Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P41342-S_01.vdt	22,815	23,854	1.046	0.1192	22,782

SEC elugram of the polymer:

P41342-SMMA

Concentration (mg/mL)	8.7294
Sample dn/dc (mL/g)	0.1340
Method File	PS80K-sept-2018-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P41342-SMMA_01	82,858	84,638	1.021	0.3138	83,771

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.