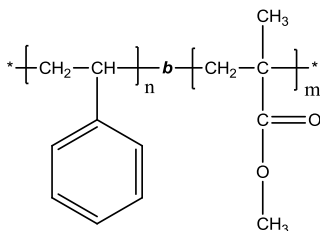


Sample Name: Poly (styrene-b-methyl methacrylate)

Sample #: P18253A-SMMA

Structure:



Composition:

Mn x 10 ³ S-b-MMA	PDI
465.0-b-35.0	1.22
Microstructure for PMMA block	S:H:I 48:52:0

Synthesis procedure:

Poly(styrene-b-methyl methacrylate) is prepared by living anionic polymerization in THF at -78°C using cumyl potassium initiator in the presence of LiCl. Polystyrene macroanions were end capped with a unit of diphenyl ethylene (DPE) before adding methylmethacrylate (MMA) monomer. For further details please see our published articles.

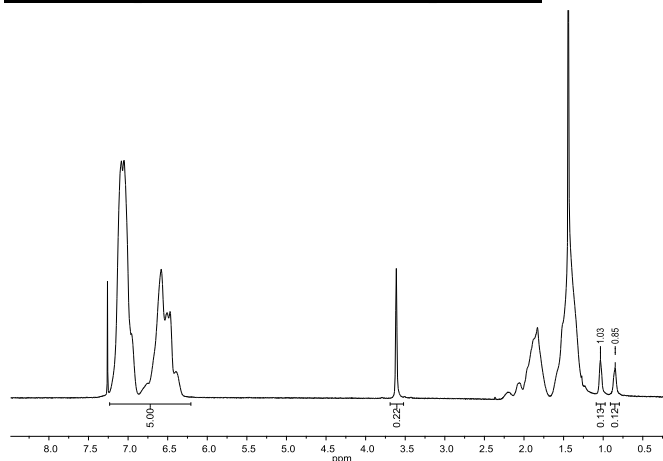
Characterization:

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.

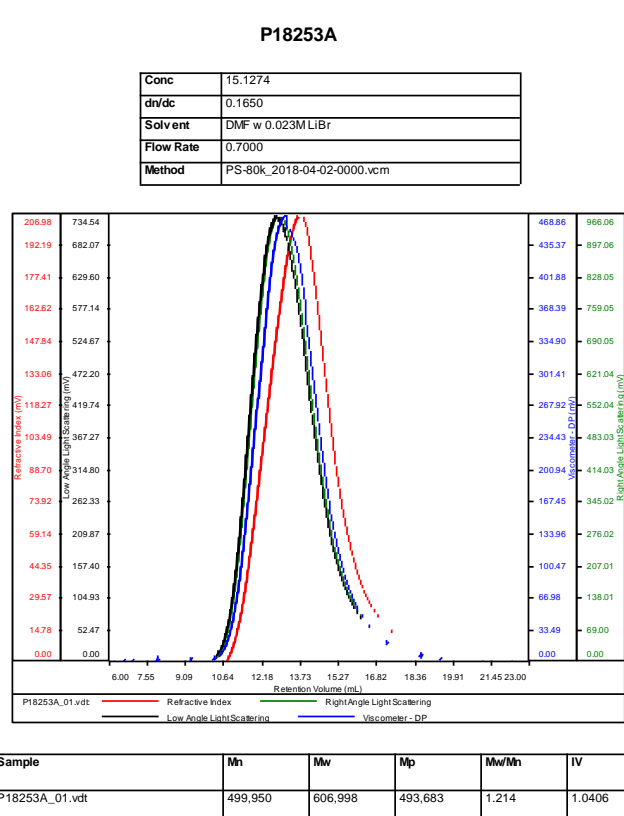
Solubility:

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

^1H NMR spectrum of the block copolymer:



SEC elugram of the block copolymer:



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.