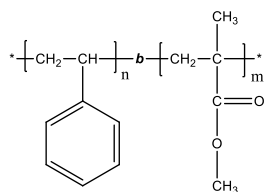


**Sample Name:** Poly (styrene-*b*-methyl methacrylate)  
(PMMA block is predominantly syndiotactic, >78%)

**Sample #:** P42048-SMMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-MMA	PDI
22.5-b-67.0	1.03

T <sub>g</sub> for PS block:	103°C
T <sub>g</sub> for PMMA block:	103°C

**Synthesis procedure:**

The polymer was synthesized by anionic polymerization process.

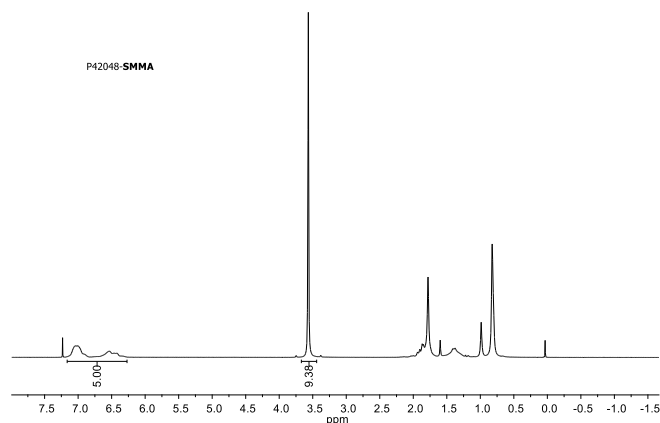
**Characterization:**

The molecular weight and polydispersity index of the polymer were determined by size exclusion chromatography (SEC). The ratio between blocks was calculated from <sup>1</sup>H NMR spectrum.

**Solubility:**

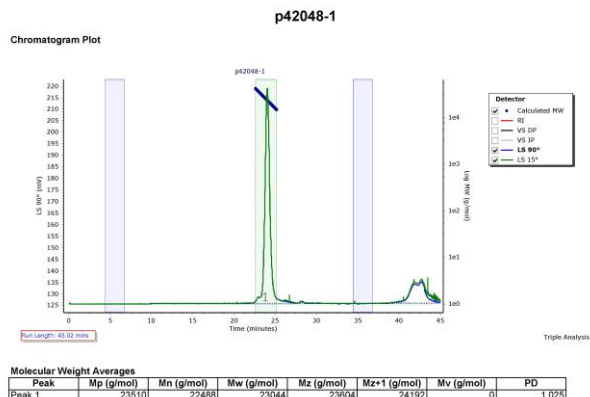
Poly(styrene-*b*-methyl methacrylate) is soluble in THF, toluene, dioxane, chloroform; and it precipitates from methanol, ethanol, hexanes, water.

**<sup>1</sup>H NMR spectrum of the polymer:**



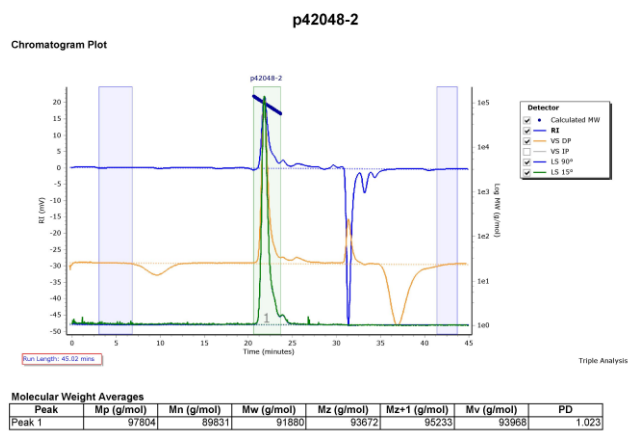
**SEC elugram of the Styrene block:**

Agilent GPC/SEC Software



**SEC elugram of the polymer:**

Agilent GPC/SEC Software



**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.