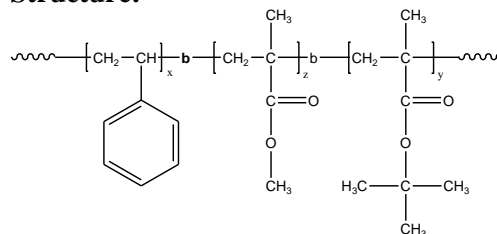


**Sample Name:** Poly(styrene-b-methylmethacrylate-b-Tert-butylmethacrylate)

**Sample #:** P11045-SMMAtBuMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
S-b-MMA-b-tBuMA	
240.0-b-226.0-b-7.0	1.07
T <sub>g</sub> for MMA block: 133.3 °C	T <sub>g</sub> for PS block: 102.7°C

**Synthesis:**

The polymer was prepared by living anionic polymerization with sequence addition of styrene, methyl methacrylate (MMA) and tert-butylmethacrylate.

**Characterization:**

The chemical composition of block copolymer was calculated from proton NMR using CDCl<sub>3</sub> as solvent. The molecular weights and polydispersity index (PDI) of final block were obtained from size exclusion chromatography (SEC).

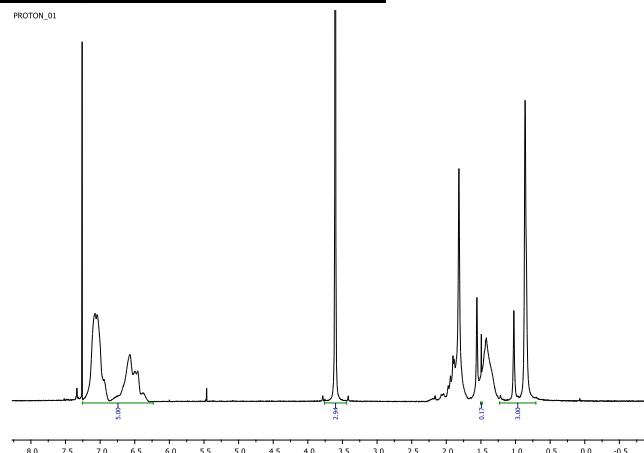
**Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

**Solubility:**

Polymer is soluble in THF, toluene, and CHCl<sub>3</sub>. The polymer readily precipitates from hexanes, ether and water.

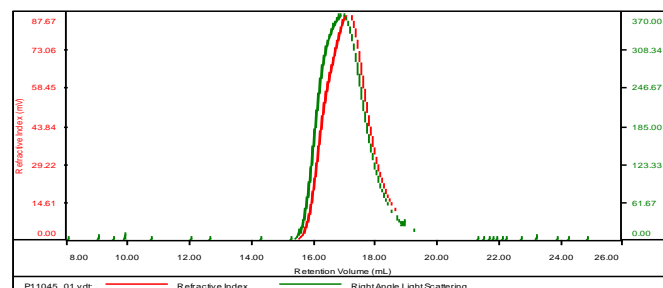
**<sup>1</sup>HNMR spectrum of the Polymer:**



**SEC elugram of the polymer:**

**P11045**

Concentration (mg/mL)	7.0871
Sample dn/dc (mL/g)	0.1350
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)
P11045_01.vdt	473,273	505,715	1.069	0.8673	476,799

**DSC thermogram for PS and MMA block:**

