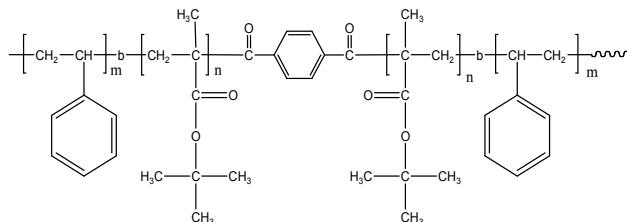


Sample Name:

Poly(Styrene-b-tert butyl methacrylate-b-Styrene)

Sample #: P10039-StBuMAS

Structure:

**Composition:**

$M_n \times 10^3$ (S-b-tBuMA-S)	PDI
8.0-b-52.0-b-8.0	1.4
T_g for PS block: 77°C	T_g for tBuMA block: 112°C

Synthesis Procedure:

Poly(styrene -b- tert.butylmethacrylate -b- styrene) is prepared by living anionic polymerization. The synthesis details are available in the cited reference at the end.

Characterization:

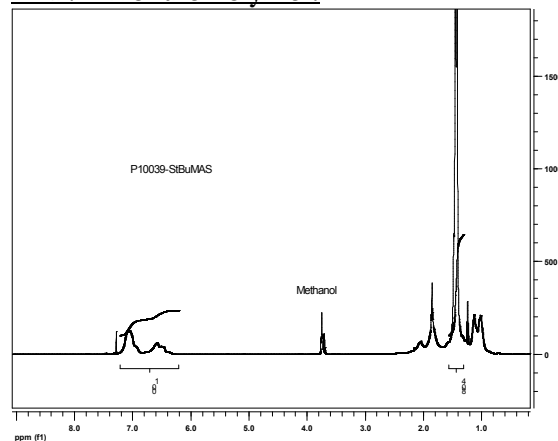
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal Analysis:

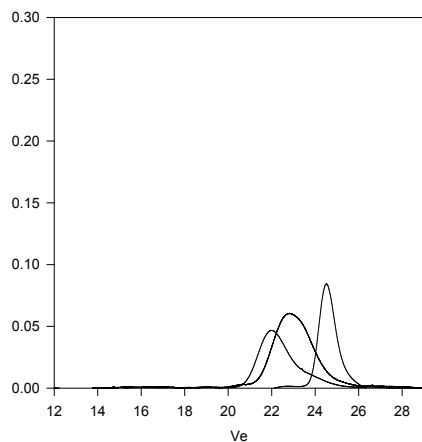
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

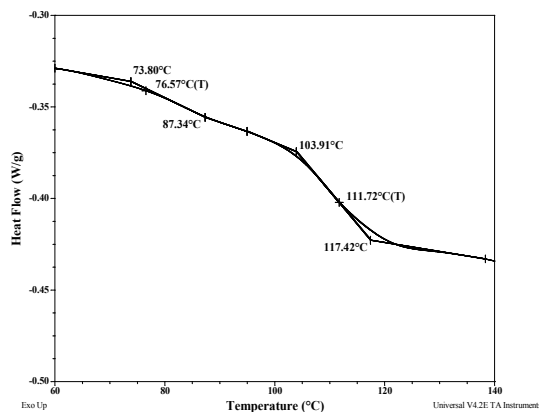
Polymer is soluble in THF, toluene and CHCl_3 . It precipitates from methanol, ethanol, water and hexanes (depending on the composition).

 ^1H NMR of the Polymer:**SEC of Sample:**

P10039-StBuMAS



Size Exclusion Chromatography of:
 — PS first block $M_n=8,000$, $PI=1.10$
 — StBuMA, diblock PS(8,000)-b-PtBuMA(26,000), $PI=1.5$
 After linking reaction
 PStBuMAS: 8000-b-52,000-b-8,000 Mw/Mn 1.4

DDSC thermogram for the triblock polymer:**Reference:**

S.K. Varshney, P. Kesani, N. Agarwal, J. Xin. Zhang, and M. Rafailovich Synthesis of ABA type thermoplastic elastomers based on Polyacrylates”Macromolecules, 1999, 32, 235.