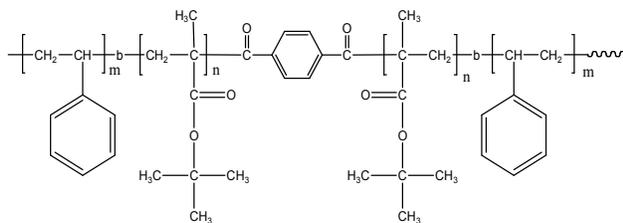


Sample Name:

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

Sample #: P11160-StBuMAS

Structure:



Composition:

$M_n \times 10^3$ (S-b-tBuMA-S)	PDI
80.0-120.0-b-80.0	1.18
T_g for PS block ($^{\circ}\text{C}$):	105
T_g for PtBuMA block ($^{\circ}\text{C}$):	125

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.

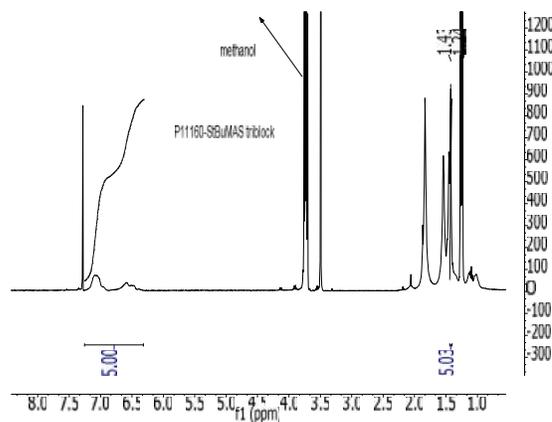
Thermal Analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^{\circ}\text{C}/\text{min}$. 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:

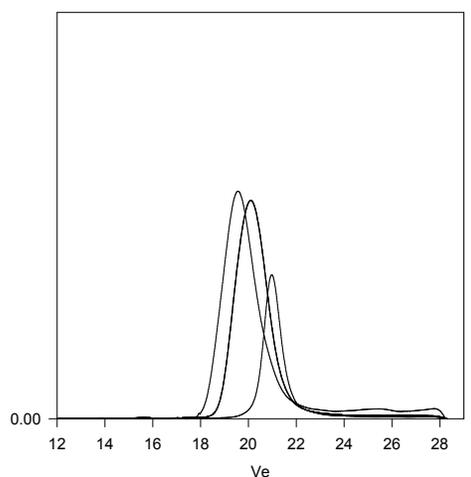
Polymer is soluble in THF, toluene and CHCl_3 . It precipitates from methanol, ethanol, water and hexanes (depending on the composition).

^1H NMR of the Polymer:



SEC of Sample:

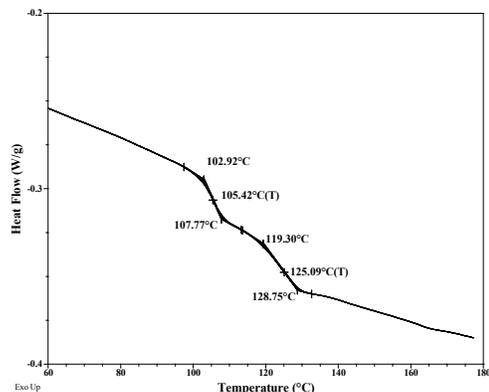
P11160-StBuMAS



Size Exclusion Chromatography of:

— PS first block $M_n=80,000$, $PI=1.10$
— StBuMA, diblock PS(80,000)-b-PtBuMA(60,000), $PI=1.10$
After linking reaction
PStBuMAS: 80,000-b-120,000-b-80,000 Mw/Mn 1.18

DSC of Sample



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.