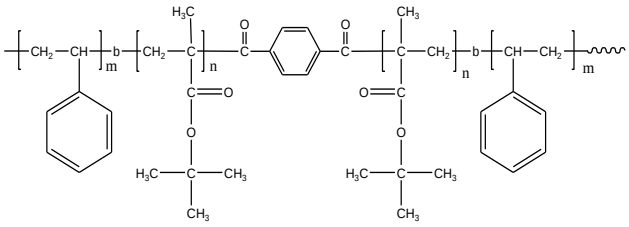
Sample Name:
Poly(Styrene-b-tert butyl methacrylate-b-Styrene)

Sample #: P11159-StBuMAS
Structure:



Composition:

Mn × 10^3 (S-b-tBuMA-S)	PDI
50.0-120.0-b-50.0	1.18
T_g for PS block (°C):	105
T_g for PtBuMA block (°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.

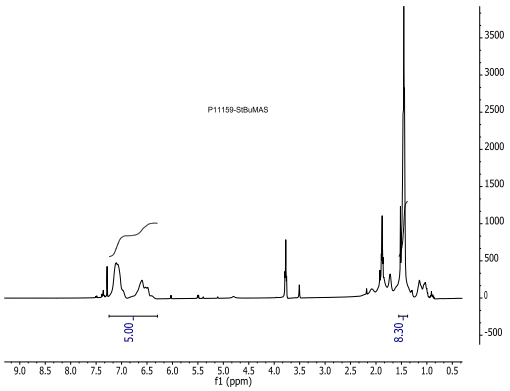
Characterization:

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.

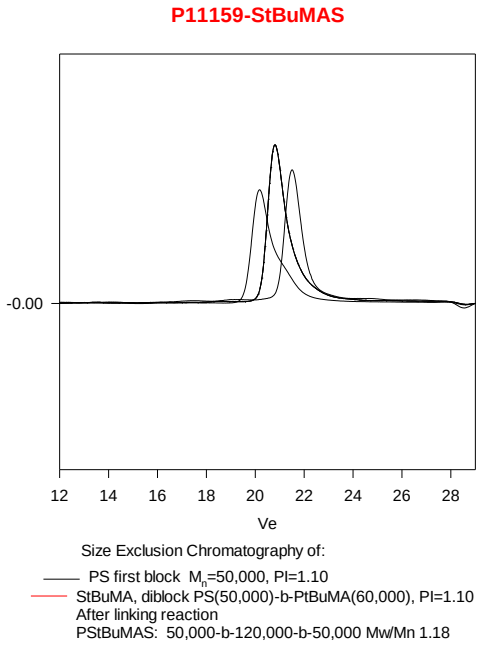
Thermal Analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

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

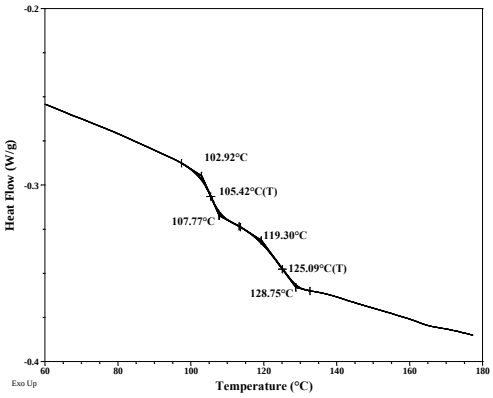
1H NMR of the Polymer:



SEC of Sample:



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.