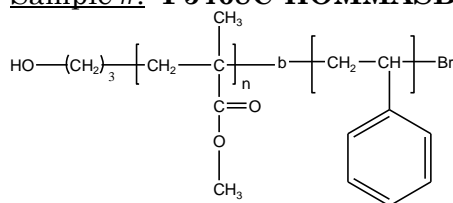


Sample Name: Hydroxy Terminated Poly(methylmethacrylate-*b*-styrene) with Bromide terminal end towards polystyrene block

Sample #: P5468C-HOMMASBr



Composition:

Mn x 10 ³ MMA- <i>b</i> -St	Mw/Mn (PDI)	PMMA microstructure (Iso:hetero:syndio)
42.0- <i>b</i> -15.0	1.18	3: 18: 79
T _g for PS block: 104°C		T _g for MMA block: 133°C

Synthesis Procedure:

Polymer is obtained by combination of anionic and controlled radical process using different ligand system.

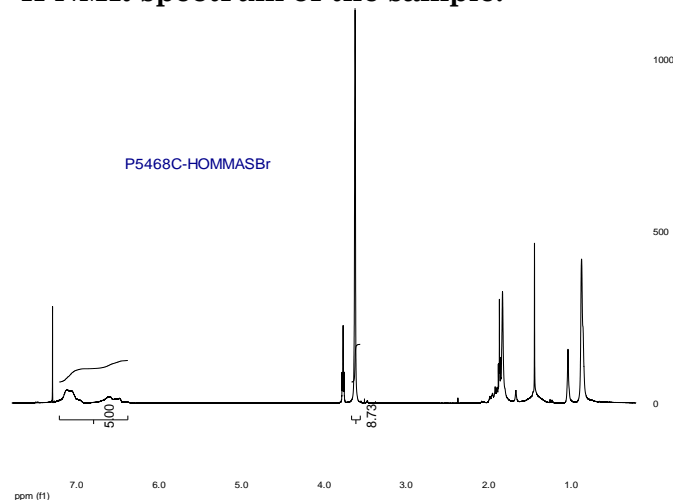
Characterization:

Polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ¹H-NMR spectroscopy.

Thermal analysis:

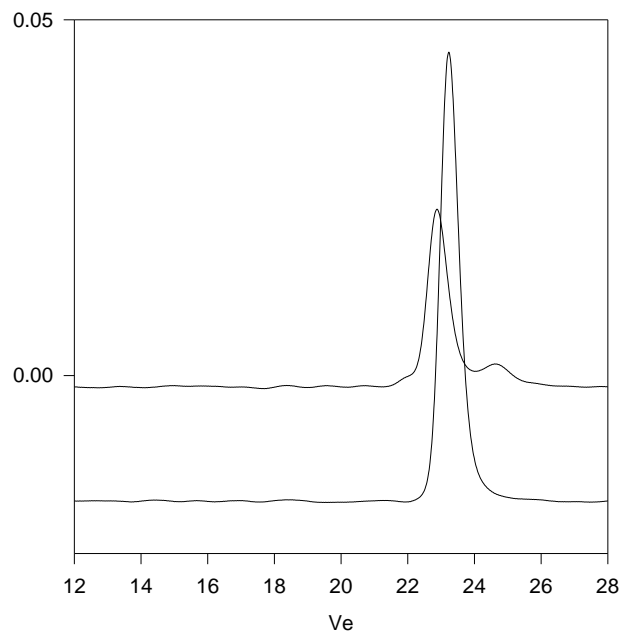
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

¹H NMR spectrum of the sample:



SEC profile of the block copolymer

P5468C-HOMMASBr



Size Exclusion Chromatography :

— First PMMA block bear terminal Br group M_n=42000, M_w/M_n=1.09
— After reaction with styrene Mn : 42000-*b*-15000 Mw/Mn: 1.18
Composition from HNMR

DSC thermogram for the polymer:

