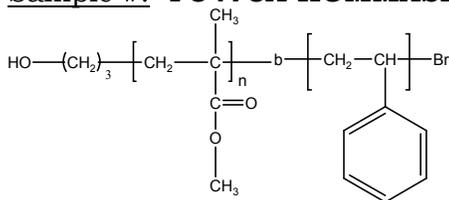


**Sample Name: Hydroxy Terminated Poly(methylmethacrylate-b-styrene) with Bromide terminal end towards polystyrene block**

Sample #: **P5476A-HOMMASBr**



**Composition:**

Mn x 10 <sup>3</sup> MMA-b-St	Mw/Mn (PDI)	PMMA microstructure (Iso:hetero:syndio)
20.0-b-46.0		3: 18: 79
T <sub>g</sub> for PS block: 108°C		T <sub>g</sub> for MMA block: 134°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 <sup>1</sup>H-NMR spectroscopy.

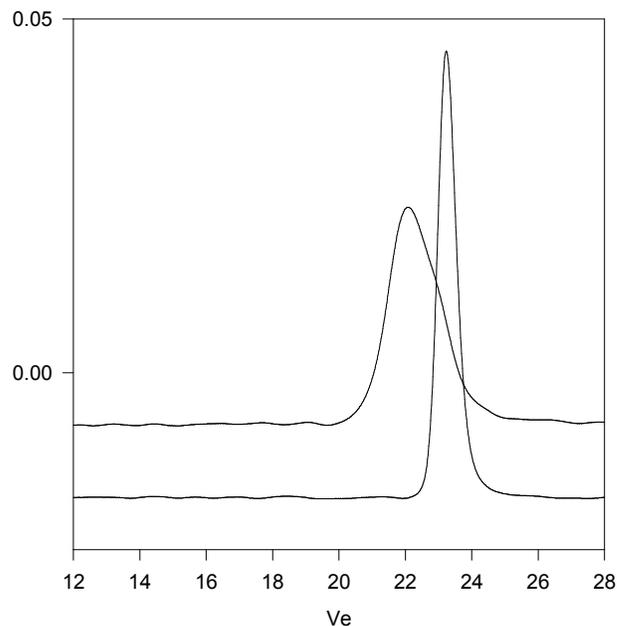
**Thermal analysis:**

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<sub>g</sub>).

**<sup>1</sup>H NMR spectrum of the sample**

**SEC profile of the block copolymer**

**P5468D-HOMMASBr**



Size Exclusion Chromatography :

- First PMMA block bear terminal Br group M<sub>n</sub>=42000, M<sub>w</sub>/M<sub>n</sub>=1.09
- After reaction with styrene Mn : 42000-b-46000 Mw/Mn: 1.35  
Composition from HNMR

**DSC thermogram for the diblock polymer:**

