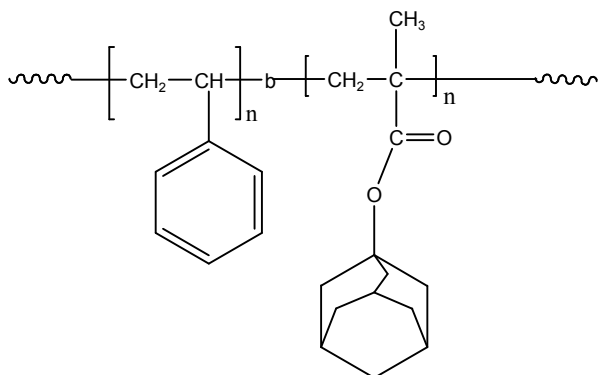


Sample Name:**Poly(Styrene-*b*-1-Adamantyl methacrylate)****Sample #:** P13251-SADMMA**Structure:****Composition:**

Mn x 10 ³ PS- <i>b</i> -ADMMA	PDI
50.0- <i>b</i> -4.5	1.7
Microstructure for ADMMA	Syndio:hetero:iso Rich in heterotactic
T _g for PS block:109°C	T _g for PADMMA block:172 °C

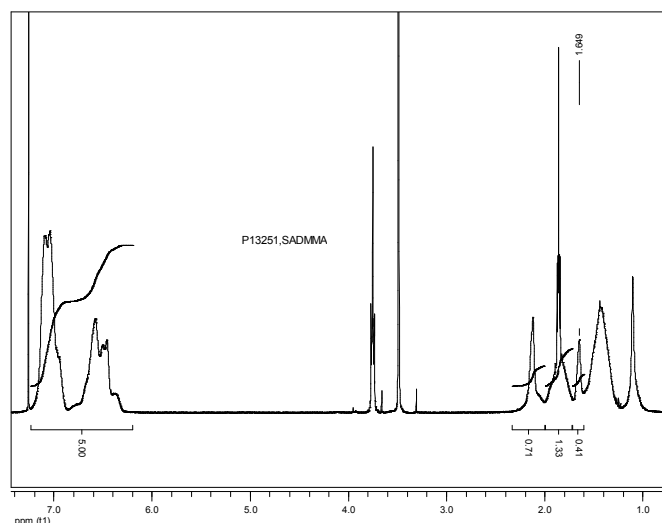
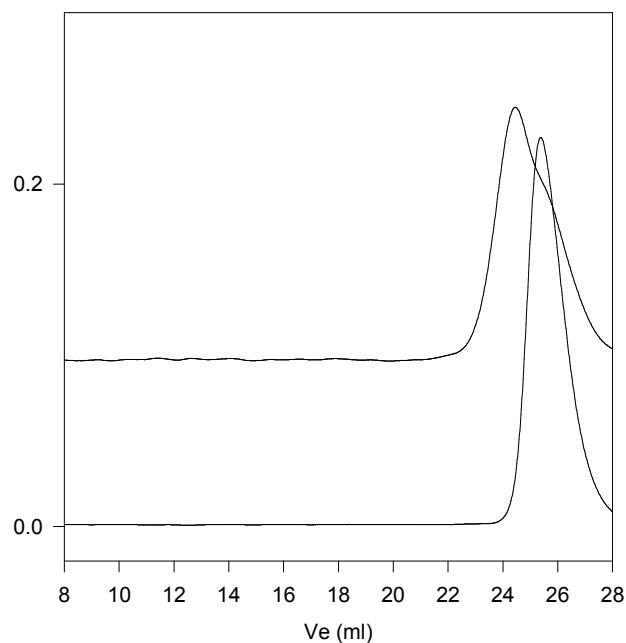
Synthesis Procedure: Prepared by controlled radical process (ADMMA polymerized first in this case) .

Characterization:

An aliquot of the anionic poly(ADMA) block was terminated before addition of MMA monomer and 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.

Solubility:

Polymer is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

¹H-NMR Spectrum of the block copolymer:**SEC of the block copolymer:****P13251-SADMMA**

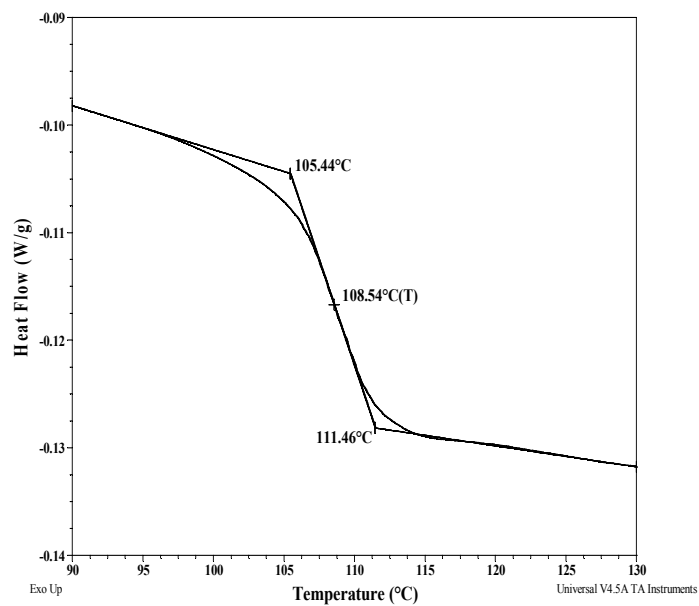
Size exclusion chromatography:

— Poly(ADMMA block), M_n=4500, M_w=6000, PI=1.3— Block Copolymer PS(50000)-*b*-PADMMA(4500), PI=1.7
composition from H NMR

Thermal analysis of P13251-SADMMA:

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) of the sample has been considered.

DSC thermogram for PS block:



Thermogram for PADMMA block:

