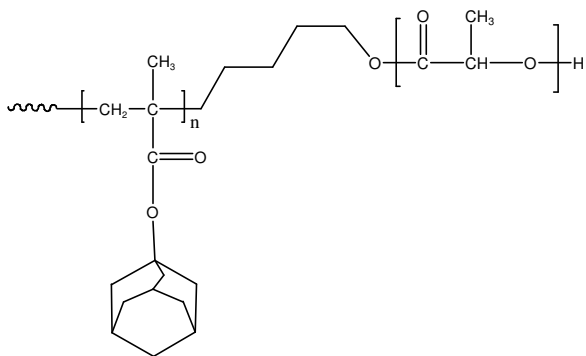


**Sample Name:****Poly(1-Adamantyl methacrylate-b-Lactide(DL form))****Sample #:** P9420-ADMMALA (DL form)**Structure:****Composition:**

Mn x 10 <sup>3</sup> ADMA-b-PLA (DL form)	PDI
4.0-b-30.0	1.6
Microstructure of PADMMA	Heter: iso:syndio Rich in hetero>85%
T <sub>g</sub> for ADMA block: Not distinct	T <sub>g</sub> for PLA: 47°C

**Synthesis Procedure:** Combination *anionic process* and metal catalysed ring opening polymerization to lactide

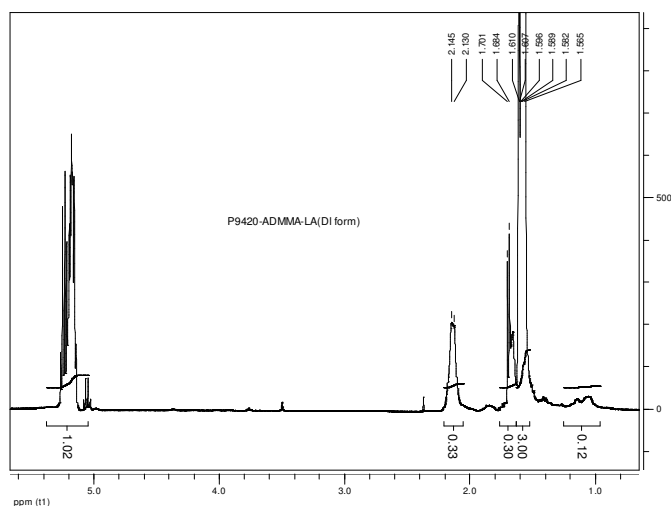
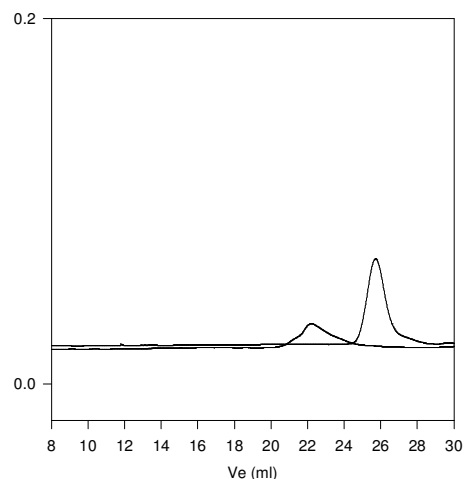
**Characterization:**

Polymer 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 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<sub>g</sub>) of the sample has been considered.

**Solubility:**

Polymer is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

**<sup>1</sup>H-NMR Spectrum of the block copolymer:****SEC of the block copolymer:****P9420-ADMMALA**

Size exclusion chromatography:

— OH terminated Poly(Adamantyl methacrylate), M<sub>n</sub>=4000, PI=1.2— Block Copolymer PADMMA(4000)-b-PLA(30000), PI=1.6  
composition from H NMR**DSC thermogram for PLA block:**