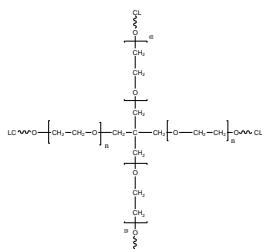


Sample Name:

**Poly(ethylene oxide)-b-poly( $\epsilon$ -caprolactone), 4-arm block star / Core: pentaerythritol**

Sample #: **P10498A-4EOCL**

**Structure:**

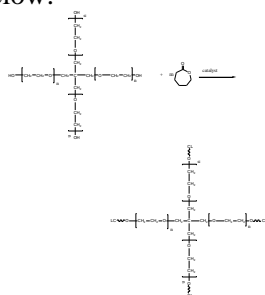


**Composition:**

Mn x 10 <sup>3</sup> Total (branch)	PDI
0.22-b-0.5 Mn : (0.05-b-0.125)	1.15
Dp of each branch: EO-b-CL 1.0-b-1.1 (average)	

**Synthesis Procedure:**

The polymer was prepared by ring opening polymerization of caprolacton using Tin octoate as the catalyst and pentaerthritol ethoxylate that bears Mn of 224. The scheme of the reaction is illustrated below:

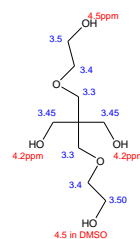


**Characterization:**

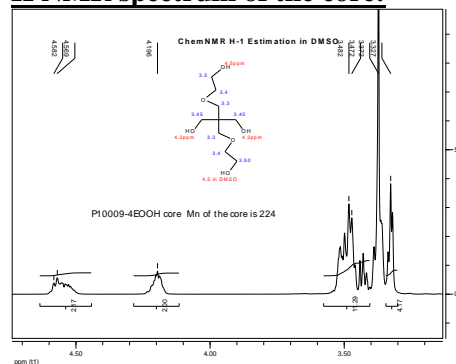
The Mn of the polymer is calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the core protons at about 3.6 ppm with the  $\epsilon$ -caprolactone protons at about 4.1 ppm. Polydispersity is determined by size exclusion chromatography (SEC): Varian liquid chromatograph equipped with UV and refractive detector. SEC columns from Supelco were used with THF containing 2 vol% (Et)3N as the eluent.

**Characterization data for the core bearing  
Mn : 224**

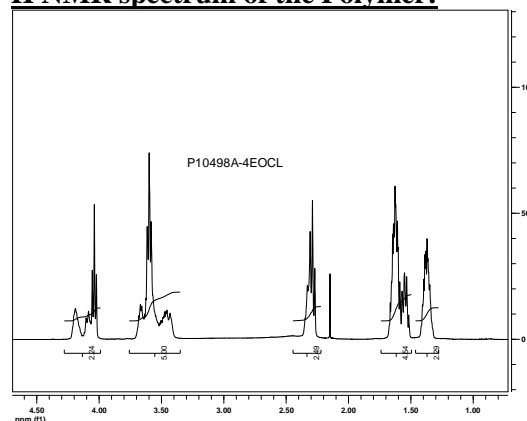
Chemical shifts of Core: Estimation in DMSO



**H NMR spectrum of the core:**



**H NMR spectrum of the Polymer:**



**SEC profile of the polymer:**

