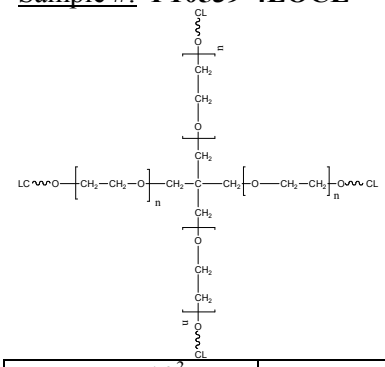
Sample Name:

Four arm Poly(ethylyene oxide –b-ε-caprolactone)

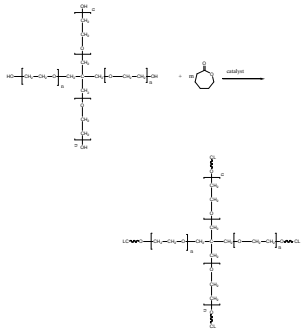
Sample #: **P10539-4EOCL**



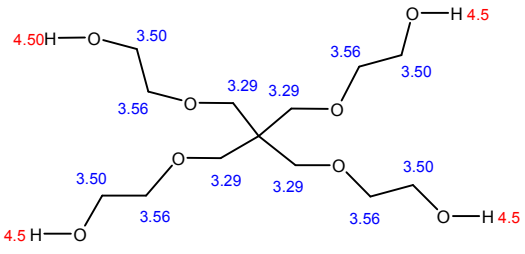
Mn x 10^3 Total (branch)	PDI
0.32-b-1.5 Mn : (0.08-b-0.39)	1.15
Dp of each branch: EO-b-CL 2-b-3.4 (average)	

Synthesis Procedure:

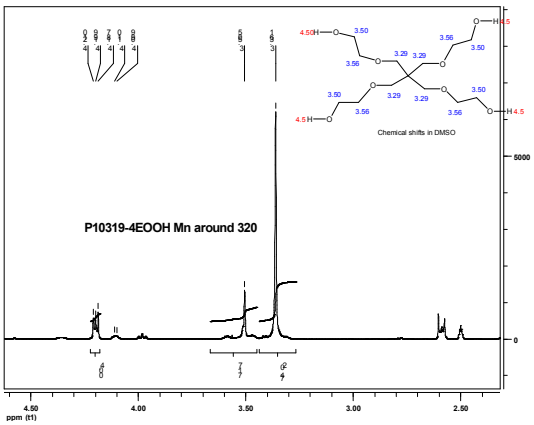
The polymer was prepared by ring opening polymerization of caprolacton using Tin octoate as the catalyst and pentaerthritol ethoxylate that bears Mn of 320. The scheme of the reaction is illustrated below:



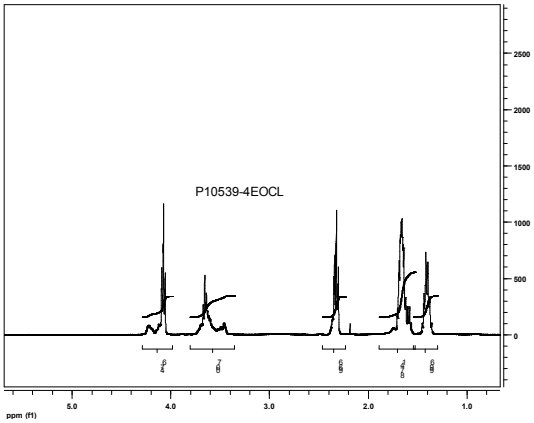
Characterization data for the core bearing Mn : 320



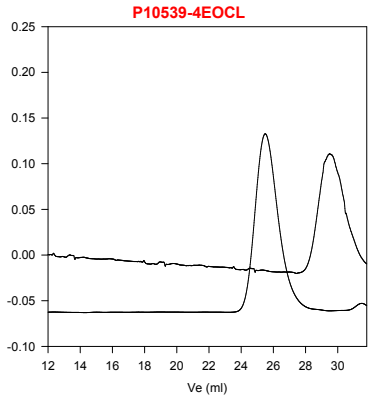
^{1}H NMR of the core:



H NMR of the Polymer:



SEC of the polymer:



Characterization.

The Mn of the polymer is calculated from 1H-NMR spectroscopy by comparing the peak area of the core protons at about about 3.6 ppm with the □-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.