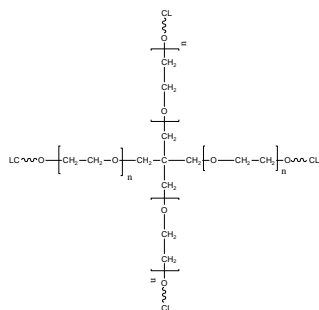


Sample Name: Four arm Poly(ethylene oxide –b-ε-caprolactone)

Sample #: P10774A-4EOCL

Structure:



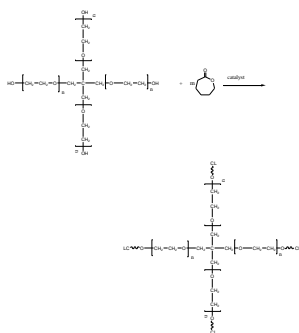
Composition:

Mn x 10 ³ Total	PDI
0.50-b-5.2	1.63
(branch) Mn : (0.13-b-1.3)	

Dp of each branch: EO-b-CL 3-b-12 (average)

Synthesis Procedure:

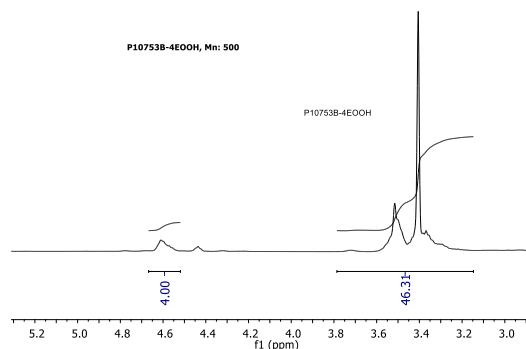
The polymer was prepared by ring opening polymerization of caprolactone using Tin octoate as the catalyst and 4EOOH that bears Mn of 500 as the core. The scheme of the reaction is illustrated below:



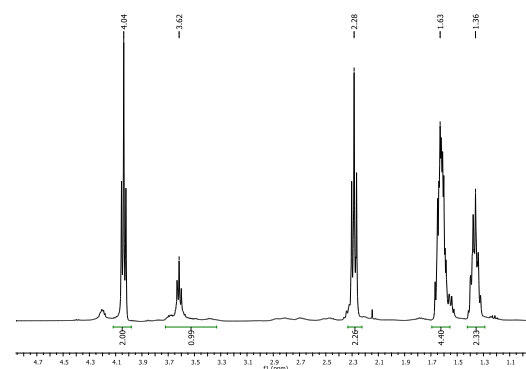
Characterization:

The Mn of the polymer is calculated from ¹H-NMR spectroscopy by comparing the peak area of the core protons at about 3.6 ppm with the ε-caprolactone protons at about 4.1 ppm. Polydispersity is determined by size exclusion chromatography (SEC) equipped with RI and light scattering detectors using THF containing 2 vol% (Et)₃N as the eluent.

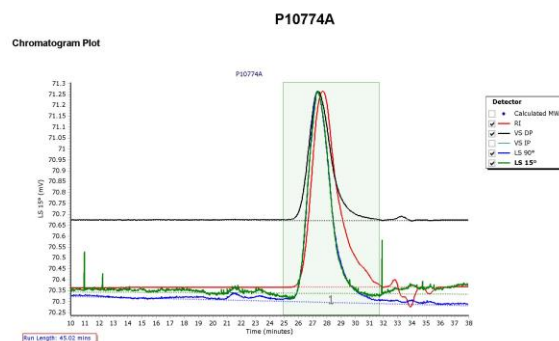
¹H NMR spectrum of the core 4EOOH:



¹H NMR spectrum of the polymer:



SEC elugram of the polymer:



Peak	Mn(g/mol)	Mw(g/mol)	PDI
Peak 1	5,700	9,300	1.63