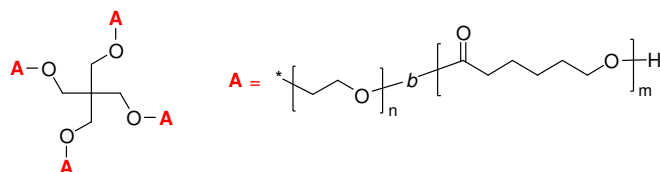


**Sample Name:**

Four-arm poly(ethylene oxide-*block*- $\epsilon$ -caprolactone)  
star polymer with pentaerythritol core

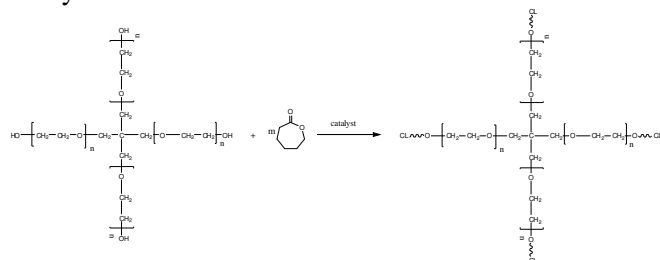
**Sample #** P3131-4EOCL

**Structure:****Composition:**

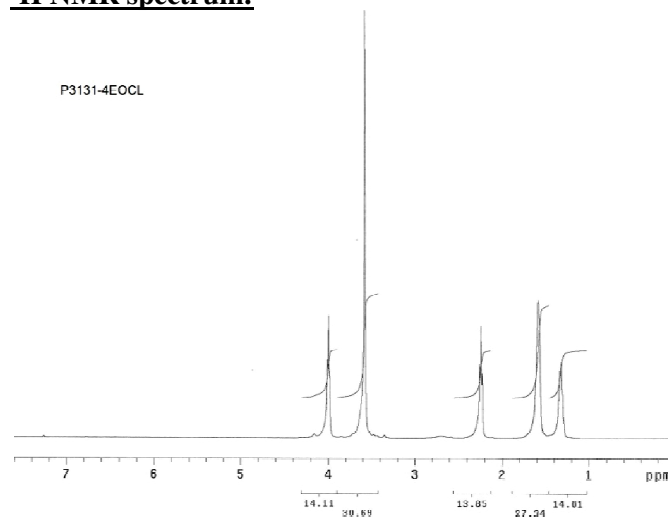
$M_n \times 10^3$ (g/mol) of each PEO- <i>b</i> -PCL arm	$M_w/M_n$
2.5- <i>b</i> -6.0	1.08

**Synthesis procedure:**

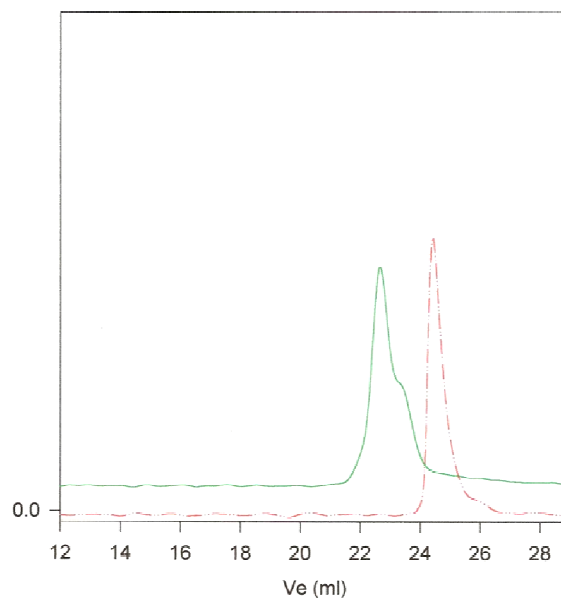
The polymer was prepared by ring opening polymerization of caprolactone using Tin octoate catalyst. The scheme of the reaction is shown below:

**Characterization:**

The molecular weight of the polymer was calculated by  $^1\text{H}$ -NMR spectroscopy by comparing the integration of protons assigned to core ( $\sim 3.6$  ppm) and to  $\epsilon$ -caprolactone ( $\sim 4.1$  ppm). Polydispersity index ( $M_w/M_n$ ) was determined by size exclusion chromatography (SEC) on Varian liquid chromatograph equipped with triple detector, Supelco columns, and using THF (cont. 2 vol%  $\text{Et}_3\text{N}$ ) as an eluent.

 **$^1\text{H}$  NMR spectrum:****SEC elugrams:**

**P3131- 4EOCL**



Size exclusion chromatography of Four arm block copolymer of Poly(ethylene oxide-*b*-caprolactone):

— Four arm Poly(ethylene oxide),  $M_n=10000$ ,  $M_w=10800$ ,  $PI=1.08$

— Four arm Block Copolymer PEO(10000)-*b*-PCL(24000),  
 $M_w/M_n$  (PI)=1.20 Composition from  $^1\text{H}$  NMR  
Mn: of each Branch: PEO (2500) PCL(6000)