

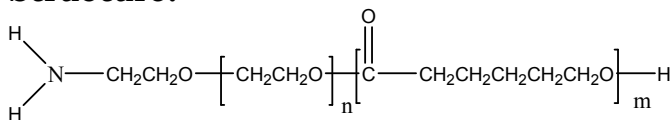
Sample Name:

Amino end functionalized

Poly(ethylene oxide-b-caprolactone)

Sample #: P10343D- NH2EGCL

Structure:



Composition:

| Mn x 10 ³ NH2 EG-b-PCL | PDI | NH ₂ functionality |
|--------------------------------------|------|-------------------------------|
| 4.0-b-1.7 | 1.15 | >95% |

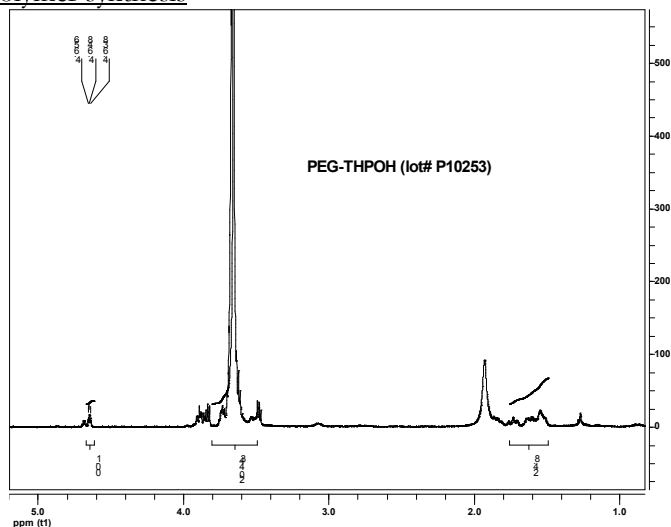
Characterization:

An aliquot of the anionic poly(ethylene oxide) block was terminated before addition of caprolactone and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The polymer obtained at each step and the final block copolymer composition was calculated from ¹H-NMR spectroscopy by comparing the peak area of the ethylene oxide protons at about 3.6 ppm with the ε-caprolactone protons at about 4.1 ppm.

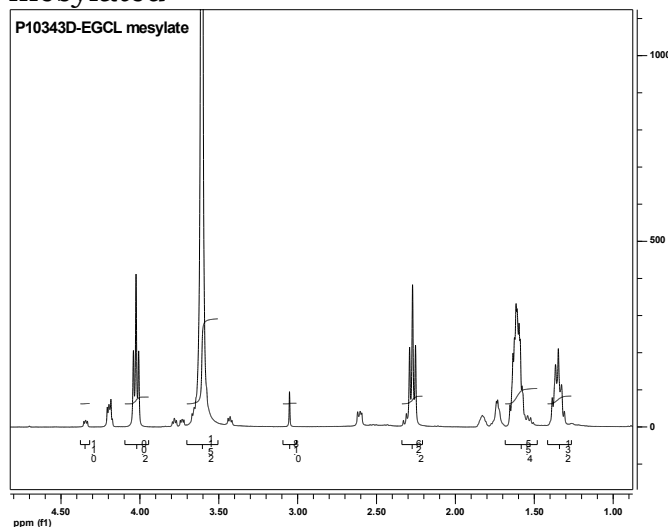
Terminal mesylate group was converted to amino group and the reaction was monitored by disappearance of mesylate absorbance at 1175 cm⁻¹. Titration: the degree of functionality was confirmed by titration with HClO₄ using crystal violet as the indicator.

¹H-NMR Spectrum of the polymer

α-Mesylate-ω-pyran terminated PEG used in this polymer synthesis

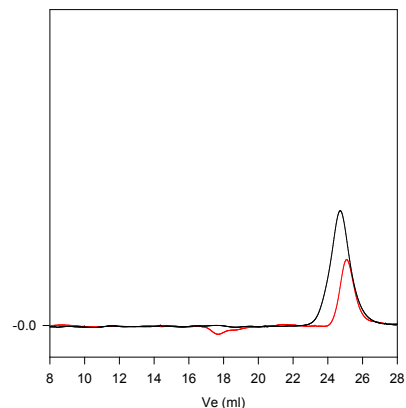


¹H NMR of the diblock copolymer:
mesylated



SEC of the block copolymer:

P10343D-NH2EGCL



Size exclusion chromatograph of NH2 terminated PEG-b-CL

PEG Block: M_n=4000, M_w=4300, PI=1.08

NH2-EG-b-CL: 4,000-b-1700 Mw/Mn:1.15

