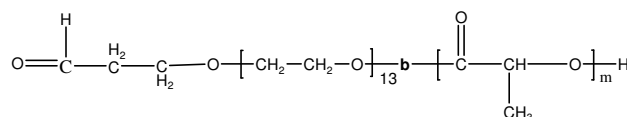


Sample Name:
Aldehyde end functionalized Poly(ethylene oxide -b- lactide) DL form

Sample #: P4348- EGLACHO

Structure:

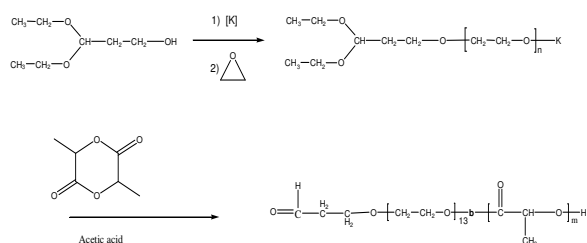


Composition:

Mn x 10 ³ CHOEG-b-LA	PDI
5.1-b-4.5	1.10

Synthesis Procedure:

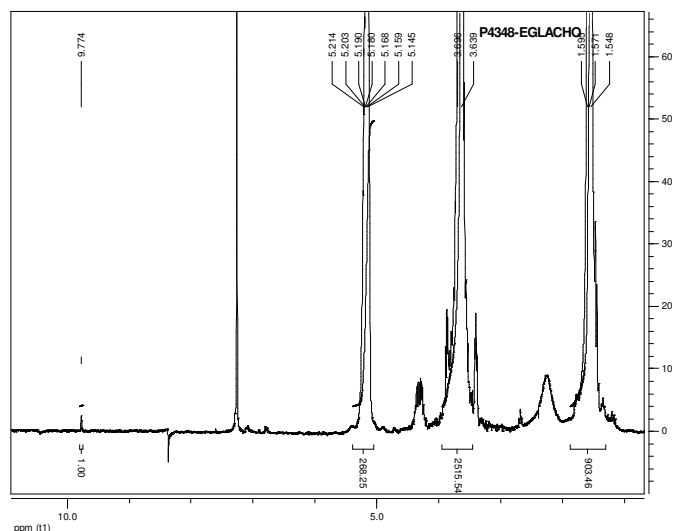
The scheme of the reaction is illustrated below:



Characterization:

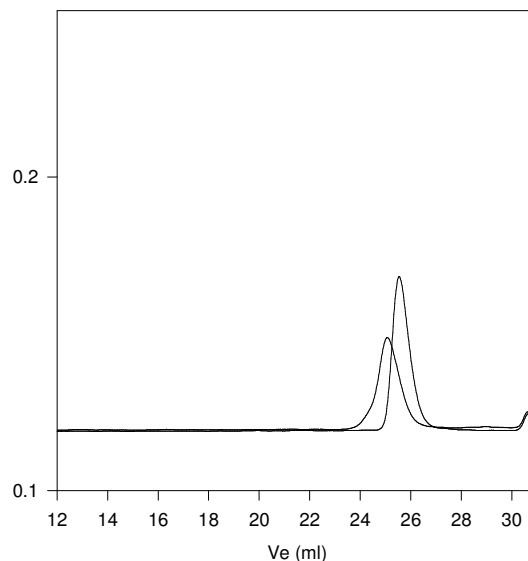
An aliquot of the anionic poly(ethylene oxide) block was terminated before addition of caprolactone and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The polymer obtained at each step and the final block copolymer composition was calculated 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.

¹H NMR Spectrum of the polymer and the final block copolymer



SEC elugram of the block copolymer:

P4348- EGLACHO (DL -lactide)



Size exclusion chromatography:

- First block 3,3-diethoxy propoxy terminated Poly(ethylene glycol),
M_n=5100, M_w=5300, PI=1.04
- Block Copolymer diethoxy endcapped PEG-b-Lactide
Mn: PEG(5100)-b-PLA_{DL}(4500) Mw/Mn : 1.10
Composition from H NMR and FTIR
After deprotection terminal end group:
aldehyde terminated PEG-b-Lactide_(DL form)