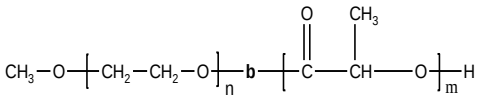
Sample Name:
Poly(ethylene oxide -b- lactide) (DL form)
Sample #: P7077-EOLA
Structure:



Composition:

Mn x 10^3 PEO-b-PLA	PDI
0.55-b-26.8	1.3
For PLA block	T_g: 46°C

Synthesis Procedure:
Poly(ethylene oxide -b- lactide) is prepared by living anionic polymerization of ethylene oxide and coordination polymerization of lactide.

Characterization:

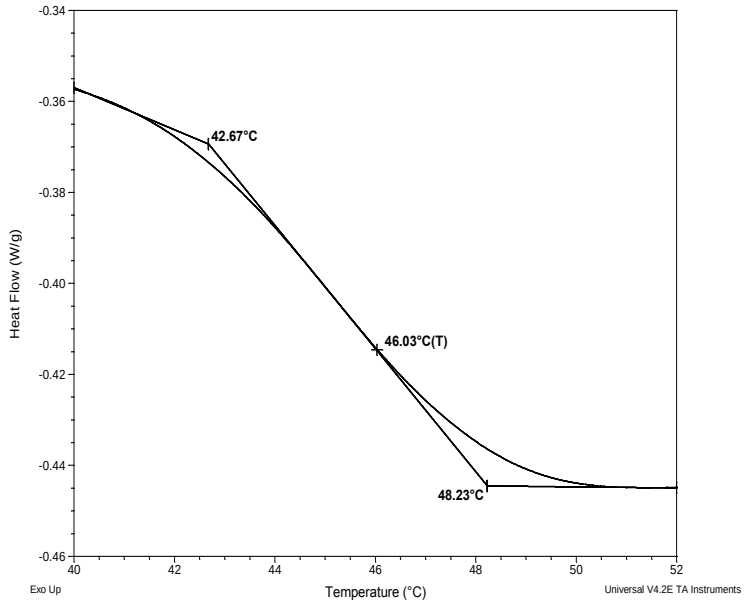
An aliquot of the anionic poly(ethylene oxide) block was terminated before addition of lactide and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ^{1}H-NMR spectroscopy by comparing the peak area of the ethylene oxide protons at about 3.6 ppm with the lactide protons at about 5.1 ppm.

Thermal analysis

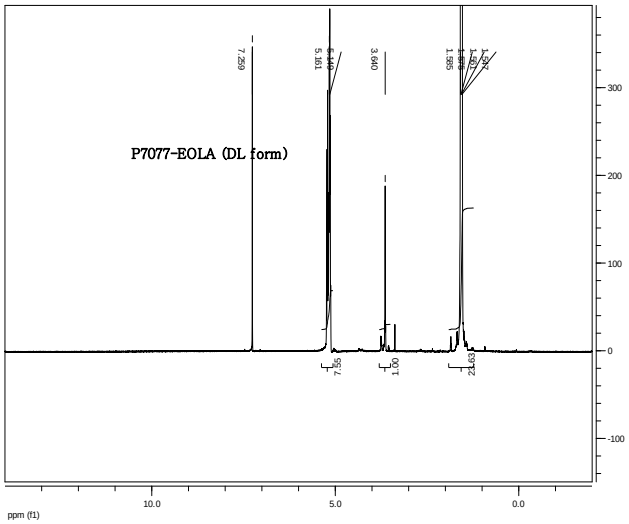
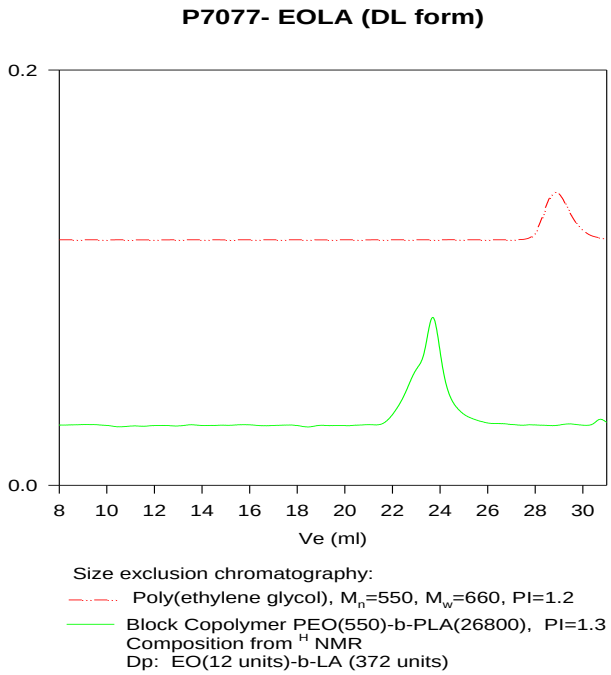
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:
Poly(ethylene oxide -b- lactide) is soluble in chloroform, THF, DMF, toluene and precipitates from ethanol, ether and hexane.

Thermogram for the sample



^{1}H-NMR Spectrum of the block copolymer:



SEC of the block copolymer: