

Product Profile

Identification

Product Name:	Methoxy poly(ethylene glycol)- <i>b</i> -poly(D,L-lactide) Or Poly(ethylene glycol - <i>b</i> - lactide) (DL form) Or Polyethyleneglycol methylether- <i>block</i> -Poly DL lactide
Linear Formula:	$\text{HO}[\text{CH}(\text{CH}_3)\text{COO}]_m[\text{CH}_2\text{CH}_2\text{O}]_n\text{CH}_3$
Product Lot Number:	P44587F-EOLA
Product Chemical Architecture:	$\text{CH}_3-\text{O}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-\text{b}-\left[\text{C}(=\text{O})-\text{CH}(\text{CH}_3)-\text{O}\right]_m-\text{H}$

Composition:

$\text{Mn} \times 10^3$ mPEG- <i>b</i> -LA (dl form)	Mw/Mn j(PDI)	Lactide
0.75- <i>b</i> -7.0	1.43	(dl form)
Dp of each block: mPEG ₁₇ - <i>b</i> -LA ₁₀₀)		

Method of Synthesis

Poly(ethylene oxide -*b*- lactide) is prepared by living anionic polymerization of ethylene oxide and coordination polymerization of lactide with Tin octoate as catalyst.

Solubility in different solvents

THF (warm)	√		
CHCl ₃	√	CHCl ₃	√
Toluene-(warm)	√		

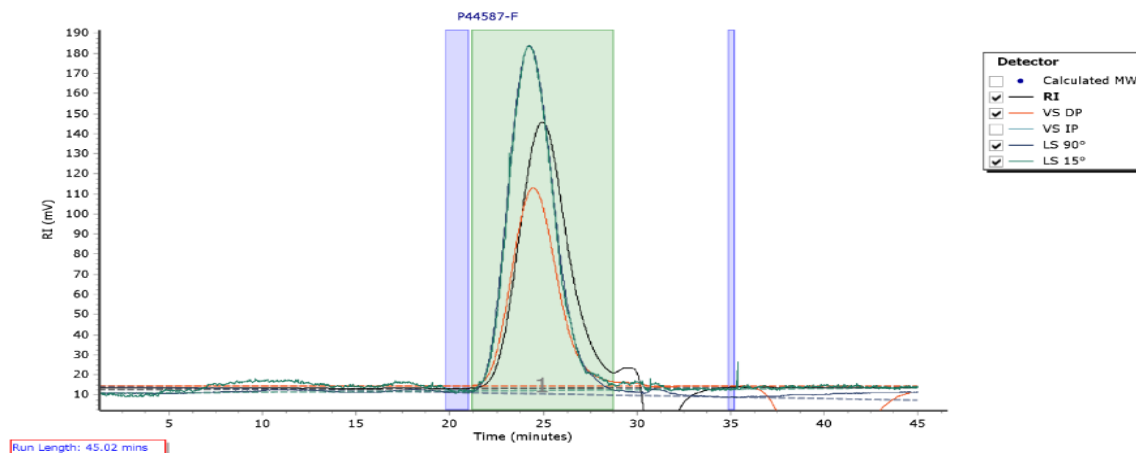
Important biocompatible, amphiphilic block copolymer composed of a hydrophilic PEG block and a hydrophobic poly(D,L-lactide) (PLA) block. These materials are for control release and nanoparticle formulation for drug encapsulation and delivery applications.

Architecturally controlled well-defined materials with varying properties can be prepared by controlling the relative length of each polymer block. OH, SH and NH₂ end terminated polymers allows for facile further chemical modification of these materials.

Characterization:

A. Gel Permeation Chromatography (GPC), SEC- Profile: P44587-F

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	7489	5687	8134	10953	14033	10538	1.43

B. NMR (HNMR) of polymer:

