

## Product Profile

### Identification

<b>Product Name:</b>	Methoxy poly(ethylene glycol)- <i>b</i> -poly(D,L-lactide) <b>Or</b> Poly(ethylene glycol - <i>b</i> - lactide) (DL form) <b>Or</b> Polyethyleneglycol methylether- <i>block</i> -Poly DL lactide
<b>Linear Formula:</b>	$\text{HO}[\text{CH}(\text{CH}_3)\text{COO}]_m[\text{CH}_2\text{CH}_2\text{O}]_n\text{CH}_3$
<b>Product Lot Number:</b>	<b>P44587E-EOLA</b>
<b>Product Chemical Architecture:</b>	$\text{CH}_3-\text{O}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-\text{b}-\left[\text{C}(=\text{O})-\text{CH}(\text{CH}_3)-\text{O}\right]_m-\text{H}$

### Composition:

$\text{Mn} \times 10^3$ mPEG- <i>b</i> -LA (dl form)	Mw/Mn (PDI)	Lactide
0.75- <i>b</i> -1.0	1.14	(dl form)
Dp of each block: mPEG <sub>17</sub> - <i>b</i> -LA <sub>14</sub> )		

### 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 <sub>3</sub>	√	CHCl <sub>3</sub>	√
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.

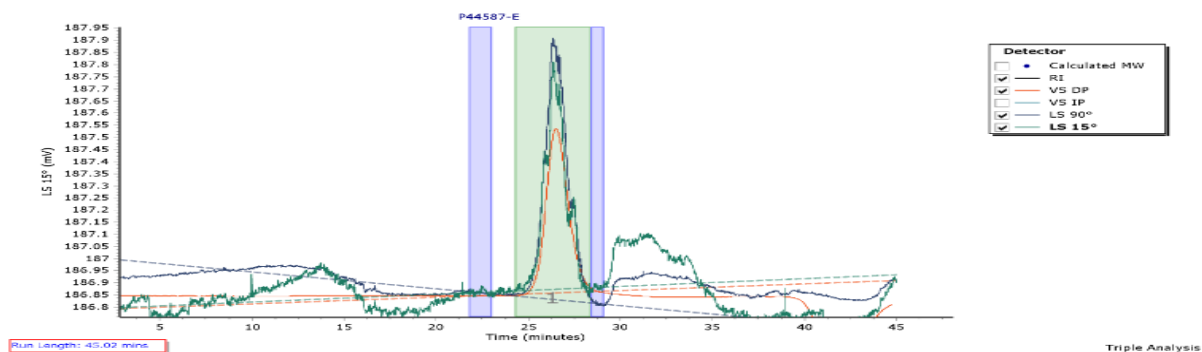
Architecturally controlled well-defined materials with varying properties can be prepared by controlling the relative length of each polymer block. OH, SH and NH<sub>2</sub> end terminated polymers allows for facile further chemical modification of these materials.

## Characterization:

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

P44587-E

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	2146	1855	2121	2392	2662	2280	1.143

### B. NMR (HNMR) of polymer:

P44587E

P44587E-mPEG-B-LA Mn 750-b-1000

