

# Product Profile

## Identification

**Product Name:** Methoxy poly(ethylene glycol)-*b*-poly(D,L-lactide)

**Or** Poly(ethylene glycol -*b*- lactide) (DL form)

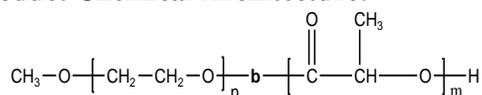
**Or** Polyethyleneglycol methylether-*block*-Poly DL lactide

## 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:** P44522-EOLA

## Product Chemical Architecture:



## Composition:

Mn x 10 <sup>3</sup> mPEG- <i>b</i> -LA (dl form)	Mw/Mn (PDI)	Lactide
0.7- <i>b</i> -3.0	1.12	(dl form)
Dp of each block: mPEG <sub>16</sub> - <i>b</i> -LA <sub>43</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.

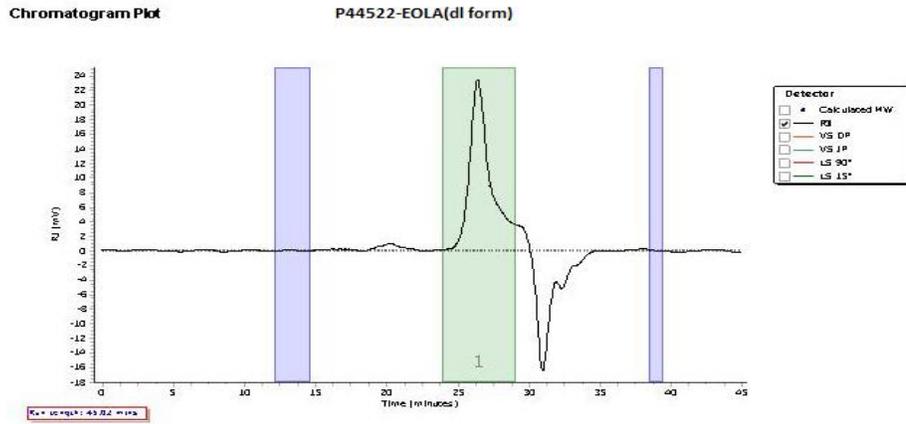
## Solubility in different solvents

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.

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



**B. NMR (HNMR) of mPEG-b-LA**

