

Product Profile

Identification

Product Name: Poly(lactide-co-glycolide), random
Lactide in DL-Form

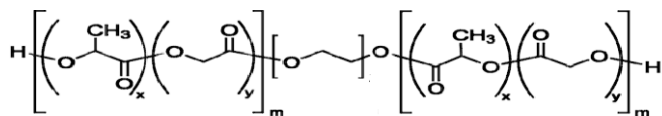
Synonym(s): PLGA

Linear Formula: $[C_3H_4O_2]_x[C_2H_2O_2]_y$

Product Lot Number: P44474-LAGLran

CAS# 26780-50-7

Product Chemical Architecture:



Composition:

Mn x 10 ³	Mw x 10 ³	Mw/Mn (PDI)
6.0	10.5	1.7
Composition: dl(LA):GL 40:60		
Terminal group -Hydroxy		

Appearance (Color) White to Faint ivory

Appearance (Form) Powder or honey like depends on its Mw.

Molecular Number determined by ¹H NMR.

Storage: In airtight bottle 2-8°C

Method of Synthesis

3,6-Dimethyl-1,4-dioxane-2,5-dione (or DL Lactide or *rac*-lactide), is the 50:50 racemic mixture of D- and L-Lactide with Glycolide (required composition mixture). Lactide and Glycolide mixture can be readily polymerized via ring-opening polymerization, using a variety of metal or organo-catalysts, yielding poly(D,L-lactide-co-Glycolide). *While the resulting polymer is generally amorphous*, the use of **stereospecific** catalysts can lead to heterotactic PLA, which exhibits some degree of crystallinity.

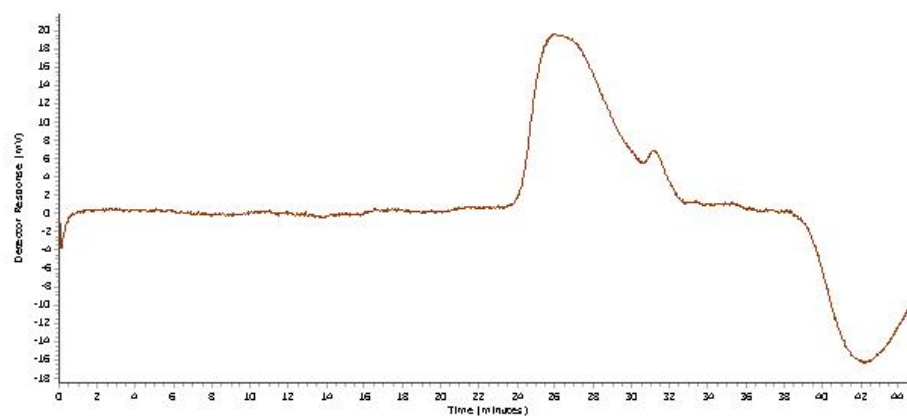
Solubility in different solvents

THF (warm)	√	Ethyl-acetate	
CHCl ₃	√		
Acetone	√		

Architecturally controlled well-defined materials with varying properties can be prepared by controlling Dp of monomer units. OH, SH and NH₂ end terminated polymers allow for facile further chemical modification of these materials.

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

Chromatogram Plot



Mn calculated from HNMR and Mw/Mn by GPC=1.7

B. HNMR of the producty carried out in CdCl₃:

P44474-LAGLran Ratio 40:60

