Product Profile

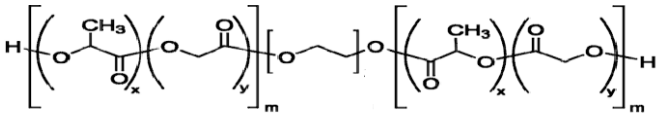
Identification

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: P18712AR-LAGLran
CAS# 26780-50-7

Product Chemical Architecture:



Composition:

Mn x 10^3	Mw x 10^3	Mw/Mn (PDI)
3.0	3.5	1.17
Composition: dl(LA):GL 65:35		
Terminal group -Hydroxy		

Appearance (Color) White to Faint ivory
Appearance (Form) Powder or honey like depends on its Mw.
Molecular Number determined by ^{H}NMR.
Storage: In airtight bottle 2-8^{o}C

Method of Synthesis

3,6-Dimethyl-1,4-dioxane-2,5-dione(or DL Lactide r *rac*-lactide), is the 50:50 racemic mixture of D- and L-Lactide with Glycolide (required composition mixture). *L*actide and Glycolide mixture can be ready 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 amorphou*s, the use of stereospecific catalysts can lead to heterotactic PLA, which exhibits some degree of crystallinity.

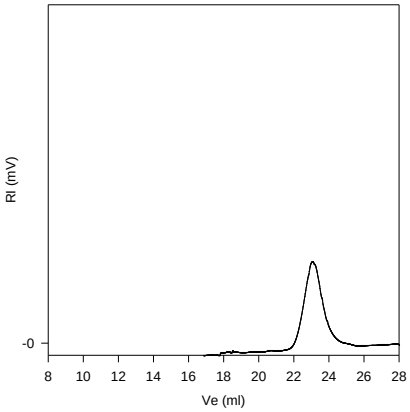
Solubility in different solvents

THF ($_{warm}$)	√	Ethyl-acetate	
CHCl3	√		
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 allows for facile further chemical modification of these materials.

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

P18712A-LAGL-ran



Size Exclusion Chromatography of random copolymer : THF/CHCl3

M_n = 3,000, M_w = 3,500, M_w/M_n = 1.17

B. ^{H}NMR of the product carried out in $CdCl_3$: