

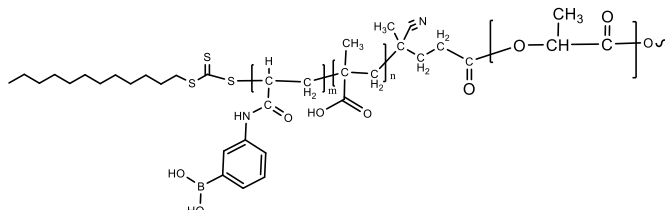
Product Profile

Identification

Product Name: Poly(dl-lactide)-b-poly(methacrylic acid-co-3-acrylamidophenylboronic acid)

Sample #: P45745-LAMAAPBA

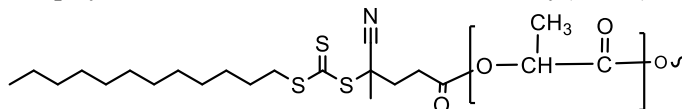
Structure:



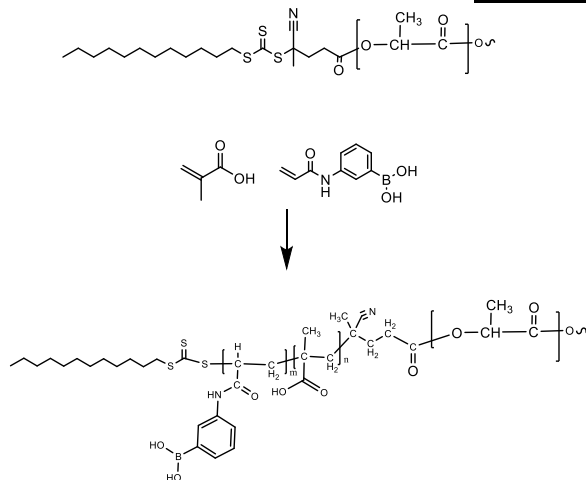
Composition:

Mn x 10 ³ PDLLA-b-MAAPBA	Mw/Mn (PDI)	Dp of copolymer by HNMR	Dp of copolymer by HNMR In DMSO+CD ₃ Cl
5.0-b-39.0	1.4	In DMSO PDLLA ₇₀ -b-MAA ₃₆₀ PBA ₄₂	
		In DMSO+ a drop of D ₂ O PDLLA ₇₀ -b-MAAPBA	

Method of Synthesis. 2 step synthesis 1. RAFT macroinitiator of Poly(dl LA) of Mn 5000



2. Reaction of RAFT macroinitiator with MAA and PBA monomer **in Dioxan** with trace amount of water



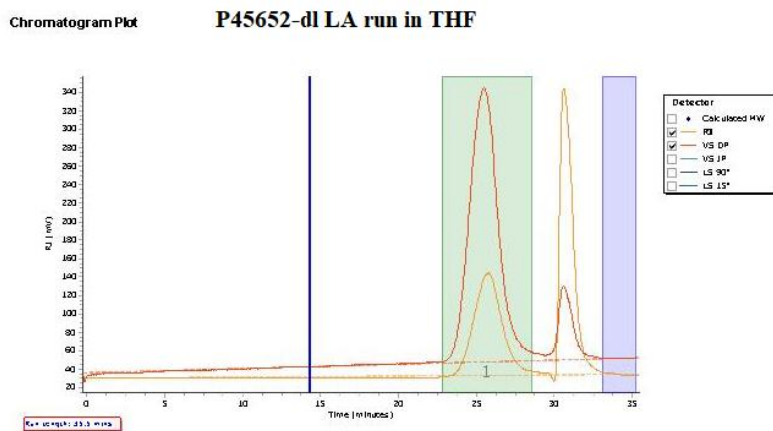
Solubility in different solvents : depending on the compositions

THF	X	Methanol	√	Acetone	X Cloudy soft heterogeneous solution
CHCl ₃	X	DMSO	√	Aceton:Methanol 5:5	√

Purification of Polymer By Soxhlet in acetone: to remove any traces amount of PDLLA and unreacted RAFT and traces amount of MAA and PBA monomer.

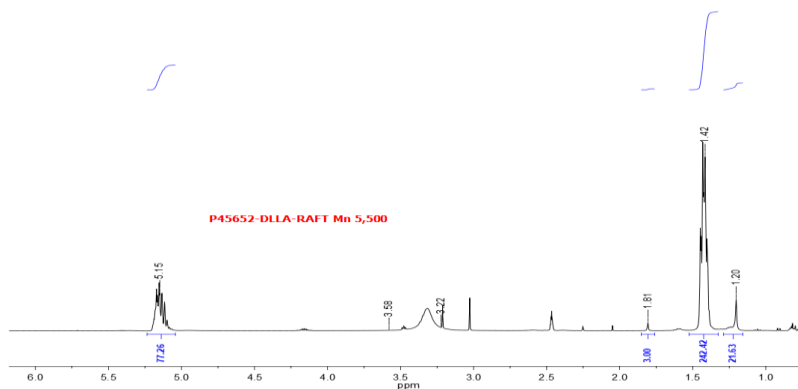
Validation of Architecture:

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



Mn from HNMR and MW/MN by GPC 1.15

HNMR of DILA RAFT

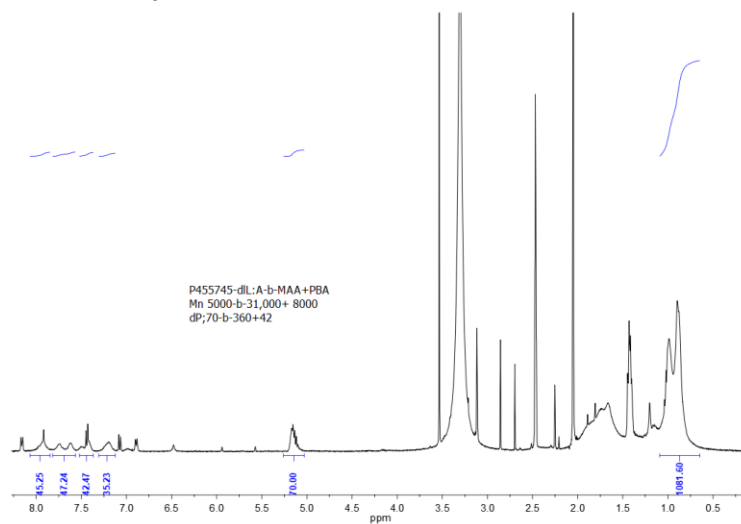


B. NMR (HNMR) of polymer: RAFT Macroinitiator PDLLA

	<u>Chemical shift</u> <u>C-(H)</u>	<u>C(CH₃)</u>	<u>Calculated Mn</u>
In acetone	5.43	1,53	4,800
In CdCl₃	5.05	1.60	5,500
In DMSO	5.43	1,45	4,000
			<u>Average</u> 5,000

C. HNMR of Block copolymer

1. Run from d6 DMSO



D. TGA of the polymer run at 10 °C heating rate:

