

Product Profile

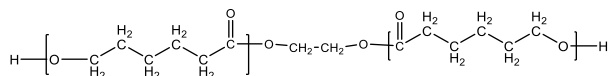
Identification

Product Name: Poly(ε-Caprolactone)

Product Lot Number: P44341-CL

CAS #: 24980-41-4

Chemical Architecture:



Composition:

Mn (g/mole)	173,500
Mw (g/mole)	230,000
Mw/Mn	1.30
dn/dc (mL/g) in THF at 30 °C	0.030

Method of Synthesis

The polymer is synthesized by ring opening polymerization process.

Solubility in different solvents:

THF	√	DMF	√
Alcohol	X	CHCl ₃	√
Toluene	√	Water	X

Validation of Architecture

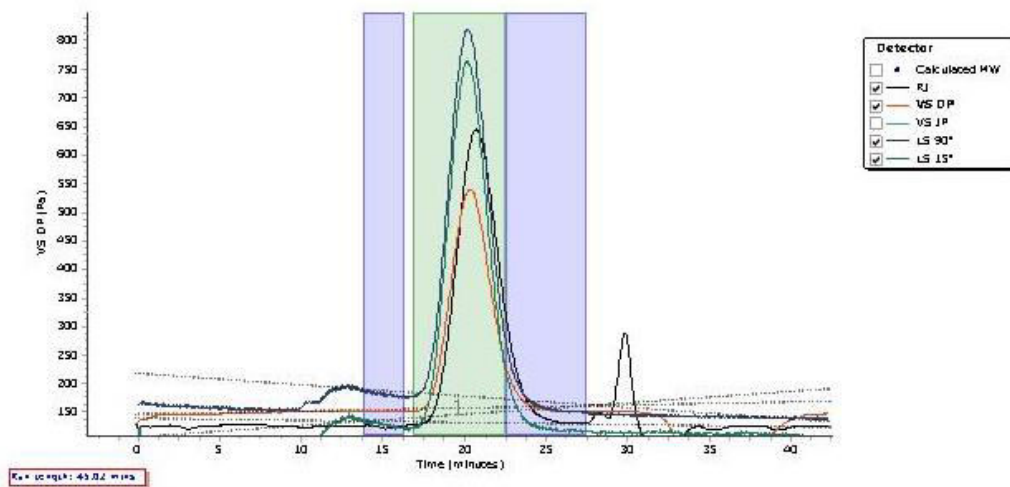
A. Gel Permeation Chromatography (GPC), SEC Profile:

Molecular weights were determined by Agilent Technologie 1260 Infinity II GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LS 15°) and three columns (PLgel, 7.5x300 mm, 5µm-10µm, 10⁵-10⁶Å). THF (stabilized BHT) with 1%(v/v%) TEA was the eluent. The flow rate was 1.0 ml/min.



Chromatogram Plot

P44341-CL

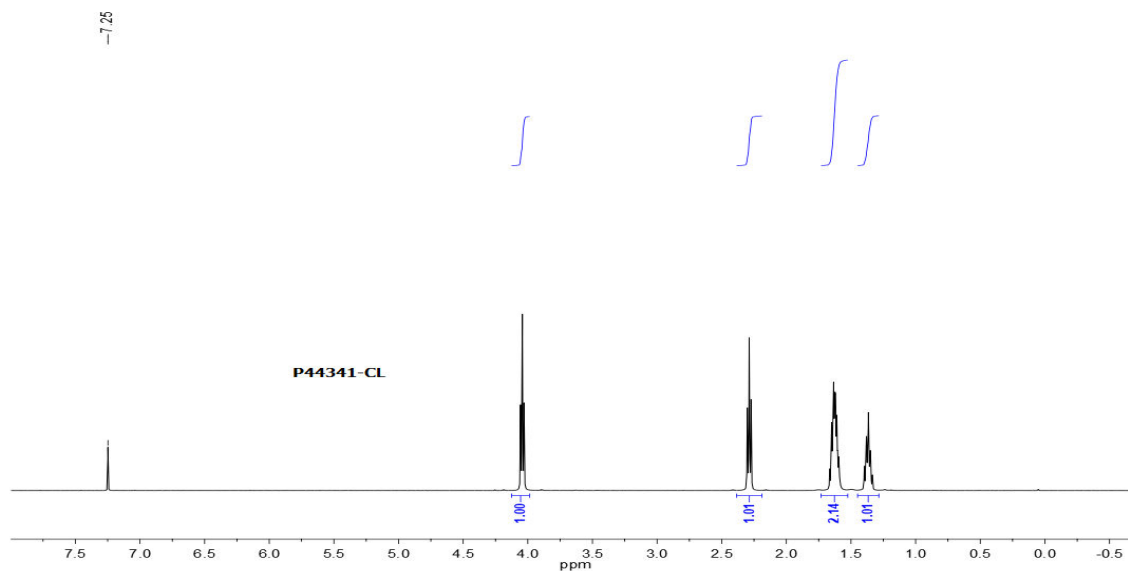


Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	199683	173415	230117	304732	386586	295460	1.327

B. NMR (¹H NMR) of CL

CL sample was dissolved in CDCl₃. ¹H NMR spectra was determined using a 500 MHz. Bruker Avance III spectrometer.





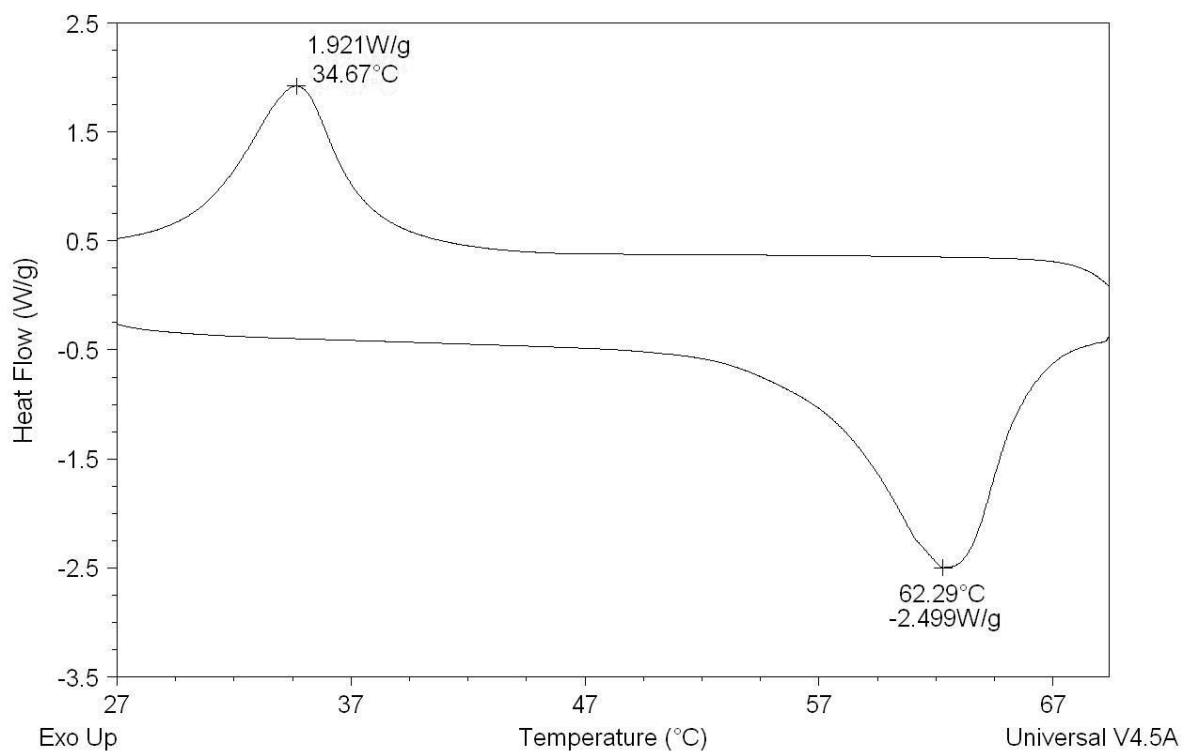
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Thermal analysis result:

T_m (°C)	T_c (°C)	T_g (°C)
62.3	34.7	Not distinct

Sample: PP44341-CL

DSC File: C:\...\Desktop\DSC\Data\Valentyn\2023\270623\PP44341-CL.001



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