

Product Profile

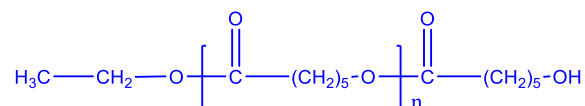
Identification

Product Name: Poly(ε-Caprolactone)

Product Lot Number: P44161B-CL

CAS #: 24980-41-4

Chemical Architecture:



Composition:

| | |
|-------------------------------------|--------------|
| Mn (g/mole) | 3,800 |
| Mw (g/mole) | 4,800 |
| Mw/Mn | 1.27 |
| 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

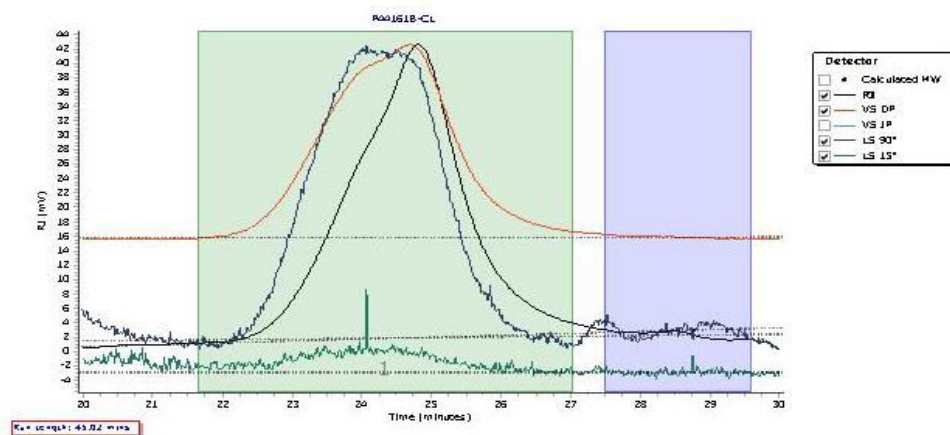
A. Gel Permeation Chromatography (GPC), SEC Profile:

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.



P44161B-CL

Chromatogram Plot



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 | 3938 | 3800 | 4832 | 6055 | 7412 | 5663 | 1.272 |

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.

