



## Product Profile

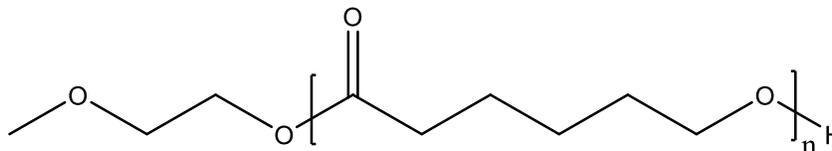
### Identification

**Product Name:** Poly( $\epsilon$ -Caprolactone)

**Product Lot Number:** P18183B-CL

**CAS #:** 24980-41-4

**Chemical Architecture:**



**Composition:**

<b>Mn (g/mole)</b>	<b>17,000</b>
<b>Mw (g/mole)</b>	<b>28,000</b>
<b>Mw/Mn</b>	<b>1.64</b>
<b>dn/dc (mL/g) in THF at 30 °C</b>	<b>0.030</b>

### Method of Synthesis

The polymer is synthesized by ring opening polymerization process.

**Solubility in different solvents:**

THF	√	DMF	√
Alcohol	X	CHCl <sub>3</sub>	√
Toluene	√	Water	X

### Validation of Architecture

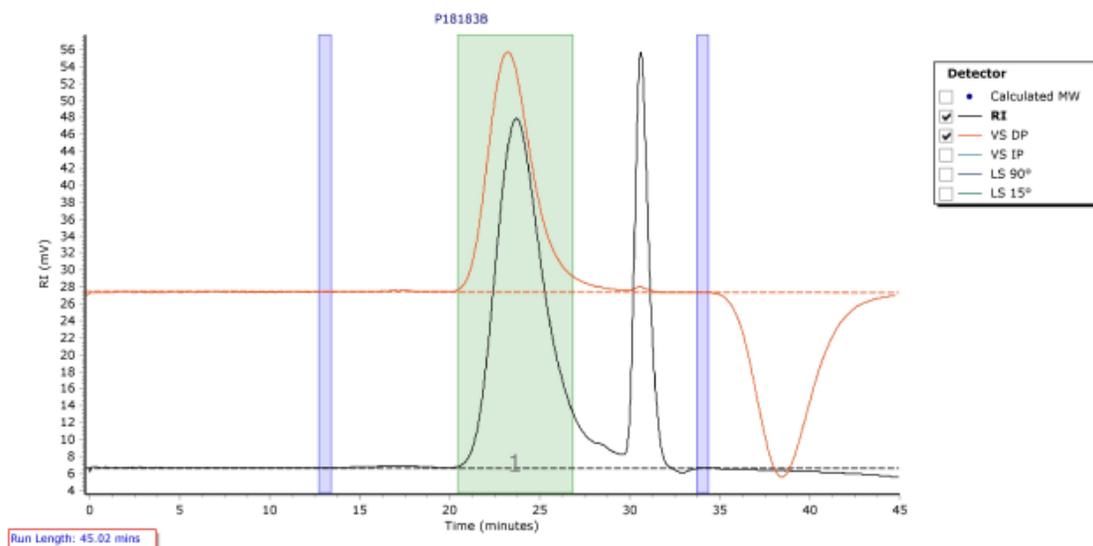
**A. Gel Permeation Chromatography (GPC), SEC Profile:**

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, 5 $\mu$ m-10 $\mu$ m, 10<sup>5</sup>-10<sup>6</sup>Å). THF (stabilized BHT) with 1%(v/v%) TEA was the eluent. The flow rate was 1.0 ml/min.



P18183B

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	25732	16971	27841	41981	57825	39115	1.641

**B. NMR (<sup>1</sup>H NMR) of CL**

CL sample was dissolved in CDCl<sub>3</sub>. <sup>1</sup>H NMR spectra was determined using a 500 MHz. Bruker Avance III spectrometer.

