

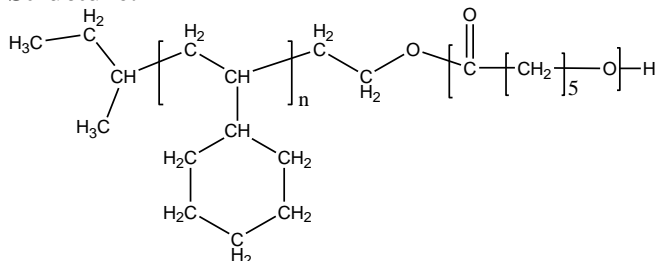
Sample Name:

Poly Vinyl Cyclohexane-b- ϵ -Caprolactone

**Synonym: Poly Cyclohexyl ethylene-b-
 ϵ -Caprolactone**

Sample #: **P40577-VCHCL**

Structure:



Composition:

Mn x 10 ³	PDI
5.0-b-25.5	1.65
T _m (PCL):	49.5 °C

Synthesis Procedure:

The polymer was synthesized from OH terminated Poly Vinyl cyclohexane.

Characterization:

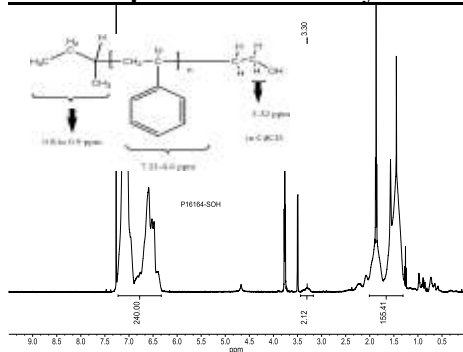
The product was characterized by size exclusion chromatography (SEC) and ¹H NMR.

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The melting point (T_m) and glass transition temperature (T_g) of the polymer were measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

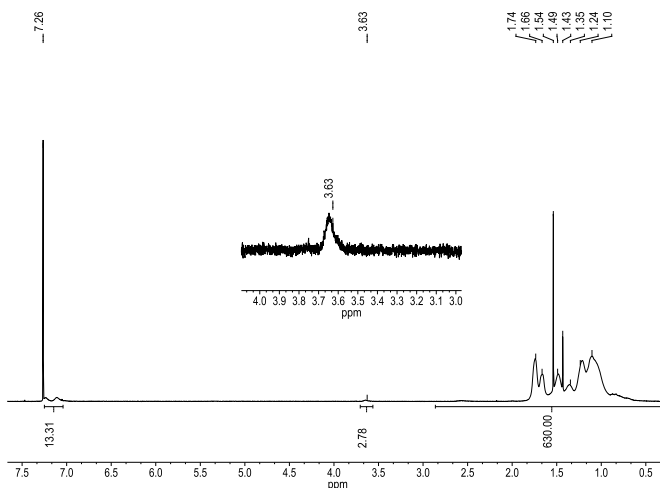
Solubility:

Polymer is soluble in toluene, THF, CHCl₃ and can be precipitated in water and cold methanol.

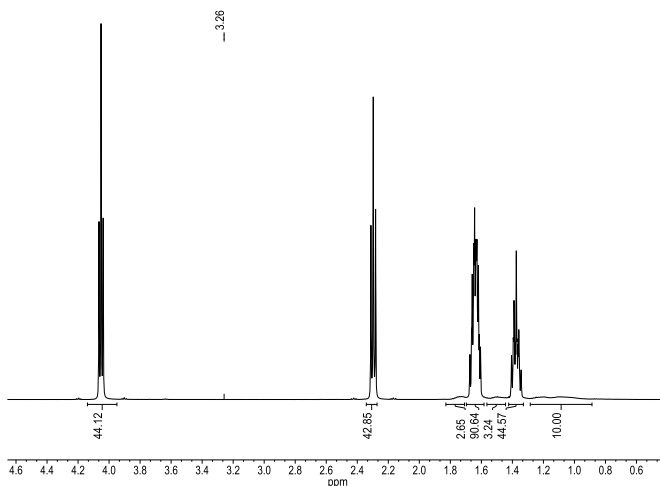
¹H NMR spectrum of the Polymer: SOH



¹H NMR spectrum of the PVCH OH:

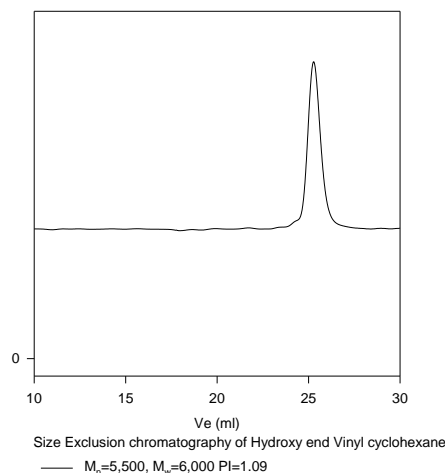


¹H NMR spectrum of the block coPolymer:



SEC elugram of the PVCH OH :

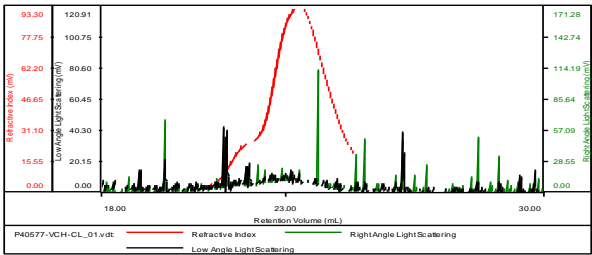
P40405-VCHOH



SEC elugram of the block copolymer

P40577-VCH-CL

Concentration (mg/mL)	6.1371
Sample dn/dc (mL/g)	0.0540
Method File	PS80K-Feb2017-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



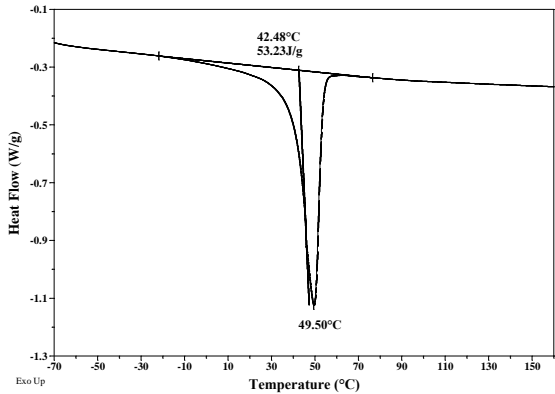
Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40577-VCH-CL_01.vdt	30,452	51,172	1.680	0.5831	28,008

DSC thermograms of the polymer:

– 2nd heating scan at 10°C/min

Sample: P40577_VCHCL
Size: 11.8000 mg

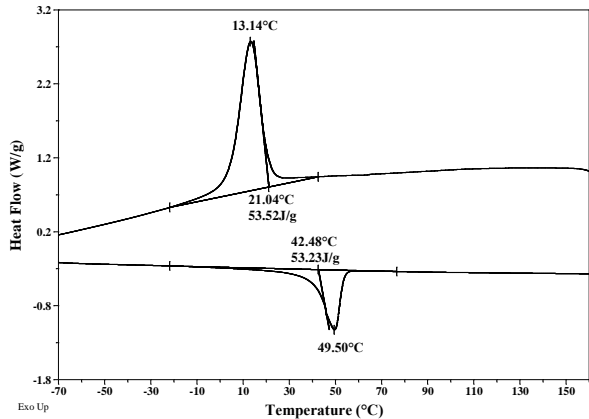
File: P40577-VCHCL.001



– 2nd heating scans at 10°C/min and 3rd cooling scan at 30°C/min:

Sample: P40577_VCHCL
Size: 11.8000 mg

File: P40577-VCHCL.001



– no T_g observed for this polymer.