

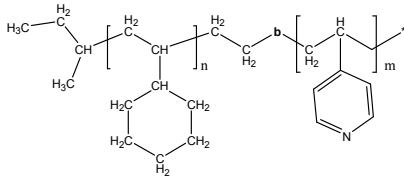
Sample Name:

Poly Vinyl Cyclohexane-b-4Vinylpyridine

Synonym: Poly Cyclohexyl ethylene-b-4Vinylpyridine

Sample #: **P40374-VCH4VP**

Structure:



Composition:

Mn x 10 ³	PDI
12.5-b-5.0	1.05
T _g (°C)	120 & 152

Synthesis Procedure:

The polymer was synthesized by combination of anionic polymerization and RAFT process.

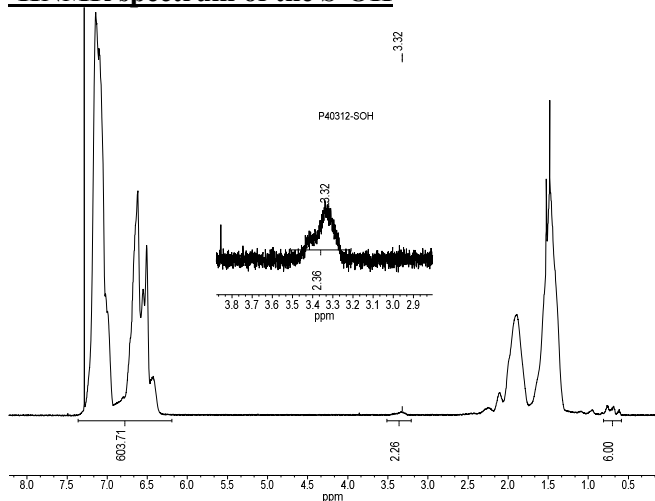
Characterization:

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

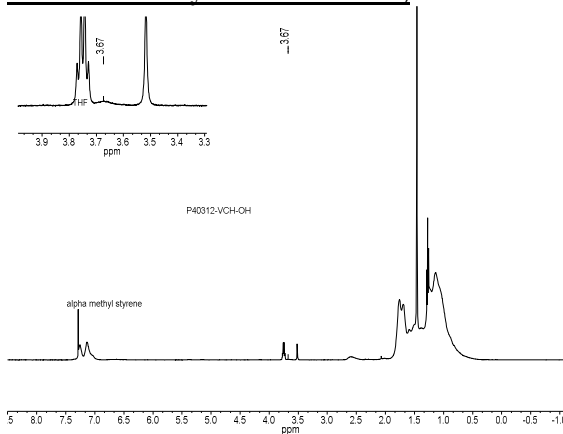
Solubility:

Polymer is soluble in toluene (not clear solution), THF, CHCl₃ and is not soluble in Methanol, and DMF.

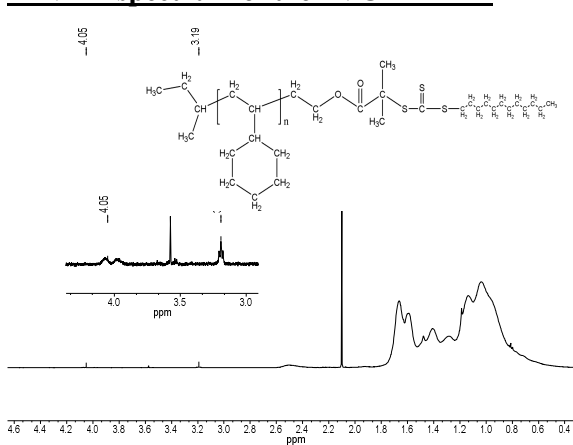
¹H NMR spectrum of the S-OH



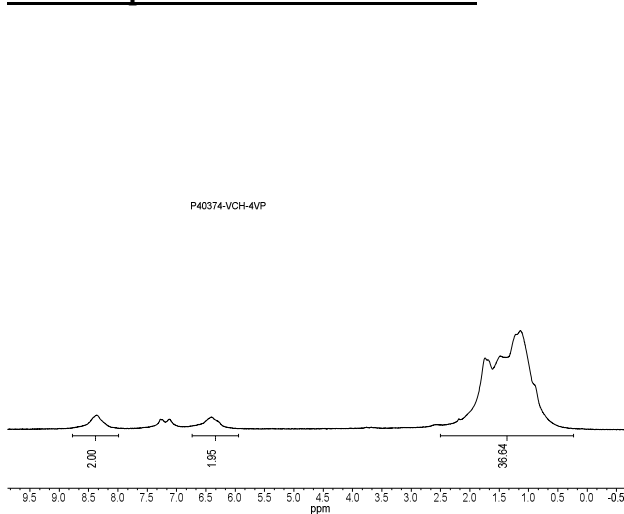
¹H NMR of Polymer PVCH-OH:



¹H NMR spectrum of the PVCH-RAFT



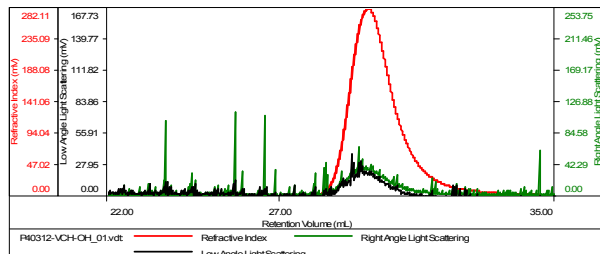
¹H NMR spectrum of the PVCH-4VP:



SEC elugram of PCHE before attaching 4VP block

P40312-VCH-CH

Concentration (mg/mL)	8.5194
Sample dn/dc (mL/g)	0.1300
Method File	PS80K-Nb2016-6-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



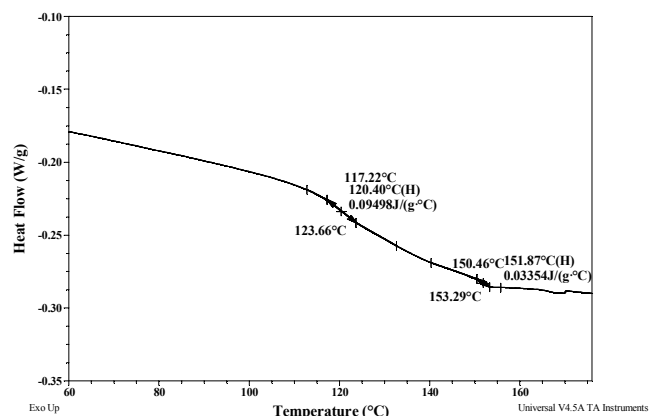
Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40312-VCH-CH_01.v	12,304	12,934	1.051	0.1575	12,815

DSC thermogram for the sample:

Sample: P40375-VCH4VP
Size: 7.5000 mg

DSC

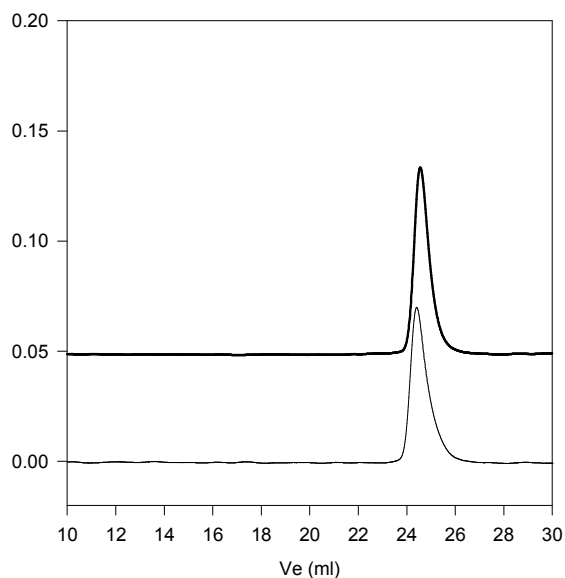
File: P40375-VCH4VP.001



SEC elugram of PVCH4VP:

Elution: THF containing 4/v/v(Et)3N and Solution of polymer containing a drop of DMF to avoid adsorption of polymer with columns packing material

P40374-VCH4VP



- Poly(VCH): $M_n=12,500$, $M_w=13,000$, $M_w/M_n=1.05$,
 - Block Copolymer PVCH(12,500)-b-4VP(5,000), $M_w/M_n=1.10$
- Compositions from HNMR