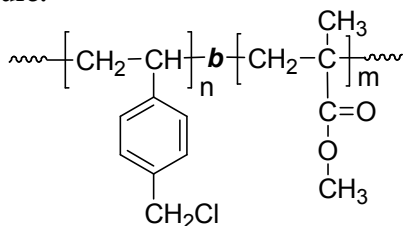


Sample Name: Poly (4-vinyl benzyl chloride-b-methyl methacrylate)
Sample # P19317A-4VBCMMA

Structure:



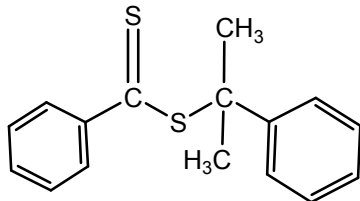
Composition:

Mn x 10 ³ 4-VBC-b-MMA	PDI
28.0-b-44.0	1.6
Contain Homopoly 4VBC in the block copolymer	<15%

Synthesis:

Poly (4-vinyl benzyl chloride-b-methyl methacrylate) block copolymer was synthesized by RAFT polymerization with sequence addition of vinyl benzyl chloride monomer and methyl methacrylate monomer.

RAFT used



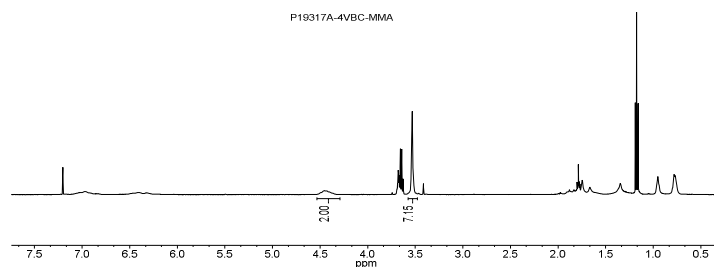
Characterization:

SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. The molecular weight is calculated based on polystyrene standards. The NMR spectrum was recorded in deuterated chloroform to determine the the composition of copolymer.

Solubility:

Poly (4-vinyl benzyl chloride-b-methyl methacrylate) block copolymer is soluble in toluene, THF, CHCl₃; the polymer can be precipitated from ethanol, methanol, and hexane.

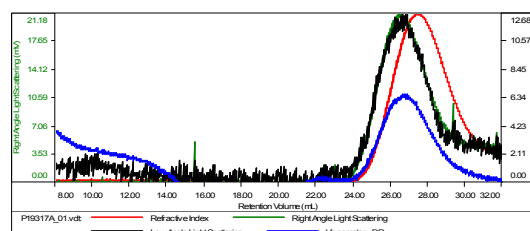
¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

Sample ID: P19317A-1

Concentration (mg/mL)	2.2080
Sample chdc (mL/g)	0.1850
Method File	PS80K-May20-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersal	Intrinsic Viscosity (dL/g)
P19317A_01.vcl	27,984	35,134	28,365	1.255	0.2232

SAMPLE ID: P19317A-4VBCMMA run in DMF
Mn composition by HNMR

Conc (mg/mL)	2.2213
dn/dc (mL/g)	0.1560
Method	PS80K-May2015-0000.vcm
Solvent	DMF w/ 0.03M LiBr
Column	PBS

