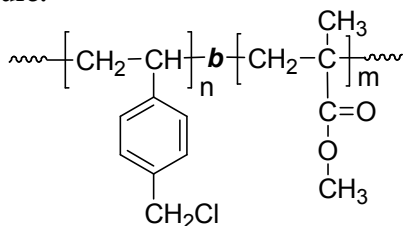


Sample Name: Poly (4-vinyl benzyl chloride-b-methyl methacrylate)
Sample # P19317B-4VBCMMA

Structure:



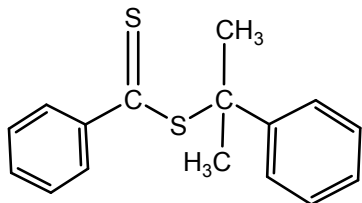
Composition:

Mn x 10 ³ 4-VBC-b-MMA	PDI
24.0-b-55.0	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



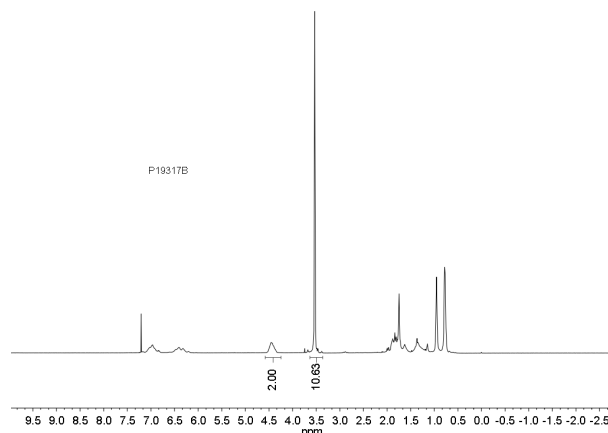
Characterization:

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, hexane.

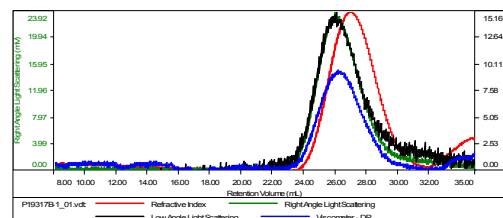
¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

Sample ID: P19317B-4VBC

Concentration (mg/mL)	2.3789
Sample conc: (mL/g)	0.1860
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)	Polydispersity	Intrinsic Viscosity (dL/g)
P19317B-1_01.vcl	23,920	32,270	25,769	1.349	0.2586

SAMPLE ID: P19317B-4VBCMMA run in DMF Mn composition by HNMR

Conc (mg/mL)	3.3124
Sample conc: (mL/g)	0.1860
Method	ps80k-May2015-0000.vcm
Solvent	DMF w 0.02M LiBr
Column	PSS

