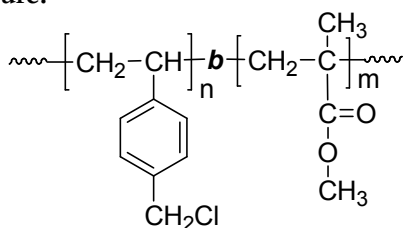


Sample Name: Poly (4-vinyl benzyl chloride-b-methyl methacrylate)  
Sample # P19317-4VBCMMA

**Structure:**



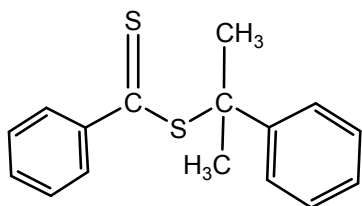
**Composition:**

Mn x 10 <sup>3</sup> VBC-b-MMA	PDI
17.5-b-28.0	1.6

**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



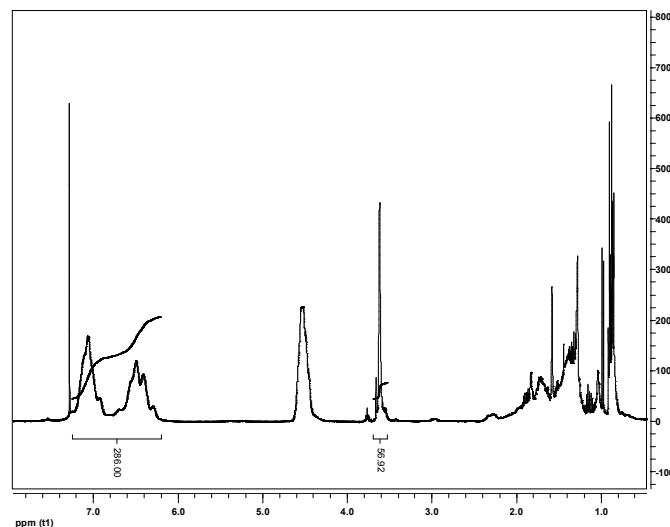
**Characterization:**

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, CHCl<sub>3</sub>; the polymer can be precipitated from ethanol, methanol, and hexane.

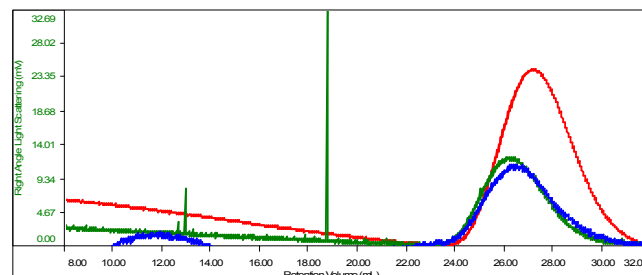
**<sup>1</sup>H-NMR Spectrum of the block copolymer:**



**SEC of the block copolymer:**

**Sample ID: P19317-1 4VBC**

Concentration (mg/mL)	1.3197
Sample dn/dc (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)	Polydispersity	Intrinsic Viscosity (dL/g)
_P19317_01.volt	17,375	27,792	23,696	1.600	0.2548