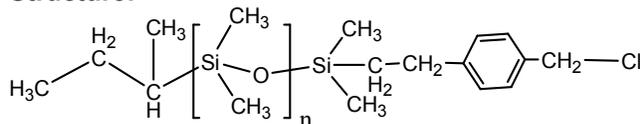


Sample Name:

**$\alpha$ -benzyl chloride terminated Poly(dimethyl siloxane)**

Sample #: **P10650C-DMSBzCl**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
1.0	1.2

**Synthesis Procedure:**

$\alpha$ -Benzyl chloridel terminated Poly(dimethyl siloxane) was prepared by ionic living polymerization and the termination was carried out with (chloromethyl) phenylethyl dimethylchlorosilane in THF. Polymer was purified after passing through the column packed with silica , eluent CHCl<sub>3</sub>. Unreacted electrophile was removed by repeated precipitation in cold methanol and followed by varied by SEC.

Ref: J.X. Zhang, S.K. Varshney, "Simple Approach for the Scale-up Production of Block Copolymer of Polydimethylsiloxane with (Meth)acrylic Ester Monomers" Designed Monomers and Polymers, 2002, 1, 79

**Characterization:**

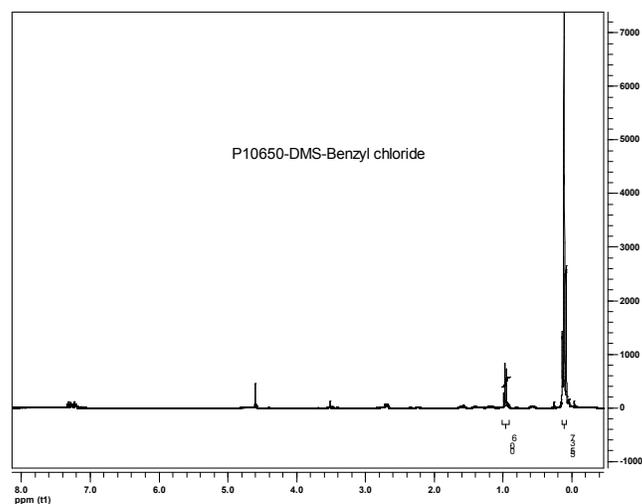
By Size exclusion chromatography (SEC): Varian liquid chromatograph equipped with UV and refractive detector. SEC columns from Supelco were used with THF containing 2 vol% (Et)<sub>3</sub>N as the eluent. The molecular weights were determined using light scattering detector and viscosity detector. The molecular weights and the polydispersity indice were calculated.

**Functionality:** Functionality of the polymer was determined by H NMR analysis. It was found over 90%.

**Solubility:**

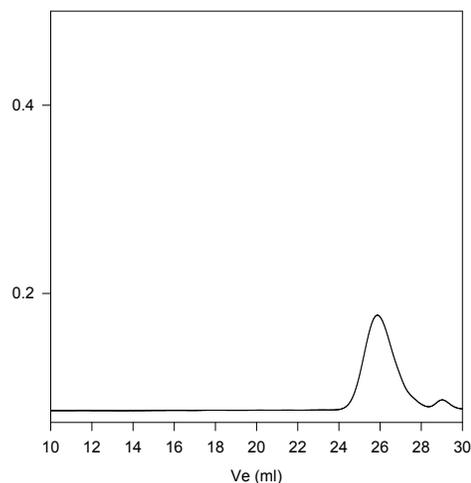
Polymer is soluble in CHCl<sub>3</sub>, THF. It is precipitated out from cold ethanol, isopropanol.

**<sup>1</sup>H NMR of Sample:**



**SEC of Sample:**

**P10650-DMS-BZCI**



Size exclusion chromatography of the polymer

— Polydimethyl siloxane benzyl chloride terminated: M<sub>n</sub>=1000, M<sub>w</sub>=1200, M<sub>w</sub>/M<sub>n</sub>=1.2