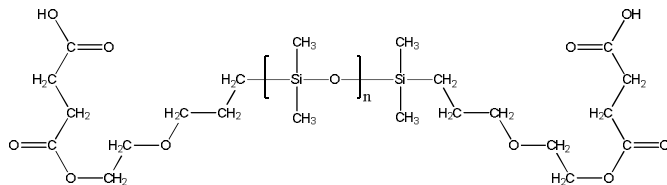
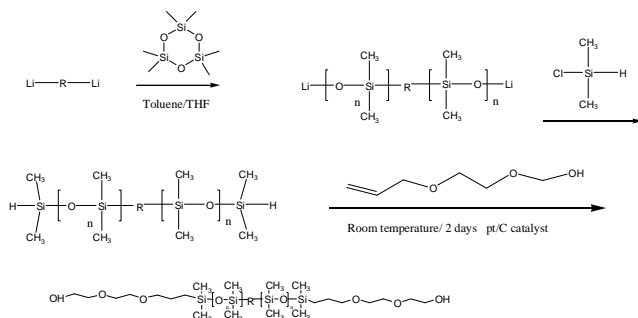


Sample Name: **α,ω -Dicarboxy-terminated Polydimethylsiloxane****Sample #** P18852-DMS2COOH**Structure:****Composition:**

$M_n \times 10^3$	PDI
4.5	1.5
COOH functionality (by titration and from HNMR)	>90%

Synthesis Procedure:

Dihydroxy- (carbinol) terminated poly(dimethyl siloxane) was prepared by living anionic polymerization of hexamethyl cyclotrisiloxane. The scheme of the reaction is illustrated below:



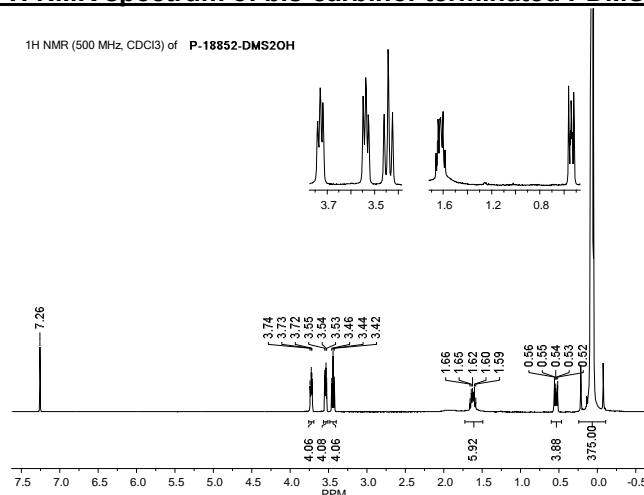
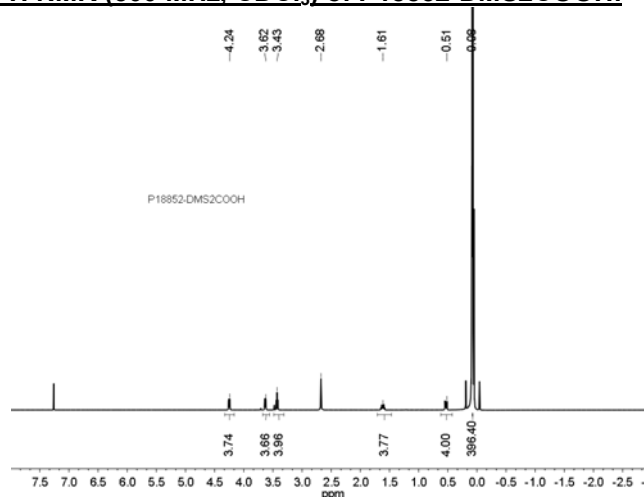
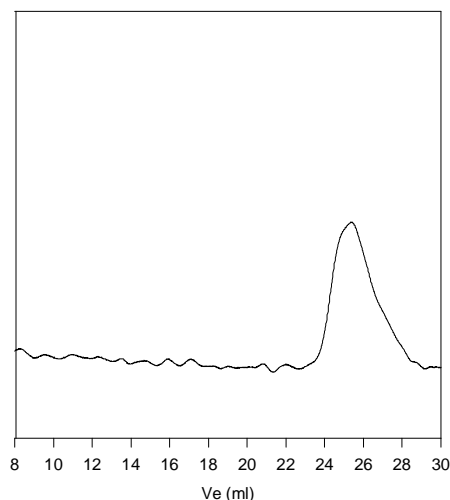
The obtained polymer was reacted with succinic anhydride to get the dicarboxylic acid terminated polymer.

Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Reference:

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.

¹H NMR spectrum of bis-carbinol-terminated PDMS:**¹H NMR (500 MHz, CDCl₃) of P18852-DMS2COOH:****SEC of polymer before reacting with succinic anhydride:****P18852-DMS2OH (carbinol end group)**

Size exclusion chromatography of dicarbinol terminated polydimethylsiloxane
 — Polydimethylsiloxane $M_n=4500$, $M_w=6700$, $PI=1.5$