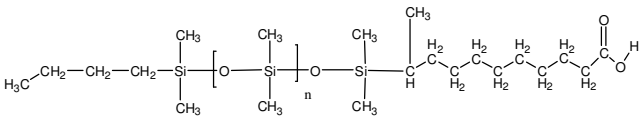
Sample Name:
Mono Carboxy decyl Terminated PDMS
or
Mono undecanoic acid terminated PDMS

Sample #: **P18617-DMSC10COOH**

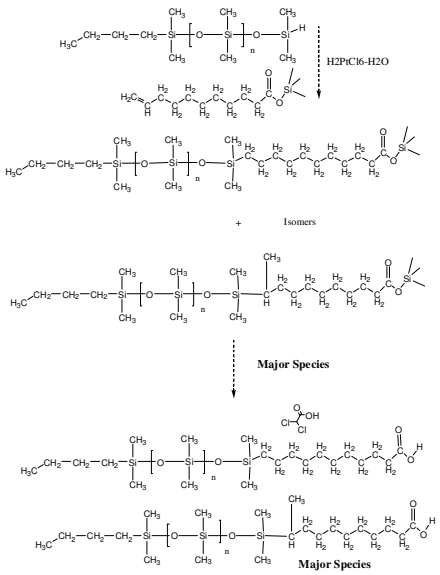
Structure:



Composition:

Mn x 10^3	PDI
2.7	1.2

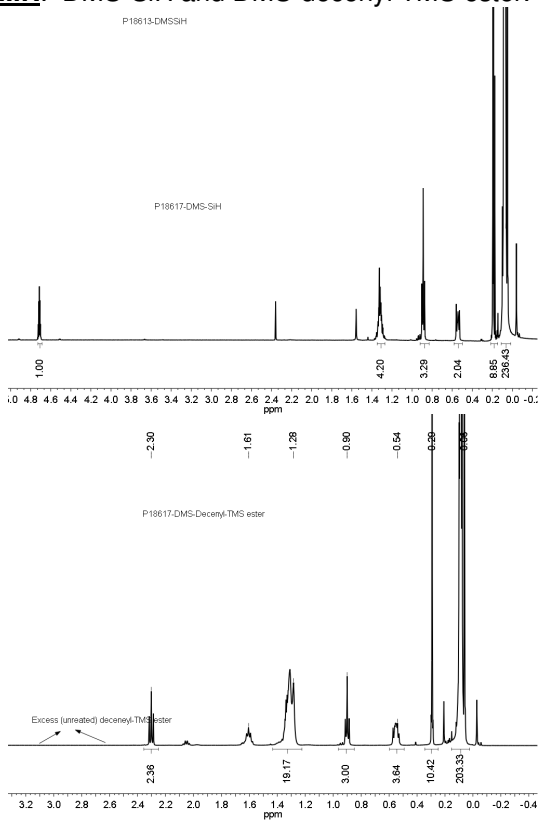
Synthesis:
Carboxy terminated polydimethylsiloxane was prepared by living anionic polymerization of hexamethyl cylotrisiloxane,



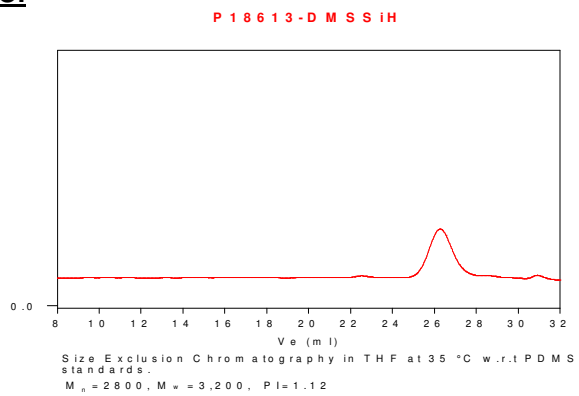
Characterization:
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Solubility: The polymer is soluble in hexane, toluene, cylcohexane, THF and chloroform; and precipitates from methanol and ethanol.

^{1}H NMR: DMS-SiH and DMS-decenyl TMS ester.

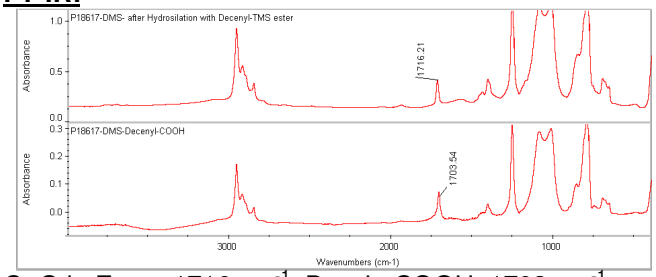


SEC:



Size Exclusion Chromatography in THF at 35 °C w.r.t PDMS standards.
M_n = 2800, M_w = 3,200, PI=1.12

FT-IR:



C=O in Ester: 1716 cm^{-1}; Decyl –COOH: 1703 cm^{-1}

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.