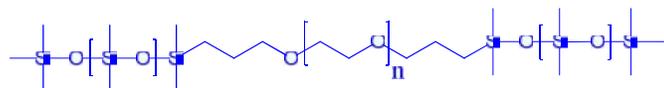


**Sample Name:** Poly(dimethyl siloxane-b-ethylene oxide-b-dimethyl siloxane) Trimethyl siloxy end group

**Sample #:** P9092B-DMSEODMS

Prepared by route : 2

**Structure:**

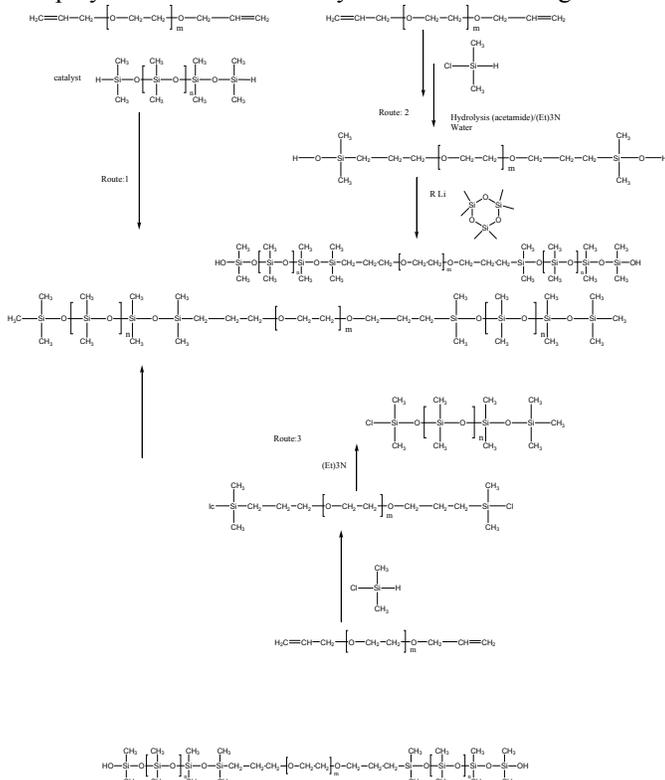


**Composition:**

Mn x 10 <sup>3</sup>	PDI
PDMS-b-PEO-b-PDMS	
0.5-b-0.42-b-0.5	1.45

**Synthesis Procedure:**

The polymer can be obtained by one of the following routes:



**Characterization:**

The polymer was analyzed by size exclusion chromatography (SEC) and NMR to obtain the molecular weight and polydispersity index (PDI). Copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the siloxane protons at about 0.08 ppm with the peak area of ethylene oxide protons at about 3.4 ppm.

**Solubility:**

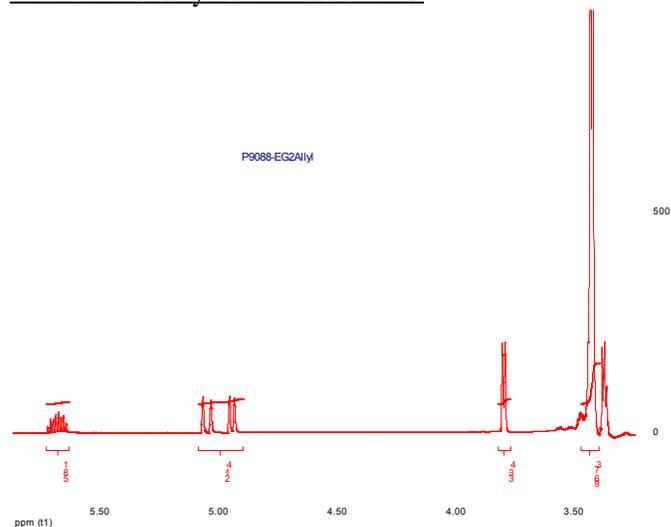
The polymer is soluble in THF, chloroform, not soluble in MeOH/water mixture;

FTIR: SiH – Characteristics absorbance: 2120cm<sup>-1</sup>

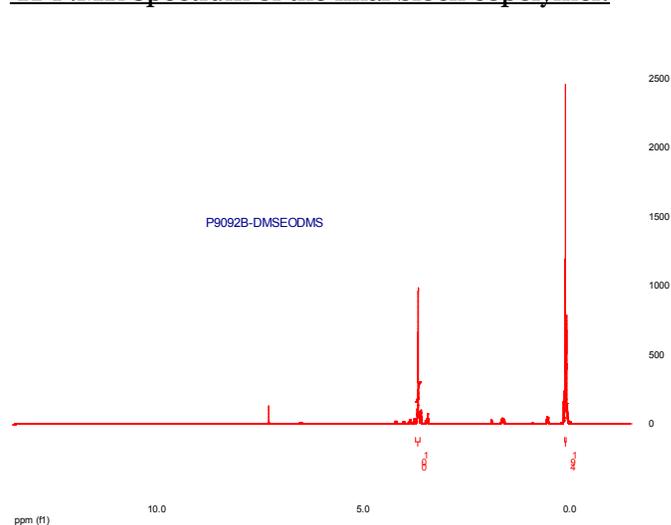
CH=CH<sub>2</sub> in PEG: absorbance: 1645cm<sup>-1</sup>

After the reaction these absorbance must disappear indicating the stoichiometry required for the reaction.

**<sup>1</sup>H-NMR of allyl terminated PEO**

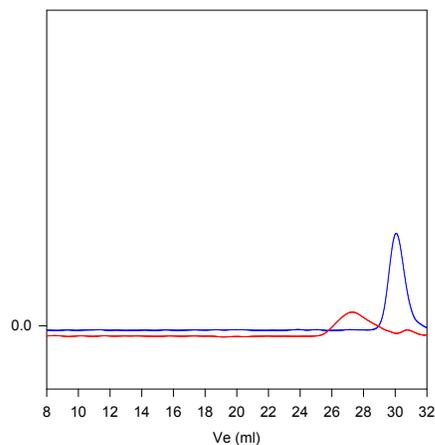


**<sup>1</sup>H-NMR Spectrum of the final block copolymer:**



**SEC of the polymer**

**P9092B-DMSEODMS**



Size Exclusion Chromatogram of Triblock copolymer

— Di-Allyl PEG: M<sub>n</sub>=420, M<sub>w</sub>=500, M<sub>w</sub>/M<sub>n</sub>=1.20

— PDMS SiH terminated Mn 800 Mw/Mn 1.25  
Triblock (PDMS-PEO-PDMS): M<sub>n</sub>: 500(DMS)-420(EO)-500(DMS), M<sub>w</sub>/M<sub>n</sub>=1.45