

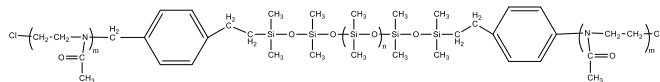
Sample Name:

Poly(2-methyloxazoline-b-dimethylsiloxane-b-2-methyloxazoline) Triblock Copolymer

Linker: benzyl group in between PDMS and MEOXZ chains

Sample #: **P43502B-MEOXZDMSMEOXZ**

Structure:

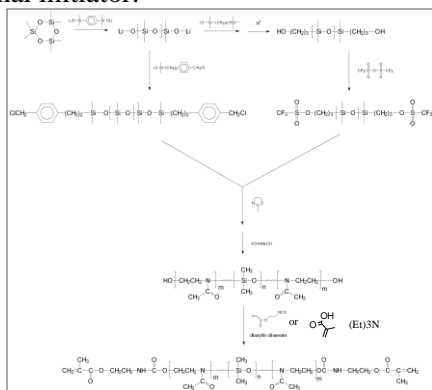


Composition:

Mn x 10 ³	PDI
0.15-b-3.7-b-0.15	1.3
Dp of each Block: 2-b-50-b-2	

Synthesis Procedure:

The α - ω dihydroxy terminated Poly(2-methyloxazoline-b-dimethylsiloxane-b-2-methyloxazoline) triblock copolymer was prepared by combination of anionic living polymerization of hexamethylcyclotrisiloxane (D3) and cationic polymerization of 2-methyl oxazoline, using difunctional initiator.



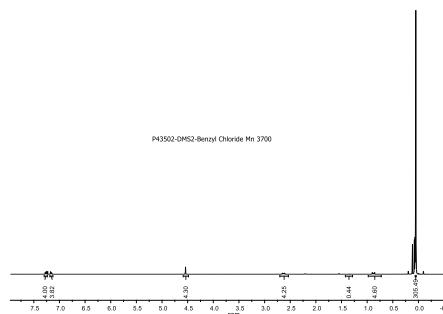
Characterization:

The product was characterized by ¹H-NMR. GPC analysis of such kind of polymer cannot be carried out in THF or DMF as solvent. We have used a mixture of DMF/THF 20/80 by volume and added 3 V% (Et)₃N to elute such polymer. The values of Mw/Mn were determined, and the composition of the polymer determined by its ¹H-NMR.

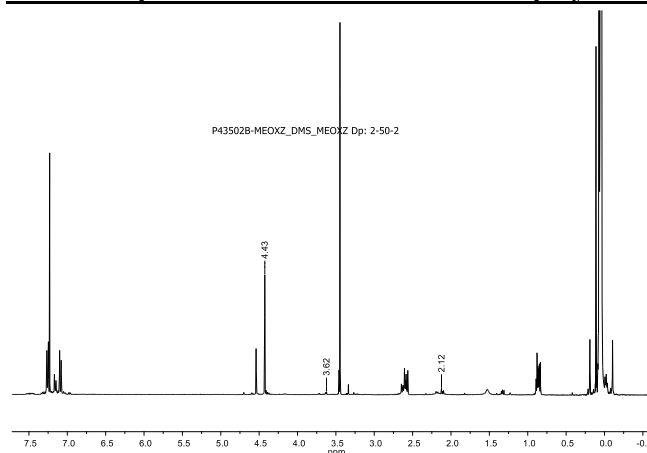
Solubility in Different Solvents:

1. Soluble in Methanol, CHCl₃, DMF.
2. Insoluble in THF.
3. Soluble in THF-Methanol mixture.

¹H-NMR spectrum of the Benzyl end functionalized PDMS:

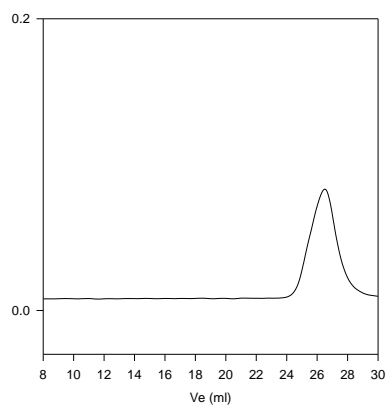


¹H-NMR spectrum of the ABA triblock copolymer:



SEC profile of the sample:

MEOXZDMSMEOXZ P43502A



Size exclusion chromatography of the polymer

— ABA triblock copolymer Mw/Mn=1.30 Composition from HNMR