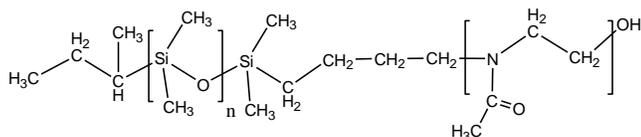


Sample Name:

**Poly(Dimethylsiloxane-b-2-methyloxazoline)  
diblock Copolymer**

Sample #: **P42509-DMSMEOXZ**

Structure:

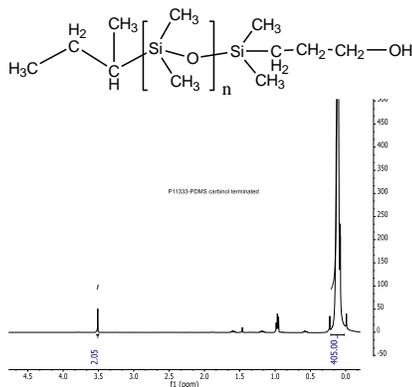


Composition:

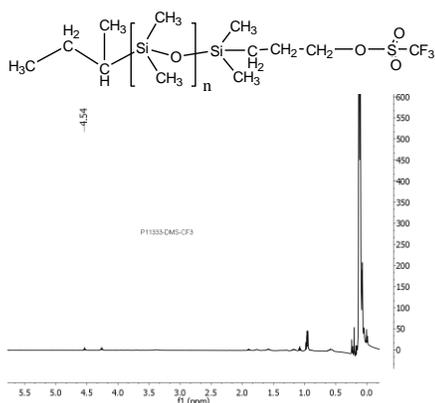
$M_n \times 10^3$	PDI
5.0-b-0.7	1.20

Dp: of PDMS 67-b-8 units
Physical appearance at Room temperature: Honey like soft white material

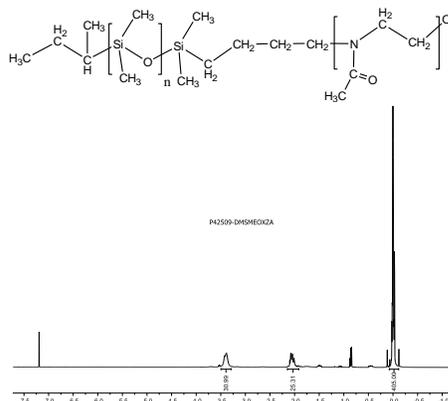
**<sup>1</sup>H-NMR spectrum of P11333-PDMS carbinol terminated:**



**<sup>1</sup>H-NMR spectrum of P11333-DMS-CF3:**



**<sup>1</sup>H-NMR spectrum of the diblock Copolymer:**



**Purification of the Diblock copolymer:**

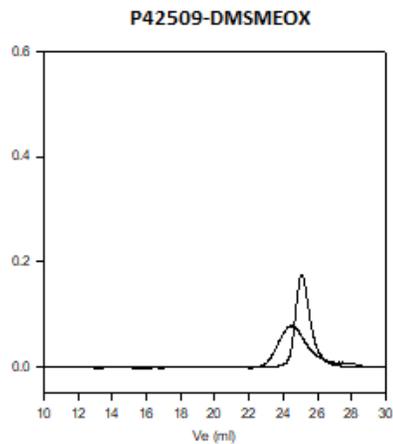
1. After the reaction Chlorobenzene was removed under vacuum.
2. Product was dissolved in a mixture of methanol-acetone
3. Filter to remove NaI
4. Product centrifuge to remove traces amount of salt.
5. Filter.
6. Concentrate and precipitated in cold acetone at -78 oC.
7. Kept at -10 oC over night.
8. Decant the solution and recover the solid product.
9. Dried under vacuum over 24h at room temperature.

**Central Block:**

Size exclusion chromatography (SEC): Varian liquid chromatograph equipped with UV and refractive detector. SEC columns from Supelco were used with THF for the first block (PDMS) Since it can not be eluted in DMF and for the block copolymer in DMF containing 0.06M LiBr at 60 °C as the eluent. The molecular weights and the polydispersity indice were calculated.

**DiBlock:** The chemical composition was extracted from proton NMR, which was recorded from Varian 500MHz instrument using CDCl<sub>3</sub> as solvent. The molecular weight of block was calculated based on the molecular weight of the first block and the chemical composition.

**SEC elugram of Diblock copolymer:**



Size exclusion chromatography of poly(dimethylsiloxane-b-MEOXZ)

— PDMS,  $M_n=5000$ ,  $M_w=5,800$ ,  $M_w/M_n=1.10$

— Poly(dimethylsiloxane-b-MEOXZ) eluted in presence of DMF

**Mn : 5000-b-700 Mw/Mn 1.2**