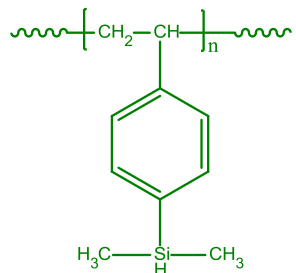


Sample Name:

**Poly(4-dimethylsilyl styrene) or  
[poly(4vinylphenyl)dimethylsilane]**

Sample #: **P6546-4SSiH**

**Structure:**

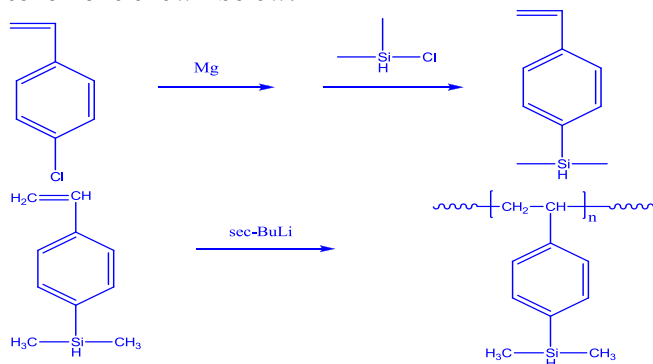


**Composition:**

$M_n \times 10^3$	PDI
10.7	1.23
$T_g$ ( $^{\circ}C$ )	88

**Synthesis Procedure:**

Poly(4-dimethylsilyl styrene) was synthesized via anionic polymerization and the reaction scheme is shown below.



**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography. The chemical structure was validated by NMR.

**Thermal analysis:**

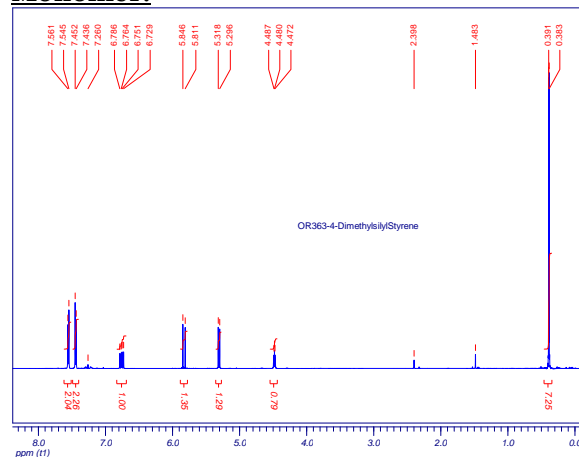
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of  $10^{\circ}C/min$ .

**Solubility:**

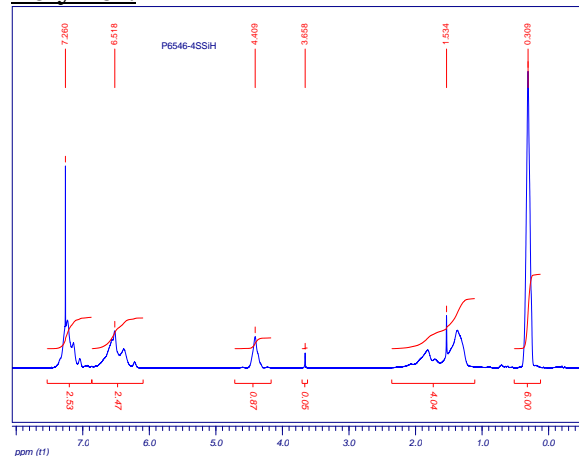
Poly(4-dimethylsilyl styrene) is soluble in DMF, THF, toluene, hexane, acetone, ether and  $CHCl_3$ . It precipitates from methanol.

**NMR of Homopolymer:**

**Monomer:**

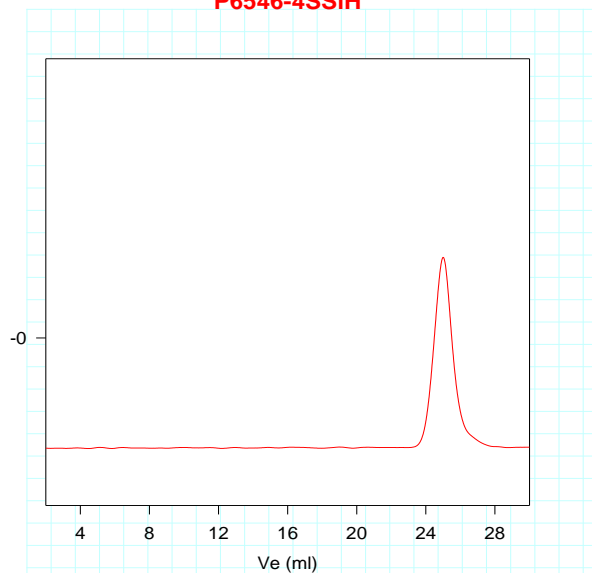


**Polymer:**



**SEC of Homopolymer:**

**P6546-4SSiH**



Size exclusion chromatograph of polymer: poly(4-dimethylsilyl styrene):

$M_n=10700$ ,  $M_w=13200$ ,  $M_w/M_n=1.23$

# DSC thermogram for the polymer:

